

# Public Documents of Maine:

BEING THE

# ANNUAL REPORTS

OF THE VARIOUS

# **Public Officers and Institutions**

FOR THE YEAR

# 1896.

# VOLUME II.

AUGUSTA kennebec journal print 1897

# NINTH ANNUAL REPORT

OF THE

# BUREAU

OF

# Industrial and Labor Statistics

FOR THE

# STATE OF MAINE.

# 1895.

AUGUSTA: BURLEIGH & FLYNT, PRINTERS TO THE STATE. 1896.

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# STATE OF MAINE.

OFFICE OF COMMISSIONER OF INDUSTRIAL AND LABOR STATISTICS, AUGUSTA, December 31, 1895.

To his Excellency, HENRY B. CLEAVES, Governor of Maine: SIR: I have the honor to present the report of the Bureau of Industrial and Labor Statistics for 1895.

Very respectfully,

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SAMUEL W. MATTHEWS,

Commissioner.

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# INTRODUCTION.

The investigations made by the bureau during the past year have been largely directed to ascertaining the earnings and expenses lost time, savings, etc., of many classes of working men. These investigations have been made through competent agents and are therefore more full and accurate than if carried on through the medium of the mails.

The relations between employers and employed during the year have generally been amicable and satisfactory, but few strikes or other "labor troubles" having occurred. Labor of all kinds has had employment at fair wages and a marked improvement in many lines of business is noticeable.

The number of manufacturing establishments erected during the year has been largely increased over that of the previous year, the amount of capital invested being more than doubled.

Other features of the Report are returns from butter, cheese and condensed milk factories, and descriptive articles on the lime and slate industries, the blue-berry, sardine, and oil-cloth industries, and an extended article entitled "Maine's Industrial Progress and the Outlook for the Future."

The report also contains a list of new factories erected, enlarged and completed during the year, together with some facts with regard to employes on railroads in the State, compiled from returns made to the Board of Railroad Commissioners.

The Commissioner hereby acknowledges his indebtedness for the faithful and valuable services of those who have, for shorter or longer periods, been in his employ during the past year. Maj. C. J. House, the able and competent Clerk of the Bureau, and Special agents, A. I. Brown, J. S. Bourdon, E. M. Blanding and W. A. Newcomb have rendered important services which merit special recognition.

# INDIVIDUAL REPORTS OF WORKING MEN.

# GENERAL SUMMARY AND REMARKS.

In making an investigation of the earnings and expenses of working men, such lines of industries were selected as would be fairly representative of the wage workers generally throughout the State. Investigations have been made among the workmen in eighteen different lines of industry, consisting of carpenters, masons, mason tenders, painters, blacksmiths, common laborers, hostlers, house finish makers, granite workers, slate workers, lime workers, saw mill hands, cotton mill hands, woolen mill hands, shoemakers, moccasin makers, ship builders and pulp makers. In order to secure uniformity in the information obtained a blank return was prepared asking for the following facts:

- 1. Name in full (not to be made public.)
- 2. Age. 3. Where born.
- 4. Residence. Post office address.
- 5. Occupation. Sub-division of work.
- 6. Number of hours employed daily. Number of days in week.
- 7. Earnings : Per day. Per week. Per month.
- 8. Earnings from your regular trade for year ending Dec. 31st, 1894.
- 9. Earnings from other personal service.
- 10. Earnings of all others in your family, for same year.
- Number of days lost during the year—not including legal holidays: Total. From sickness. From inability to obtain work. From other causes.
- 12. How many dependent on you for support.
- Cost of living during the year for self and family: Total cost. How much did you pay for rent. Food. Clothing. Light and fuel. Society dues. Life Insurance. Other things.

- 14. Do you own a home. If so, is it mortgaged.
   Value of home. Amount of mortgage. Rate of interest on mortgage.
- 15. Total number in your family.
- 16. Number engaged in working for wages.
- 17. Are wages paid in cash, or otherwise.
- 18. Were your wages increased during the year. What per cent.
- 19. Were your wages reduced during the year. What per cent.
- 20. How often are you paid.
- 21. Are any wages withheld under certain rules.
- 22. Do you belong to any labor organization.
- 23. Do you belong to any beneficiary association.
- 24. Do you receive weekly benefits in case of sickness.
- 25. Have you a savings bank account.
- 26. Have you accumulated any savings during former years. During past year.
- 27. Have you run into debt during the past year.

The use of the mails in obtaining returns from working men has proved so unsatisfactory that the matter was put into the hands of special agents who gathered the facts by personal interviews and inquiries. In compiling these matters, men with families and those without, have been tabulated separately. The following is a general summary of some of the more important statistics derived from the compilation of these individual reports: Whole number of reports, both with and without families, 556; number American born, 433; number foreign born, 123; number owning homes, 188; value of homes, \$253,725; number homes mortgaged, 43; amount of mortgages, \$17,800; number renting, 327; number having savings bank accounts, 228; number who have accumulated savings in former years, 436; during past year, 332; run in debt during past year, 63; neither gained nor lost during past year, 161.

From men with families, 514 reports were obtained. Number of persons in the 514 families, 2,146; average number per family, 4.18; number assisted by members of family, 141; number owning homes, 187; number having savings bank accounts, 222; number accumulating savings, in former years, 421; number accumulating savings during past year, 318; running in debt during past year, 61; neither gained nor lost during past year, 135; average age, 40 years; average daily wages, \$1.87; average annual earn-

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ings from regular trade, \$465.88; average annual earnings from other personal service, \$19.00; average annual earnings of others members of the family, \$64.21; average annual income per family, \$549.09; average annual income per individual. \$131.52. Average annual expenditure per family; for rent, \$85.68; food, \$199.97; clothing, \$94.27; fuel and lights, \$36.23; society dues, \$5.68; life insurance, \$20.55; other things, \$74.96: total per family, \$466.64. Average annual expenditures per individual in families; rent, \$20.50; food, \$47.90; clothing, \$22.58; fuel and lights, \$8.68; society dues, \$1.36; life insurance, \$4.91; other things, \$17.95; total per individual, \$111.77. Average net surplus per family, \$82.45; average net surplus per individual, \$19.75; average number of days lost time; from sickness, 3; inability to obtain work, 33; other causes, 6; total, 42. Average number of days worked at regular trade, 249; at other personal service, 13; average wages per day at regular trade, \$1.87; at other personal service, \$1.46.

From men without families, 42 reports were obtained. American born, 38; foreign born, 4; average age, 27 years; average daily wages, \$1.71; average annual earnings from regular trade, \$362.64; from other personal service, \$25.91; total income Average annual expenditures; for board, \$169.74; for \$388.55. clothing, \$62.62; for society dues, \$3.28; for life insurance. \$35.00; for other things, \$85.83; total expenditure, \$320.98; net surplus, \$67.57. Number having savings bank accounts, 6; number accumulating savings in former years, 15; during past year, 14; run in debt during past year, 2; number showing neither gain nor loss during past year, 26. Average number days of lost time; from sickness, 5; from inability to obtain work, 53; from other causes, 13; total, 71. Average cost of board per week, \$3.26; average total expenditure per day, \$.88.

The daily average of total expenditure per individual, in families, is found to be 31 cents; the daily average for rent, food, fuel and lights for same, 21 cents, while the daily average for board, which covers the above mentioned items, of men without families, is 46 cents. According to similar figures obtained in 1891, these same items cost at that time, respectively, 33 cents, 23 cents and 49 cents, a lessening in the total daily cost of living of the individual in the family of 2 cents, of the cost per individual for rent, food, fuel and lights, 2 cents, and of the cost for board to the single man, 3 cents. The average daily cost per individual in families for the item of food is 13 cents, as against a cost of 14 cents in 1891. Men with families saved 15 per cent of their income as compared with 12 per cent in 1891, and single men 17 per cent, the same as in 1891. Of the men with families, 318 show savings amounting to \$42,379 or \$133.27 each. Of those without families, 18 show savings amounting to \$2,837 or \$157.66 each.

The arrangement of the "Recapitulation" table, is such that the statistics of the different occupations of working-men are readily seen, and comparisons of wages, expenses, lost time, savings, etc., can be made without difficulty. Some of the more important statistics are as follows: Carpenters, with families, have averaged \$2.03 per day; carpenters without families, \$1.62. The average annual earnings of these two classes of carpenters have been \$491.89 and \$337.50; lost time, 58 and 85 days. The average total annual income of carpenters with families, has been \$535.40.

Masons, with families, daily wages, \$2.51, without families, \$2.08; annual earnings, with families, \$601.00, without families, \$395.00. Average annual income of masons with families, \$621.74, lost time 56 days; without families, lost time 101 days.

Mason tenders, with families, daily wages, \$1.58, annual earnings, \$390.87, annual income, \$450.20, lost time, 54 days.

Painters, with families, daily wages, \$2.13, annual earnings, \$493.10, annual income, \$540.60, lost time, 69 days; without families, daily wages, \$2.00, annual earnings, \$416.25, lost time, 68 days.

Blacksmiths, with families, daily wages, \$1.95, annual earnings, \$572.59, annual income, \$586.38, lost time, 11 days; without families, daily wages, \$1.75, annual earnings, \$499.33, lost time, 18 days.

Laborers, with families, daily wages, \$1.47, annual earnings, \$375.61, annual income, \$503.74, lost time, 48 days; without families, daily wages, \$1.50, annual earning, \$357.00, lost time, 66 days.

Hostlers, with families, daily wages, \$1.25, reckoned generally on the basis of 7 days to the week, annual earnings, \$432.94, annual income, \$484.33, lost time, 13 days.

House finish makers, with families, daily wages, \$2.14, annual earnings, \$644.23, annual income, \$695.39, lost time, 5 days.

Granite workers, with families, daily wages, \$2.41, annual earnings, \$641.87, annual income, \$709.37, lost time, 34 days.

Slate workers, with families, daily wages, \$1.75, annual earnings, \$376.84, annual income, \$421.84, lost time, 84 days.

Lime workers, with families, daily wages, \$2.25, annual earnings, \$637.33, annual income, \$661.77, lost time, 19 days.

Sawmill hands, with families, daily wages, \$1.88, annual earnings, \$429.29, annual income, \$478.60, lost time, 63 days; without families, daily wages, \$1.62, annual earnings, \$334.85, lost time, 83 days.

Cotton mill hands, with families, daily wages, \$1.35, annual earnings, \$371.43, annual income, \$507.51, lost time, 32 days; without families, daily wages, \$1.35, annual earnings, \$326.20, lost time, 68 days.

Woolen mill hands, with families, daily wages, \$1.49, annual earnings, \$418.71, annual income, \$482.53, lost time, 24 days.

Shoemakers, with families, daily wages, \$2.15, annual earnings, \$605.30, annual income, \$687.45, lost time, 27 days; without families, daily wages, \$2.08, annual earnings, \$542.20, lost time, 43 days.

Moccasin makers, with families, daily wages, \$1.67, annual earnings, \$483.19, annual income, \$561.76, lost time, 16 days.

Ship builders, with families, daily wages, \$2.19, annual earnings, \$547.67, annual income, \$581.05, lost time, 45 days.

Pulp makers, with families, daily wages, \$1.52, annual earnings, \$431.91, annual income, \$583.73, lost time, 24 days.

# Tables of Working Men's Returns.

# CARPENTERS

						-	Earn	INGS.	
Number of return	Age.	Where born.	Present residence.	Number hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$\begin{array}{c} 392\\ 3308\\ 4966\\ 6436\\ 0423\\ 3356\\ 5545\\ 5307\\ 2225\\ 6346\\ 6539\\ 501\\ 2421\\ 133\\ 1665\\ 4233\\ 428\\ 282\\ 428\\ 2482\\ 429\\ 82\\ 4251\\ 158\\ 040\\ 3356\\ 6388\\ 842\\ 1466\\ 5390\\ 1424\\ 1466\\ 5390\\ 1424\\ 1466\\ 5390\\ 1424\\ 1466\\ 5390\\ 1424\\ 1466\\ 5390\\ 1424\\ 1466\\ 1422\\ 133\\ 1466\\ 1422\\ 1424\\ 1426\\ 1422\\ 1424\\ 1426\\ 1422\\ 1424\\ 1426\\ 1422\\ 1424\\ 1426\\ 1422\\ 1424\\ 1426\\ 1422\\ 1424\\ 1426\\ 1422\\ 1424\\ 1426\\ 1422\\ 1424\\ 1426\\ 1422\\ 1424\\ 1426\\ 1422\\ 1424\\ 1426\\ 1422\\ 1424\\ 1426\\ $	A merica. Maine. America. Ame	Anson . Augusta Bangor Bango	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		$\begin{array}{c} -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ $	- \$500 - 2225 - - - - - - - - - - - - - - - -	$\begin{array}{l} \$520\\ 700\\ 700\\ 505\\ 6050\\ 505\\ 500\\ 505\\ 500\\ 505\\ 500\\ 505\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 400\\ 800\\ 500\\ 400\\ 400\\ 400\\ 400\\ 400\\ 400\\ 4$

### AND LABOR STATISTICS.

# WITH FAMILIES.

			]	EXPENS	ES.					
Number of return	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.
$\begin{array}{c}1&2&3&4\\5&6&7&8&9\\101&11&2&13&1\\11&1&5&1&6&7\\11&1&1&1&5&1&6\\11&1&1&1&1&5&1\\11&1&1&1&1&5&1\\11&1&1&1&$	$\begin{array}{c} - \\ \$120 \\ 84 \\ - \\ 96 \\ - \\ - \\ 96 \\ - \\ 96 \\ - \\ 96 \\ - \\ 96 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ $		$\begin{array}{c} \$140\\ \$5\\ 65\\ 50\\ 75\\ 80\\ 75\\ 80\\ 120\\ 120\\ 120\\ 120\\ 120\\ 120\\ 120\\ 12$	$\begin{array}{c} \$25\\ 40\\ 45\\ 225\\ 40\\ 500\\ 43\\ 50\\ 500\\ 443\\ 48\\ 835\\ 46\\ 43\\ 449\\ 440\\ 440\\ 440\\ 440\\ 440\\ 440\\ 440$	$\begin{array}{c} 88\\ 82\\ 55\\ 15\\ 3\\ 8\\ 8\\ 3\\ 3\\ 5\\ 2\\ -\\ 8\\ 3\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\$	\$30 - 13 15 - 20 - - - - - - - - - - - - -	$\begin{array}{c} \$ \ 75 \\ 100 \\ 150 \\ 50 \\ 100 \\ 150 \\ 150 \\ 150 \\ 150 \\ 150 \\ 150 \\ 150 \\ 150 \\ 100$	$\begin{array}{c} \$438\\ 357\\ 393\\ 395\\ 393\\ 377\\ 515\\ 475\\ 500\\ 482\\ 397\\ 448\\ 431\\ 431\\ 431\\ 432\\ 425\\ 425\\ 425\\ 425\\ 425\\ 420\\ 570\\ 439\\ 443\\ 433\\ 432\\ 425\\ 425\\ 420\\ 570\\ 439\\ 448\\ 437\\ 420\\ 356\\ 601\\ 601\\ 601\\ 601\\ 639\\ 500\\ 500\\ 336\\ 601\\ 465\\ 393\\ 336\\ 601\\ 601\\ 412\\ 420\\ 356\\ 601\\ 435\\ 936\\ 435\\ 835\\ 835\\ 835\\ 835\\ 395\\ 459\\ 459\\ 458\\ 395\\ 458\\ 395\\ 458\\ 395\\ 335\\ 335\\ 335\\ 335\\ 335\\ 335\\ 335$	\$ 82 343 355 337 52 282 123 50 200 104 144 141 186 103 32 77 170 68 128 116 - 115 125 777 400 107 400 107 400 107 408 106 220 103 32 77 40 107 107 40 107 107 107 107 107 107 107 10	\$6 25 30 48
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		DAYS	Lost.				age.	u		for		
Number of return	From sickness.	Inability to obtain work.	Other causes.	Total.	Owning homes.	Value of homes.	Amount of mortg	Rate of interest or mortgage.	Number in family	Number working wages.	Wages increased- per cent.	Wages decreased- per cent.
$\frac{1}{2} \frac{2}{3} \frac{4}{5} \frac{5}{6} \frac{6}{7} \frac{7}{8} \frac{9}{9} \frac{10}{112} \frac{11}{13} \frac{11}{16} \frac{11}{17} \frac{11}{19} \frac{12}{22} \frac{22}{22} \frac{22}{2} 22$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 44\\ 12\\ 75\\ -\\ 80\\ 68\\ 80\\ 60\\ 100\\ 70\\ 70\\ 70\\ 43\\ 65\\ 44\\ 50\\ 75\\ 45\\ 68\\ 96\\ 68\\ 96\\ 68\\ 96\\ 99\\ 99\\ 26\\ 50\\ 70\\ 71\\ 18\\ 80\\ 70\\ 71\\ 18\\ 30\\ 154\\ 65\\ 15\\ 65\\ 15\\ 15\\ 55\\ 15\\ 31\\ 320\\ 28\\ 80\\ 74\\ 64\\ 80\\ 106\\ -\\ 464\\ 80\\ 106\\ -\\ 106\\ -\\ 100\\ 28\\ 80\\ 80\\ 80\\ 80\\ 80\\ 80\\ 106\\ -\\ 106\\ -\\ 100\\ 28\\ 80\\ 80\\ 80\\ 106\\ -\\ 106\\ -\\ 100\\ 28\\ 80\\ 80\\ 106\\ -\\ 106\\ -\\ 100\\ 28\\ 80\\ 80\\ 106\\ -\\ 100\\ 28\\ 80\\ 80\\ 106\\ -\\ 100\\ 28\\ 80\\ 80\\ 106\\ -\\ 100\\ 28\\ 80\\ 80\\ 106\\ -\\ 100\\ 28\\ 80\\ 106\\ -\\ 100\\ 28\\ 80\\ 106\\ -\\ 100\\ 28\\ 80\\ 106\\ -\\ 100\\ 28\\ 80\\ 106\\ -\\ 100\\ 28\\ 80\\ 100\\ -\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\$	$\begin{array}{c} - \\ 12 \\ 29 \\ - \\ - \\ 15 \\ 14 \\ 30 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ $	$\begin{array}{c} 44\\ 24\\ 104\\ -\\ 75\\ 15\\ 104\\ 98\\ 94\\ 60\\ 120\\ 82\\ 75\\ 43\\ 85\\ 65\\ 44\\ 48\\ 82\\ 60\\ 85\\ 96\\ 64\\ 88\\ 59\\ 60\\ 54\\ 44\\ 47\\ 76\\ 34\\ 40\\ 104\\ 88\\ 70\\ 15\\ 65\\ 15\\ 70\\ 70\\ 70\\ 5\\ 77\\ 31\\ 130\\ 80\\ 80\\ 80\\ 80\\ 80\\ 80\\ 80\\ 80\\ 80\\ 8$		\$1,500 1,000 - 2,000 1,500 - 1,500 - 1,500 - 1,500 - 1,600 1,200 1,500 - 1,600 1,200 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,000 1,500 1,000 1,200 - - - - - - - - - - - - - - - - - -	\$300 	- 0.06 	4323422456423444443335474633322533425252233453525464428645456443334	$\begin{array}{c} 1\\ 1\\ 2\\ 2\\ 1\\ 1\\ 2\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\$	.10	.10

# CARPENTERS

Number of r       Are any wag       Are any wag       under certain       bo you belon       labor organization       beneficiary       organization       beneficiary       beneficiary       beneficiary       beneficiary       beneficiary       beneficiary       beneficiary       paye you acc       savings durin       years?       lave you acc       savings durin       year?	Have you during pa
1       Irregularly       No       No	

# WITH FAMILIES-CONTINUED.

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# CARPENTERS

				EARNINGS.				
Where born.	Present residence.	Number hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.	
A merica America America America America	Pittsfield Rockland Rockland Rockland Thomaston Vinalbayen	$     \begin{array}{r}       10 \\       9 \\       9 \\       9 \\       10 \\       10 \\       10     \end{array} $		\$260 780 765 700 455 588	\$150 - - - - 100	\$65 - - 600 300	\$475 780 765 700 1055 988	
	Where born. America America America America America	Where born.       Present residence.         America.       Pittsfield         America.       Rockland         America.       Rockland         America.       Rockland         America.       Thomaston         Yhomaston       Yinoubeyce	Where born.       Present residence.       Strong pa Acolding a constraint of pa Acolding a c	Where born.       Present residence.	Where born.       Present residence.            Where born.       Present residence.            America       Pittsfield             America       Rockland             America       Rockland             America       Rockland             America       Thomaston             America       Thomaston              America       Yhomaston	Where born.       Present residence.  <	Where born.     Present residence.     EARNINGS       Where born.     Present residence.     State unit       Image: State unit     Image: State unit     Image: State unit       America.     Pittsfield     10       America.     Rockland     92 50       America.     Rockland     92 50       America.     Rockland     92 50       America.     Rockland     10       America.     Thomaston     10       Image: State unit     10     10       Image: State unit     10     10       America.     10     10       Image: State unit     10     10	

# CARPENTERS

$ \begin{array}{c} 1 & 24 \\ 2 & 21 \\ 3 & 21 \\ 4 & 22 \\ 5 & 31 \\ 6 & 69 \end{array} $	Maine Maine Maine Maine America Maine Maine	Bangor Bangor Bangor Bangor Bath Monson	10 10 10 10 10	5 \$355 5 350 5 266 5 200 5 495 5 200	- \$34 50 - 75	 \$355 350 300 250 495 275
				 		 <u> </u>

# MASONS

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1	39	Maine	Auburn	10	2.75	\$528	\$150	-	\$678
<b>2</b>	35	Maine	Augusta	10	3 00	600	50	-	650
- 3	32	Maine	Bangor	10	3 00	728	-	-	728
4	42	New Brunswick	Bangor	10	3 00	649	- 1	-	649
-5	38	Maine	Bangor	10	3 00	575	25		600
- 6	46	Maine	Bangor	10	3 00	546	75	-	621
7	42	Maine	Bangor	10	3 00	600	100	\$300	1000
- 8	35	Maine	Bangor	10	3 00	663	_	-	663
- 9	48	Maine	Bangor	10	3 00	625	50	_	675
10	50	Maine	Bangor	10	$\bar{3}$ 00	650		_	650
11	37	Maine	Bangor	10	275	550	50	_	600
12	37	Maine	Bangor	10	$\frac{1}{2}$	620		_	620
13	38	Maine	Bangor	10	$\frac{1}{2}$ $\frac{1}{5}$	575	_	-	575
14	46	Maine	Bangor	10	$\frac{5}{2}$ $\frac{10}{50}$	500	- 50	-	550
15	22	Maine	Bangor	10	$\frac{1}{2}$ $\frac{1}{10}$	1 400	50	-	450
16	32	Maine	Brewer	10	2 00 2 00	618	100	_	510
17	43	Maine.	Brewer	10	3 00	690	100	-	600
18	45	Maine	Brewer	10	8 00	200	-	-	200
<b>1</b> 9	41	America	Brunswick	10	5 00	500	-05	-	100
20	31	America	Camden	10	2 00	5-5	20	-	545
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52	39	America	Dexter	10	1 40	400	-	-	460
22	58	Maino	Dover	10	1 10	400	-	-	450
54	30	America	Fairfield	10	2 00	200	300	50	600
25	46	America	Houlton	10	1 /0	420	-		420
26	18	America	Madiuon	10	$\frac{2}{2}$ 00	600	- 10	100	700
97	11	Amorios	Oakland	10	$\frac{2}{2}$ 00	540	10	-	550
50	57	Amorico	Dittofold	10	2 00	312	100	-	412
40 90	27	Amorico	Pittafield	10	1 75	370	- 1	100	470
- 40 - 90	201	Amorico	Pool-land	10	1 75	470	- 1	-	470
91	102	America	Rockland	10	2 50	765	-	100	865
16	40	A merica	Rockland	9	2 25	648		-	648
02/	40	America	Rockland	10	$2^{-}00$	604	-	55	659
33	41	Maine	Saco	10	3 00	702	300		1002
<b>ð</b> 4	43	maine	saco	10	3 00	456	50	-	506

Number of return.	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.
61 62 63 64 65 66 67	- - \$90 - -	$\begin{array}{c} \$150\\ 100\\ 225\\ 200\\ 200\\ 130\\ 120\\ \end{array}$	\$123 75 150 150 75 120 60	$\$30\ 35\ 50\ 50\ 20\ 45\ 40$	- \$ 8 8 8 - 8 - 8 -	- \$75 - -				

# WITH FAMILIES-CONTINUED.

# WITHOUT FAMILIES.

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o board	00 01	φu φu	10222	-	10	100	142

# WITH FAMILIES.

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2	-	240	100	25		- 3	:	\$13	125	506	144	
- 3	\$108	267	120	50	1	4	-		65	614	114	
4	96.	260	130	38	- 1		-		125	649		
$\overline{5}$	-	162	75	44		- 3			125	409	191	
-6	108	160	80	47		4		26	85	510	111	
7	-	375	150	50		4	-		125	704	296	
8	-	210	100	41		- 8		20	150	529	134	
-9	108	255	130	50		4	-		85	632	43	
10	120	211	79	48		5		20	80	563	87	
11	96	210	85	46	-		-		100	537	63	
12	108	260	100	45	-		-		.82	595	25	
13	-	260	100	48	-	1	-		100	508	67	
14	84	160	58	47	-		-		75	424	126	
15	72	135	75	- 40		- 3	-		125	450	1	
16	· 96	300	100	44	-				78	618	100	
17	120	215	78	48		- 3		24	132	620	60	
18	-	320	125	52	-		-		<b>15</b> 0	647	53	
19		125	100	28	-			10	45	308	245	
20	-	150	155	30	-	f			35	370	205	
21	96	120	140	34	-	ł			50	440	20	
22	_	145	130	30		10	-		40	355	95	
23	-	230	70	35	- 1	t t	-		100	435	165	
24	-	150	135	25		10		18	50	388	32	
25		175	150	30	- 1				100	455	245	
26	85	200	150	25		10	-		80	550		
27		150	120	$\overline{20}$		10		25	50	375	37	
$\overline{28}$	-	150	110	25	-		-		65	350	120	
29	-	175	145	30		8			30	388	82	
$\overline{30}$	_	150	150	50		- 8		25	75	458	407	
31	_	240	100	50		8	-	20	50	448	200	
32	90	280	1:30	50		- Si	-		42	600	59	
33	-	267	250	35	-		_		198	750	252	
34	-	288	120	30	_		_		137	575		\$69
×.		200	120	0.					101	0.0	1	φου
		3							1			

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#### CARPENTERS DAYS LOST. Amount of mortgage. Number working for wages. Wages decreased-per cent. Rate of interest on mortgage. 1 Number in family. Wages increased per cent. Value of homes. Owning homes. From sickness. Other causes. Inability to obtain work. Total. $\begin{array}{c} 61 \\ 62 \\ 63 \\ 64 \\ 65 \\ 66 \\ 67 \end{array}$ $\$1,200\ 1,500\ 1,500$ 74 1 1 1 1 741 2111321\_ 4333442 .06 ī \$300 ------ - -1 --.12-1,300 700 800 40 44 4 $1\\1\\1\\1$ \_ -----8 8 CARPENTERS 123456100 94 80 75 15 $100 \\ 104 \\ 80 \\ 85 \\ 21$ -----1 ----------101 1 ---\_ 1 $\frac{1}{1}$ -10 \_ \_ 6 11 $^{1}_{1}$ -120 120MASONS .05 6 3212 50\$2,500 700 \$760 11 44553374544553364623234456345446551111112111111111111111212121212111 $\begin{array}{r} 656\\ 600\\ 80\\ 600\\ 546\\ 700\\ 737\\ 709\\ 775\\ 750\\ 760\\ 280\\ 101\\ 37\end{array}$ $\begin{array}{r} 652\\ 889\\ 932\\ 548\\ 70\\ 80\\ 795\\ 80\\ 70\\ 71\\ 28\\ 10\\ 41\\ 10\\ 64\\ \end{array}$ -\_ \_ -6 \_ $12 \\ 13$ 16 -1,200 - - - -1 -121,5001,800.06 300 $1 \\ 1 \\ 1$ .06 3 12400 -\_ \_ \_ 14 \_ \_ 10 \_ \_ -10 $\frac{8}{5}$ 1 \_ \_ ---1,800 1,500 11 1 -11 6 950 ---1,200 900 1,000 1,800 6 4 10 48 3 2 ---1 1 1 1 .06 4 $12 \\ 1 \\ 25 \\ 81 \\ 93$ 1 1 1 1 1 $\begin{array}{c} 4\\ 27\\ 81\\ 93\\ 36\end{array}$ 1,300 $1\\1\\1\\1\\1\\1$ 900 1,350 -36 1,2001,000--400 16 16 \_ .05 1 4 2,000 2,500 1 6 1 1 .05 -900 700

### 20

Number of return.

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-119 \_

119

.06

Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
$\begin{array}{c} 61 \\ 62 \\ 63 \\ 64 \\ 65 \\ 66 \\ 67 \end{array}$	Weekly. Weekly. Weekly. Weekly. Weekly. Weekly. Irregularly.	No No No No No	No Yes Yes No Yes No	No Yes Yes No Yes No	No Yes No No Yes No	Yes No Yes Yes No Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	No. No. No. No. No. No.

# WITH FAMILIES-CONCLUDED.

# WITHOUT FAMILIES-CONCLUDED.

$\frac{1}{2}$	Weekly	No	No No	No No	No No	Yes No	Yes No	Yes No	No. No.
$\frac{3}{4}5$	Weekly Weekly Irregularly	No No No	No No	No No No	No No No	No No Yes	No No Yes	No No Yes	No. No. No.
6	Irregularly	No	No	No	No	Ño	No	Ño	No.

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# WITH FAMILIES-CONCLUDED.

		1	1		1				1
1	Irregularly	No	No	Yes	Yes	Yes	Yes	Yes	No.
$^{2}$	Irregularly	No	No	Yes	No	No	Yes	Yes	No.
3	Weekly	No	Yes	No	No	Yes	Yes	Yes	No.
4	Weekly	No	No	No	No	No	Yes	No	No.
5	Weekly	No	No	No	No	Yes	Yes	Yes	No.
-6	Weekly	No	Yes	Yes	Yes	Yes	Yes	Yes	No.
-7	Weekly	No	No	No	No	No	Yes	Yes	No.
-8	Weekly.	No	No	Yes	Yes	No	Yes	Yes	No.
- 9	Weekly	No	No	No	No	No	Yes	Yes	No.
10	Weekly	No	Yes	Yes	Yes	Yes	Yes	Yes	No.
11	Weekly	No	No	No	No	No	Yes	Yes	No.
12	Weekly	No	No	No	No	Yes	Yes	Yes	No.
13	Weekly	No	No	No	No	No	Yes	Yes	No.
14	Weekly	No	No	No	No	No	Yes	Yes	No.
15	Weekly	No	No	No	No	No	No	No	No.
16	Weekly	No	No	No	No	Yes	Yes	Yes	No.
17	Weekly	No	No	Yes	Yes	Yes	Yes	Yes	No.
18	Weekly	No	No	No	No	Yes	Yes	Yes	No.
19	Weekly	No	No	No	No	Yes	Yes	Yes	No.
$\overline{20}$	Irregularly	No	No	No	No	Yes	Yes	Yes	No.
21	Irregularly	No	No	No	No	Yes	Yes	Yes	No.
$\overline{22}$	Irregularly	No	Yes	Yes	Yes	No	Yes	Yes	No.
$\bar{23}$	Irregularly.	No	No	No	No	No	Yes	Yes	No.
94	Irregularly.	No	Yes	Yes	Yes	Yes	Yes	Yes	No.
25	Irregularly	No	No	Ño	No	Yes	Ŷes	Yes	No.
26	Weekly	No	Yes	Yes	Yes	Yes	Ŷes	No	No.
57	Irregularly	No	Ŷes	Ño	Ño	Yes	Ŷes	Yes	No.
58	Irregularly	No	No	No	No	Ŷes	Yes	Ŷes	No.
50	Irrogularly	No	Yes	No	No	No	Yes	Ŷes	No.
20	Wookly	No	Vos	Yes	Ves	Ves	Yes	Ves	No.
91	Fortnightly	No	V 09	105 Vas	Ves	No	Ves	Ves	No.
201	Wookly	No	Vos	No	No	No	Ŷes	Ŷes	No.
04 99	Worthightly	No ····	V 09	No	No ····	Vos	Y 49	V09	No
00 94	Fortnightly	No	No	No ····	No	No	Vos ····	No	Voa
94	rormignuy	1 <sup>20</sup>	in the second seco		1.0		169		103.
		1	5	1			1	ι	

# MASONS

						EARNINGS.				
Number of return.	Age.	Where born.	Present residence.	Number of hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.	
$\frac{1}{2}$	$47 \\ 30 \\ 21$	New Brunswick Maine America	Augusta Bangor Calais	10 10 10	$egin{array}{c} 8 \\ 1 & 75 \\ 2 & 50 \\ 2 & 00 \end{array}$	\$130 450 400	\$205 _ _	-	\$335 450 400	

# MASON TENDERS

						1		
1 45	Ireland	Bangor	10.1	60	\$240	\$100	-	\$340
-2 6(	Ireland	Bangor	10 1	50	273	78	-	351
3 5:	2 Maine	Bangor	10'1	50	300	-120	\$150	570
4 46	Ireland	Bangor	10.1	65	310	76	125	511
5 6	Maine	Bangor	10.1	50	230	75	_	305
6 28	Ireland	Biddeford	10.1	75	476	25	- 1	501
753	Ireland	Biddeford	10'1	75	406	80	-	486
8 5	Ireland	Brewer	10:1	50	270	60	$-200^{1}$	530
9 5	5 Maine	Brewer	10 1	50	306	-	_	306
10 5	Ireland	Brewer	10.1	50	255	100	-	355
11 40	Ireland	Brewer	10 1	50	250	50	-	300
12 28	America	Houlton	10 1	75	525	-	_	525
13 4:	Ireland	Lewiston	10 1	50	405	26	160	591
14 40	Maine	Old Town	10.1	50	297	30	125	452
15 24	America	Rockland	10.1	75	500	-	130	630

# PAINTERS

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-						· · · · · · · · · · · · · · · · · · ·			
					\$	1			1
1	23	America	Anson	10	1.75	5 8425	- 1		\$425
- 2	61	Maine	Augusta	10	3 00	)  900	I – .	\$275	1175
- 3	50	New Brunswick	Bangor	10	2 5(	) 550	-	-	550
4	48	Maine	Bangor	10	2 50	) 510	\$25	-	535
5	35	Maine	Bangor	10	$2^{-23}$	5 460		100	560
-6	38	Maine	Bangor	10	2 2?	5  630	-		630
7	41	Maine	Bangor	-10	$2^{-2}$	500	~	-	500
- 8	47	Maine	Bangor	-10	$2^{-2i}$	5 437			437
-9	32	Maine	Bangor	10	2 25	5  369	100	-	469
10	30	Maine	Bangor	10	$2^{-}2^{\circ}$	5  498	-	-	498
11	40	Nova Scotia	Bangor	10	2 25	5 405	-	-720	1125
12	45	Maine	Bangor	10	2 2?	5 437	-	200	637
13	46	Maine	Bangor	10	2 2?	5 400	25	_	425
14	57	Maine	Bangor	10	2 00	380	50	-	430
15	31	Maine	Bangor	10	2 00	400	63		463
16	44	America	Bath	10	2 00	) 520	_	-	520
17	38	England	Biddeford	10	1 73	5 500	_	80	580
18	35	Maine	Brewer	10	2 50	500	-	_00	500
19	43	Maine	Brewer	10	2 2	518	_	_	518
20	48	Nova Scotia	Brewer	10	$\overline{2}$ $\overline{0}$	1 408	_	_	408
21	28	Massachusetts	Brewer	10	1 78	395	_		395
22	37	America	Calais	10	2 00	400	78	_	478
23	39	America	Deer Isle	10	2 50	715		_	715
24	32	America	Fairfield	10	1 50	442		-	44.2
$\overline{25}$	42	Maine	Old Town	- <u>î</u> ŏ	2 50	375	100	_	475
26	26	Maine	Old Town	10	$\overline{2}$ $\widetilde{\alpha}$	350	50	-	400
27	36	Maine	Orono	$-\hat{1}\check{0}$	$\frac{5}{2}$ 27	338	25	_	363
28	48	America	Pittsfield	10	1 50	425		50	475
29	34	America	Pittsfield	10	Ĩ 50	440	_	~	440
30	44	America	Rockland.	ĩŏ	$\frac{2}{2}$ 00	600	50	-	650
	1			<b>^</b>	- 00	1 300		-	000

# WITHOUT FAMILIES-CONTINUED.

Number of return.	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.
$\frac{1}{2}$	Board Board Board	\$185 180 156	\$30 50 140		-	-	$\$120\ 220\ 104$	\$335 450 400		
W	ITH F	AMILI	ES.							
1	\$54	\$120	\$50	\$33	-	-	\$53	\$310	\$30	

1	<b>\$54</b>	\$120	\$50	\$33			-	\$53	\$310	\$30	
2	60	140	60	40	-		-	51	351		
3	72	225	63	43	- 1		-	47	450	120	
4	72	250	100		-		-	19	476	35	
<b>5</b>	48	108	45	40	1	\$3	-	61	305		
-6	60	$2^{63}$	175	27	- 1		-	25	50	-	\$49
$\overline{7}$	- 1	169	150	50		6	-	75	450	36	
-8	72	196	100	40		- 3	-	119	530		
-9	60	95	50	43	-		-	58	306		
10	-	155	60			2	-	75	325	30	
11	60]	140	50	38	- 1		-	12	300		
12	100	130	105	20			-	60	415	110	
13	72	240	162	35		12	-	70	591		
14	72	230	80	43	-		-	27	452		
15	96	120	125	44		6	\$35	74	500	130	
1											

# WITH FAMILIES.

1						1					
1	\$ 96	\$140	\$135	\$34	-		-	\$ 50	<b>\$</b> 455	-	\$30
2	180	360	125	90		\$1	-	491	1,250	-	75
- 3	120	213	80	48	-		-	89	550		
-4		263	105	50	-		-	95	513	\$22	
5	84	275	110	40	-			51	560		
-6	-	165	75	50		- 3	\$21	150	464	166	
$\overline{7}$	96	205	85	41		- 3	-	75	505	-	5
-8]	84	103	45	42	-		-	163	437		
- 91	96	210	68	40	-	i	-	55	469		
10	-	198	95	41	-		-	75	409	89	
11	132	460	155	50	-		-	250	1,047	78	
12	-	162	58	46		-7	-	200	473	164	
13	96	200	65	44	-		-	20	425		
14	72	104	45	38	-		30	141	430		
15	84	195	72	43	-		-	69	463		
16	100	200	150	25	-			10	485	35	
17	72	390	100	30	-		- 1	20	612	-	32
18	108	330	90	42	-		-	10	580		80
19	96	] 155	53	40		- 3	-	125	472	46	
20	84	195	58	36	-		-	35	408		
21	84	145	58	38	- 1		-	70	395		
22[		160	125	30		10	- 1	50	375	103	
23	-	230	120	40	-		-	75	465	250	
24	90	160	150			10	- 1	40	480	-	38
25	-	275	75			- 3	-	84	475		
26	84	140	60	36	-			80	400	]	
27	60	110	38	36		<b>2</b>	-	100	346	17	
28	-	156	110	25	- 1		- 1	50	341	134	
$\bar{29}$	85	170	140	20	-			25	440		
30	100	180	148	40	_		- 1	50	518	132	
- 0	200										

#### DAYS LOST. A mount of mortgage. Number working for wages. on Wages decreased-per cent, Wages increased-per cent. Number in family. Rate of interest mortgage. Value of homes. Owning homes. From sickness. Other causes. Inability to obtain work. Total. 75 90 78 $75 \\ 124 \\ 104$ - - -\_ $^{1}_{1}$ 1 1 1 --34 .05 26 î \_ MASON TENDERS 10 45 555 $\begin{array}{c} 60\\ 70\\ 24\\ 71\\ 92\\ 16\\ 19\\ 74\\ 100\\ 65\\ 104\\ 4\\ 17\\ 84\\ 18\end{array}$ -335625942453752 1 1 1 1 1 - - - - $65 \\ 24 \\ 60 \\ 89 \\ 16 \\ 19 \\ 54 \\ 100 \\ 65 \\ 101$ ..... \_ 1221113111122226 5 3 \_ \$5,000 -.06 \$500 -1 -----20-\_ $\frac{-}{200}$ 1 900 .06 3 1 1 1 1 --4 17 \_ 4 80 \_ 18 PAINTERS 20 41 $\begin{array}{c} 61\\ 4\\ 76\\ 85\\ 100\\ 24\\ 87\\ 110\\ 85\\ 85\\ 85\\ 124\\ 110\\ 82\\ 65\\ 44\\ 18\\ 104\\ 74\\ 100\\ 82\\ 65\\ 104\\ 78\\ 52\\ 18\\ 8\\ 9\\ 9\\ 85\\ 100\\ 130\\ 21\\ 11\\ 4\end{array}$ -\_ 254563424394424547343353532354 . . . . . . . . . 1211211111321111211111111111211.10 4 $\overline{\mathbf{5}}$ $71\\80\\80\\24\\87\\85\\85\\108\\100$ -\$1,400 $\mathbf{5}$ 1 10 10 1.600 1 -25\_ --1,200 1 ................ -16\_ -1,400 10 1 94 76 65 6 10 . . . . . . . . . . . ----1,200 1,000 \_ 6 -44 11111111111111 $\begin{array}{c} 14 \\ 92 \\ 69 \\ 90 \\ 78 \\ 52 \end{array}$ 4 -125 -- - -10 - $1\\1$ 10 8 $\begin{array}{c} 6 \\ 85 \\ 95 \\ 125 \\ 18 \end{array}$ 3 \_ 1,400 1 \_ $\mathbf{5}$ \_ 53 \_ \$650 2,0001 .05 11 4

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# MASONS

Number of return.

 $\frac{1}{2}$ 

 $\begin{array}{r}
 1 \\
 2 \\
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 15 \\
 \end{array}$ 

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Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
$1 \\ 2 \\ 3$	Irregularly	No	No	No	No	No	No	No	No.
	Weekly	No	No	No	No	No	No	No	No.
	Weekly	No	No	No	No	No	No	No	No.

# WITHOUT FAMILIES-CONCLUDED.

# WITH FAMILIES—CONCLUDED.

$1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 12 \\ 13 \\ 14 \\ 15 \\ 15 \\ 15 \\ 15 \\ 15 \\ 15 \\ 15$	Weekly Weekly Weekly Irregularly. Fortnightly Fortnightly Weekly Irregularly. Weekly Weekly Weekly Weekly Weekly Weekly Weekly	No No No No No No No No No No No	No No No No No No No No Yes Yes	No No No Yes No No No No Yes No No Yes No	No No No Yes No No No Yes No No No	Yes No No No No No No Yes Yes Yes	Yes Yes Yes Yes No No Yes Yes Yes Yes Yes	Yes Yes Yes No Yes No Yes No Yes Yes	No. No. No. No. No. No. No. No. No. No.
	, comp								1.01

# WITH FAMILIES-CONCLUDED.

1		1						1	1
1	Irregularly	No	No	No	No	$Yes \dots$	Yes	No	Yes.
<b>2</b>	Irregularly	No	No	No	No	No	No	No	Yes.
3	Weekly	No	No	No	No	No	Yes	No	No.
4	Weekly	No	No	No	No	No	Yes	Yes	No.
5	Weekly	No	No	No	No	No	Yes	No	No.
6	Weekly	No	No	Yes	Yes	Yes	Yes	Yes	No.
$\overline{7}$	Weekly	No	No	No	No	Yes	Yes	No	Yes.
8	Weekly	No	No	No	No	No	No	No	No.
- 9	Weekly	No	No	No	No	No	Yes	No	No.
10	Weekly	No	No	No	No	No	Yes	Yes	No.
11	Weekly	No	No	No	No	No	Yes	Yes	No.
12	Weekly	No	No	Yes	Yes	Yes	Yes	Yes	No.
13	Weekly	No	No	No	No	No	Yes	No	No.
14	Weekly.	No	No	No	No	$Yes \dots$	Yes	No	No.
15	Weekly	No	No	No	No	No	Yes	No	No.
16	Irregularly	No	No	No	No	Yes	Yes	Yes	No.
17	Weekly	No	Yes	No	No	No	No	No	Yes.
18	Weekly	No	No	No	No	No	No	No	Yes.
19'	Weekly	No	No	No	No	$Yes \dots$	Yes	$Yes \dots$	No.
<b>20</b>	Weekly	No	No	No	No	No	Yes	No	No.
21	Weekly	No	No	No	No	No	Yes	No	No.
22	Irregularly	No	Yes	Yes	Yes	Yes	Yes	Yes	No.
23	Irregularly	No	No	No	No	$Yes \dots$	Yes	Yes	No.
24	Irregularly	No	Yes	Yes	Yes	No	No	No	Yes.
25	Weekly	No	No	No	No	Yes	Yes	No	No.
26	Irregularly	No	No	No	No	No	Yes	No	No.
27	Weekly	No	No	No	No	Yes	Yes	Yes	No.
$\overline{28}$	Weekly	No	No	No	No	No	Yes	Yes	No.
29	Weekly	Yes	No	No	No	Yes	Yes	No	No.
30	Irregularly	No	No	No	No	Yes	Yes	Yes	No.
- *									
			1	·					

# PAINTERS

							:	EARN	INGS	
Number of return.	Age.	Where born.	Present res	dence.	Number hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
$     \begin{array}{c}       1 \\       2 \\       3 \\       4     \end{array} $	23 22 22 24	Maine Maine Maine America	Bangor Bangor Bangor Bath	•••••	$     \begin{array}{c}       10 \\       10 \\       10 \\       10 \\       10     \end{array} $			\$75 - 40 -		\$445 400 450 550

# BLACKSMITHS

			\$	~ ~				
136	America	Anson	101	80	\$530	-	-	\$530
2 35	Maine	Bangor	10 2	50	750	~	-	750
3 46	Maine	Bangor	10 2	25	650	-	-	650
4 43	Sweden	Bangor	10 2	25	650	-	i -	650
5 42	Maine	Bangor	10 2	-00	585	-	-	585
6 30	Maine	Bangor	10 2	-00	500	-	-	500
-7[54]	Maine	Bangor	10 2	-00	620	-	\$200	820
8 33	Maine	Bangor	10 2	-00	600	~	-	600
9 36	Maine	Bangor	10.2	-00	608	-	-	608
10 55	Maine	Bangor	10 2	-00	600		200	800
11 60	Maine	Bangor	10 1	75	450		-	450
12 35	Maine	Bangor	10 1	75	532	-	-	532
13 45	America	Bath	10 2	50	750	-	- 1	750
14 44	America	Bath	10 2	-00	550	-	- 1	550
15 50	Maine	Brewer	10 2	50	750		- 1	750
16 40	New Brunswick	Brewer	10 2	-00	600		-	600
17 43	America	Brunswick	102	-00	600		- 1	600
18 25	America	Brunswick	101	75	520		-	520
19 35	America	Calais	10 1	75	510		- 1	510
20 35	America	Camden	10 1	75	525	-	- 1	525
21 43	America	Camden	101	50	423		- 1	423
22 38	America	Dexter,	101	50	440	_	-	440
23 36	America	Dover	102	-00	598		-	598
24 39	Ireland	Lewiston	10 2	- 00	572	_		572
25 33	America	Madison	10 2	-00	600	-	-	600
26 47	America	Oakland .	10 2	ŏŏ	600	_	- I	600
27 28	America	Pittsfield	1 กิ๊บไม้	50	442	_		442
28 44	America	Rocknort	- 0 1	50	450	_	1 _	150
20 42	America	Vinalhaven	63	- 00	600	_	1	600
		· mama, on	04	00	000	-	-	000
	· · · · · · · · · · · · · · · · · · ·						1	1

# BLACKSMITHS

122232	28 America 23 Maine 22 Maine	Roekland Bangor Bangor	9 10 10	$\begin{array}{c c c c c c c c c c c c c c c c c c c $			\$600 473 425
-		Dangot	10	1 00 110	[ _	ļ	120

# WITHOUT FAMILIES.

		Expenses.														
Number of return.	Rent.	Food.	Food. Clothing. Fuel and light. Society dues. Life insurance. Other things. Total.													
$1 \\ 2 \\ 3 \\ 4$	Board Board Board Board	\$180 180 200 260		-		- - \$35	\$ 25 160 200 25		\$200 105							

# WITH FAMILIES.

1	_	\$150	@160	\$95				\$50	\$995	£145	
- 2	\$120	9100	125	48	_	\$2	- 00	950 95 - 94	750	\$14J	
- 2	φ <b>ι</b>	960	100	36		-φ0 Λ	φ4	150	550	100	
Ă	96	100	100	20		4	_	175	569	200	
- 5		100	10	40	-		-	100	405	190	
Ř	on	145	57	40 90	-	0	-	100	400	100	
- 7	00	975	107	32		- 6	-	120	400	20	
6	109	210	120	40		2	-	195	500	10	
6	100	105		00		្ទ	-	120	000	100	
10	-	100	10			0	-	100	428	100	
10	-	320	120	43		2		119	040	150	
끐	-	90	38	30	-		-	200	368	82	
12	- 10-	325	100	38		2		61	532	0.07	
13	120	110	120	30	-		-	1 72	525	225	
14	100	160	125	35	-		-	35	455	95	
19		225	85 85	47		5	-	100	462	288	
16	108	165	55	39		- 3	2	5 75	470	130	
17		200	135	35	-		-	45	415	185	
18	125	130	120	35	-		-	50	460	60	
19	100	150	120	25	-		-	40	435	75	
20	100	150	135	25	-		-	50	460	65	
21	-	170	135	22	-		-	50	377	46	
22	90	140	125	20			-	40	415	25	
23	-	135	100	40	-		-	60	335	263	
24	120	268	90	60		9		25	572		
25	100	155	150	30	-		-	60	495	105	
26	-	175	150	35	-		-	45	405	195	
27	90	140	140	30	-			42	442		
28	108	140	127	25	-		-	50	450		
<b>29</b>	70	160	130	20	-		-	50	430	170	
						1				Ì	

# WITHOUT FAMILIES.

$\frac{1}{2}$	Board Board Board	\$182 185 185	\$65 42 48	- - -	\$6 3 -	 \$ 35 115 150	\$288 345 383	\$312 128 42	

# PAINTERS

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Number of return.		DAYS	Lost.				age.	a		for		
	From sickness.	Inability to obtain work.	Other causes.	Total.	Owning homes.	Value of homes.	Amount of mortg	Rate of interest or mortgage.	Number in family	Number working wages.	Wages increased- per cent.	Wages decreased- per cent.
$1 \\ 2 \\ 3 \\ 4$	 - 29	60 90 70 -	9 14 - -	69 104 70 29		- - - -			1 1 1 1	1 1 1 1		-

# BLACKSMITHS

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18	~		-			7		$\overline{7}$	-	~	-	-	3	1	-	-
19		2	-			11		13	-	-	-	-	3	1	.17	-
20		3	-			1		4			-	-	4	1	-	
21		22	-		-			22	1	1,800	550	.04	5	1		-
22	-		-			$\Pi$		11			-		3	1	-	-
23		10	-		-			5	1	1,500	600	.05	3	1	-	-
24		12	-			6		18	-		-	-	6	1	-	-
20	-		. –			4		4		- 000	-	-	3	1	-	-
20		4	-		-			4	1	900	-	-	6	1	-	-
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48	-		-			4		4	-	-	-	-	3	ĻĻ	-	-10
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# BLACKSMITHS

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	-
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### AND LABOR STATISTICS.

Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
$     \begin{array}{c}       1 \\       2 \\       3 \\       4     \end{array} $	Weekly Weekly . Weekly Irregularly	No No No No	No No No No	No No No No	No No No No	Yes No No Yes	Yes No Yes	Yes No No Yes	No. No. No. No.

# WITHOUT FAMILIES-CONCLUDED.

### WITH FAMILIES-CONCLUDED.

_									
-1234567890112314151617	Irregularly Weekly. Weekly. Weekly. Weekly. Weekly. Weekly. Weekly. Weekly. Irregularly. Irregularly. Fortnightly. Irregularly.	No No No No No No No No No No No No No No No No No	No No	No No No No No No No No No No No No No No No	No No	Yes No Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	Yes Yes	Yes No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	No. No. No. No. No. No. No. No. No. No.
8910 11112 1314 1516 1718 1920 2122	Weekly. Weekly. Weekly. Irregularly. Irregularly. Fortnightly. Fortnightly. Irregularly. Irregularly. Monthly. Monthly.	No No No No No No No No No No No	NO	NO          NOO          NOO	No	No          Yes          Yes	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	No. NO. NNO. NNO. NNO. NNO. NNO. NNO. NN
23 24 25 26 27 28 29	Weekly Irregularly Irregularly Weekly Weekly Irregularly	No No No No No No No	No Yes No No No No No	No Yes No No No No	No Yes No No No No No	No Yes Yes No Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes No No Yes	No. No. No. No. No. No.

# WITHOUT FAMILIES-CONCLUDED.

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And the second second

# LABORERS

							Earn	INGS.	•
Number of return.	Age.	Where born.	Present residence.	Number hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
$\begin{array}{c} 1\\ 2\\ 3\\ 4\\ 5\\ 6\\ 7\\ 8\\ 9\\ 10\\ 11\\ 12\\ 13\\ 14\\ 15\\ 16\\ 17\\ 18\\ 9\\ 20\\ 223\\ 24\\ 5\\ 26\\ 27\\ 28\\ 29\\ 30\\ 1\end{array}$	62253345064451486146626685565495555652405555555555555555555555555555555	Maine Maine Canada Ireland Maine Canada Canada Canada Canada Canada Canada Canada Canada Canada Canada Canada Canada Canada Canada Canada Canada Maine Ireland Maine Ireland America Canada America Canada Canada Maine Ireland America Canada	Augusta Augusta Bangor Bangor Bangor Bangor Bangor Bangor Bangor Bangor Bangor Bangor Biddeford Biddeford Biddeford Biddeford Biddeford Biddeford Biddeford Biddeford Biddeford Biddeford Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Brewer Browe	$\begin{array}{c} 10\\ 11\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\$	$\begin{array}{c} \$ \\ 2 \\ 2 \\ 000 \\ 1 \\ 500 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 1 \\ 500 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\$	$\begin{array}{c} \$304\\ 456\\ 403\\ 381\\ 420\\ 350\\ 405\\ 420\\ 500\\ 250\\ 250\\ 250\\ 250\\ 250\\ 300\\ 450\\ 375\\ 350\\ 364\\ 459\\ 312\\ 450\\ 313\\ 280\\ 456\\ 449\\ 300\\ \end{array}$		\$200 - 522 23 - 100 - 520 220 0 672 - - - - - - - - - - - - - - - - - - -	$\begin{array}{c} \$504\\ 456\\ 455\\ 406\\ 420\\ 400\\ 400\\ 475\\ 632\\ 700\\ 475\\ 650\\ 350\\ 650\\ 355\\ 650\\ 365\\ 459\\ 312\\ 528\\ 88\\ 345\\ 528\\ 280\\ 01056\\ 447\\ 600\\ \end{array}$

# LABORERS

-					18	1	i		i i	
1	51	America	Anson	10	11	50	\$441	_ 1	-	\$441
2	25	Maine	Bangor	10	1	50	400		_	400
3	23	Maine	Brewer	10	î.	50	230		_	020
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e

# HOSTLERS

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	00		n		\$					
1	39	Maine	Bangor	14	1 3	3018	468	-	-	\$463
- 2	41	Maine	Bangor	14	1 5	20	ACO			100
5	16.	Y7 among and 4	D	1.1	1 0	10	400	~	-	408
ð	-99	vermont	Bangor	- 14	1 3	301-	475		\$100	575
- 4	45	Maine	Bangor	14	1 -	25	495		4200	405
5	10	Now Youlz	Pangon	11	11 2		120	_		940
- 9	40	New TOIR	Dangor	14	1 2	:D{	4561	-	350	-806
- 6	30	Maine	Bangor	14	1 2	25	425	-	75	500
- 7	55	Maine.	Bangor	14	1 6	10	9.0.0		10	000
. 's	1-	Maine .	Dangoi	14	1 4	- j	<b>520</b>		-	320
- 8	] <b>4</b> 7	maine	Bangor	- 14	11 2	2	4251	-		495
- 9	23	Maine,	Bangor	14	1 1	5	275			0==
10	30	Maine	Dangen	14	1. 1	2	010	-	-	919
10	20	maine	Dangor	14	11	15	400	-	-	400
					l l		- 1	1		
					1		1			

### AND LABOR STATISTICS.

# WITH FAMILIES.

<b>*</b>										
			]	Expens	ES.					
Number of return	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.
1234567890011123145167789002122324256789000000000000000000000000000000000000	$\begin{array}{c} - \\ 860 \\ 600 \\ 72 \\ 844 \\ 484 \\ 72 \\ - \\ 844 \\ 72 \\ - \\ 844 \\ 366 \\ 366 \\ 844 \\ 660 \\ 72 \\ 844 \\ - \\ 72 \\ 844 \\ - \\ 75 \\ 552 \\ 75 \\ 600 \\ 840 \\ 840 \\ 844 \\ - \end{array}$		$\begin{array}{c} \$100\\ 100\\ 100\\ 75\\ 75\\ 75\\ 75\\ 162\\ 100\\ 185\\ 25\\ 20\\ 90\\ 51\\ 45\\ 35\\ 70\\ 80\\ 115\\ 85\\ 120\\ 135\\ 55\\ 0\\ 30\\ 200\\ 200\\ 120\\ 150\\ 150\\ 150\\ 150\\ 150\\ 150\\ 150\\ 15$	$\begin{array}{c} \$35\\ \$35\\ \$35\\ \$35\\ \$38\\ \$35\\ \$28\\ \$44\\ \$32\\ \$40\\ 144\\ \$40\\ 144\\ \$40\\ 144\\ \$38\\ \$40\\ 115\\ \$520\\ 155\\ 205\\ 155\\ 205\\ 144\\ \$35\\ 205\\ 155\\ 205\\ 144\\ 306\\ 28\\ 840\\ 840\\ 840\\ 840\\ 840\\ 840\\ 840\\ 84$	$\begin{bmatrix} & \$11 & 2 \\ - & & - \\ $				\$70 - 76 160 20 273 307 62 37 307 - 270 58 - - 173 - 173 - 146 376 67	\$30- 70 66 100

# WITHOUT FAMILIES.

# WITH FAMILIES.

1	1					1		1			1
1	<b>\$</b> 96	\$240	\$75	\$45	-		-	\$50	\$506	-	\$38
2	72	260	90	43	-		-	25	490	-	22
3	96	194	75	45		\$3	\$12	50	475	\$100	
4	84	185	75	43	-		-	50	437	-	12
5	96	400	160	50	-		_	100	806		
ē	96	138	47	45	-		-	62	388	112	[
Ž	84	96	40	42	-		-	48	310	15	
8	96	238	80	50		2	- 1	35	501	-	76
ğ	60	108	45	39	-	-	_	75	327	48	
10	60	110	50	30	1	3	- 1	25	278	122	1
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		DAYS	Lost.				ige.			or		
Number of return	From sickness.	Inability to obtain work.	Other causes.	Total.	Owning homes.	Value of homes.	A mount of mortg	Rate of interest on mortgage.	Number in family	Number working f wages.	Wages increased- per cent.	Wages decreased- per cent.
$\begin{array}{c}1\\1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\8\\19\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} - \\ - \\ 50 \\ 24 \\ 0 \\ 60 \\ 34 \\ 24 \\ 54 \\ 47 \\ - \\ 15 \\ 22 \\ - \\ 70 \\ 445 \\ 666 \\ 344 \\ 177 \\ 400 \\ 400 \\ - \\ 114 \\ 544 \\ 75 \\ - \\ 66 \\ 82 \\ \end{array}$	- - - - - - - - - - - - - - - - - - -	$\begin{array}{c} 150\\ -35\\ 50\\ 24\\ 104\\ -34\\ 54\\ -33\\ 22\\ 54\\ 104\\ -33\\ 22\\ 54\\ 104\\ 454\\ 171\\ 455\\ -52\\ -96\\ 4\\ 126\\ 6\\ 54\\ 50\\ -6\\ 104\\ \end{array}$		\$ 600 	- - - - - - - - - - - - - - - - - - -	.06	5246623864573263252426545532646	2 2 2 2 2 1 2 2 2 2 2 2 2 2		.05
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$1 \\ 2 \\ 3$	- 5	$10 \\ 35 \\ 120$	$-\frac{2}{25}$	10 37 150	1 - -	\$500 - -			1 1 1	1 1 1		
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12	-	-	-		-	-	_	-	5	1	-	-

# LABORERS

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### AND LABOR STATISTICS.

Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
1 I.M. 23 VI 4 5 VV 7 8 VI 7 8 VI 7 8 VI 7 8 VI 11 15 VV 7 8 VI 11 15 VV 7 13 14 15 15 VV 13 14 15 16 VI 120 VI 223 11 11 18 VV 223 12 11 12 26 11 11 18 VV 120 VI 120 VI 120 VI 120 VI 11 18 10 120 VI 11 120	rregularly fonthly	No No	No            Yes            No            No            No	No            Yes            No            No            No            No            Yes            Yes            No            No	No No No No No Yes Yes Yes Yes Yes No No No No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes No	No	Yes No No Yes No Yes No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes No No No No No No No No No No No No No No No No No	No            No            No            No            Yes            Yes            Yes            Yes            Yes            No            No            Yes            Yes            Yes            Yes            No            No            Yes            No            No            No            Yes            No            Yes            Yes            Yes            Yes	No. No. No. No. No. No. No. No. No. No.

# WITH FAMILIES-CONCLUDED.

WITHOUT FAMILIES-CONCLUDED.

1       Irregularly       No       No       No       No       No       No        No        Yes       Yes	. No. . No. . No.
--	-------------------------

# WITH FAMILIES-CONTINUED.

						1											I
1	Weekly		 	No		No	 NO		NO		No		No.	••	No		Yes.
<b>2</b>	Weekly	• • • • •	 	No		No	 No		No		No	• • • •	No.		No		Yes.
3	Weekly		 	No		No	 Yes	3	Yes	3	No	• • •	Yes		Yes	• • •	No.
4	Weekly		 	No		No	 No		No	•••	No		No.		No.		Yes.
5	Weekly		 	No		No	 No		No		No		No.		No		No.
6	Weekly		 	No	• • •	No	 No		No		Ye	s	Yes		Yes		No.
$\tilde{7}$	Weekly		 	No		No	 No		No		Ye	s	Yes		Yes		No.
ŝ	Weekly	·	 	No		No	 No		No		No	• • •	No .		No		Yes.
9	Weekly		 	No		No	 No.		No		No	••	No		Yes		No.
lŌ	Weekly	·	 	No		No	 No		No		No	••••	Yes		Yes		No.
																	-
	·		 			<u>.</u>			·		<u>.</u>						
		3															

in the second second

# HOSTLERS

							Earn	INGS	
Number of return.	Age.	Where born.	Present residence.	Number hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
	4	Maina	Promon	14	\$ 1.20	0150			0150
$\frac{11}{12}$	48	Maine	Brewer	14	1 30 1 30	448	_	\$400	848
$\tilde{1}\tilde{3}$	35	New Brunswick	Brewer	14	1 30	468	-	φ <u>τ</u> ος	468
14	32	Maine	Brewer	14	1 30	450	-	-	450
15	30	Maine	Brewer	14	1 25	425			425
16	35	Maine	Brewer	14	1 22	425	-	~	425
17	22	Maine	Brewer	14	1 15	375	-		3/5
18	54	A merica	ROCKIANU	10	1 43	016	-	-	510

.
		Expenses.										
Number of return	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.		
$11 \\ 12 \\ 13 \\ 14 \\ 15 \\ 16 \\ 17 \\ 18 \\$	\$60 84 60 72 72 84 60 75	\$240 35 $3$ 145 145 15 125 120	\$ 75 125 58 63 55 70 60 6)		- - - - - - 5		\$ 37 135 58 100 113 56 90 35	\$450 741 387 420 425 425 375 340	\$107 81 30 170			

### WITH FAMILIES-CONTINUED.

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# HOSTLERS

_		DAYS LOST.										
Number of return.	From sickness.	Inability to obtain work.	Other causes.	Total.	Owning homes.	Value of homes.	Amount of mortgage	Rate of interest on mortgage.	Number in family.	Number working for wages.	Wages increased— per cent.	Wages decreased-
$11 \\ 12 \\ 13 \\ 14 \\ 15 \\ 16 \\ 17 \\ 18 \\ 18 \\ 18 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10$	4 - - - 4 10 3	- - - - - 4	$\begin{array}{r} 10\\ 15\\ -\\ 14\\ 13\\ 10\\ 20\\ 2\end{array}$	$\begin{array}{c} 14\\ 15\\ -\\ 14\\ 13\\ 14\\ 34\\ 5\end{array}$		- - - - - - - - - -			6 8 4 3 3 4 3 4 3 4	$     \begin{array}{c}       1 \\       2 \\       1 \\       1 \\       1 \\       1 \\       1 \\       1 \\       1 \\       1   \end{array} $		

Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
$11 \\ 12 \\ 13 \\ 14 \\ 15 \\ 16 \\ 17 \\ 18$	Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly	No No No No No No	No No No No No Yes	No No No No No No No	No No No No No No No	No Yes Yes No No Yes	Yes Yes Yes Yes No No Yes	No Yes Yes No No Yes	No. No. No. No. No. No. No.

## WITH FAMILIES-CONCLUDED.

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### HOUSE FINISH MAKERS

\_\_\_\_\_

						]	Earn	INGS	•
Number of return. Age.	Where born.	Present residence.	Subdivision of work.	Number of hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
$\begin{array}{c} 1 \\ 3 \\ 4 \\ 4 \\ 5 \\ 3 \\ 6 \\ 3 \\ 5 \\ 6 \\ 2 \\ 3 \\ 4 \\ 4 \\ 3 \\ 3 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 2 \\ 4 \\ 5 \\ 3 \\ 2 \\ 2 \\ 2 \\ 3 \\ 3 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 2 \\ 2 \\ 2 \\ 3 \\ 3 \\ 3 \\ 3 \\ 2 \\ 3 \\ 3$	Maine         Maine	Bangor Bangor Bangor Bangor Bangor Brewer Brewer Brewer Bangor	Cabinet maker Cabinet maker Gabinet maker Glazier Glazier Glazier Glazier Glazier Glazier Glazier Mantle maker Mantle maker Mantle maker Mantle maker Mantle maker Mantle maker Mantle maker Mantle maker Sash machine Moulding machine Mou	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	$\begin{array}{c} \$ & 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0$	$\begin{array}{c} \$594\\ \$596\\ 600\\ 580\\ 600\\ 596\\ 600\\ 596\\ 600\\ 600\\ 596\\ 600\\ 1155\\ 520\\ 600\\ 1155\\ 520\\ 610\\ 599\\ 450\\ 610\\ 599\\ 912\\ 908\\ 835\\ 590\\ 600\\ 615\\ 762\\ 600\\ 615\\ 762\\ 610\\ 600\\ 675\\ 600\\ 675\\ 762\\ 775\\ 770\\ 610\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 775\\ 770\\ 770$			$\begin{array}{c} \$594\\ \$594\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$

# GRANITE WORKERS

$ \begin{array}{c} 1 54\\ 2 43\\ 3 51\\ 4 33\\ 5 48\\ 6 42\\ 7 47\\ 8 49 \end{array} $	Maine. America Canada America America America America America	Waterville Calais Biddeford Vinalhaven Vinalhaven Deer Isle Deer Isle	Cutter Cutter Cutter Polisher Polisher Quarryman Quarryman Teamster	$\begin{array}{c} 8\\10 3 50\\10 2 50\\10 2 55\\10 2 50\\10 2 50\\10 2 50\\10 2 50\\10 2 00\\10 2 00\end{array}$		- \$20 - - - 40	\$160 	\$954 770 910 743 604 630 468 596
				10 - 00	1.00	TO	140	000

# WITH FAMILIES.

				Expe	NSES.					
Number of return	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.
$\begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 0 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	$\begin{array}{c} \$108\\ 84\\ -\\ -\\ -\\ 120\\ 96\\ -\\ 132\\ 72\\ 96\\ 60\\ -\\ -\\ -\\ 96\\ -2\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\$	$\begin{array}{c} \$238\\ 140\\ 150\\ 100\\ 100\\ 100\\ 145\\ 245\\ 205\\ 195\\ 375\\ 375\\ 375\\ 375\\ 375\\ 375\\ 375\\ 37$	$\begin{array}{c} \$80\\ 52\\ 52\\ 800\\ 600\\ 900\\ 555\\ 755\\ 1655\\ 600\\ 855\\ 488\\ 500\\ 766\\ 1255\\ 1205\\ 1205\\ 1000\\ 600\\ 600\\ 600\\ 600\\ 600\\ 600\\ 60$	$\begin{array}{c} \$36\\ 36\\ 40\\ 41\\ 36\\ 34\\ 43\\ 36\\ 336\\ 28\\ 336\\ 45\\ 28\\ 336\\ 45\\ 34\\ 40\\ 36\\ 34\\ 40\\ 36\\ 34\\ 40\\ 36\\ 34\\ 40\\ 36\\ 34\\ 35\\ 34\\ 36\\ 34\\ 35\\ 34\\ 35\\ 34\\ 35\\ 35\\ 35\\ 35\\ 35\\ 35\\ 35\\ 35\\ 35\\ 35$	- - - - - - - - - - - - - -	$\begin{array}{c} & & \\$	$\begin{array}{c} \$125\\ 500\\ 1300\\ 966\\ 185\\ 1000\\ 788\\ 1300\\ 1500\\ 2000\\ 2000\\ 2000\\ 2000\\ 2000\\ 2000\\ 2000\\ 2000\\ 2000\\ 2000\\ 2000\\ 755\\ 1422\\ 1225\\ 544\\ 660\\ 1755\\ 2000\\ 665\\ 1000\\ 1000\\ 1225\\ 1200\\ 755\\ 1000\\ 1200\\ 755\\ 1000\\ 1225\\ 1500\\ 250\\ 250\\ 250\\ 250\\ 250\\ 250\\ 250\\ $	$\begin{array}{c} \$587\\ 362\\ 394\\ 3200\\ 470\\ 867\\ 381\\ 500\\ 368\\ 867\\ 700\\ 700\\ 723\\ 562\\ 446\\ 437\\ 500\\ 700\\ 723\\ 562\\ 446\\ 437\\ 700\\ 728\\ 575\\ 575\\ 575\\ 575\\ 575\\ 575\\ 575\\ 501\\ 440\\ 486\\ 503\\ 501\\ 414\\ 402\\ 698\\ 455\\ 513\\ 501\\ 414\\ 402\\ 698\\ 555\\ 579\\ 480\\ 550\\ 550\\ 550\\ 525\\ 625\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 550\\ 525\\ 525$		

# WITH FAMILIES.

$     \begin{array}{c}       1 \\       2 \\       3 \\       4 \\       5 \\       6 \\       7     \end{array} $	- \$96 - 112 - - -	\$350 200 375 165 145 190 190	$\$150 \\ 160 \\ 200 \\ 100 \\ 130 \\ 130 \\ 60 $	\$54 20 48 30 35 30 40	- \$3 - 12 10 - 10 10 10	- - \$35 25 35			\$278 265 88 333 214 210 48	
-7	_	190	60	40	10	- 00	120	420	48	
8	-	175	135	25	10	-	75	420	176	
	1			}					l	{

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# HOUSE FINISH MAKERS

-							1					
		DAYS	Lost.				age.	a		for		1
ACCOL Number of retur	From sickness.	Inability to obtain work.	Other causes.	Total.	Owning homes.	Value of homes.	A mount of mortg	Rate of interest o mortgage.	Number in family	Number working   wages.	Wages increased- per cent.	Wages decreased- per cent.
123456789011123141561718190212232425267890313233453637899041423	- 4 4 - 2 - 5 - 4 - 4 - 5 - 4 - 5 - 4 - 5 - 4 - 5 - 4 - 5 - 4 - 5 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7		$ \begin{array}{c} 7\\ 14\\ -\\ 0\\ 8\\ 4\\ -\\ 0\\ 2\\ 10\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\$	7 $14$ $4$ $4$ $14$ $4$ $8$ $8$ $4$ $ 30$ $4$ $         -$		\$1,200 1,800 - - - 2,500 1,400 - - - - - - - - - - - - - - - - - -	\$500 200- - - - - - - - - - - - - - - - -		53322354482253246653334245554544566643355455448223			

### GRANITE WORKERS

-									
Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Weekly Weekly	No            No	NO            NO	No           No	No           No	Yes Yes Yes No No No No Yes	Yes Yes	Yes Yes	NOO. NNNNNNNN

# WITH FAMILIES-CONCLUDED.

WITH FAMILIES-CONCLUDED.

1	fonthly	No	Yes	No	No	Yes	Yes	Yes	No.
2 V 3 H 4 V	Veekly Fortnightly Weekly	NO NO NO	No Yes Yes	NO Yes No	NO Yes No	Yes Yes	Yes Yes	Yes Yes	NO. NO. NO.
5 V 6 N	Weekly	No No	No Yes	No No	No No	Yes Yes	Yes Yes	Yes Yes	No. No. No
8	Weekly	No	Yes	Yes	Yes	No	Yes	Yes	No.

## SLATE WORKERS

						-	EARN	INGS.	
Number of return Age.	Where born.	Present residence.	Subdivision of work.	Number hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
$\begin{array}{c} 1 \ 400 \\ 2 \ 35 \ 800 \\ 3 \ 500 \\ 4 \ 35 \\ 5 \ 44 \\ 35 \\ 5 \ 44 \\ 35 \\ 5 \ 44 \\ 35 \\ 5 \ 44 \\ 35 \\ 5 \ 44 \\ 10 \ 27 \\ 11 \ 35 \\ 26 \\ 11 \ 25 \\ 64 \\ 11 \\ 12 \ 56 \\ 11 \\ 12 \ 56 \\ 11 \\ 12 \ 56 \\ 11 \\ 12 \ 56 \\ 12 \\ 22 \\ 33 \\ 22 \\ 34 \\ 44 \\ 22 \\ 35 \\ 36 \\ 22 \\ 35 \\ 22 \\ 34 \\ 44 \\ 25 \\ 44 \\ 19 \\ 36 \\ 22 \\ 35 \\ 22 \\ 34 \\ 44 \\ 22 \\ 35 \\ 36 \\ 35 \\ 22 \\ 31 \\ 25 \\ 31 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 25 \\ 31 \\ 31 \\ 31 \\ 31 \\ 31 \\ 31 \\ 31 \\ 3$	Maine . Sweden Maine . Sweden Nova Scotia Maine . Maine . Maine . Maine . Canada Maine . Sweden Sweden Sweden Wales Ireland Ireland Ireland Maine Wales Wales Maine Maine Maine Maine Maine Sweden Sweden Sweden Sweden Maine	Brownville Brownville Monson Brownville Monson Brownville Brownville Brownville Brownville Monson Monson Monson Monson Monson Monson Monson Monson Monson Monson Monson Brownville Brownville Brownville Brownville Brownville Brownville	Dump man Dunp man Dump man Dump man Dump man Engineer Laborer Laborer Laborer Laborer Laborer Laborer Laborer Splitter	100 100 100 100 100 100 100 100 100 100	$\begin{array}{c} \$ 1 500\\ 1 1 355\\ 3 500\\ 1 1 1 355\\ 1 500\\ 1 1 1 355\\ 0 1 1 1 1 550\\ 1 1 1 1 550\\ 1 1 1 1 1 550\\ 2 5 550\\ 0 00\\ 0 00\\ 0 0 0\\ 0 00\\ 0 00\\ 0 0\\ 0$	$\begin{array}{c} \$360\\ 3500\\ 2700\\ 2700\\ 2700\\ 312\\ 3500\\ 688\\ 312\\ 3755\\ 1700\\ 3600\\ 3850\\ 38$	\$25 - 500 - 255 - 1000 - - 500 - 500 - - 500 - - - - - - -	\$200 - - 3755 210 - 100 - - - - - - - - - - - - - - - -	$\begin{array}{c} \$385\\ 350\\ 350\\ 250\\ 2750\\ 312\\ 750\\ 278\\ 368\\ 412\\ 375\\ 370\\ 360\\ 300\\ 300\\ 300\\ 300\\ 300\\ 350\\ 400\\ 350\\ 400\\ 350\\ 400\\ 385\\ 510\\ 300\\ 350\\ 480\\ 480\\ 480\\ 385\\ \end{array}$

### LIME WORKERS

$ \begin{array}{r} 1 38 \\ 2 45 \\ 3 41 \\ 4 45 \\ 5 45 \\ 6 30 \\ 7 38 \\ 9 43 \\ 9 48 \\ \end{array} $	A merica A merica A merica A merica A merica A merica A merica A merica	Rockland Rockport Rockland Rockland Thomaston Thomaston Thomaston Thomaston	Quarryman Quarryman Quarryman Engineer Teamster Kiln tender Linne burner. Cooper		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	\$120 - 100 - - - - -	\$900 750 650 800 645 500 600 625 486
948	America	Thomaston	Cooper	10 1 75 486	5 -	-	486

# WITH FAMILIES.

				Expe	NSES.					
Number of return.	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.
$\begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 2 \\ 13 \\ 4 \\ 15 \\ 16 \\ 7 \\ 8 \\ 9 \\ 2 \\ 1 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2$	$\begin{array}{c} \$48\\ 48\\ 72\\ 66\\ -\\ 48\\ -\\ 66\\ 60\\ 56\\ -\\ -\\ 60\\ -\\ -\\ 60\\ -\\ -\\ 60\\ 60\\ 60\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\$	\$175 1800 1800 1655 172 1955 2155 2155 2155 2250 1755 1655 2255 26555 2655 2655 2655 2655 2655 2655	$\begin{array}{c} 850\\ 555\\ 100\\ 405\\ 400\\ 500\\ 500\\ 500\\ 500\\ 500\\ 5$	\$28 \$28 \$20 20 20 20 20 20 20 20 20 20 20 20 20 2		- - - - - - - - - - - - - - - - - - -	$\begin{array}{c} \$84\\ 40\\ 25\\ 35\\ 20\\ 10\\ 125\\ 40\\ 152\\ 98\\ 40\\ 100\\ 75\\ 20\\ 60\\ 60\\ 60\\ 81\\ 35\\ 50\\ 88\\ 20\\ 88\\ 20\\ 110\\ 60\\ 81\\ 35\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 25\\ 50\\ 88\\ 20\\ 20\\ 88\\ 20\\ 20\\ 88\\ 20\\ 20\\ 88\\ 20\\ 20\\ 88\\ 20\\ 88\\ 20\\ 20\\ 88\\ 20\\ 88\\ 20\\ 88\\ 20\\ 80\\ 88\\ 20\\ 88\\ 88\\ 20\\ 88\\ 20\\ 88\\ 20\\ 88\\ 20\\ 88\\ 20\\ 88\\ 20\\ 88\\ 20\\ 88\\ 20\\ 88\\ 20\\ 88\\ 80\\ 80\\ 80\\ 80\\ 80\\ 80\\ 80\\ 80\\ 8$	3355	- \$345 - - - 112 140 76 38 90 170 - 70 138 40 200 200	\$58 404 22 47 47

# WITH FAMILIES.

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# SLATE WORKERS

-														
			DAYS	Lost.					ige.	-		for	1	
Number of return	From sickness.		Inability to obtain work.	Other causes.		Total.	Owning homes.	Value of homes.	Amount of mortg	Rate of interest or mortgage.	Number in family	Number working   wages.	Wages increased- per cent.	Wages decreased- per cent,
$\begin{array}{c} 1\\ 2\\ 3\\ 4\\ 5\\ 6\\ 7\\ 8\\ 9\\ 0\\ 11\\ 12\\ 13\\ 14\\ 15\\ 16\\ 17\\ 8\\ 9\\ 21\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22$		0 6 6 0 5 5 0 0 0 0 4	$\begin{array}{c} 40\\ 40\\ 65\\ 104\\ 50\\ 80\\ 96\\ -\\ 254\\ 50\\ 96\\ 96\\ 90\\ 45\\ 76\\ 100\\ 55\\ 74\\ 40\\ 104\\ 94\\ 445\\ 140\\ 107\\ 50\\ 60\\ 44\\ 460\\ 60\\ 65\\ 104\\ 84\\ 84\\ \end{array}$		5 4 10 5 2 5	$\begin{array}{c} 40\\ 70\\ 70\\ 104\\ 54\\ 60\\ 96\\ 96\\ 70\\ 90\\ 50\\ 50\\ 64\\ 60\\ 100\\ 104\\ 104\\ 104\\ 50\\ 104\\ 65\\ 65\\ 65\\ 65\\ 104\\ 84\\ \end{array}$		- - - - - - - - - - - - - - - - - - -	\$200 - - - - - - - - - - - - - - - - - -	.06	4403455959354444585394833454856539 •	$1 \\ 1 \\ 2 \\ 2 \\ 1 \\ 1 \\ 2 \\ 2 \\ 1 \\ 1 \\ $		

# LIME WORKERS

$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	- - - - - - - - - - - - - - - - - - -	- 4 31  - 4 - 4	$ \begin{array}{c} - & 4 \\ 40 \\ - & 46 \\ 54 \\ 4 \\ - & 26 \end{array} $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $		4 5 4 5 3 05 4 5 4 5	2 - 1 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	
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Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
-123456789011234567890112345678901222222222222222222222222222222222222	Monthly Irregularly Monthly Monthly Monthly Monthly	No         No           No         No	N0            N0	N0            N0	No            No	No            No	No            Yes            No            Yes            No            Yes            Yes       Yes <tr< td=""><td>No            No            No            No            No            No            No            No            Yes            Yes            Yes            Yes            No            No            Yes            No            Yes            Yes   </td><td>No. Yes. No. Yes. No. No. Yes. No. No. Yes. No. No. No. No. No. No. No. No. No. No</td></tr<>	No            No            No            No            No            No            No            No            Yes            Yes            Yes            Yes            No            No            Yes            No            Yes            Yes	No. Yes. No. Yes. No. No. Yes. No. No. Yes. No. No. No. No. No. No. No. No. No. No

## WITH FAMILIES-CONCLUDED.

WITH FAMILIES-CONCLUDED.

Fortnightly Weekly Weekly Weekly Fortnightly Fortnightly Fortnightly Fortnightly	Yes No No No Yes Yes No	Yes Yes Yes Yes Yes Yes Yes No	Yes No Yes Yes No Yes No	Yes No Yes Yes No Yes No	No No Yes No Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes Yes	No. No. No. No. No. No. No.
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# SAW MILL HANDS

								EARN	INGS	
Number of return	Age.	Where born.	Present residence.	Subdivision of work.	Number hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
-1233456789101121314151678990111222122342566789101121314151617890221223242566789101121314456678910112131445678910112131415161789101112131415161789101112131415161789101111111111111111111111111111111111	$\begin{array}{c} 33288\\ 333288\\ 3333324\\ 33333324\\ 33333324\\ 33333324\\ 33333324\\ 33333324\\ 33333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 3333324\\ 333324\\ 333324\\ 333324\\ 333324\\ 333324\\ 333324\\ 333324\\ 333324\\ 333324\\ 333324\\ 333324\\ 333324\\ 333244\\ 33324\\ $	Maine New Brunswick Maine Maine Maine Maine Maine Maine Maine Maine Yermont Yermont Yermont New Brunswick Maine Yew Brunswick Maine Maine New Brunswick Maine Maine New Brunswick Maine Maine New Hampshire Maine Maine New Hampshire Maine New Hampshire Maine New Brunswick Maine New Brunswick Maine New Brunswick Maine New Brunswick Maine New Brunswick Maine New Brunswick Maine New Brunswick Maine Main	Veazie	Bedman. Bedman. Bedman. Dogs logs Filer. Fireman. Gangman. Gang helper. Head edger. Head edger. Borer. Narker. Marker. Marker. Marker. Marker. Single sawyer. Sorter. Surveyor. Surveyor. Surveyor. Tail edger. Teamster Teamster. Teamster. Teamster. Teamster. Teamster. Watchman Yard hand	$\begin{array}{c} 11\\ 11\\ 11\\ 11\\ 11\\ 11\\ 11\\ 11\\ 11\\ 10\\ 10$	$\begin{smallmatrix} 8 & 1 & 1 & 1 & 1 \\ 5 & 5 & 5 & 0 & 0 \\ 5 & 5 & 5 & 0 & 0 \\ 5 & 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 5 & 0 & 0 & 0 \\ 5 & 0 $	$\begin{array}{c} \$250\\ 260\\ 263\\ 263\\ 243\\ 315\\ 350\\ 364\\ 455\\ 350\\ 450\\ 300\\ 400\\ 300\\ 450\\ 350\\ 450\\ 350\\ 500\\ 420\\ 350\\ 263\\ 350\\ 355\\ 575\\ 575\\ 575\\ 210\\ 422\\ 360\\ 300\\ 325\\ 575\\ 344\\ 420\\ 390\\ 525\\ 365\\ 515\\ 344\\ 420\\ 390\\ 420\\ 390\\ 252\\ 525\\ 344\\ 450\\ 360\\ 420\\ 390\\ 252\\ 525\\ 344\\ 450\\ 360\\ 420\\ 390\\ 252\\ 525\\ 344\\ 450\\ 360\\ 270\\ 325\\ 525\\ 371\\ 250\\ 370\\ 370\\ 370\\ 370\\ 370\\ 370\\ 370\\ 37$	$\begin{array}{c} \$566\\755\\500\\255\\-\\-\\000\\000\\000\\000\\000\\000\\000\\000\\0$		$\begin{array}{c} \$306\\ 3355\\ 293\\ 390\\ 450\\ 424\\ 424\\ 450\\ 450\\ 450\\ 450\\ 450\\ 450\\ 450\\ 45$

# WITH FAMILIES.

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Number of return	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.
$\begin{array}{c}12345678901112341567890112222242567890112334556789011222222222222222233323333333333333333$	$\begin{array}{c} 860\\ 544\\ 54\\ 2\\ 42\\ -2\\ -3\\ -3\\ -3\\ -3\\ -3\\ -3\\ -3\\ -3\\ -3\\ -3$	\$130 180 120 240 168 243 243 140 378 8255 220 1350 1350 1350 1350 1350 1350 1350 1200 2000 3000 944 168 168 1400 378 8255 2100 1355 155 150 2900 3000 944 1655 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 2202 900 1600 1600 2200 1600 1600 2200 1600 1600 2200 1600 2000 1600 1	$\begin{array}{c} \$48\\ 62\\ 62\\ 62\\ 62\\ 62\\ 62\\ 62\\ 62\\ 62\\ 62$	\$40 32∧ 38 3035 353 380 40 355 355 355 355 355 355 355 355 355 35	$ \begin{array}{c} & \$1 \\ & 4 \\ & 3 \\ & 3 \\ & 7 \\ & 6 \\ & 3 \\ & 7 \\ & 6 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 4 \\ & 2 \\ & 2 \\ & 2 \\ & 4 \\ & 2 \\ & 2 \\ & 3 \\ & 6 \\ & 5 \\ & 3 \\ & 5 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 4 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 4 \\ & 2$		$\begin{array}{c} \$28\\ \$28\\ 64\\ 64\\ 26\\ 82\\ 82\\ 85\\ 100\\ 225\\ 142\\ 900\\ 205\\ 35\\ 85\\ 85\\ 85\\ 85\\ 85\\ 85\\ 85\\ 85\\ 85\\ 8$	$\begin{array}{c} \$306\\ \$368\\ 383\\ 323\\ 330\\ 2966\\ 450\\ 450\\ 451\\ 451\\ 451\\ 451\\ 451\\ 451\\ 451\\ 451$	$\begin{array}{c} - \\ \$21 \\ 85 \\ 177 \\ 123 \\ - \\ 120 \\ 75 \\ 147 \\ - \\ 116 \\ - \\ 43 \\ 200 \\ 72 \\ 65 \\ 106 \\ 225 \\ 34 \\ 54 \\ 129 \\ 150 \end{array}$	\$48 30 49 61 32 36
41 42 43 44 45 46 47 48	$-\frac{90}{72}\\-\frac{72}{108}\\-\frac{84}{60}$	$175 \\ 200 \\ 318 \\ 280 \\ 200 \\ 93 \\ 160 \\ 112$	52 80 100 108 100 47 55 55	$     \begin{array}{r}       30 \\       40 \\       40 \\       38 \\       40 \\       33 \\       36 \\       38 \\$	- 6 4 2 -	- - - - - - -	$ \begin{array}{c}     328 \\     50 \\     30 \\     133 \\     100 \\     127 \\     111 \\     48 \end{array} $	$     \begin{array}{r}       375 \\       370 \\       566 \\       692 \\       514 \\       300 \\       446 \\       313 \\     \end{array} $	- 255 - 28 - 37	116 14

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		DAYS	Lost.				age.	T		for		
have I Number of retur	From sickness.	Inability to obtain work.	Other causes.	Total.	Owning homes.	Value of homes.	Amount of mortg:	Rate of interest or mortgage.	Number in family	Number working 1 wages.	Wages increased- per cent.	Wages decreased- per cent.
$\begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 0 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$		$\begin{array}{c} 75\\72\\85\\82\\102\\50\\82\\102\\50\\62\\-\\62\\50\\25\\40\\60\\-\\60\\-\\60\\100\\95\\70\\100\\95\\70\\100\\80\\90\\100\\80\\80\\68\\70\\-\\50\\86\\110\\-\\20\\40\\75\\70\\62\\100\\100\\80\\80\\80\\80\\68\\70\\-\\50\\70\\68\\50\\50\\86\\110\\-\\20\\62\\70\\62\\10\\10\\10\\80\\80\\80\\80\\80\\80\\80\\80\\80\\80\\80\\80\\80$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 85\\ 72\\ 85\\ 72\\ 85\\ 85\\ 26\\ -\\ 62\\ 50\\ 55\\ 30\\ 40\\ 60\\ 44\\ 60\\ 65\\ 125\\ 100\\ 75\\ 115\\ 115\\ 100\\ 75\\ 70\\ 75\\ 70\\ 75\\ 70\\ 75\\ 60\\ 60\\ 85\\ 85\\ -\\ -\\ 4\\ 20\\ 50\\ 78\\ 65\\ 65\\ 65\\ 65\\ 65\\ 65\\ 65\\ 65\\ 65\\ 65$		- - - - - - - - - - - - - - - - - - -		.06	3433455614534454665334492488248340385444883446665288	$\begin{array}{c} 1\\ 1\\ 1\\ 1\\ 2\\ 2\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 2\\ 2\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\$		.12

## SAW MILL HANDS

Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
$-\begin{array}{c}123345677890111231415167899222232425627899301323334566789910112231415167899222232425627899301323334566783990441223424444444444444444444444444444444$	Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Weekly Weekly Fortnightly Weekly Fortnightly Weekly Weekly Weekly Fortnightly For	No            No	No            No	No            No            No            Yes            No            No	No         No           No         No           No         Yes           No         Yes           No         No           No         No	No No	Yes Yes	No         No           No         No           No         No           No         Yes           Yes         Yes           No         Yes           Yes         Yes           No         Yes           No         Yes           No         Yes           No         No           Yes         No           No         No           Yes         No           No         No	No. No. Yes. No. No. No. No. No. No. No. No. Yes. No. Yes. No. Yes. No. No. Yes. No. No. No. No. No. No. No. No. No. No

# WITH FAMILIES-CONCLUDED.

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- In the test of the Property address of

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# SAW MILL HANDS

							EARNINGS.			
Number of return.	Age.	Where born.	Present residence.	Subdivision of work.	Number hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
$     \begin{array}{r}       1 \\       2 \\       3 \\       4 \\       5 \\       6 \\       7 \\       8 \\       9 \\       10 \\       11 \\       12 \\       13 \\       \end{array} $	18 23 27 26 32 25 24 22 21 30 26 38 24	Maine Maine Maine Maine Maine Maine Maine Maine Maine Maine Maine Maine Maine Maine Maine	Passadumk'g Bangor Calais Brewer Bangor Veazie Passadumk'g Bangor Bangor Bangor Bandeford Orono Veazie	Cutting off saw Fireman Laborer Marker Rolls on. Shook buncher Sawing staves Teamster Teamster Teamster Yard hand Yard hand	$ \begin{array}{c} 10\\ 11\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\$		\$228 300 260 390 405 295 263 330 275 300 224 234	\$50 50 15 50 - 150 80 50 - - 48 56		$\begin{vmatrix} \$278 \\ 350 \\ 275 \\ 440 \\ 300 \\ 555 \\ 375 \\ 313 \\ 330 \\ 275 \\ 300 \\ 272 \\ 290 \end{vmatrix}$

# COTTON MILL HANDS

	1	1	1	1 1	1		1 1			\$
1	55	Canada	Biddeford	Bobbin man	10 \$	72	\$225	-	\$1128	1353
2	59	Canada	Biddeford	Bobbin man	10	$\dot{72}$	224	-	225	449
- 3	41	Canada	Lewiston	Card stripper	10	90	250	-	144	394
4	38	Ohio	Saco	Card stripper	10	90	200	~	150	350
5	53	Rhode Island	Lewiston	Card grinder	10 1	50	423	\$96	-	519
6	41	Maine	Lewiston	Card grinder	10 1	50	423	30	-	453
$\overline{7}$	30	Ireland	Biddeford	Card grinder	10 1	35	412	-	-	412
8	30	Canada	Westbrook	Card grinder	10 1	35	246	-	-	246
-9	33	New York	Springvale	Card grinder	10 1	30	393	-	- 1	393
10	24	Massachusetts	Springvale	Card grinder	10 1	12	297	-	50	347
11	30	Maine	Biddeford	Dresser	10 1	65	422	75	160	657
12	30	Maine	Biddeford	Dresser	10 1	65	498	-	105	603
13	54	Maine	Biddeford	Dyer	8 1	44	323	<b>5</b> 0	-	373
14	41	Maine	Saco	Dyer helper	$5\frac{1}{2}1$	25	318	-	175	493
15	35	Canada	Westbrook	Dyer helper	10 1	10	200	-	-	200
16	40	Maine	Saco	Engineer	10 2	50	635	-	-	635
17	$^{28}$	Maine	Saco	Engineer	91	67	384	-	-	384
18	42	Massachusetts	Biddeford	Fireman	10 1	40	412	-	-	412
19	34	Ireland	Biddeford	Fireman	11 1	19	283	-	-	283
20	40	Maine	Saco	Floor washer	10	90	275	-	~	275
21	36	Canada	Lewiston	Loom fixer	10 1	90	575	-	210	785
22	48	Maine	Auburn	Loom fixer	10 1	83	449	-	- 1	449
23	34	Germany	Auburn	Loom fixer	10 1	80	564	-	-	564
24	33	Canada	Biddeford	Loom fixer	10 1	68	427	-	-	427
25	64	Maine	Saco	Loom fixer	10 1	67	424	-	-	424
26	28	Ireland	Biddeford	Loom fixer	10 1	50	432	-	225	657
27	36	Canada	Biddeford	Loom fixer	10 1	50	456	-	364	820
28	42	Maine	Biddeford	Machinist	10 1	75	433	100	-	833
29	34	Maine	Westbrook	Machinist ,	10 1	33	242	-	-	242
30	21	Maine	Biddeford	Machinist	10 1	33	305	-	-	305
31	17	Maine	Auburn	Oiler	10 1	00	282	-	364	646
32	<b>28</b>	Canada	Lewiston	Picker	101	10	310	-	_	310
33	60	Canada	Biddeford	Picker	10	90	238	-	225	463
34	40	Canada	Biddeford	Roving man	10	90	250	-	320	570
35	25	Maine	Saco	2d hand spinner	10 2	00	508	-	-	508
36	31	Ireland	Biddeford	Ring spinner	10 1	80	518		-	518
37	38	England	Auburn	Mule spinner	10 1	92	575	-		575
38	37	Maine	Biddeford	Mule spinner	10 1	80	518	-	_	518
-		l	l	1 1						
	_									

## WITHOUT FAMILIES.

		Expenses.										
Number of return	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.		
$   \begin{array}{r}     1 \\     2 \\     3 \\     4 \\     5 \\     6 \\     7 \\     8 \\     9 \\     10 \\     11 \\     12 \\     13 \\   \end{array} $	Board Board Board Board Board. Board Board Board Board Board Board	\$150 185 156 156 156 156 156 155 156 156 156 156 156 156 156 156			- - - - - - - - - - - - - - - - - - -		$\begin{array}{c} \$ \ 28 \\ 115 \\ 59 \\ 80 \\ 106 \\ 100 \\ 100 \\ 75 \\ 105 \\ 84 \\ 75 \\ 83 \\ 65 \\ \end{array}$	\$278 350 275 271 300 302 286 275 330 275 300 275 290	\$169 253 89 38			

# WITH FAMILIES.

1 2 3 4 5	\$96 96 84 60 -	\$368 224 183 260 250	\$318 60 75 45 75	\$35 31 32 20 45	  		\$136 38 20 10 10	\$953 449 394 395 380	\$400 - 139	\$45
7	- 84	182	35	38	φ; (	5 8	5 5	358	- 54	100
8	60	194	125	28	-		3 -	410	-	146
	48	275	40	25	-		2 -	400	-	
10	60	220	50	30	- 1/		2 3	380	- 959	<b>00</b>
11	48	120	48	20	1	2	ə 20 15	004 551	000 50	
12	108	312	80			- 1	100	901	92	
10	- 79	147	20	10	_		75	280	119	
휪	12	100	50	40	_	1 -	1 15	295	_ 112	125
16	_	995	300	55	_	- 1	5 25	620	- 15	140
37	_	145	50	20	_		10	225	159	
18	84	182	70	38	_	1 1	0 28	412		
19	96	175	40	20	-	-	8 25	364	-	81
$\overline{20}$	-	220	25	25	1	i -	40	315	-	40
21	162	280	160	35	5	8 2	6 55	721	64	
<b>22</b>	-	265	70	50		i	20	410	39	
<b>23</b>	-	259	90	60	-	-	180	589	-	25
24	84	243	100	25	8	5 –	50	507	-	80
25	120	177	55	38	-	-	50	440		16
26	120	130	50	38		- 10	110	457	200	
27	96	291	50	40	18	3 -	25	520	300	
28	-	195	125	25	-	-	125	470	63	00
29	78	157	60	25	-	-	20	340		98
-30	-	180	25	26	-	-	50	281	24	
31		261	250	60	~	-	10	640 900		50
32	72	169	65	36	-	-	40	382	-	72
33	96	181	10		-	-	70	403		07
04	120	305	120	22		. –	109	502	-	21
30	90	173	100	20	16		1 100	556		22
27	84 0.0	2/0		22	_ 14	1 1	100	590	_	14
20	90	210	210	40	- ,		9 5	519	-	1.1
	04	301	10	40		1	-	510		

to an entering the construction of the state of the state

# SAW MILL HANDS

		DAYS	Lost.				age.	d		for		1
Number of return	From sickness.	Inability to obtain work.	Other causes.	Total.	Owning homes.	Value of homes.	Amount of mortg	Rate of interest o mortgage.	Number in family	Number working wages.	Wages increased- per cent.	Wages decreased- per cent,
$     \begin{array}{r}       1 \\       2 \\       3 \\       4 \\       5 \\       6 \\       7 \\       8 \\       9 \\       10 \\       11 \\       12 \\       13 \\       13       \end{array} $	10	$50 \\ 75 \\ 80 \\ 100 \\ 15 \\ 20 \\ 50 \\ 115 \\ 80 \\ - \\ 96 \\ 85 \\ $	$ \begin{array}{c} 25\\ -\\ 4\\ -\\ 25\\ -\\ -\\ 25\\ 8\\ 40\\ -\\ 15\\ \end{array} $	$\begin{array}{c} 75\\75\\84\\80\\125\\15\\30\\75\\123\\120\\79\\96\\100\\\end{array}$					1 1 1 1 1 1 1 1 1 1 1 1 1 1			

# COTTON MILL HANDS

$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
5 222 10 224 300 224 6 225 40 4 1
$\begin{array}{c} - & - & - \\ - & 75 \\ - & 122 \\ - & - \\ $
$\begin{array}{c} - & 21 \\ 27 \\ - & - \\ -$
$\begin{array}{c} - \\ 26\\ 102\\ 22\\ 22\\ 22\\ 24\\ 122\\ 22\\ 47\\ 50\\ 50\\ 74\\ 10\\ 66\\ -\\ 1\\ 59\\ -\\ 59\\ -\\ 50\\ 50\\ 60\\ -\\ 122\\ 75\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22\\ 20\\ 12\\ 75\\ 50\\ 1\\ 1\\ 4\\ 16\end{array}$
* 475 1,500 - - - 1,200 500 - 500 - 2,500 - - 2,500 - - 1,100 2,400 - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
946225264324335255553466222524272483565
$\begin{array}{c} 6 \\ 3 \\ 2 \\ 2 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 2$
.05
.10 .10 .10 .10 .10 .10 .10 .10 .10 .10

Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 12 \\ 13 \\ - \end{array} $	Monthly Weekly Monthly. Weekly. Weekly. Monthly. Monthly. Weekly. Weekly. Fortnightly Fortnightly.	No No No No No No No No No No No	No No No No No No No No No No	No No No No No No No No No No No No	No No No No No No No No No No No	No No Yes Yes No No No No No No No	No          No          Yes          Yes          Yes          No          No          No          No          No          No	No No Yes Yes Yes No No No No	No. No. No. No. No. No. No. No. No. No.

## WITHOUT FAMILIES-CONCLUDED.

WITH FAMILIES-CONTINUED.

	Fortnightly	No	No	No	No.	Ves .	Yes .	Ves .	No.
- 5	Fortnightly	No	No	No	No	No	No	No	No
3	Fortnightly	No	No	No	No	No	No	No	No
1	Fortnightly	No	No	No	No	No	Yes	No	Yes.
5	Fortnightly	No	No	No	No	No	No.	Yes	No
ä	Fortnightly	No	No	Yes	Yes	No	No	No	Yes.
	Fortnightly	No	No	Ves	Yes	No	Yes .	Yes	No
8	Fortnightly	No	No	No	No	No	No	No	Yes.
ğ	Fortnightly	No	No	Yes	No	No	Yes	No	Yes
10	Fortnightly	No	No	Yes	No	No	No	No	Yes.
11	Fortnightly	No	No	Yes	Yes	Yes	Yes	Yes	No.
12	Fortnightly	No	No	Yes	Yes	Yes	No	Yes	No.
13	Fortnightly	No	No	No	No	No	Yes	Yes	No.
14	Fortnightly	No	No	No	No	Yes	Yes	Yes	No.
15	Fortnightly	No	No	No	No	No	$Yes \dots$	No	Yes.
16	Fortnightly	No	No	Yes	No	Yes	Yes	$Yes \dots$	No.
17	Fortnightly	No	No	No	No	No	$Yes \dots$	$Yes \dots$	No.
18	Fortnightly	No	$Yes \dots$	No	No	No	No	No	No.
19	Fortnightly	No	No	$Yes \dots$	No	No	<u>No</u>	No	Yes.
20	Fortnightly	No	<u>No</u>	$\underline{\mathbf{Y}}$ es	$\underline{Y}es \dots$	No	Yes	No	Yes.
21	Fortnightly	No	Yes	Yes	Yes	No	$\underline{Y}$ es	$Yes \dots$	No.
22	Fortnightly	No	<u>No</u>	NO	No	No	$Yes \dots$	$\gamma es \dots$	No.
23	Fortnightly	No	$1 es \dots$	No	NO	NO	$\chi_{es} \dots$	NO	Yes.
24	Fortnightly	NO	NO	res	Yes	1 es	$res \dots$	NO	res.
25	Fortnightly	No	No	NO	NO	1 Yes	$Yes \dots$	NO	Yes.
26	Fortnightly	No	$ \underline{\mathbf{Y}} \mathbf{es} \cdots$	$xes \dots$	Yes	res	NO	$1 es \dots$	NO.
27	Fortnightly	No	No	Yes	Yes	NO	Yes	res	NO.
28	Fortnightly	No	No	NO	NO	NO	NO	res	NO.
29	Fortnightly	NO	NO	NO	NO	<u>NO</u>	res	NO	ies.
30	Fortnightly	NO	NO	NO	NO .	res	1 es	NO	res.
31	Fortnightly	NO	NO	NO	NO	NO	res	NO	NO.
32	Fortnightly	NO	NO	NO	NO	NO	NO	NO	res.
33	Fortnightly	NO	NO	NO	NO	NO	NO	NO	NO.
34	Fortnightly	NO	NO	NO	NO	NO	NO	NO	res.
35	Fortnightly	NO	NO	res	1 es	NO	NO	NO	NO.
36	Fortnightly	NO	NO	res	1 es	NO	NO	NO	res,
37	Fortnightly	NO	NO ····	NO	NO	NO	NO	No ····	No.
38	Fortnightly	NO	NO	res	·1 es	168	1 es	NO	NO.
						L			l

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### COTTON MILL HANDS

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							2	Earn	INGS.	,
Number of return.	Age.	Where born.	Present residence.	Subdivision of work.	Number of hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
394124344564784905555555555556789661	$\begin{array}{r} 28\\ 36\\ 35\\ 26\\ 0\\ 27\\ 37\\ 40\\ 25\\ 43\\ 25\\ 43\\ 39\\ 45\\ 31\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 39\\ 45\\ 1\\ 44\\ 44\\ 58\\ 58\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\$	Canada England Canada Scotland Canada	Springvale Biddeford Biddeford Saco Biddeford Biddeford Biddeford Biddeford Biddeford Westbrook Biddeford Lewiston Biddeford Lewiston Biddeford Lewiston Biddeford Lewiston Biddeford Lewiston Biddeford Biddeford Biddeford Biddeford Biddeford Biddeford Biddeford Biddeford Biddeford	Mule spinner Spinning room Section hand Slasher tender Slasher helper 2d hand spooler 2d hand spooler Teamster Weaving room Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Weaver Yard hand	10 10 10 10 10 10 10 10 10 10 10 10 10 1	$\begin{array}{c} \$ \\ 1 50 \\ 1 200 \\ 2 001 \\ 2 200 \\ 1 25 \\ 1 25 \\ 1 25 \\ 1 25 \\ 1 25 \\ 1 25 \\ 1 25 \\ 1 25 \\ 1 25 \\ 1 25 \\ 1 300 \\ 1 25 \\ 1 104 \\ 1 001 \\ 1 001 \\ 1 00 \\ 1 0 \\ 1 00 \\ 1 0 \\$				\$429 637 628 508 318 599 1185 530 356 353 206 353 206 353 369 384 360 380 691 604 6722 820 650 518

## COTTON MILL HANDS

1 20 Rhode Island 2 19 Canada 3 25 Maine 3 34 Maine	Lewiston Westbrook Lewiston Biddeford	Card stripper Card stripper Mule spinner Mule spinner	10 \$ 9 10 1 10 1 10 1	$\begin{array}{c} 90 \\ 90 \\ 90 \\ 163 \\ 92 \\ 576 \\ 83 \\ 440 \end{array}$			\$205 163 576 440
4 34 Maine 5 21 Maine	Biddeford Westbrook	Mule spinner Yard hand			-	=	440

### WOOLEN MILL HANDS

	1	1	1	18 1		1	
1 38	Maine	Old Town	Carder	10 1 15 8276	-	-	\$276
2 26	Ireland	So. Berwick.	Card stripper	10 1 05 308	-	- 1	208
3 41	Canada	Lewiston	Fireman	10 1 25 380		\$180	560
4 48	America	Skowhegan	Rubber	10 2 50 750	-	210	960
5 35	America	Pittsfield	Rubber	10 2 00 600	-		600
6 38	Maine	So. Berwick	Spinner	10 1 50 441		100	541
7 52	New Brunswick	Old Town	Spinner	10 1 50 400		-	400
8 36	Maine	Old Town	Spinner	10 1 45 363	-	125	488
9 43	Maine	Old Town	Weaver	10 1 55 410	-	120	530
10 40	Massachusetts	Old Town	Weaver	10 1 54 400	-	100	500
11 33	Maine	Foxcroft	Weaver	10 1 50 450	-	- 1	450
12 50	Massachusetts	Old Town	Weaver	10 1 50 411		-	411
13 48	Maine	Foxcroft	Weaver	10 1 50 450	-	-	450
14 38	New York	Old Town	Weaver	10   1   48   355	-	-	355
15 36	Maine	Dover	Weaver	10 1 45 400	- 1	-	400
16 38	England	So. Berwick.	Weaver	10 1 42 430	-	250	680
17 42	maine	So. Berwick.	weaver	$10 1 \ 00  \ 294 $	-	-	294
	<u> </u>						

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## WITH FAMILIES-CONTINUED.

Number of return	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.
$\begin{array}{r} 39\\ 40\\ 41\\ 42\\ 43\\ 44\\ 45\\ 46\\ 47\\ 48\\ 49\\ 50\\ 51\\ 55\\ 55\\ 55\\ 55\\ 55\\ 55\\ 56\\ 57\\ 58\\ 59\\ 60\\ \end{array}$	\$75 72 96 96 96 96 96 96 96 96 96 96 96 96 96	$\begin{array}{c} \$285\\ 4500\\ 137\\ 2000\\ 114\\ 1000\\ 3155\\ 297\\ 2000\\ 3000\\ 157\\ 203\\ 300\\ 1400\\ 150\\ 3000\\ 124\\ 175\\ 279\\ 222\\ 262\\ 262\\ 262\\ 262\\ 262\\ 262\\ 26$	$\begin{array}{c} \$25\\ 100\\ 100\\ 180\\ 60\\ 100\\ 200\\ 210\\ 120\\ 75\\ 85\\ 200\\ 69\\ 78\\ 100\\ 60\\ 60\\ 125\\ 210\\ 225\\ 210\\ 225\\ 70\\ 900\\ 900\\ 900\\ 900\\ 900\\ 900\\ 900\\$	\$30  $255 $ $18 $ $35 $ $353 $ $373 $ $353 $ $300 $ $330 $ $300 $ $325 $ $225 $ $225 $ $225 $ $228 $ $222 $ $61 $ $41 $ $510 $ $360 $ $40 $ $40 $ $40 $ $360 $ $40 $ $40 $ $360 $ $40 $ $40 $ $40 $ $360 $ $40 $	- - - - - - - - - - - - - -	- \$48 - 21 - - - - - - - - - - - - - - - - - - -	\$50 30 225 - 75 200 70 70 30 70 30 100 80 46 255 228 87 7 45 125 40 50	$\begin{array}{c} \$465\\ 677\\ 628\\ 516\\ 324\\ 389\\ 671\\ 729\\ 492\\ 530\\ 380\\ 380\\ 380\\ 380\\ 380\\ 380\\ 380\\ 3$	- - - - - 26 - 49 - 49	\$36 40 8 6 55 24 114 141

## WITHOUT FAMILIES.

1 Board 2 Board 3 Board 4 Board 5 Board	\$130 143 156 208 156	\$47 28 150 50 31		\$3 6 4 25 -		$\substack{\$25\\13\\125\\157\\60}$		\$141	\$27
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## WITH FAMILIES.

1	1		1	1				1		
1	\$84	\$128	\$30	<b>\$</b> 26	-	_	\$ 8	\$276		
2	-	245	25	28	-	- 1	10	308		
3	96	269	100	48	\$12	-	35	560		
4	120	160	125	20	10	-	50	485	\$475	
5	100	150	130	25	4		75	484	116	
6	72	219	190	40	5	- 1	15	541		
7	84	212	68	26	-	-	10	400		
8	84	200	76	32	3	_	60	455	33	
- 9	96	190	60	31	3	-	75	455	75	
10	84	190	60	34	4	\$10	75	457	43	
11	72	225	60	32	1	- 1	60	450		
12	84	210	60	30	- 1	-	27	411		
13	- 1	220	70	35	10	- 1	75	410	40	
14	60	125	40	25	-	- 1	25	275	80	
15	84	145	50	30	í – í	- 1	60	369	31	
16	84	332	150	32	7	) –	75	680		
17	-	207	30	27	5	-	25	294		
l	(					1			}	

## COTTON MILL HANDS

		DAYS	LOST.				ige.			or		
Number of return.	From sickness.	Inability to obtain work.	Other causes.	Total.	Owning homes.	Value of homes.	A mount of mortga	Rate of interest or mortgage.	Number in family.	Number working f wages.	Wages increased- per cent.	Wages decreased- per cent.
$\begin{array}{c} 39 \\ 401 \\ 42 \\ 434 \\ 45 \\ 447 \\ 489 \\ 501 \\ 52 \\ 53 \\ 54 \\ 556 \\ 578 \\ 59 \\ 60 \\ 61 \\ \end{array}$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	- 50 50 - 21 - 50 - 122 - 30 - - - - - - - - - - - - - - - - -	$ \begin{array}{c} - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\$	$\begin{array}{c} 18\\ -\\ 31\\ 50\\ 50\\ -\\ 15\\ 21\\ 17\\ 50\\ 52\\ 152\\ 152\\ 152\\ 152\\ -\\ 30\\ 29\\ 14\\ 4\\ 4\\ 4\\ 4\\ 16\end{array}$			\$700 	.066	56333378787878787878787878787878787878787	$1 \\ 3 \\ 2 \\ 2 \\ 1 \\ 1 \\ 2 \\ 4 \\ 4 \\ 3 \\ 2 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$		
$1 \\ 2 \\ 3 \\ 4 \\ 5$	- 20 4 24 -	$   \begin{bmatrix}     10 \\     122 \\     - \\     73   \end{bmatrix} $	- 46 - 40 - 40	$76\\122\\4\\64\\73$			- - -	- - - -				- - - 10
							W	OOL	EN M	IILL	HAI	NDS
1 2 3 4 5 6 7 8 9 10 11 12 13 14	- 6 - 5 - 5 	64 5 - 2 10 30 50 40 44 - 30 - 60		$\begin{array}{c} 64\\ 11\\ -\\ 4\\ 10\\ 35\\ 54\\ 40\\ 44\\ 5\\ 30\\ 4\\ 60\\ \end{array}$		\$1,000     1,600			3 4 6 5 3 8 5 5 4 4 5 5 4 3 5 5 4 3 5 5 4 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 4 3 5 5 5 5	1 1 3 2 1 2 2 1 2 2 2 1 1 1 1	10 	

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Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
$\begin{array}{r} 39\\ 40\\ 41\\ 42\\ 43\\ 44\\ 45\\ 46\\ 47\\ 48\\ 49\\ 50\\ 51\\ 52\\ 53\\ 55\\ 55\\ 55\\ 55\\ 55\\ 56\\ 61\\ \end{array}$	Fortnightly Fortnightly	N0            NN0            N0            N0            N0            N0            N0	No            No	No No Yes Yes Yes Yes Yes Yes No	No            No            Yes            No            Yes            Yes            Yes            Yes            Yes            Yes            Yes            No            No	Yes No Yes Yes Yes No	Yes Yes Yes Yes Yes Yes No No Yes Yes Yes Yes Yes Yes Yes Yes Yes No	No         No           No         No           No         Yes           No         No           No         No	Yes. Yes. Yes. Yes. No. No. No. Yes. No. Yes. No. Yes. No. No. No. No. No. Yes. No. No. No. No. No. No. No.

## WITH FAMILIES-CONCLUDED.

# WITHOUT FAMILIES-CONCLUDED.

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### WITH FAMILIES-CONCLUDED.

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	1		1	1		(			1
1	Fortnightly	No 1	No	No	No	No	Yes	No	No.
2	Fortnightly	No N	So	No	No	No	No	No	No.
- 3	Fortnightly	No N	No	Yes · · ·	Yes	No	No	No	No.
Ă	Fortnightly	No	Yes	Yes	Yes	Yes	Yes	Yes	No.
- Ā	Fortnightly	No	Yes	Ño	Ño	Yes	Yes	Yes	No.
Ř	Fortnightly	No.	Ň0	Yes	Yes	Ŷes	Yes	No	No.
7	Fortnightly	No	No	No	No	No	Ŷes	No	No.
-	Fortnightly	No	NO	No	No	No	Ŷes	Yes	No.
00	Fortnightly	No No	NO	No	No	Vee	Vos	You Vou	No
10	Fortnightly	No	to	Vog	Vog	Vog	V09	Vog	No.
10	Fortinghtly	$\mathbf{N}_{\mathbf{a}}$		105	1 65	No	165	105	No.
11	Fortnightly	NO	NO	NO	NO	NO	168	NO	NO.
12	Fortnightly	NO 2	NO	NO	NO	NO	1 es	NO	NO.
13	Fortnightly	No 1	NO	No	NO	Yes	Yes	Yes	NO.
14	Fortnightly	No 1	No)	No	No	Yes	Yes	$Yes \dots$	No.
15	Fortnightly	No 1	NO	No	No	No	Yes	Yes	No.
16	Fortnightly	No N	No	Yes	Yes	No	No	No	No.
17	Fortnightly	No	No	Yes	Yes	No	No	No	No.
~ '	r orthightij								
			1		l				1

## SHOE MAKERS

								Earn	INGS	•
Number of return	Age.	Where born.	Present residence.	Subdivision of work.	Number hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
$\begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 12 \\ 13 \\ 14 \\ 16 \\ 17 \\ 18 \\ 19 \end{array}$	$\begin{array}{r} 29\\ 39\\ 24\\ 64\\ 41\\ 34\\ 47\\ 39\\ 43\\ 45\\ 27\\ 28\\ 26\\ 43\\ \end{array}$	Maine Maine Minnesota America New Hampshire Maine	Lewiston Auburn Auburn So. Berwick Skowhegan Auburn Springvale So. Berwick Calais So. Berwick Auburn Auburn Auburn Auburn Lewiston Lebanon . Springvale	Beater out Buffer . Closer . Cutter . Cutter . Cutter . Upper cutter . Upper cutter . Foreman . Foreman . Heel finisher . Heeling machine . Laster . Welt stitcher Goodyear stitcher . Stock fitter . Stock fitter . Treer .	$\begin{array}{c} 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\$	$\begin{array}{c} \$ \\ 2 \\ 2 \\ 50 \\ 2 \\ 2 \\ 83 \\ 1 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2$	3735 364 380 616 562 600 463 661 433 1050 312 483 600 1031 697 680 507 450	- - - \$40 40 - - - - - - - - -	- \$518 - 200 - 50 - - 800 - - - 50	

## SHOE MAKERS

1 23 Maine 2 18 Maine 3 27 Maine 4 29 Maine 5 49 Maine	Lewiston Auburn Lewiston Auburn Auburn	Cutter . Cutter Laster McKay stitcher Trimmer	- - \$60	 \$370 390 546 890 515
	1	1		

## MOCCASIN MAKERS

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	_		Weller summer designed and summer and summer and							
	1			1		\$	1	1	l	1
1	42	Maine	Bangor	Cutter	10	$\dot{2}$ 0	0 \$600	_	-	\$600
<b>2</b>	48	Maine	Bangor	Cutter	10	$2^{0}$	600	_	-	600
3	40	Maine	Bangor	Stitcher	10	$\frac{1}{2}$ 0	610	-	\$400	1010
4	42	Maine	Bangor	Stitcher	10	$\frac{1}{2}$ 0	574	-	450	1024
5	53	Maine	Bangor	Maker	10	17	5 508	_	_	508
6	35	Maine	Bangor	Maker	10	îż	5 490	-	-	490
-7	35	Maine	Bangor	Maker	10	1 7	481	_	_	481
-8	25	Maine	Bangor	Maker	10	$\frac{1}{1}$	5 525	-	_	595
- 9	32	Maine	Bangor	Maker	10	1 6	5 480	-	_	400
10	40	Maine	Bangor	Maker	10	1 6	1 464		400	964
īĭ	31	Maine	Bangor	Maker	10	1 6	1 465	-	400	465
19	30	Maine	Bangor	Makor	10	1 8	1 400	-		400
13	36	Maine	Bangor	Makor	10	1 6	1 400	-	-	480
14	40	Maine	Bangor	Makor	10	1 5	1 400	-	100	400
15	20	Maino	Bangor	Makor	10	1 6/	) 400	-	400	800
16	28	Canada	Bangor	Makor	10	1 54	400	- 1	-	400
17	22	Maina	Bangor	Maker	10	1 5	J 440	-	-	440
16	49	P F Island	Bangor	Maker	10	1 0	J 400	- 1	-	400
10	40	Moine	Dangor	Maker	10	1 9	9 420	-	-	420
19	22	Maine	Dangor	Maker.	10	1.5	) 425	-		425
20	24	Maine	Dangor	Maker	10	1 5	J 435	-	-	435
21	22	maine	bangor	макег	10	1 5	J 435	-	-	435
							1			

## WITH FAMILIES.

Number of return	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.
$\begin{array}{c} 1\\ 1\\ 2\\ 3\\ 4\\ 5\\ 6\\ 7\\ 8\\ 9\\ 10\\ 11\\ 12\\ 13\\ 14\\ 15\\ 16\\ 17\\ 18\\ 19\\ 20\\ \end{array}$	\$112 144 108 100 - 84 - 100 75 135 75 - 144 - 108 96 - -	\$268 200 177 1500 280 280 280 280 280 280 280 280 280 2	$\begin{array}{c} \$131\\ 225\\ 250\\ 160\\ 150\\ 150\\ 150\\ 150\\ 150\\ 150\\ 150\\ 15$	$\begin{array}{c} \$62\\ 45\\ 40\\ 20\\ 50\\ 40\\ 20\\ 38\\ 35\\ 35\\ 35\\ 40\\ 40\\ 40\\ 40\\ 37\\ 100\\ 40\\ 50\\ 50\\ 50\\ \end{array}$	\$4 	- - - - - - 22 - - - - - - - - - - - -		\$735 864 675 510 310 331 703 3499 661 6355 6355 641 6355 642 5999 304 6000 8500 8500 8500 3800 3800 3800 352	\$223 106 231 - 154 478 179 981 177 135	\$63 2 <b>8</b> 7

# WITHOUT FAMILIES.

1 2 3 4	Board Board Board Board	$$208 \\ 208 \\ 182 \\ 208 \\ 182 \\ 208 \\ 208 \\ 182 \\ 182$	\$175 57 175 80		-			\$438 390 507 388	- \$ 39 502	\$68
4	Board	208	80	-	-	-	100	388	502	
5	Board	210	160	-	-	-	58	428	87	

### WITH FAMILIES.

									,		
1	\$ 96	\$193	\$75	\$44	-	_	.	\$100	\$508	\$92	
2	120	215	75	43	\$	2	\$20	100	575	25	
3	120	410	155	50				150	885	125	
4	108	375	150	50	-	1 -	. 1	175	858	166	
5	-	120	65	50		8	19	100	362	146	
- 6	96	143	52	43	-	-		100	434	56	
7	96	185	54	43		2 -		101	481	-	
-8	84	192	60	41	-		. 1	125	502	23	
- 9	72	142	58	46	-		.	125	443	37	
10		325	125	50		3	17	200	720	144	
11	72	215	75	41	_	- I		62	465		
12	66	142	60	40			.	100	402	78	
13	96	150	75	<b>4</b> 5	~	1 _	.	94	460	10	
14	120	345	132	47		2	25	179	850		
15	84	175	65	40	-	Ĩ _	. <b>-</b> 0	36	400	1	
16	84	206	68	40		2 -	.	45	445		
17	84	150	50	45	-	-1 _	. 1	71	400	- 1	
18	_ 01	115	60	45		3	- 93	100	346	74	
îgl	72	135	60	41		2 -		100	410	15	
20	75	132	35	34		Ĩ _		95	303	132	
51	52	140	65	46	_	~		75	300	104	
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		DAYS 1	Lost.				age.	a		for		1
Number of return	From sickness.	Inability to obtain work.	Other causes.	Total.	Owning homes.	Value of homes.	Amount of mortg	Rate of interest of mortgage.	Number in family	Number working wages.	Wages increased- per cent.	Wages decreased- per cent.
$\begin{array}{c} 1\\ 2\\ 3\\ 4\\ 5\\ 6\\ 7\\ 8\\ 9\\ 10\\ 11\\ 12\\ 13\\ 14\\ 15\\ 16\\ 17\\ 18\\ 19\\ 20\\ -\end{array}$	- 2 - 12 - 4 - 4 - 2	$ \begin{array}{c} 10\\ -12\\ 26\\ 10\\ -34\\ 10\\ -34\\ 10\\ -34\\ 104\\ -96\\ 111\\ -1\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\$	- 4 20 - 6 - - 4 - - 2 - 2 - 2 -	$ \begin{array}{c} 10\\ -\\ 18\\ 30\\ 42\\ 4\\ 40\\ 10\\ 14\\ 96\\ 111\\ 1\\ 4\\ -\\ 2\\ 14\\ 47\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\$		- - - - - - - - - - - - - - - - - - -		- - - - - - - - - - - - - - - - - - -	89 8 4 8 8 4 9 15 9 9 15 9 8 8 8 4 15 8 5	$ \begin{array}{c} 1\\ 1\\ 2\\ 1\\ 1\\ 1\\ 1\\ 2\\ 2\\ 1\\ 1\\ 1\\ 1\\ 1\\ 2\\ 2\\ 2\\ 2\\ 1\\ 1\\ 1\\ 1\\ 1\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\$	- .10 .25 .15 - .12	.15
									$\mathbf{SH}$	OE M	[AK]	ERS
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## SHOE MAKERS

1	-	83	-	83	_	_	_	_	1	1	.10	_
$\frac{2}{2}$	-	44	-	44	-	-	-	-	î	î	.12	-
3 4	_	- 7	_	- 7	-	-	-	-	1	1	-	-
<b>5</b>	-	-	82	82	-	-	-	-	ĩ	í	-	-
-		1			l	1						

# MOCCASIN MAKERS

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- 3	- 1		~	-	-	-	- 1	-	-	8	2	-	-
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6		12	-	12	24	-	_	-	- 1	3	1		_
- 7			20	) 9	29	- 1	- 1	-	- 1	4	1	-	- 1
8	-		-	4	4	-	-	-	-	4	1	-	-
9	-		~	13	13	-	1 - 1	-	- 1	3	1	-	- 1
10	-		-	1 14	. 14	1	1,800		- 1	6	2	-	-
11		- 3	-	10	13	- 1	-	-	-	5	1	-	1 -
12	-		-	4	4	-	-	-	- 1	3	1	-	- 1
13	-		~	16	16	-	- 1	-	-	3	1	-	- 1
14		<b>5</b>	-	9	14	-	-	-	- [	7	2	-	- 1
15		17	-	20	37	- 1	-	-	- 1	4	1	-	-
16	-		-	14	14	-	-	-	-	4	1	-	- 1
17		5	20	0 12	37	-	-	- 1	-	3	1	-	-
18		3	-	20	23	1	1,400	-	-	2	1	-	-
19	-		-	20	1 20	-	-	-	-	3	1	-	-
20	-		-	14	14		-	-	-	3	1	-	-
21		4	-	10	14	-	1 - 1	-	- 1	3	1	-	- 1
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Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
$\begin{array}{c}12\\3\\4\\5\\6\\7\\8\\9\\10\\11\\23\\14\\15\\16\\17\\18\\9\\20\end{array}$	Weekly	N0 N0	No No No Yes No Yes No No No No No No No No No No No No No No No No No No No Yes No	No No Yes Yes No Yes No Yes No Yes Yes Yes Yes Yes Yes Yes Yes Yes	No No Yes Yes No No Yes No Yes No Yes No Yes Yes Yes	No No Yes No Yes Yes Yes Yes No Yes No Yes No Yes No Yes Yes Yes No Yes No Yes No No Yes No Yes No Yes No Yes No Yes No Yes No Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes No Yes Yes Yes Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes No No Yes No No Yes No No Yes No Yes No Yes No Yes No Yes No Yes Yes No Yes	No No Yes Yes Yes Yes Yes Yes Yes Yes Yes No Yes	No No Yes Yes Yes No No Yes No No Yes No Yes No Yes No Yes No Yes No Yes No Yes	No. No. No. No. No. No. No. No. No. No.

## WITH FAMILIES-CONCLUDED.

# WITHOUT FAMILIES-CONCLUDED.

### WITH FAMILIES-CONCLUDED.

					(				
1	Weekly	No	No	No	No	Yes	$Yes \dots$	Yes	No.
2	Weekly	No	No	Yes	Yes	Yes	Yes	Yes	No.
3	Weekly	No	No	No	No	Yes	Yes	Yes	No.
4	Weekly	No	No	No	No	Yes	Yes	Yes	No.
5	Weekly	No	No	Yes	Yes	Yes	Yes	Yes	No.
6	Weekly	No	No	No	No	Yes	Yes	Yes	No.
7	Weekly	No	No	No	No	No	Yes	No	No.
- 8	Weekly	No	No	No	No	No .	Yes	Yes	No.
9	Weekly	No	No	No	No	No	Yes	Yes	No.
10	Weekly	No	No	Yes	Yes	Yes	Yes	Yes	No.
11	Weekly	No	No	No	No	No	Yes	No	No.
12	Weekly.	No	No	No	No	No	Yes	Yes	No.
13	Weekly	No	No	No	No	No	Yes	No	No.
14	Weekly	No	No	Yes	Yes	No	Yes	No	No.
15	Weekly	No	No	No	No	No	Yes	No	No.
16	Weekly	No	No	No	No	No	Yes	No	No.
17	Weekly.	No	No	No	No	No	Yes	No	No.
18	Weekly	No	No	No	No	Yes	Yes	Yes	No.
19	Weekly	No	No	No	No	No	Yes	Yes	No.
$\overline{20}$	Weekly	No	No	No	No	Yes	Yes	Yes	No.
21	Weekly	No	No	No	No	No	No	Yes	No.
					1				ļ

## SHIP BUILDERS

								Earn	INGS	•
Number of return	480.	Where born.	Present residence.	Subdivision of work.	Number hours employed daily.	Wages per day.	From regular trade.	From other personal service.	Of others in family.	Total.
$\begin{array}{c} 1 & 4 \\ 2 & 3 \\ 3 & 5 \\ 4 & 4 \\ 5 & 3 \\ 6 & 3 \\ 7 & 3 \\ 6 & 3 \\ 7 & 3 \\ 6 & 3 \\ 7 & 3 \\ 6 & 3 \\ 7 & 3 \\ 6 & 3 \\ 7 & 3 \\ 6 & 3 \\ 7 & 3 \\ 6 & 3 \\ 7 & 3 \\ 8 & 4 \\ 4 & 1 \\ 1 & 3 \\ 1 & 3 \\ 1 & 3 \\ 1 & 3 \\ 1 & 3 \\ 1 & 3 \\ 1 & 3 \\ 1 & 5 \\ 2 & 0 \\ 3 & 2 \\ 1 & 4 \\ \end{array}$	924494633659160177040	A merica A merica	Bath Rockland Bath Bath Bath Bath Bath Bath Bath Bath	Borer Calker Calker Calker Carpenter Fastener Fastener Foreman Joiner Joiner Laborer Laborer Painter Rigger Sail maker Sail maker Sail maker Sail maker Sail maker	10 10 10 10 10 10 10 10 10 10 10 10 10 1	$\begin{array}{c} \$ \\ \$ \\ 2 \\ 50 \\ 2 \\ 2 \\ 50 \\ 2 \\ 2 \\ 2 \\ 50 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ $	\$630 495 158 545 510 450 450 450 635 527 350 460 480 500 525 440 420 525 440	* 82 350 - 15 25 - - - 56 - 30 - 150 - - -	- \$500 65 - - - - - - - - - - - - - - - - - -	\$630 577 1008 610 510 495 363 1000 635 527 406 6460 510 568 500 420 593 440

# PULP MAKERS

-			1	1	1	\$				1
1	48	Maine	Lincoln	Carpenter	11	2 00	\$600	-	~	\$600
$\overline{2}$	35	New Brunswick	Lincoln	Digester	11	175	500	-		500
3	30	Maine	Lincoln	Digester	11	2 00	620			620
4	44	America	Skowhegan	Teamster	11	1 50	463	-		463
5	30	Maine	Lincoln	Wood room	11	135	400	-		400
6	45	Maine	Lincoln	Wood room	11	135	405	-	\$800	1205
7	38	Maine	Lincoln	Yard hand	11	135	375	-	200	575
8	46	Maine	Lincoln	Yard hand	11	$1 \ 35$	338	- 1	670	1008
9	35	Maine	Lincoln	Yard hand	11	$1 \ 35$	300	\$ 30	- '	330
10	26	Maine	Lincoln	Yard hand	11	$1 \ 35$	200	120	-	320
11	35	Maine	Lincoln	Yard hand	11	1.35	400	-	_ '	400

# WITH FAMILIES.

				Expens	ES.					
Number of return.	Rent.	Food.	Clothing.	Fuel and light.	Society dues.	Life insurance.	Other things.	Total.	Surplus.	Deficit.
$1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 12 \\ 13 \\ 14 \\ 15 \\ 16 \\ 17 \\ 18 \\ 19 \\ 20 \\ 21 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10$	- \$600 - 655 - 600 - 1255 - 78 - 600 - 1000 - 78 900 - 90	\$200 100 150 175 135 130 200 200 200 200 190 180 130 140 200 180 140 140 140 175 100 168 125 175 175 180	\$165 500 1200 1200 75 150 1500 1500 1200 1800 100 1755 1300 1200 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1200 1200 1200 1000 1000 1200 1		- \$10 - 10 8 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - - - - - - - - - - - - -	\$35 - - - - - - - - - - - - - - - - - - -	$\begin{array}{c} \$55\\ 255\\ 25\\ 40\\ 20\\ 355\\ 50\\ 100\\ 100\\ 100\\ 455\\ 38\\ 15\\ 35\\ 106\\ 70\\ 50\\ 30\\ 50\\ 25\\ \end{array}$	$\begin{array}{c} \$500\\ 2250\\ 385\\ 415\\ 5415\\ 540\\ 5500\\ 5500\\ 5500\\ 5500\\ 5500\\ 5600\\ 5600\\ 3700\\ 4500\\ 568\\ 305\\ 3410\\ 4500\\ 4500\\ 4500\\ 568\\ 368\\ 368\\ 305\\ 3410\\ 410\\ 4500\\ 568\\ 368\\ 368\\ 368\\ 368\\ 368\\ 368\\ 368\\ 3$	$\begin{smallmatrix} $130\\ 327\\ 623\\ 195\\ 170\\ 167\\ 55\\ 170\\ 450\\ 450\\ 95\\ 86\\ 90\\ 60\\ -\\ 220\\ 300\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ $	\$21

## WITH FAMILIES.

12345678910	\$84 72 - 100 72 96 - 60 -	225 190 240 180 180 425 265 400 200 135		\$33 28 36 18 31 45 40 30 30 32	\$ - - - -	3 - 2 - 5 - 5 - 5 - - -		\$510 467 551 463 400 916 490 740 330 320	\$90 33 69 289 85 268	
$10\\11$	-	$135 \\ 140$	50 50	32 30	-	-	103 80	320 300	100	

erhändenkonstationer im

# SHIP BUILDERS

		DAYS	Lost.				age.			for		
Number of return	From sickness.	Inability to obtain work.	Other causes.	Total.	Owning homes.	Value of homes.	Amount of mortg	Rate of interest or mortgage.	Number in family	Number working wages.	Wages increased- per cent.	Wages decreased- per cent.
$\begin{array}{c}1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\2\\13\\14\\15\\16\\17\\18\\9\\221\\\\\\19\\221\\\\\\\\19\\221\\\\\\\\19\\221\\\\\\\\19\\221\\\\\\\\19\\221\\\\\\\\19\\221\\\\\\\\19\\221\\\\\\\\19\\221\\\\\\\\10\\221\\\\\\10\\221\\\\\\10\\221\\\\\\10\\221\\\\\\10\\221\\\\\\10\\221\\\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\\\10\\22\\22\\\\10\\22\\22\\\\10\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22$	5 - 15 - 4 - 2 - 2 - 6  - 3 - 3 - 4 50	$egin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 47\\ -\\ 36\\ 45\\ 45\\ 35\\ -\\ 52\\ 44\\ -\\ -\\ 2\\ -\\ 23\\ 38\\ -\\ 78\\ -\\ 78\\ -\end{array}$	52 50 25 62 49 47 54 94 54 54 94 54 54 94 54 54 54 94 54		\$1,000 900 - 1,000 750 1,100 2,500 1,500 - 1,200 1,800 - 1,500 -	\$300 3000 - - - - - - - - - - - - - - - -	- .06 - - - - - - - - - - - - - - - - - - -	$\begin{array}{c} 62434355244455443545544354554435455445544354554455544555445554455544555445554455544555445554455544555445554455544555445554455544555644455564455564455564455564455564455564455564455564455564455566445556666$	$1 \\ 1 \\ 2 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ $		
									PU	LP M	IAK	ERS
1 2	-	- 16	_ 4	4	-	-	-	-	4	1	-	.12

$     \begin{array}{c}       1 \\       2 \\       3 \\       4 \\       5 \\       6 \\       7 \\       8 \\       9 \\       10 \\       11 \\     \end{array} $	- - - - 5 4 10 30	- 16 - - - - - - 50 50 -	4 - - 7 4 18 - - 10 7	4 - - - 23 54 60 90 7	- - - - 1 - 1 1 1	- \$1,200 - 1,400 - 800 600 800			4 5 5 4 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5	$     \begin{array}{c}       1 \\       1 \\       1 \\       1 \\       3 \\       2 \\       3 \\       1 \\       2 \\       3 \\       1 \\     $		-.12 - .12 .12 .12 .10 .12 .12 .12 .12
11	-	-	7	7	1	800	-	-	š	î	-	.12

Number of return.	How often paid?	Are any wages withheld under certain rules?	Do you belong to any labor organization?	Do you belong to any beneficiary organization?	Do you receive weekly benefits in case of sickness?	Have you a savings bank account?	Have you accumulated savings during former years?	Have you accumulated savings during past year?	Have you run into debt during past year?
$\begin{array}{c} 1\\ 2\\ 3\\ 4\\ 5\\ 6\\ 7\\ 8\\ 9\\ 10\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\$	Weekly Weekly	No No	No No Yes	No Yes No Yes No Yes Yes Yes Yes Yes Yes Yes No Yes Yes Yes Yes Yes	No            Yes            No            No            No            No            Yes            No            Yes            Yes            Yes            Yes            Yes	Yes Yes Yes Yes No Yes Yes Yes No No No Yes Yes Yes Yes Yes Yes Yes No No No No No No Yes Yes No Yes Yes Yes Yes Yes No Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes No Yes Yes No Yes No No Yes No No Yes Yes No No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	Yes Yes	Yes Yes	No. No. No. No. No. No. No. No. No. No.

# WITH FAMILIES-CONCLUDED.

# WITH FAMILIES-CONCLUDED.

			[	1				
1	Monthly	No	No	No	No	$Yes \dots$	Yes	Yes No.
2	Monthly	No	No	No	No	No	Yes	Yes No.
3	Monthly	No	No	No	No	No	Yes	Yes No.
4	Weekly	No	No	No	No	Yes	Yes	No No.
5	Monthly	No	No	No	No	No	Yes	No No.
6	Monthly	No	No	No	No	No	Yes	Yes No.
$\overline{7}$	Monthly	No	No	No	No	Yes	Yes	Yes No.
8	Monthly	No	No	No	No	No	Yes	Yes No.
9	Monthly	No	No	No	No	No	Yes	No No.
Ó	Monthly	No	No	No	No	No	Yes	No No.
ú	Monthly.	No	No	No	No	No	Yes	Yes No.

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# RECAPIT

		· · · · · · · · · · · · · · · · · · ·						
Consecutive number.	Industries.	Social condition.	Number of returns.	American born.	Foreign born.	Average age.	Number paid weekly.	Number paid fortnightly.
$\begin{array}{c}123456789\\9111234156789011234256\\122222222222222222222222222222222222$	Carpenters. Carpenters. Masons. Masons. Masons. Painters. Painters. Blackswiths. Laborers. Laborers. House finish makers. Granite workers. Slate workers. Slate workers. Saw mill hands. Cotton mill hands. Cotton mill hands. Woolen mill hands. Shoe makers. Shoe makers. Moccasin makers. Ship builders. Pulp makers.	With families Without families Without families With families	$\begin{array}{c} 67\\ 6\\ 34\\ 3\\ 3\\ 3\\ 15\\ 30\\ 4\\ 29\\ 3\\ 3\\ 18\\ 43\\ 3\\ 8\\ 13\\ 3\\ 18\\ 43\\ 3\\ 8\\ 43\\ 3\\ 18\\ 43\\ 3\\ 61\\ 5\\ 17\\ 7\\ 20\\ 5\\ 11\\ 11\\ 11\\ 11\\ 11\\ \end{array}$	58 6 33 2 6 26 26 3 14 43 7 15 9 361 117 433 7 15 9 361 117 43 123 44 13 195 55 199 211 10	$\begin{array}{c} 9\\ -\\ 1\\ 1\\ 1\\ 9\\ 4\\ -\\ 3\\ -\\ 17\\ -\\ 1\\ -\\ 1\\ -\\ 12\\ 2\\ 38\\ 1\\ 4\\ 4\\ 1\\ -\\ 2\\ -\\ 1\\ -\\ 1\\ -\\ 1\\ -\\ 2\\ -\\ 1\\ -\\ 1\\ -\\ 1\\ -\\ 2\\ -\\ 1\\$	$\begin{array}{c} 42\\ 31\\ 40\\ 33\\ 46\\ 40\\ 22\\ 40\\ 24\\ 45\\ 33\\ 37\\ 37\\ 46\\ 41\\ 39\\ 26\\ 88\\ 24\\ 40\\ 41\\ 39\\ 26\\ 38\\ 24\\ 41\\ 37\\ 37\\ 37\\ 37\\ 37\\ 37\\ 37\\ 37\\ 37\\ 37$	$\begin{array}{c} 32\\ 32\\ 4\\ 4\\ 200\\ 2\\ 1\\ 1\\ 1\\ 22\\ 3\\ 3\\ 1\\ 5\\ 2\\ 1\\ 8\\ 4\\ 4\\ 2\\ 3\\ 7\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ 1\\ 4\\ 5\\ 21\\ 200\\ 1\\ 1\end{array}$	$\begin{array}{c} 4\\ -\\ 3\\ -\\ 2\\ -\\ -\\ 2\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\$

## ULATION.

Consecutive number.	Number paid monthly.	Number paid irregularly.	Number whose wages are withheld under certain rules.	Number belonging to labor organizations.	Number belonging to beneficiary organizations.	Number receiving weekly benefits in case of sickness.	Number having savings bank accounts.	Number accumulating savings in past years.	Number accumulating savings during the year.	Number running in debt during the year.	Number having wages increased during the year.	Number having wages decreased during the year.
$1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 2 \\ 3 \\ 10 \\ 11 \\ 2 \\ 3 \\ 10 \\ 11 \\ 2 \\ 3 \\ 10 \\ 11 \\ 2 \\ 3 \\ 10 \\ 11 \\ 2 \\ 3 \\ 10 \\ 11 \\ 2 \\ 3 \\ 10 \\ 11 \\ 2 \\ 3 \\ 10 \\ 11 \\ 2 \\ 3 \\ 10 \\ 11 \\ 2 \\ 3 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 $	3 - - - 4 - 1 - 1	28 21 11 2 8 1 8 1 11 11 1 1 1	- - - - - - - - - - - - -	$ \begin{array}{c} 19 \\ -12 \\ -2 \\ -3 \\ -1 \\ -1 \\ -1 \\ -7 \\ -7 \\ -7 \\ -7 \\ -7 \\ -7 \\ -7 \\ -7$		$ \begin{array}{c} 13 \\ -10 \\ -2 \\ 4 \\ -1 \\ 1 \\ 8 \\ -1 \\ 9 \\ 9 \\ 9 \\ 9 \\ 9 \\ 9 \\ 9 \\ 9 \\ 9 \\ 9$	$ \begin{array}{c} 34\\2\\19\\-\\5\\13\\2\\19\\-\\12\\-\\6\\31\\6\end{array} $	$\begin{array}{c} 61\\ 3\\ 33\\ -\\ 11\\ 25\\ 2\\ 26\\ 2\\ 21\\ 2\\ 21\\ 2\\ 9\\ 41\\ 2\\ 9\\ 41\\ 2\end{array}$	$ \begin{array}{r} 48\\3\\30\\-\\7\\12\\2\\4\\3\\16\\2\\9\\40\\8\end{array} $	$ \begin{array}{c} 4 \\ - \\ 1 \\ - \\ 1 \\ 6 \\ - \\ - \\ 4 \\ - \\ 4 \\ - \\ 4 \end{array} $	2 - 1 1 2 1 - 1	8 1 1 2 _ 4
$14 \\ 15 \\ 16 \\ 17 \\ 18 \\ 19 \\ 20 \\ 21 \\ 22 \\ 23 \\ 24 \\ 25 \\ 26 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 1$		22	- - - - - - - - -	- 6 1 - 5 2 2 3 - 14 -		$ \begin{array}{c}       3 \\       4 \\       10 \\       - \\       22 \\       3 \\       6 \\       7 \\       - \\       4 \\       11 \\       - \\   \end{array} $	$ \begin{array}{c}             4 \\             3 \\           $	$25 \\ 9 \\ 41 \\ 4 \\ 33 \\ - \\ 13 \\ 13 \\ 2 \\ 20 \\ 21 \\ 11 \\ 11 \\ 11 \\ 11 \\ 11 $	14 9 22 4 19 1 8 9 3 14 18 7	4 - 8 - 26 1 - 2 1 1 - 1 -	- - 12 - 24 2 -	1 25 1 3 1 7

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	AVERAGE	NUMBER	DAYS LO	OST TIME.	mes.		omes.		çes.
Consecutive numbe	From sickness.	Inability to obtain work.	Other causes.	Total.	Number owning ho	Value of homes.	Average value of h	Number homes mortgaged.	A mount of mortgag
$\begin{array}{c}12\\3\\4\\5\\6\\7\\8\\9\\0\\11\\2\\3\\4\\5\\6\\1\\8\\1\\9\\0\\2\\2\\2\\2\\3\\4\\2\\2\\2\\2\\2\\2\\2\\2\\2\\2\\2\\2\\2\\2$	3 20 2 - 3 3 7 7 3 2 10 2 1 1 2 2 5 1 1 1 1 1 1 - 3 4 4 4	$\begin{array}{c} 50\\ 61\\ 49\\ 81\\ 49\\ 60\\ 55\\ -\\ -\\ 32\\ 78\\ 14\\ 55\\ -\\ 32\\ 78\\ 14\\ 58\\ 65\\ 200\\ 41\\ 211\\ 21\\ 24\\ 121\\ 21\\ 121\\ 21\\ 16\\ 15\\ 16\\ 16\\ 15\\ 16\\ 16\\ 16\\ 15\\ 16\\ 16\\ 16\\ 16\\ 16\\ 16\\ 16\\ 16\\ 16\\ 16$	5 4 50 20 6 6 4 6 2 9 11 - 1 4 - 1 4 17 6 17 22 16 17 22 16 17 25 5	58 56 101 54 69 68 111 18 48 666 13 5 344 193 833 322 688 244 245 244	$\begin{array}{c} 42\\ -20\\ -2\\ 8\\ -\\ -\\ -\\ 4\\ -\\ 12\\ -\\ -\\ 16\\ -\\ 16\\ -\\ 14\\ -\\ 3\\ 7\\ -\\ 3\\ 11\\ 1\\ 5\end{array}$	54,600 -5,900 -5,900 1,200 -7,000 -4,450 -5,600 5,600 10,000 9,700 -8,100 -3,100 14,750 4,800	\$1,300 - - - 9,950 1,440 - - 1,113 - - 1,113 - - 1,113 - - 1,707 - 933 833 1,386 1,131 - 1,033 2,114 - 1,033 2,114 - 1,950 - 1,341 - - - - 1,445 - - - - - - - - - - - - - - - - - -	9 7 2 1 3 - 1 2 2 1 1 3 - 2 - 5 - 5 - 3 - 3 - 3 - 3 - 3 -	\$4,200 

### RECAPIT

# ULATION-CONTINUED.

		es.	mings.	L .	rnings of	Average Inco	ANNUAL DME.
Consecutive numb Average amount of mortgages.	Average number ir family.	Average daily wag	Average annual ca	Number assisted by members of family	Average annual ea. of other members of family.	Per family.	Per individual.
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} \$2 \ 03\\ 1 \ 62\\ 2 \ 51\\ 2 \ 08\\ 1 \ 58\\ 2 \ 51\\ 1 \ 58\\ 2 \ 00\\ 1 \ 95\\ 1 \ 75\\ 1 \ 57\ 1 \ 57$		$\begin{array}{c} 18\\ -\\ 6\\ -\\ 6\\ -\\ 2\\ -\\ 16\\ -\\ 4\\ -\\ 3\\ 8\\ 2\\ 12\\ -\\ 27\\ -\\ 7\\ -\\ 7\\ -\\ 7\\ -\\ 7\\ -\\ 7\\ -\\ 4\\ 4\\ 4\\ 3\end{array}$	$\begin{array}{c} \$43 51\\ -20 74\\ -\\ -\\ 59 33\\ 47 50\\ -\\ -\\ 13 79\\ -\\ -\\ -\\ 128 13\\ -\\ -\\ -\\ 128 13\\ -\\ -\\ -\\ 136 08\\ -\\ -\\ -\\ 136 08\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\$	$\begin{array}{c} \$535 \ 40 \\ -2 \\ -2 \\ -3 \\ -4 \\ -4 \\ -4 \\ -5 \\ -5 \\ -5 \\ -5 \\ -5$	$\begin{array}{c} \$141\ 23\\ 337\ 50\\ 145\ 79\\ 395\ 00\\ 103\ 89\\ 135\ 15\\ 461\ 25\\ 142\ 90\\ 499\ 33\\ 116\ 54\\ 357\ 00\\ 113\ 22\\ 170\ 87\\ 168\ 841\\ 101\ 37\\ 168\ 841\\ 101\ 37\\ 166\ 79\\ 116\ 61\\ 334\ 85\\ 109\ 39\\ 326\ 20\\ 112\ 37\\ 196\ 41\\ 542\ 20\\ 117\ 17\\ 138\ 66\\ 41\\ 542\ 20\\ 137\ 17\\ 138\ 66\\ 191\ 15\\ \end{array}$

	RENT.		Fo	Food.		CLOTHING.		AND HT.	SOCIETY DUES.		
Consecutive numbe	Per family.	Per individual.	Per family.	Per individual.	Per family.	Per individual.	Per family.	Per individual.	Per family.	Per individual.	
$\begin{array}{c} 1\\ 1\\ 2\\ 3\\ 4\\ 5\\ 6\\ 7\\ 8\\ 9\\ 10\\ 11\\ 12\\ 13\\ 14\\ 15\\ 16\\ 17\\ 18\\ 9\\ 20\\ 12\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22$	\$93 60 -99 07 -69 08 95 59 102 71 -70 08 -78 17 101 21 104 00 59 68 75 00 78 47 -85 00 -86 20 106 23 -89 33 89 60	\$26 59 - 22 74 - 7 - 23 90 - 390 - 64 45 - 7 03 - 17 03 - 8 27 - 25 53 14 18 - 18 75 - 18 60 - 17 91 - 19 11 - 30 69 - 21 16 - 19 66	$\begin{array}{c} \$180\ 76\\ \hline\\ -212\ 06\\ \hline\\ -212\ 07\\ 208\ 30\\ \hline\\ -208\ 30\\ \hline\\ -190\ 17\\ \hline\\ -190\ 17\\ \hline\\ -190\ 17\\ \hline\\ -190\ 17\\ -194\ 35\\ -223\ 75\\ -192\ 94\\ 219\ 44\\ -194\ 46\\ \hline\\ -225\ 20\\ \hline\\ -201\ 59\\ 214\ 75\\ \hline\\ -200\ 24\\ -161\ 10\ 10\\ -161\ 10\ 10\ 10\ 10\ 10\ 10\ 10\ 10\ 10\ 1$	$\begin{array}{c} \$47 & 68 \\ 157 & 00 \\ 49 & 72 \\ 173 & 67 \\ 39 & 71 \\ 52 & 07 \\ 205 & 00 \\ 46 & 34 \\ 184 & 00 \\ 44 & 96 \\ 129 & 33 \\ 44 & 71 \\ 184 \\ 66 \\ 129 & 33 \\ 44 \\ 73 \\ 81 \\ 11 \\ 48 \\ 54 \\ 158 \\ 60 \\ 46 \\ 95 \\ 61 \\ 36 \\ 203 \\ 200 \\ 48 \\ 90 \\ 37 \\ 99 \\ \end{array}$	$\begin{array}{c} \$96 & 61 \\ \hline 117 & 53 \\ \hline 93 & 10 \\ \hline 09 & 55 \\ \hline 90 & 35 \\ \hline 133 & 12 \\ 60 & 00 \\ 128 & 33 \\ \hline 75 & 66 \\ \hline 99 & 49 \\ \hline 77 & 88 \\ 128 & 20 \\ \hline 78 & 86 \\ \hline 126 & 90 \\ \hline 76 & 86 \\ \hline 126 & 90 \\ \hline 126 & 90 \\ \hline \end{array}$	$\begin{array}{c} \$25 \ 48\\ 45 \ 57\\ 73 \ 32\\ 756\\ 73 \ 33\\ 21 \ 15\\ 23 \ 28\\ 68 \ 75\\ 26 \ 70\\ 51 \ 67\\ 20 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 43 \ 90\\ 44 \ 90\\ 18 \ 14\\ 45\\ 45 \ 66\\ 18 \ 14\\ 45 \ 66\\ 18 \ 129 \ 40\\ 18 \ 73\\ 90\ 28\\ 80\ 28\\ 80\ 28\\ 100\ 100\ 100\\ 100\ 100\ 100\\ 100\ 100\$	\$37 25 - 39 35 - 39 35 - 37 60 40 10 - 40 10 - 41 67 - 38 05 - 35 25 - 37 78 - 35 40 - 38 93 - 43 75 - 43 75 - 43 71 - 28 7	$\begin{array}{c} \$9 \ 82 \\ -9 \ 23 \\ -9 \ 23 \\ -9 \ 23 \\ -9 \ 23 \\ -9 \ 23 \\ -9 \ 23 \\ -9 \ 23 \\ -9 \ 29 \\ -9 \ 20 \ 20 \\ -9 \ 20 \ 20 \\ -9 \ 20 \\ -9 \ 20 \\ -9 \ 20 \ 20 \\ -9 \ 20 \ 20 \\ -9 \ 20 \ 20 \\ -9 \ 20 \ 20 \ 20 \\ -9 \ 20 \ 20 \ 20 \ 20 \ 20 \ 20 \ 20 \ 2$	\$6 12 - 6 22 - 5 \$3 4 67 - 3 82 - 3 82 - 3 82 - 3 92 9 17 2 14 10 00 3 88 - 6 96 - 5 82 5 17 - 3 22 10 79	$\begin{array}{c} \$1 56\\ -1 47\\ -1 47\\ -1 44\\ 1 31\\ -96\\ 3 00\\ 1 20\\ -87\\ 1 01\\ 1 67\\ -87\\ 1 2 00\\ 1 62\\ 9 50\\ 1 28\\ -1 48\\ -1 00\\ 2 44 \end{array}$	

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### RECAPIT
## ULATION-CONCLUDED.

r	LIFE INS	URANCE.	OTHER THINGS. TOTAL. SUF		SURI	PLUS.		
Consecutive numbe	Per family.	Per individual.	Per family.	Per individual.	Per family.	Per individual.	Per family.	Per individual.
$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ $	$\begin{array}{c} \$25 53\\ -0 11\\ -5500\\ 25500\\ -5500\\ -2500\\ -925\\ -1200\\ 2169\\ 3167\\ -1663\\ -1663\\ -1663\\ -1663\\ -1663\\ -080\\ -280\\ -280\\ -280\\ -280\\ -280\\ -280\\ -55\\ -5\\ -5\\ -5\\ -5\\ -5\\ -5\\ -5\\ -5\\ -$		$\begin{array}{c} \$69 55 \\ - \\ 89 82 \\ - \\ 507 \\ 93 37 \\ - \\ 507 \\ 93 37 \\ - \\ 507 \\ 93 37 \\ - \\ 507 \\ 93 37 \\ - \\ 507 \\ 93 37 \\ - \\ 507 \\ - \\ 63 56 \\ 107 91 \\ - \\ 63 56 \\ 107 91 \\ - \\ 71 00 \\ 67 39 \\ 51 67 \\ - \\ - \\ 49 00 \\ - \\ 40 \\ - \\ 10 \\$	$\begin{array}{c} \$18 \ 35 \\ 64 \ 17 \\ 21 \ 06 \\ 148 \ 00 \\ 12 \ 71 \\ 23 \ 34 \\ 102 \ 50 \\ 20 \ 95 \\ 100 \ 00 \\ 13 \ 93 \\ 41 \ 00 \\ 14 \ 85 \\ 26 \ 51 \\ 13 \ 85 \\ 16 \ 19 \\ 12 \ 57 \\ 19 \ 17 \\ 82 \ 67 \\ 19 \ 17 \\ 82 \ 16 \\ 10 \ 10 \\ 10 \ 56 \\ 76 \ 00 \\ 10 \ 41 \\ 30 \ 39 \\ 97 \ 60 \\ 25 \ 15 \\ 11 \ 04 \\ 21 \ 51 \end{array}$	$\begin{array}{c} \$428 & 75 \\ -508 & 38 \\ -20 & 73 \\ 508 & 10 \\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -$	$\begin{array}{c} \$113 & 09\\ 276 & 50\\ 119 & 21\\ 395 & 00\\ 97 & 09\\ 127 & 02\\ 385 & 500\\ 117 & 66\\ 338 & 67\\ 102 & 08\\ 221 & 00\\ 104 & 95\\ 126 & 30\\ 99 & 10\\ 93 & 52\\ 126 & 30\\ 99 & 10\\ 93 & 52\\ 112 & 03\\ 107 & 47\\ 292 & 62\\ 103 & 76\\ 303 & 40\\ 100 & 14\\ 163 & 36\\ 430 & 20\\ 123 & 73\\ 99 & 17\\ 103 & 53\\ \end{array}$	$\begin{array}{c} \$106 & 66 \\ \hline 113 & 36 \\ 29 & 47 \\ 32 & 50 \\ \hline 02 & 86 \\ \hline 62 & 51 \\ \hline 62 & 51 \\ \hline 33 & 39 \\ 201 & 49 \\ 32 & 68 \\ 201 & 49 \\ 32 & 68 \\ 201 & 22 \\ 37 & 52 \\ \hline 26 & 15 \\ \hline 52 & 53 \\ 115 & 70 \\ \hline 55 & 55 \\ 165 & 48 \\ 88 & 50 & 11 \end{array}$	\$ 28 14 101 00 26 58 8 13 76 25 25 24 160 66 134 64 136 00 8 27 44 57 7 855 7 85 7 85 7 85 7 85 7 85 7 85

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#### COMMISSIONER OF INDUSTRIAL

## MEN WITH FAMILIES.

#### ANALYSIS.

Number of reports	514
American born	395
Foreign born	119
Assisted by their families	141
Owning homes	187
Homes mortgaged	43
Renting	327
Belonging to labor organizations	79
Belonging to beneficiary organizations	126
Having savings bank accounts.	222
Accumulating savings in former years	421
Accumulating savings during past year	318
Running in debt during past year	61
Showing neither gain nor loss	135
Of individuals in 514 families	2,146
Average number per family	4.18

#### AVERAGES.

Age of persons reporting	40
Daily wages	<b>\$1</b> 87
Annual earnings from regular trade	465 88
Annual earnings from other personal service	19 00
Annual earnings of other members of family	$64 \ 21$
Annual income per family	549 09
Annual income per individual	131 52
Annual expenditure for rent per family	85 68
Annual expenditure for rent per individual	$20 50^{\circ}$
Annual expenditure for food per family	199 97
Annual expenditure for food per individual	47 90
Annual expenditure for clothing per family	$94 \ 27$
Annual expenditure for clothing per individual	22 58
Annual expenditure for fuel and light per family	36 23
Annual expenditure for fuel and light per individual	8 68
Annual expenditure for society dues per family	5 68
Annual expenditure for society dues per individual	1 36
Annual expenditure for life insurance per family	20 55
Annual expenditure for life insurance per individual	4 91
Annual expenditure for other things per family	74 96
Annual expenditure for other things per individual	17 95
Total annual expenditures per family	466 64
Total annual expenditures per individual	111 77
Annual net surplus per family	82 45
Annual net surplus per individual	19  75
Rental per month per family	7 14
Days lost time from sickness	3
Days lost time from inability to obtain work	33.
Days lost time from other causes	6
Days lost from all causes	42
Days worked at regular trade	249
Wages per day for same	\$1 87
Days worked at other personal service	13
Wages per day for same	\$1 46

#### AND LABOR STATISTICS.

#### HOMES.

Number owning homes	187
Value of homes	\$253,225
Average value of homes	\$1,354
Number homes mortgaged	43
Amount of mortgages	\$17,800
Average amount of mortgage	\$414
Number homes not mortgaged	144

## MEN WITHOUT FAMILIES.

#### ANALYSIS.

Number of reports	. 42
American born	38
Foreign born	4
Belonging to labor organizations	3
Belonging to beneficiary organizations	5
Having savings bank accounts	6
Accumulating savings in former years	. 15
Accumulating savings in past year	. 18
Running in debt during past year	2
Showing neither gain nor loss	26

#### AVERAGES.

Age of persons reporting	27
Daily wages	\$ 1.71
Annual earnings from regular trade	$362 \ 64$
Annual earnings from other personal service	25 91
Annual income	388 55
Annual expenditure for board	$169 \ 74$
Annual expenditure for clothing	$62 \ 62$
Annual expenditure for society dues	3 28
Annual expenditure for life insurance	35 00
Annual expenditure for other things	85 83
Annual expenditure total	32098
Annual net surplus	67 57
Days lost from sickness	5
Days lost from inability to obtain work	53
Days lost from other causes	13
Days lost from all causes	71
Days worked at regular trade	212
Wages per day for same	<b>\$1</b> 71
Days worked at other personal service	21
Wages per day for same	<b>\$1 23</b>
Cost of board per week	3 26
Expenditure per day	88

## MEN WITH AND WITHOUT FAMILIES.

#### TOTALS.

Number of reports	556
American born	433
Foreign born	123
Owning homes	188
Total value of homes owned	\$253,725
Number homes mortgaged	43
Amount of mortgages	\$17,800
Number renting	327
Belonging to labor organizations	82
Belonging to beneficiary organizations	131
Having savings bank accounts	228
Accumulating savings in former years	436
Accumulating savings during past year	332
Run in debt during past year	63
Showing neither gain nor loss	161

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#### RAILROADS.

# Table Showing the Number of Employes (excluding general officers) in the employ of Steam Railroads in Maine, Wages Paid, etc., for years ending June 30, 1894 and 1895.

Name of road.	nber bloyes,		aber oloyes,	ges paid,	Averag Compen	AVERAGE DAILY COMPENSATION.	
	Nun emp 1894	Wa£ 1894	Nun em 1895.	Wag 1895.	1894.	1895.	
Bangor & Aroostook Rail- road	294	\$142,605 40	460	\$224,032 6	5 \$1 55	<b>\$1</b> 55	
Boston & Maine Railroad .	340	194,748 60	373	216,903 2	3 1 83	1 82	
Bridgton & Saco River Railroad	33	13,229 72	32	13,903 5	6 1 43	1 46	
Canadian Pacific Railway	266	130,706 78	252	122,152 7	3 1 58	1  65	
Franklin & Megantic Rail- road	14	5,607 40	18	7,222 §	4 1 21	1 35	
Georges Valley Railroad,.	11	5,072 40	11	5,098 7	0 1 33	1 46	
Grand Trunk Railway	350	175,380 00	400	204,600 (	0 1 60	1  65	
Kennebec Central Rail- road	11	5,495 41	12	5,696 (	3 1 54	1 60	
Lime Rock Railroad	21	10,249 61	20	9,944 5	3 1 70	1 71	
Maine Central Railroad	2,444	1,223,955 20	2,564	1,255,741 3	6 1 60	1 59	
Monson Railroad	13	5,770 06	12	4,057 8	0 1 50	1 54	
Phillips & Rangeley Rail- road	57	19,027 17	61	18,393 2	5 1 32	1 30	
Portland & Rochester Rail- road	188	94,662 73	197	100,208 1	3 164	1 66	
Portland & Rumford Falls Railroad	103	36,993 90	103	36,993 9	0 140	1 40	
Rockport Railroad	3	1,780 00	3	1,780 0	0 190	1 90	
Sandy River Railroad	42	14,083 84	41	<b>14,366</b> €	9 140	1 40	
Sebasticook & Moosehead Railroad	14	5,669 40	9	3,638 6	0 1 29	1 59	
Somerset Railway	53	23,882 63	55	24,611 0	0 144	1 40	
St. Croix & Penobscot Rail- road	28	11,845 40	27	10,466	6 140	1 40	
York Harbor & Beach Rail- road	25	11,235 90	25	11,235 §	0 1 74	1 74	
Wiscasset & Quebec Rail- road	-	-	18	7,283 3	0 –	1 40	
	4,360	<b>\$2,132,001</b> 55	4,693	\$2,268,357 8	6		

As will be seen by the foregoing table, the total number of employes, (excluding general officers,) upon the railroads in Maine was 4,693, and the amount paid in wages was \$2,268,357.86. This summary is as nearly correct as it is possible to ascertain, and has been taken from the returns of railroads to the Railroad<sup>-</sup> Commissioners for year ending June 30, 1895.

The number in the employ of railroads in Maine for year ending June 30, 1894, was 4,360. The number for same date in 1893, was 4,772. The depression in business in 1894, caused a loss of 412 persons employed, over the year 1893. The present showing indicates that the railroads have recovered almost entirely from that depression and have employed nearly as many in 1895 as in the year 1893. In order to see how our State has prospered in business connected with the operation of railroads, and how little labor has suffered from the business troubles, attention is called to the following comparisons.

According to the returns of the Interstate Commerce Commission for the year 1894, there were 92,641 less persons employed in the United States in the same class of labor upon railroads as above referred to, than for the same period in 1893. This was a loss of a little more than one man for every two miles of railroad in the country.

The same proportion would have made the loss in employes in Maine 820, instead of 412. In other words, Maine's loss in persons employed upon the railroads was only fifty-one per cent as great as in the country at large. Now while there has been but slight gain in the country at large, in numbers employed, over the year 1894, Maine has almost completely recovered, employing about the same numbers as in the height of prosperity in 1893.

This means much more than one would think, without taking thought of the consequences upon those dependent upon railroad employment for support. Taking the safe estimate that there are four persons dependent for support for every one employed, we have 18,772 persons receiving their support from this source alone. Had Maine suffered to the extent that the whole country did, and does to-day, we would now have between three and four thousand persons made dependent upon such other labor as they might have been able to get, instead of having support from employment at remunerative wages. The Maine Central Railroad Company, alone employ 2,564 men, and pay them \$1,255,741.36 annually. More than \$100,000 is monthly paid by this railroad to employes. Not only was that company able to furnish employment to nearly as many men in 1895, as in 1893, but since the date of the foregoing data it has been able to restore one-half of the reduction made to each employe whose wages were reduced.

The Bangor and Aroostook Railroad Company employ 460 persons, to whom they annually pay \$224,032.65, which amount is nearly all distributed along the line of their road. While the foregoing number of persons employed by the Bangor & Aroostook Railroad Company is all that would be reckoned in making the comparisons mentioned, it does not give the public but a small part of the actual numbers employed, or the amount of wages paid. Railroads in process of construction are not considered in the reports, until they are put in operation. It is therefore proper to state here, that during the years 1893 and 1894, the Bangor & Aroostook Railroad Company constructed 168 miles of railroad, not only furnishing employment to hundreds of our laborers, but also giving merchants of the State an opportunity to wholly supply those both from the State and from out of the State, in all very near 2,000 persons during the time of construction of the road. It would be impossible to minutely compute the benefits arising from the construction of so many miles of road. Hotels and boarding houses were crowded with guests; labor contractors purchasing materials and erecting buildings; expending for labor and otherwise, more than two millions of dollars; and developing permanent business interests in Piscataquis, Penobscot and Aroostook counties of immense benefit now, and of immeasurable future value.

Therefore it must be evident that to the building of new railroads, and the return of prosperity to those in operation, has come a relief to labor in the State which can hardly be properly estimated. This prosperity, and this ability to build new railroads, during a period of business adversity, has not come uninvited, but has been secured by superior management of the roads in existence, and the indomitable energy and great business capacity of those men who have been able to construct hundreds of miles of road, opening up the wealth of forests, and giving the rich fields of husbandry an opportunity to reach the markets of the world. While I would not exaggerate the importance our railroads bear to the permanent prosperity of the State, that they more than most else give our sturdy people the opportunity to advance our State in all that pertains to its material prosperity, must be evident to every candid observer.

#### STREET RAILWAYS.

The returns of street railways to the railroad commissioners do not contain the data as to the number of men employed, and wages paid to employes, to that extent which would enable absolutely correct estimates to be given. From what can be gathered, which is without boubt very nearly correct, the number employed in all the departments of operation is not far from five hundred. There were almost ninety-one miles of street railways in operation to June 30, 1895, employing some two hundred and twenty as conductors and motormen, beside trackmen and laborers.

While the pay of the conductors and motormen upon the Portland Railroad is returned at \$1.50 per day, elsewhere the pay for that class of labor is not far from \$1.42 per day. There are dependent upon the labor of those working upon the street railways in the State, at least 2,000 persons. We have therefore more than 20,000 persons in our State dependent wholly for support upon the steam and street railways in Maine.

## FACTORIES, MILLS AND SHOPS BUILT DURING 1895.

In response to the following inquiries: "How many and what kinds of factories, mills or shops for manufacturing purposes, have been enlarged, completed, or are in process of erection during 1895?" "Estimated cost of same?" "Probable number of hands they will employ?" answers have been returned by the officers of nearly every city and town. Seventy-five cities, towns and plantations report building in this line as follows:

#### ANDROSCOGGIN COUNTY.

Towns.	Buildings.	What done.	Cost.	Help.
Lewiston	Cotton mill	Enlarged	\$160.000	150
Lewiston	Cotton mill	Repaired	10,000	
Lewiston	Bleachery	Repaired	25,000	
Turner	Blacksmith shop	New	150	2
Turner	Harness shop	Completed	1,000	8
Turner	Carriage shop	Enlarged	250	3

#### AROOSTOOK COUNTY.

Bridgewater	Two lumber mills	New	\$15,000	30
Easton	Starch factory	New	3,000	8
Easton	Lumber mill	Enlarged	200	5
Fort Fairfield	Electric plant	Commenced .	8.000	3
Fort Kent	Starch factory	Completed	3.500	8
Frenchville	Grist mill	New	1.500	3
Island Falls	Two lumber mills	Enlarged	5,000	50
Mapleton	Lumber mill	New	800	22
Mars Hill	Two starch factories	New	= 000	07
Mars Hill	One starch factory	Enlarged	7,000	30
Mars Hill	Planing mill	New	1.500	3
Presque Isle	Wood shop	New	1,000	4
Sherman	Lumber mill	New boiler	500	10
Van Buren	Starch factory	Enlarged )	0.000	
Van Buren	Lumber mill	Commenced	3,000	25

#### CUMBERLAND COUNTY.

Casco	Butter factory and grist mill			
	combined	New	\$1,000	1
Harpswell	Grist mill	New	3,500	5
Otisfield	Lumber mill	Repaired	500	
South Portland	Bicvele factory	Remodeled	15,000	150
Westbrook	Paper mill	Enlarged	15.500	
		0		

#### COMMISSIONER OF INDUSTRIAL

#### FRANKLIN COUNTY.

Towns.	Buildings.	What done.	Cost.	Help.
Jay Jay Kingfield Kingfield Strong Wilton	Two paper mills Lumber mill Blacksmith shop Enameling shop Toothpick factory Wool picker house	New} New New Enlarged New.	\$150,000 1,0 <b>6</b> 0 800 750	40 15 75

#### HANCOCK COUNTY.

Bucksport	Tannerv	Commenced.	6.000	20
Gouldsboro	Sardine factory	Rebuilt	2,500	100
Mariaville	Lumber mill	New	1,500	5
Swan's Island	Sardine factory	Commenced	4,000	40

#### KENNEBEC COUNTY.

Albion	Tannery	Repaired	1,500	5
Hallowell	Shoe factory	Enlarged	11,500	300
Rome	Lumber mill	New	200	4
Vassalboro	Woolen mill	Enlarged	2,000	
Winthrop	Butter factory	Remodeled	2,500	<b>2</b>

#### KNOX COUNTY.

Rockland	Machine shop	New	6,0001	10
Rockland	Stone tool shop	New	10,800	6
Rockport	Cooper shops	New	-	15

#### LINCOLN COUNTY.

Boothbay Harbor	Two sardine factories	New	30,000]	125
Bristol	Fish canning factory	New	1,000	25
Damariscotta	Creamery	New.	2.500	4
Nobleboro	Lumber mill	New	_,	

#### OXFORD COUNTY.

ByronBir	rch mill	Commenced	2,000	20
Canton Tar	nnerv	Enlarged	600	
Hiram Gri	ist mill	New	4.000	2
OxfordWo	olen mill	Rebuilt	6,000	-
Rumford Che	emical works	Enlarged)		
Rumford Tw	o pulp mills	Completed .	300.000	150
Rumford Gri	ist mill	Completed .		

#### PENOBSCOT COUNTY.

Bangor	Creamery	New	5.0001	5
Howland	Pulp mill	Completed	100.000	125
Old Town	Shoe factory	New	25,000	60
Orono	Pulp mill	New	200,000	50
Orrington	Lumber mill	Enlarged	1.500	4
Stacyville Pl	Two lumber mills	New	6,000	25
Webster Pl	Buoy mill	New	250	4
	-			

#### AND LABOR STATISTICS.

#### PISCATAQUIS COUNTY.

Towns.	Buildings.	What done.	Cost.	Help.
Atkinson	Ironing table mill	New	\$ 500	3
Brownville	Lumber mill	New	6,000	20
Foxcroft	Veneer mill Lumber mill	New}	5,000	<b>3</b> 5
Greenville	Two lumber mills	New.	9,000	20

#### SAGADAHOC COUNTY.

Bath ..... | Shoe factory ..... | New...... | \$6,000 | 25

#### SOMERSET COUNTY.

Cambridge Lumber mill New	\$1,000	5
Cornville Lumber mill New New	1,200	12
Fairfield	36,000	250
Fairfield Furniture mill Commenced	4,500	30
Hartland Woolen mill New	50,000	75
Madison Woolen mill New	25,000	40
Ripley New	1,000	· 4
St. Albans Box mill New	2,000	12

#### WALDO COUNTY.

Belfast	Leather board mill	New	\$10.000	8
Monroe	Lumber mill	Enlarged	1.500	6
Unity	Grist mill	New	500	1
Winterport	Grist mill	New	1.000	3
Winterport	Grist and shingle mill	New	1,000	3

#### WASHINGTON COUNTY.

Danforth	Starch factory	New	\$5,000	
Dennysville	Lumber and grist mill	New	4,000	30
Edmunds	Short lumber mill	New	600	8
Lubec	Two sardine factories	Enlarged	7,500	210
Milbridge	Sardine factory	New	4,000	200
Princeton	Lumber mill	Enlarged	2,500	10

#### YORK COUNTY.

Hollis North Berwick North Berwick Sanford	Grist mill Lumber mill Agricultural implement shop . Worsted mill	New Commenced Addition	3 8 15

## 82 COMMISSIONER OF INDUSTRIAL AND LABOR STATISTICS.

Counties.	Number of towns.	Number of buildings.	Total cost.	Hands employed.
Androscoggin. Aroostook. Cumberland Franklin. Hancock. Kennebec. Knox. Lincoln. Oxford. Penobscot. Piscataquis Sagadahoc. Somerset. Waldo. Washington. York.	22 111 5 4 4 5 22 1 7 7 5 7 4 6 3 3 7 7 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	$ \begin{array}{r}       66 \\       18 \\       5 \\       5 \\       77 \\       4 \\       5 \\       33 \\       5 \\       8 \\       8 \\       8 \\       1 \\       8 \\       5 \\       77 \\       4 \\       4 \\       102   \end{array} $	\$196,400 50,000 35,500 152,550 14,000 17,700 0,33,500 312,600 337,750 20,500 6,000 120,700 14,000 23,600 0,7,200	$\begin{array}{c} 163\\ 206\\ 156\\ 130\\ 165\\ 311\\ 31\\ 154\\ 172\\ 273\\ 78\\ 255\\ 428\\ 21\\ 458\\ 26\\ \hline 2,797\end{array}$

#### RECAPITULATION.

TOTALS FOR FIVE YEARS.

Years.	Number of towns.	Number of buildings.	Total cost.	Hands employed.
1891 1892 1893 1894 1894 1895	86 89 81 48 75	$110 \\ 114 \\ 108 \\ 55 \\ 102$	\$3,023,850 2,128,000 841,725 663,700 1,367,800	4,278 4,312 2,526 1,039 2,797

## Butter, Cheese and Condensed Milk Factories.

#### COMMISSIONER OF INDUSTRIAL

			Amount P	URCHASED.	
Consecutive number.	Value of plant.	Organization of company.	Milk.	Cream.	A mount paid patrons.
1 2 3	\$8,000 1,000 2,000	Stock company Proprietary Co-operative	101,004 pounds	- 47,756 inches	- \$4,156 07
4 5 6	4,000 600 2,500	Proprietary Co-operative Proprietary		- - -	22,952 75 6,000 00
89	2,500 2,500 10,000	Co-operative Proprietary		260,946 inches 33,199 gallons 550,000 gallons	$24,000 \ 00 \ 11,000 \ 00 \ 210,357 \ 99$
$10 \\ 11 \\ 12$	400 2,000 3,000	Co-operative	400 gallons	18,105 inches 77,201 gallons 395,808 inches	1,718 13 25,486 36 35,699 61
13     14     15	6,000 3,500 1,000	Co-operative Co-operative Proprietary	2,185,000 pounds - -	1,000 pounds	$15,000 \ 00 \ 5,181 \ 06 \ 6.225 \ 00$
$     16 \\     17 \\     18   $	3,000 3,000 500	Proprietary Proprietary Proprietary		- 48,000 inches	24,000 00 37,642 92 4,100 00
19 20 21	1,800 2,500 2,500	Co-operative Proprietary Co-operative		111,000 inches 43,137 gallons	20,362 57 10,100 00 16,528 17
22 23 24	$3,000 \\ 2,000 \\ 2,500$	Proprietary Proprietary Co-operative		96,000 inches 108,500 inches	8,650 00 9,000 00 15,072 50
25 26 27	1,200 2,500 6,000	Proprietary Proprietary Proprietary.		69,288 inches 54,591 gallons 56,575 gallons	6,189 12 21,127 10 60,250 32
28	10,000	Proprietary	-	-	-

## RETURNS FROM

RETURNS FROM

$     \begin{array}{c}       1 \\       2 \\       3 \\       4 \\       5 \\       6 \\       7     \end{array} $	1,000 1,350 1,000 2,000 2,000 500 1,000	Proprietary Proprietary Co-operative Stock company Co-operative Co-operative	537,717 pounds	 \$4,724 14 - - - -
8 9 10	1,000 1,500 800 1,200	Co-operative Proprietary Proprietary	549,709 pounds - - -	 5,285 41 5,000 00 - -

### BUTTER FACTORIES.

			Pounds Man	UFACTURED.	
Consecutive number.	Number of patrons.	Number of cows.	Butter.	Cheese.	Cream sold.
$\begin{array}{c} 1\\ 2\\ 3\\ 4\\ 5\\ 6\\ 7\\ 8\\ 9\\ 10\\ 11\\ 12\\ 13\\ 14\\ 15\\ 6\\ 17\\ 18\\ 19\\ 20\\ 22\\ 22\\ 24\\ 25\\ 26\\ 27\\ 28\end{array}$	$\begin{array}{c} 110\\ 25\\ 26\\ 1400\\ 175\\ 500\\ 175\\ 60\\ 950\\ 13\\ 900\\ 225\\ 70\\ 100\\ 205\\ 70\\ 100\\ 200\\ 100\\ 25\\ 71\\ 110\\ 200\\ 200\\ 100\\ 200\\ 300\\ 120\\ 230\\ 300\\ 125\\ 230\\ \end{array}$	$\begin{array}{c} 600\\ 100\\ 150\\ -\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $	$\begin{array}{c} 60,000\\ 21,712\\ 117,438\\ 3,100\\ 67,400\\ 59,653\\ 767,456\\ 9,655\\ 132,112\\ 193,121\\ 100,000\\ 34,500\\ 120,000\\ 199,706\\ 24,000\\ 108,626\\ 55,172\\ 99,080\\ 48,000\\ 54,000\\ 5$	52,000 12,333 - - - - - - - - - - - -	250 gallons 70 inches 885 dollars 1,000 gallons 794 dollars 140,000 gallons 2,520 gallons 2,520 gallons 1,050 gallons 6,000 gallons

## CHEESE FACTORIES.

1234567890	$egin{array}{c} 62\\ 35\\ 30\\ 30\\ 100\\ 56\\ 70\\ 60\\ 40\\ 55\\ 50\\ 50\\ 50\\ \end{array}$	- 200 100 150 250 190 160 250 100	 $56,055 \\ 20,000 \\ 19,000 \\ 50,000 \\ 16,000 \\ 20,000 \\ 57,445 \\ 52,000 \\ 8,111$	
10	40 50	100	 0,111	

### RETURNS FROM

	w	RECEIPTS FOR				
Consecutive number.	Butter.	Cheese.	Cream.	Butter.	Cheese.	Cream.
$\begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 2 \\ 13 \\ 14 \\ 15 \\ 6 \\ 17 \\ 19 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ $	Maine and Mass Boston New England Rockland Maine and Mass Maine and Mass	Me. & Mass. Houlton	Maine and Mass . Limerick. Maine and Mass . Rockland. Rockland. New England . Farmington Me., N. H. & Mass Massachusetts Local . Lynn, Mass . Lynn, Mass . Lynn, Mass . Lynn, Mass . Maise. Maine. Maine.	\$12,000 00 5,309 44 - - - 16,854 00 14,285 48 171,330 13 28,546 41 41,813 00 1,350 00 98 - 7,240 00 24,130 87 19,614 73 9,600 00 19,007 72 8,915 72 24,439	\$4,680 00 	\$250 00 6 30 - 12,612 00 794 00 72,591 25 100 00 1,260 22 1,004 10 800 00 181 36 - - - - - - - - - - - - -

#### RETURNS FROM

		Danger	}		
• • • • • • • • • • • •		Dangor	-		-
		Local	-	\$2,200 00	
		Portland		2,000 00	_
<i></i>		Lewiston	1 -	_,	_
		Bangor			_
		Local		2 300 00	_
		Bangor	1 _	6 034 60	_
		Maine	1 -	6 000 00	-
••••	•••••	Logal	·  -	0,000 00	-
• • • • • • • • • • • • •	•• •••• •••	Docat		-	
		Bangor	1 -	1 - 1	-

				Per	CENT.	
Consecutive number.	Number employed.	Wages per day.	Test used.	Milk.	Cream.	Future outlook.
$\begin{array}{c} 1\\ 1\\ 2\\ 3\\ 4\\ 5\\ 6\\ 7\\ 8\\ 9\\ 10\\ 11\\ 12\\ 13\\ 14\\ 15\\ 16\\ 17\\ 19\\ 20\\ 21\\ 22\\ 23\\ 24\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22\\ 22$	$\begin{array}{c} 3\\ 3\\ 6\\ 7\\ 6\\ 5\\ 6\\ -\\ 2\\ 3\\ 3\\ 2\\ 2\\ 2\\ 4\\ 3\\ 3\\ 4\\ 4\\ 1\\ 1\\ 3\\ 8\\ 3\\ 8\\ 3\end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Babcock	.04 	$\begin{array}{c} .18\\ -\\ .17\\ .16\\ .20\\ .20\\ .17\ to .18\\ .176\\ .176\\ .176\\ .176\\ .176\\ .186\\ .216\\ .216\\ .216\\ .216\\ .18\\ .216\\ .18\\ .216\\ .18\\ .18\\ .18\\ .18\\ .18\\ .18\\ .18\\ .18$	Good as anything in Better. [Maine. Lower prices. Good. Good. Good. Grand. Cheering. Good for a better article. Very good. Good. Slight increase. Probable improvement. Probable increase. Good for good goods. Good. Not encouraging. Good. Bright. Over production. Good for the farmer.

## BUTTER FACTORIES-CONCLUDED.

CHEESE FACTORIES—CONCLUDED.

$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} - \\ \$2 50 \\ 1 73 \\ 2 50 \\ 1 92 \\ 2 00 \\ 2 00 \\ - \end{array}$	Lactometer Glass test Common test Lactometer Cream guage Lactometer			Good. Good. Fair. Very good. Rather hard. Good. Good. Good.
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\* Per month.

## BUTTER, CHEESE AND CONDENSED MILK FACTORIES.

An investigation of the dairy business of Maine so far as relates to condensed milk, butter and cheese factories, has been partially successful. So far as the Commissioner could ascertain, nothing of the kind had been undertaken in the State since 1877, and from diligent inquiry it could not be learned that any recent lists of such factories were in existence. Making up such lists from published town statistics and from other reliable sources, blanks were sent out to the factories for information, and as a result returns have been received from the one condensed milk factory, thirty-five butter factories and eleven cheese factories. Of the thirty-five butter factories, four reported having suspended, one new one just starting, and one recently changed hands, and as the new proprietors knew little of its former business they gave no information. One other return gave the doings of two factories owned by the same parties, which leaves twenty-eight returns containing more or less of information, though in nearly every instance the returns are defective by reason of omissions in filling, which is even more apparent in the returns of cheese factories. Of the eleven returns of cheese factories, one was so defective as to be practically valueless. Besides those from which returns were received, there are probably from twelve to fifteen butter factories and three or four cheese factories in operation in the State which have not been heard from.

#### BUTTER.

Of the twenty-nine butter factories covered in the twenty-eight returns used, two were making cheese in addition to butter, one of which was selling cream; fifteen others were selling more or less of cream, while the remaining twelve were confined exclusively to butter making. The amount of capital invested, including factories and

equipment, amounted to \$92,000, or an average of \$3,172.41 per Nineteen were reported as proprietary concerns and ten factory. as coöperative. It is impossible from the returns to give even an approximate amount of milk and cream purchased, but it is very evident that as a rule cream is purchased instead of milk. Twentyeight factories report 3,481 patrons or an average of 124 per factory. Twenty, with 1,736 patrons, report the number of cows from which milk or cream is furnished at 8,765, or a fraction over five cows per patron. At the same ratio there should be the milk or cream of nearly 18,000 cows used at all the twenty-nine factories. Twenty-five factories report the amount paid for milk and cream at \$600,799.67 or an average of \$24,031.99 per factory. Eighteen factories with 8,065 cows, pay for milk and cream \$275,985.05, or an average of \$34.22 per cow or \$172.81 per patron. Twentyfour factories report 2,490,527 pounds of butter manufactured, or 103,772 pounds per factory exclusive of cream sold. Ten factories with 4,515 cows, making butter exclusively, report 752,041 pounds of butter manufactured, an average of 1663 pounds per cow. These same ten factories pay out \$139,924.88 for milk and cream or \$30.99 per cow. The number of pounds of butter made varies much at different factories, ranging all the way from 110 to 240 pounds per cow, the figures being at the different factories 110 lbs., 120 lbs., 135 lbs., 144 lbs., 150 lbs., 167 lbs., 192 lbs., 193 lbs., 202 lbs. and 240 lbs. No return is made of the number of weeks run by the different factories during the year, but it would seem probable that this difference must be on account of shut downs in many cases instead of the difference in the butter producing capacities of the cows. The amount paid the farmers for milk or cream sufficient to make a pound of butter varies but little in these ten factories, ranging from 17 to 19 cents and averaging 18.6 cents. Seven of these factories, making 502,527 pounds of butter, received for their entire make of 1894, an average of 22 1-2 cents per pound. These being the facts, and creamery butter quoted in the Boston market to-day (November 20, 1895) at 20 to 23 1-2 cents, it would seem that the margin to the butter maker, after collecting the cream, making and marketing the butter and adding interest on the capital invested, with all incidental expenses, must be a modest one.

So far as the returns indicate, the twenty-nine factories are selling, in round numbers, 165,000 gallons of cream marketed largely in Maine cities and summer resorts, though quite a portion goes to other New England cities. Eight factories which handle 156.445 gallons, or approximately fifteen-sixteenths of the whole, receive on an average 56.6 cents per gallon, though some small lots were disposed of at a higher figure.

Twenty-five factories report 148 hands employed, though 65 of them are reported at the two factories returned under one management. The wages paid at eighteen factories average \$1.77 per day without board, and at one other \$20.00 per month with board. Twenty-two use the Babcock test, one the Cooley system, three the churn, and three not stated. The average test for cream is .181.

The opinions given as to the future prospects are generally encouraging.

#### CHEESE.

The ten returns of cheese factories tabulated, show a capital in buildings and fixtures of \$12,350 or an average of \$1,235 per factory. Five are proprietary and five coöperative. Only two give the amount of milk purchased, amounting to 1,087,426 pounds, from which were made 113,500 pounds of cheese, which would allow 9.58 pounds of milk to a pound of cheese. The milk for this 113,500 pounds of cheese cost \$10,009.55 or 8.8 cents per pound of cheese manufactured. Five factories making 168,445 pounds of cheese, received \$18,534.60 for their product, an average of 11 cents per pound. Eight factories with 421 patrons and 1,400 cows, average 3 1-3 cows per patron and 175 cows per factory. Eight factories with 1,400 cows produced 242,856 pounds of cheese, an average of 173 1-2 pounds per cow. The cheese made at different factories varied from 64 pounds to 359 pounds per cow for the year, the different factories producing 64 lbs., 84 lbs., 100 lbs., 105 lbs., 190 lbs., 208 lbs., 333 lbs. and 359 lbs. per cow. Except in one instance but one man is employed at each factory. The daily wages average \$2.09 without board. From one factory the report comes that the prospects of the business are rather hard, from all others fair to good.

Twenty years ago there were, according to a statement of the secretary of the Maine Board of Agriculture, sixty cheese factories being operated in the State, while at the present time probably not more than one-fourth that number are in operation. In 1877, some statistics of cheese factories were gathered and published in the Maine Agricultural report. From these figures it is learned that the average number of cows per factory was 104, while at the present time the average is 175, an increase of 71. In 1877, twenty-four factories using 4,384,396 pounds of milk, made 446,289 pounds of cheese, being in the ratio of 9.82 pounds of milk to one of cheese, while in 1894, so far as reported, the ratio is 9.58 pounds of milk to one of cheese. At that time six factories showed an average of 15.58 pounds of milk and 1.56 pounds of cheese per cow daily. The best average showed 19.66 pounds of milk and 1.96 pounds of cheese, being in operation from June 11, to September 8, a period of 89 days and using the milk from 80 cows, while the lowest average showed 13.35 pounds of milk and 1.36 pounds of cheese, being in operation from May 1 to November 10, a period of 194 days, and using the milk from 160 cows. Then, as now, the product of our cheese factories was marketed almost wholly in the State and largely in the immediate vicinity of the factory. The price received for the product in 1877 averaged 12 1-2 cents per pound as compared with 11 cents in 1894.

#### CONDENSED MILK.

The condensed milk business was established in the United States, on a systematic and business like basis about thirty-five years ago. During the time since then, its use as an article of food has increased, so that, at the present time all the various factories in this country use, daily, about five hundred thousand gallons of fluid milk, and at least three hundred tons of granulated sugar, these being the only articles entering into the finished product.

The Maine Condensed Milk Company succeeded the Aroostook Condensed Milk Company which formerly owned two factories, one at Winthrop and one at Newport, Me. The new company commenced business on the 21st day of April, 1894. It was believed to be wise to test the business on its merits at Newport, and the factory at the latter place has been running continuously since the above date, while that at Winthrop has been idle. The company enjoys the distinction of being the only one of its kind in Maine or in New England. It has had to contend, during the last year, not only against an unparalleled business depression, but has done business in the face of the sharpest competition with old, rich, and firmly established corporations. Yet, at the close of the first year's business it was found that the company had bought of the farmers, milk to the value of fifty-five thousand dollars, that it had used tin and solder in making cans, to the value of nineteen thousand dollars, that the pay-roll had averaged between eight and nine hundred dollars per month, and that there was a reasonable balance on the right side of the ledger.

The experience of the year's business seems to prove that to be established on a safe basis, the volume of business must be increased at least threefold. Thus it may be seen that large capital, shrewd management, time, patience and untiring energy are all necessary. It will also be seen that the success of this enterprise means much to the dairying interests of Maine, and especially to the patrons of the factory.

During the eight months and ten days that the factory was in operation during 1894, the amount of milk purchased amounted to 511,600 gallons. From 9 to 15 hands are employed with wages varying from \$1.00 per day for women to \$3.00 per day highest paid to men. The product is marketed in New England, the Middle and Southern states. During 1895, the milk from about 800 cows has been used, furnished by about 200 farmers.

## MAINE'S INDUSTRIAL PROGRESS AND THE OUTLOOK FOR THE FUTURE.

This is an age of progress. On every hand are to be seen evidences of extraordinary changes. No longer do we follow those business lines originated by the fathers, but a genuine revolution has taken place, great transformations having been wrought in every avenue of industry.

There have been times when the progress was less marked than others, periods when the march of advancement was seemingly checked, and perhaps intervals even, when the hands on the dial may have been in a degree turned back; and yet the general tendency through all the years that are gone has been onward, while during recent years the progress has been very materially accelerated.

Maine, true to the proud motto on the State's escutcheon, is expected to take the lead in the march of advancement. Her citizens should see to it that no backward steps are taken, but rather that the State of Maine be at all times kept in the vanguard of the army of progress. It behooves her loyal sons and daughters to be tireless and unceasing in their efforts to uplift the standard of the Dirigo Commonwealth, to the end that her banner may be at all times proudly waving among those of the foremost sections of the land.

Maine occupies a unique position in the sisterhood of states, and being the first in the galaxy upon which the morning sun shines, she is not inappropriately styled the Sunrise State. With an area about equal to the rest of New England, separated from the Dominion of Canada by a boundary longer than that between any other state in the Union and a foreign land, possessing an extent of 3000 miles of sea coast, with lakes and rivers innumerable, furnishing water power sufficient to move all the spindles of the world, with magnificent stretches of forest aggregating in volume seven times greater than the famous Black Forest in Europe during its largest expanse in modern times, and with resources innumerable of earth, water and air, the state of which the pine tree has long been the emblem, is the peer of any territory of like extent the world over.

But these varied resources will be of but little avail unless they Development should therefore be the watchword, are put to nse. and let there be activity all along the line. It is not unnatural to judge the future by the past and while such comparisons are not at all times reliable, yet frequently valuable lessons can be obtained by a glance into the years that are gone. Looking backward is fraught with much that is instructive and profitable, and if we read aright the signs of the times much can be accurately foretold as to The rise and growth of leading industries is always the future. an interesting theme and worthy of study. Some come on the stage of action, flourish for a time and then pass into oblivion, never to be again revived. Others for a while are in the ascendency, then pass through a period of reaction and later come into prominence once more. Still others, now in their infancy, are rapidly coming to the front and destined to play an important part in the business life of the immediate future. Changes are everywhere in progress, and no where is this more strikingly evident than in the industrial world. In recent years Maine has industrially made very material progress and the future is bright with promise.

#### AGRICULTURE.

Agriculture is entitled to a foremost place among the industries of the state. About one-third of the total area of Maine is included in farms, but the quantity of improved farm lands is considerably less, being between 3,000,000 and 4,000,000 acres, while of the 150,355 families in Maine, 62,122 live on farms. In the line of agricultural wealth the state possesses many and diverse resources. In agriculture, as in other branches of industry, great changes have been inaugurated, and those who have kept thoroughly up-to-date and adopted the most approved methods find that farming pays. Especially is this true in those sections of the state where manufacturing and industrial enterprises flourish, thus opening to the farmers a good market at remunerative prices.

Maine's hay crop is almost universally large and exceeds in value the grain crop of states of like population in the West. Potatoes can no where be raised to so good advantage as in fertile Aroostook, and that county has eclipsed all previous records this year by a crop approximating 11,000,000 bushels. While it is desirable that this great county, with its fertile soil and unlimited agricultural resources, should give more attention to diversified crops, the wonderful possibilities of the region are strikingly illustrated by the phenomenal potato harvest of 1895. Closely allied with the raising of potatoes is the starch industry, and when prices are low the half a hundred or so starch factories through Northeastern Maine can grind to advantage the superfluous tubers into starch. The capacity of Maine starch factories is upwards of 8000 tons annually, consuming about 3,000,000 bushels potatoes. The dairy interests are steadily looming into prominence and the future is very promis-Butter factories and creameries have sprung up in different ing. parts of the State and the poor butter of former days is being supplanted by a high grade article at all times in demand at high prices. Cheese factories are also numerous, and the condensed milk factory of the Maine Condensed Milk Company at Newport is successfully demonstrating the possibilities of this new industry in our State. Live stock can be raised to advantage, the conditions being highly favorable, and in the line of horsebreeding no state, not even Kentucky, can excel us. The interest in blooded stock has been given new impetus in recent years by the numerous trotting parks established in different parts of the state. In addition to the two State Fairs at Bangor and Lewiston, the Rigby mile track has been built near Portland and another at Old Orchard, while throughout the State numerous other parks have been opened in late years.

The value of Maine's orchard products is rapidly enhancing and fruit culture holds out the strongest inducements, this being a most promising occupation at the present time. For the raising of apples and pears the conditions are just right here, and Maine can surpass any other section in this particular, while in the line of small fruits many kinds can be produced to good advantage. Of late years a large foreign demand has grown up, and during the shipping season of 1894–1895, upwards of 900,000 barrels of apples were shipped to England from the ports of Portland, Boston and New York. An apple orchard of winter fruit in Maine is much to be preferred to an orange grove in Florida or California.

#### SHIPBUILDING.

Shipbuilding was one of the pioneer industries in Maine. As far back as 1607 a vessel, the Virginia, was built near the mouth of the Kennebec, and from that time down to the present, shipbuilding has been one of the important occupations of this region. And closely allied with shipbuilding is navigation, Maine's hardy sons knowing not only how to build the best craft in the world but how to man them as well. A striking illustration of this was witnessed the past summer when Capt. Haff and his crew of Penobscot sailors were secured to sail the yacht Defender in the international contest in New York harbor. Victory perched upon the pennant of the American craft, and when later, upon returning to the rocky shores of their island home in Penobscot bay, these valiant Maine tars were given a public reception in Deer Isle town hall, every patriotic American, whether on land or sea, was in hearty sympathy with this demonstration.

Maine's shipbuilding has had a very interesting history, but the palmy days of the past are gone, probably never to be duplicated again so far as the building of wooden ships is concerned. In 1880, there were launched from Maine shipyards 88 vessels with a tonnage of 41,396 tons, and in 1890, the new tonnage aggregated 125 vessels of 74,467 tons. The latter record is an unusually large one for recent years, the industry in 1894 having declined to 18,692.74 tons, the tonnage for the present year being still less. The era of clipper ships has gone and no ship has left the stocks in the Maine shipyards this year. Schooners are now in the ascendency, the great majority of the new vessels being of that rig. It is now nearly a score of years since a brig has been built in Maine and barks are only occasionally launched, although barkentines are of quite frequent construction.

A notable feature of marine architecture is the size of the modern crafts in comparison with those of early days. The two and three masted schooners have quite largely given place to big four masted fore and afters, and one five-master, the Governor Ames, has been built. The ships built in recent years have likewise been leviathans compared with those of the olden times, Arthur Sewall & Co. having sent out from their Bath shipyard within the past few years a fleet including the Roanoke, 3400 tons, Shenandoah, 3258 tons, and Susquehannah, 2629 tons, these figures all being net measurement. Domestic or coastwise commerce flourishes and Maine vessels continue to hold sway in this realm. In the foreign trade, however, American vessels have lost much of their prestige and the British tramp steamer is everywhere to be found. Not only has the tramp steamship made inroads into that branch of the carrying trade heretofore monopolized by sailing vessels, but the steam tug with numerous barges in tow has also had a demoralizing effect on commerce. During the present year several large barges have been built in Bath and others are under contract.

Of late years the building of steamers, large and small, has kept busy many of our ship carpenters. That Maine can build all kinds of steel craft as well as ships of wood, has been demonstrated conclusively at the Bath Iron Works, Maine's pioneer steel shipbuilding plant. Not only have been turned out from there, steel cruisers and an Ammen ram, with other government vessels under contract, nut merchant steel steamships such as the City of Lowell, the graybound of Long Island Sound. There has also been built at Bath by A. Sewall & Co., a steel sailing vessel, the Dirigo, 2856 tons Maine can lead as a builder of steel as well as wooden vesbet. Shipbuilding is a realm in which Maine has no formidable sels. competitor and it will always be an important industry in this region. Continual inroads are being made into the fleets, and those that go must sooner or later be replaced. Commerce upon the highway of the seas, with more favorable legislation, will thrive again, and when that time comes the shipbuilder will be in his ele-Steel shipbuilding is destined to have a future, ment once more. and Maine shipbuilders should be alert to their opportunities in this, as well as in wooden shipbuilding.

#### THE FISHERIES.

When first the coast of Maine was visited by the early navigators the waters teemed with fish. Fishing was among the pioneer industries, and the fisheries have through all these years been an important source of income, giving employment to a numerous and hardy class. Along the coast fishing has taken precedence of agriculture and the harvest of the sea, although much more variable in its results than farming, has been sufficiently fascinating to hold its army of followers. Because of the migratory habits of the fish, and the uncertainties surrounding the business, the number of vessels and men employed vary considerably from year to year.

There are enrolled in the customs districts of the state 437 vessels which are exclusively engaged in the fisheries, and in addition, there are employed in the shore fisheries more than 6000 fishing boats with a valuation of not less than \$500,000. When are taken into account the vessels, boats, weirs, pounds, traps, nets, seines, lines, miscellaneous apparatus, and shore privileges necessary for the prosecution of the business, one can begin to gain some conception of the magnitude of this industry. The fisheries, as a source of immediate wealth and as a nursery of seamen, are not to be lightly considered, but are entitled to a prominent position on the roll of Maine industries.

The sea and shore fisheries of the State give employment to upward of 10,000 people, and involve an investment in apparatus and cash capital of \$3,000,000. In magnitude and volume the Maine fisheries are surpassed by only one state in the Union, and that is Massachusetts. This industry, like others, has undergone many changes, particularly in the methods pursued in capturing the fish, while in recent years the canning of sardines, lobsters, clams, shell fish, etc., has grown to large proportions.

#### FORESTS.

When these shores were first trod by white men, they found the lands covered by the forest primeval. Very pertinent in this connection are the following brief extracts from the able address delivered by Ex-Governor Daniel F. Davis, President of the Maine Landowners' and Lumbermen's Association, at the session of the Maine State Board of Trade in Bangor this fall.

"The forest primeval is our most valuable inheritance. Consider it just as it is and all that it does for us, and all that it has done since this whole country was settled. It is, I repeat, our most valuable inheritance; and so it is of every country on the globe, and has been through all the ages since civilization began. We have here in Maine 13,568,000 acres of timberland. The primeval woods of Maine, accordingly, will cover an extent seven times larger than that of the famous Black Forest of Germany at its largest expanse in modern times, The states of Rhode Island, Connecticut and Delaware could be lost together in our northern forests of Maine, and still have about each a margin of wilderness sufficiently wide to make its exploration without a compass a work of desperate adventure to an inexperienced woodsman. These forests of Maine are not simply valuable for the lumber that they produce, but also because they furnish the haunts of the finest and most numerous game upon the face of the earth, according to the territory. I think we have more forest in Maine than in the whole of the German Empire, which, there, is under the control of the German Government.

"Our acres of forest land, I say, are 13,568,000 in round numbers, probably much more in the aggregate. The valuation of the State Assessors, as rendered last year, was \$35,250,000, an enormous sum. Gentlemen, the inland waters of the State of Maine. cover an area of more than 2,050,000 acres, and the water power of the State is away up in the billions of horse power. What gives us this power? It is simply our forests that do it. The altitude of our lakes and rivers is, on the average, about 600 feet above the level of the sea. The flow to the sea is gradual, giving here in this state more splendid water power and more continuous, regular flow of water, because of the humidity of our climate, than comes from any other territory on the globe of like acreage. I want to say to you that we have water-power enough here in the State of Maine, away up in the billions of horse power, to turn the wheels sufficient to manufacture all the products that the whole of America could demand for the next hundred years, allowing population to increase as it has in the past; and it is all here in the State of Maine.

"With this more than thirteen millions of acres of forest land, that produce here the best waterpower upon the face of the earth, 99-100 of it to-day runs unvexed to the sea. We have just commenced an era of development in the line of manufacturing. Why, here in the valley of the Penobscot, we have put up within the last fifteen years more than \$10,000,000 worth of pulp and paper mills, and the outside world knows but little of it. If this had been done in any of the Western states, they would have boomed it all over the country, and the air would have been as thick with advertisements in regard to the same as the 'autumn leaves that strew the vales of Valambrosa.' A fraction more than one man in five of all our voters, numerically considered, is occupied in the production of lumber and its transportation. Thirty thousand men work in the forests of Maine every year on the average. In the Penobscot valley alone there is some \$15,000,000 invested in mill property engaged in the manufacture of lumber and its various products, including pulp and other products that come from our forests.

"I want to say one thing more in regard to the forests of Maine: and that is in regard to the age of trees. A few years ago there was a popular idea that a spruce tree could be produced in a very few years; but it is not so, gentlemen. I have found, and I have examined this matter carefully, that it takes, in the forest primeval, about 250 years to produce a mature spruce tree, and it takes to produce an old fashioned pumpkin pine, such as grew formerly in this state, from 500 to 1,000 years; and I have found some of the pine even older than that. Alas! but few of them are left, monarchs of the forest, towering away above every other tree that surrounds them, and soon the ruthless hand of the axe man will destroy the last one. I will say, however, that our forests of Maine are unlike those of any other country on the globe. Take any timber township in the State where spruce grows, and you will find that the land is sending up spruce trees all the way from a little seedling a foot high to the mature tree from one to three feet through, ready for the market. Our lumbermen go on; they cut the large trees fit for logs and let the sun in, and the younger trees come on much faster than they otherwise would. But I want further to say to you that the time is coming, as my friend Senator Hale said to me within a few months, when the cutting of lumber must be regulated by law, as it is in Europe, or within twenty-five years the old growth spruce will be as scarce as the old pumpkin pine are to-day.

"I cannot, however, prolong this discussion, for others must participate in it. I am full of it, intensely interested in it; I want others to become so and to help us protect our forests and keep them as a sacred heritage for our children; and while we protect the game for the outside world, and allow them to come here and roam over our forests, cut their firewood, build their camps, and do almost as they please with our timber lands, we want the State of Maine to protect them against fire, and to help us keep them as they are. For you see, gentlemen, that we all, as citizens of a great state, derive, each of us, directly or indirectly, great benefit from the State of Maine. And as the years go by and the demand grows

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larger for the products of our forests, so will, in future, the forests of Maine be more valuable to us and to the whole country."

The value of Maine's forests is not too strongly set forth in the above trenchant words of this distinguished Ex-Governor, who is probably more conversant with the subject than any one else within the limits of the commonwealth. Wide and far reaching questions relating to the growth, protection and preservation of our forests, are soon to come to the front, and it is fortunate at this time that we have at the head of the State Forestry Commission in the person of Hon. Charles E Oak, a young man of ability and experience, and one thoroughly impressed with the magnitude and importance of the Maine forests.

#### WATER POWER.

Closely allied with the forests, and justly ranking as one of her greatest elements of material wealth, is Maine's water power. The 1620 lakes have an area of 2300 square miles, and when to this are added the more than 5000 rivers and streams shown upon the State map, Maine's inland water surface aggregates 3200 square miles. The almost universal connection of Maine's lake system with the rivers, is a fortunate circumstance, as they can thus be readily transformed into receptacles of manufacturing power. The location of so many of these lakes near the heads of the rivers and at such an elevation above the sea, is likewise an important feature. Walter Wells in his Hydrographic Survey of Maine estimates that 1,229,200,000,000 cubic feet of water, more or less, delivered by our rivers, fall on their passage to the sea through a mean distance of 600 feet, and in their descent yield a gross power of 4,429 horse for each foot of fall, which in the aggregate amounts to 2,656,200 horse power gross, equivalent to the working energy of over 34,-000,000 men.

Maine's waterways are so hemmed in by rocky barriers which restrict their course within narrow channels, that their efficiency for manufacturing purposes is materially increased thereby, while, furthermore, because of favoring climatic conditions restricting loss by evaporation, the power is generally uniform and constant throughout the year. With the rapid growth of manufacturing, and the increasing cost of fuel as the years go by, the value and importance of this great natural power is sure to be appreciated, while, furthermore, great possibilities await these water powers because of the transmission of power through the medium of electricity. It is therefore of the greatest urgency that measures be inaugurated looking to the increased efficiency of these powers.

The year 1895, it will be remembered, was characterized in the spring by a severe freshet to be followed by many months with almost a complete absence of rain. The natural outcome of this prolonged drought through the summer and fall, was that many lakes and ponds fell far below their normal level, and numerous rivers and streams became so low as to be well nigh valueless as genera-The complaint was general throughout the State, tors of power. and the loss was in numerous instances large, important industrial establishments frequently having to shut down. Now the remedy for all this is by the storage of surplus water in the lakes and ponds tributary to the principal rivers during the wet season, and in this way the evils both of severe freshets and prolonged droughts can be guarded against and the power be kept constant and reliable. The Androscoggin, alone of the Maine rivers, did not suffer particularly during the drought, and the season therefor lies in the admirable system of storage reservoirs in the great lakes around the headwaters of that river. On the Kennebec, sometime ago, a movement was inaugurated, looking to improvement of the water power on that river in a similar manner, but it has not as yet been pushed to achievement as it should have been. On the Penobscot the conditions are exceptionally favorable for work along these lines, but as yet little has been done. The desirability of such improvements has been strikingly evident this season and the good work should not be longer delayed.

Among the important undertakings that should ere long be inaugurated under state auspices is a thorough and systematic Hydrographic Survey of Maine, and the benefits accruing therefrom would be many and far reaching.

#### TEXTILE MANUFACTURING.

Maine's water powers early attracted the attention of manufacturers of textile goods, and in this way a very large amount of outside capital has been brought into the state, the cotton and woolen plants in operation here now representing very large investments, and likewise giving employment to a numerous army of employes.

Cotton manufacturing was inauguated in Maine early in the present century, one of the pioneer mills being established at Brunswick in 1810. Other factories sprung up at Saco in 1831, Biddeford in 1845, and Lewiston in 1846, while in later years Augusta and Waterville secured large plants, and likewise several other towns in Western Maine. Lewiston is however the chief center of the industry, while the twin cities of Biddeford and Saco rank next in importance. In 1890, Maine had 23 cotton factories, representing an invested capital of \$20,850,754, an increase during the decade in capital, of over five millions of The number of employes in 1890 were 13,992 and wages dollars. paid \$4,372,473. The cost of materials used was \$8,407,362, and value of product \$15,316,909. The number of spindles was 885,672 in 1890 against 695,924 in 1880. In the years that have elapsed since these census statistics the cotton manufacturing plants have undergone many improvements, notably those at Brunswick. Augusta, Lewiston and Saco, in some instances new factories being erected while in others elaborate repairs and changes have been inaugurated. The industry is to-day in a prosperous condition with the exception of the old plant at Hallowell. Notwithstanding the alleged tendency of cotton mills to move southward near the source of the raw material there is nothing to indicate this among the mills of this region and cotton manufacturing will continue for all time to be an important industry in our midst. Α unique feature is that the cotton mills in Maine are all west of the Kennebec river, there being none in the eight counties east of that river, although just across the boundary, at Milltown, N. B., on the St. Croix, there is a large plant.

Woolen manufacturing early secured a foothold in Maine. The conditions have been very favorable for its growth and development, the industry being one especially adapted to this region. In a small way woolen manufacturing was inaugurated in Maine some years prior to the introduction of cotton mills. In the early days our good old grand-mothers made the cloth for the family right at home. Upon the advent of the woolen mills this industry was gradually lifted from the shoulders of the housekeeper, although as late as 1810 she made over half the woolen cloth in this State, 453,410 yards being thus produced, while the fulling mills dressed but 357,386 yards annually. One of the pioneer woolen mills in Maine was established at Dexter, Penobscot county, by Amos and Jeremiah Abbott, two brothers who removed there from Andover, Mass., in 1820. There was a small wool carding mill which they purchased and a few years later they built the present woolen mill, being the first firm in Maine it is claimed, to manufacture and ship woolen cloth out of the State. The business is still carried on under the same firm name of Amos Abbott & Co., and one of the partners, George H. Abbott, a son of Jeremiah Abbott of the original firm, has recently donated a \$20,000 public library to the citizens of Dexter. The woolen mills gradually multiplied and in 1850 they numbered 36. They then continued to grow more rapidly and in 1880 aggregated 97. Since that time they have decreased in number somewhat, many of the small mills going out of business, but in their places have grown up plants of large proportions. This will be seen from a glance at a few figures. While the 97 mills in 1880 represented invested capital of \$4,016,828, the 89 mills of 1890 had a capital of \$9,700,-525.The number of hands employed increased also in the ten years from 3,265 to 5,453 and the wages from \$1,091,329 to \$1,-The cost of materials used increased in the same time 911.676. from \$4,444,990 to \$5,704,569 and the value of product from \$6,962,003 to \$8,814,256. Since the census figures were taken the business has still further expanded very materially, a large number of new mills having been erected, while numerous others have been enlarged.

In addition to the woolen mills, there are flourishing plush and worsted mills at Sanford, while a worsted mill has been erected at Fairfield the present year. Maine's only silk mill, the one at Westbrook, continues to flourish. Maine has all the elements for success in the manufacture of textile fabrics, and the number of these establishments in our midst will increase rather than grow less as the years roll by.

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#### AND LABOR STATISTICS.

#### PULP AND PAPER.

In no avenue of industry has greater advance been made of late years than in the manufacture of pulp and paper. While paper manufacturing has been carried on in a small way for half a century, it is within only recent years that it has assumed much magnitude as an industry. The early mills, with the exception of the big plant of S. D. Warren & Company at Westbrook, were generally small, being located at Mechanic Falls on the Little Androscoggin, Gardiner and Skowhegan on the Kennebec, and Hampden and Belfast in Eastern Maine. Of these pioneer mills some have been abandoned, while others have been entirely rebuilt and brought up to date in all particulars.

With the advent of wood pulp, great changes have been brought about in the manufacture of paper. One of the pioneer pulp mills in Maine was that crected in Brunswick in 1870 by the Androscoggin Pulp Company. During the succeeding ten years several pulp mills were built in different parts of the State, and from 1880 down to the present, numerous and costly plants for the manufacture of ground wood, soda, and sulphite fiber have sprung up. In 1880, the census figures give seven pulp mills in Maine, with a capital invested of \$440,000, and an annual product of \$300,000, and twelve paper mills with a capital of \$2,000,000, and product somewhat in excess of that. The 1890 figures are as follows: paper mills reporting, six; capital invested, \$1,578,327; value of product, \$1,762,440; pulp mills reporting, eleven; capital invested, \$2,695,-498; value of product, \$1.518,611. These figures are incomplete, vet they indicate the great stride made during the decade in the manufacture of pulp, paper making assuming a secondary position.

In the half a decade that has since elapsed, phenomenal advance has been made. A great number of new plants have been erected, and the expenditures made involved many millions of dollars. Very generally the mills are along one of the three leading rivers. The Androscoggin is in the lead, with the Kennebec next, closely followed by the Penobscot. The latter is making a remarkable advance, with two new pulp mills, this season, that of the Howland Falls Pulp Company at Howland, and the Webster & Ring Manufacturing Company at Orono, while the Eastern Manufacturing Company is rapidly pushing to completion a new paper mill at Brewer. The pulp and paper mills in Maine at the present time have a daily capacity of about 2,400,000 pounds or 1200 tons. This vast output is about two-thirds pulp and one-third paper. Ground wood or mechanical pulp leads, with sulphite second, with soda and chemical fiber third. In paper, news is first, book second and manilla third. About \$13,000,000 are invested in pulp and paper manufacturing in Maine, and employment is given directly to upwards of five thousand men in these twin industries. Indirectly a much larger number is kept busy, when one considers the cutting of the trees in the forest, the driving of the logs down the rivers to the pulp mills, and the various processes undergone.

In pulp making Maine is in the very forefront and as the paper mills, in order that profits be satisfactory, must come to the pulp mills eventually, the time is destined to come when Maine should lead in the manufacture of both pulp and paper. The best wood for pulp is spruce, and Northern Maine is full of this article, and it is likewise easily accessible. The rapidly multiplying uses for wood pulp open up a wide field of usefulness for the fiber of our forests, while the numerous and superb water powers to be found throughout the State generate the power to convert the same into pulp and paper. Great possibilities are before Maine in this direction.

#### LUMBER AND WOODWORKING.

The first mills established in Maine were for the sawing of lumber. The wealth of timber easily accessible, impressed the first settlers on these shores. Lumbering was inaugurated early and has since been a leading occupation. Originally pine was principally cut but now spruce is king, and the amount of pine harvested is comparatively small. Hardwoods are also cut in considerable quantities to be used in diversified lines of manufactures.

The first saw mills in Maine were erected in Berwick about 1631, and fifty years later the number of saw mills for the Province of Maine had increased to twenty-four.

From early times down to the present, great changes have been wrought in this important industry. Each year the woodsmen have penetrated further into the forest depths until the almost inaccessible sections of Maine's northland have been visited and been called upon to pay tribute to the hardy lumbermen who allow no obstacles however difficult to impede their progress. As the years go by
many changes in methods have been inaugurated. Dams and canals have been built to help along operations. Steamers have been built and put on the lakes to facilitate log driving, and in one instance, at North West Carry, Moosehead lake, a log sluice and carryer has been constructed at large expense to convey the logs overland from the Penobscot West Branch to Moosehead waters, the source of the Kennebec.

Even more remarkable changes have taken place in the sawmills and their equipment, than in the methods of lumbering in vogue in the forests. The primitive mills of the early days have given place to great plants, many of them operated by steam power. And the saws of the olden time have given place to the band saws which grind out a vast cut in a limited time. The band saw was not at first believed to be adapted to Maine spruce but now it is in operation in mills on all of our leading rivers and is rapidly coming into very general use.

The importance of Maine's lumber industry can be gleaned by inspecting a few figures. The cut last winter was much below the average and therefore it will be best to take the figures of the previous winter, 1893. The total cut of logs that year amounted to 849,581,398 feet. Of this amount 573,811,627 feet were spruce, 107,330,822 pine, 100,357,101 hemlock, 60,904,701 cedar and 7,177,147 hardwoods. Bangor has been at all times Maine's leading lumber market and from the early days down to the present there have been surveyed in that port nearly 10,000,000,000 feet of lumber.

The palmy days of lumbering are gone, and yet it will for all time continue an important industry. The pulp business has already had a marked effect on the saw mills, and in numerous instances when such mills have been burned, extensive pulp plants have replaced them. Doubtless measures will ere long be adopted to restrict the wanton destruction of our forests, and the saw mill in the future as in the past will be an important factor in Maine's industrial life.

Maine's wealth of hardwoods, already now receiving liberal attention, is destined to be much better appreciated. The birch is in great demand for shipment to Scotland for purposes of spoolwood, while beech is wanted in liberal quantities to be converted into orange shooks for Florida and the Mediterranean ports. General woodworking plants have sprung up all over the State, especially at points accessible to the raw material. Such establishments are destined to multiply here, and no where are the conditions so favorable for success as in Maine where there is a wealth of material, abundance of water power, and generally good transportation facilities.

### THE QUARRIES.

An important element of Maine's native wealth is to be found in her quarries. Granite abounds in many parts of the interior and conspicuously so along the coast. A leading center of the industry is among the islands and along the shores of Penobscot bay. Important quarries exist also in Hallowell, Augusta and South Norridgewock on the Kennebec, in North Jay on the Androscoggin, and in Freeport and Biddeford, while to the Eastward, the islands and shores of Hancock and Washington counties abound in rocky Maine's granite is in great demand for building purtreasures. poses, many of the leading public and business edifices throughout the country being constructed from this material. It is also in demand in most of the large cities for paving highways, and the quarrying of paving blocks is an important branch of the industry. It is likewise shipped all over the land to be used for monumental Maine granite is in numerous varieties, among these purposes. being white, grev, dark and red. The red is found in Hancock and Washington counties, and the dark chiefly in Washington and The granite industry is by no means of recent origin, some Knox. of the older quarries having been in operation for half a century. In the early days, however, the business was carried on in a small way, and it is largely within the last two decades and a half that the extensive operations now characterizing this important industry have been inaugurated. By 1890, the number of quarries in Maine had increased to 153, with employes numbering 3,737, and annual wages paid of \$1,517,026. These guarries represent a capital of \$3,192,317 and a total output per annum of 6,701,346 cubic feet, aggregating \$2,225,839 in value. Of this product upwards of one-half was for street work, including paving blocks, and more than a quarter for building purposes. Within the past few years several new quarries have been opened; the older ones are generally being operated on an extensive scale, and the outcome of this important business is full of promise, this being a field in which Maine can satisfactorily compete with the world.

The quarrying of limestone and the conversion of the same into lime, is justly entitled to a prominent place among Maine's indus-This business had a very early origin, dating back to the tries. last century. The limestone deposits are confined largely to Waldo and Knox counties, and it is in the latter county that the industry is chiefly confined. The industry originated at Thomaston, and the quarries and kilns are located principally at Rockland, Thomaston, Rockport, Camden and Warren. In 1890 the business had reached such proportions as to employ 1,063 employes, with a yearly payroll of \$679,825, the 60 quarries having an annual output of 1,903,639 barrels, there being a capital of \$1,120,500 invested in the industry. In the volume of her lime product, Maine is only exceeded by Pennsylvania, while the Maine lime, because of its superior grade, it being used chiefly for building purposes, is so much in advance of that from the Keystone state, that, in value, Maine's lime product in the aggregate is at the head of all her sister commonwealths. Maine has at present a formidable competitor in the Maritime Provinces, but under favorable conditions we can hold our own in the markets of the world. Maine lime manufacturers are thoroughly enterprising and progressive. Thev are adopting all the newest and most approved methods, and with reasonable encouragement this will continue to be for all time a leading Maine industry. A new field in which Maine limestone is in demand at the present time is the pulp industry, some of the Maine pulp mills using large quantities.

Maine's slate industry originated about fifty years ago when valuable slate discoveries were made in Brownville, Piscataquis county, the late Adams H. Merrill being the pioneer operator. For many years the product was hauled by teams to Bangor. With the advent of the railroad into Piscataquis county increased shipping facilities were secured, the business being given a new impetus. Brownville was for many years the chief center of the industry, but later, Monson stepped to the front. Massachusetts capital became heavily interested in the quarries in the latter town and operations were prosecuted there on a very extensive scale. At different times, quarries have been opened in numerous towns thoughout Penobscot county, but, at present, the industry is confined principally to the three towns of Brownville, Monson and

In 1890 there were eight quarries in operation, with a Blanchard. An output of 43,500 squares valued at \$214, capital of \$641,000. 000, and employing 300 hands with a pay-roll of \$160,300. The leading firm is the Monson Maine Slate Company, which, in addition to owning several quarries at Monson, has recently acquired the famous Merrill quarry at Brownville. Maine slate is unexcelled the world over for roofing purposes and is in demand all over this country. The Monson Maine Slate Company also use it for many other purposes, and their mill at Monson turns out a great variety of slate products. The Slate Engraving & Manufacturing Company, with quarries at Monson and factories at Portland, also find many uses for it outside of roofing buildings and they utilize it for counters, floor tiling, urinals, wainscoting, mantels and all kinds of ornamental work. The possibilities of this industry are very great, and Maine slate will figure conspicuously in the industrial future of the State.

In some sections of the State, fieldspar mining is the source of considerable income. Copper and iron mining have also been carried on in different parts of Maine, but with indifferent success. These minerals exist here in considerable quantities and the time may come when these deposits will be operated with profit. Mica exists here, and likewise tin, besides many others of the valuable minerals. The mining of tournalines in Oxford county, has, for years, been prosecuted with considerable success. Gold has also been found in paying quantities in portions of Androscoggin, Franklin and Oxford counties.

### ICE.

A crop that rarely fails in Maine is that of ice. With each returning winter the temperature invariably runs low enough and remains so a sufficient length of time to form a crystal harvest of merchantable thickness, while, furthermore, the waters of the rivers and ponds are of such purity that the quality of the article is sure to be all right. Maine's ice industry is not of recent origin, yet it has made great advances within the two past decades. The business originated on the Kennebec, where shipments were made in a small way, some sixty years ago. The business gradually expanded, being characterized by much speculation.

In the early years it was confined exclusively to the Kennebec, but about 1860, operations were inaugurated in other waters. One of the conspicuous figures in the pioneer days of the industry was James L. Cheeseman. With the advent of the Knickerbocker and other large outside companies, the industry began to assume a more permanent basis. As the big ice house plants commenced to multiply along the Kennebec, the industry began to reach out to other portions of the State. The Penobscot, in time, became also an important ice harvesting river, and likewise numerous lakes and ponds near the coast gave up their icy surfaces.

In 1890, which was the banner year in Maine, the harvest aggregated the immense amount of 3,092,400 tons. The expectations of many failed, however, of realization at that time, and the returns were far from what had been hoped. Since that time the crop has varied with each season, at no time equaling the phenomenal record of 1890, and yet at all times reaching figures of quite large proportions.

The industry is now on a permanent basis, and operators who are satisfied with a fair margin of profits find the business pays. Although artificial ice is coming into use to a considerable extent through the south, indications point to a steady expanding demand for Maine ice.

## BOOTS AND SHOES.

An industry which has made remarkable growth in recent years. is that of manufacturing boots and shoes. Auburn is the center of the industry, it being appropriately styled "Maine's Shoe City." There are large plants, however, scattered throughout the State, and nearly every city or large town has one or more of these desirable industrial institutions. Many of these firms have removed here from other New England states, drawn hither by the superior advantages offered in Maine. The small shoe shops of the early days have largely gone by, and in their stead are extensive factories, equipped with modern machinery and employing hundreds of hands. One of the pioneer manufacturers in Maine is Ara Cushman, the head of the Ara Cushman Company, whose present plant at Auburn is the largest of its kind in Maine. Mr. Cushman commenced in West Minot in 1854, and in 1862 removed his business to Auburn. From small beginnings the business of manufacturing boots and shoes in Maine has grown until it has reached its present immense proportions, employing an army of workmen and paying between \$3,000,000 and \$4,000,000 in wages.

There are few lines of business in which greater changes have been wrought as the years go by, these changes being largely due to the advent of machinery. It is indeed an interesting study to watch The business is the growth and development of such an industry. one that should be fostered and encouraged in our midst, as it gives employment to numerous hands at remunerative prices. We have an abundance of skilled labor here in the state, the cost of living is reasonable, shipping facilities are generally good, and the business should expand rather than grow less as the years roll by. Numerous Maine towns have had unpleasant experiences with tramp shoe firms from away who come here drawn, perhaps, by some alluring inducement and then after a brief time skip out. It behooves our people to be on their guard and not allow them to become victims to irresponsible parties from outside of the state. Maine is admirably adapted, however, for such an industry and with right men at the head and with proper encouragement on the part of the community, such enterprises should be successful.

Closely associated with the boot and shoe interests is the manufacture of leather, the tanning industry being an important one in The tanneries are located in different sections of the Maine. state, the large plants being in Eastern Maine. The business has undergone numerous changes, and many of the older establishments have been burned, abandoned, or put to other uses. The industry is however of much magnitude here in our midst, giving employment to a large capital, keeping busy many hands and consuming bark in immense quantities. The big tanneries are generally located in the counties of Penobscot, Washington and Aroostook. With the building of the Bangor & Aroostook Railroad, Proctor, Hunt & Company of Boston, built at Island Falls two years ago, the largest tannery in the State, it being 670 feet in length and consuming 10,000 cords of bark annually.

### CANNING INDUSTRY.

From small beginnings the canning industry has assumed a prominent place in Maine's business world. It was about 1857 that Nathan Winslow commenced in Portland the packing of sweet corn in hermetically sealed cans. The industry in its inception had much to contend with, and it was with difficulty that any market was found for the goods; and yet from this humble origin the great packing industry of the country and the world has grown. To-day the canning of sweet corn is a business of large magnitude in Maine, there being from forty to fifty corporations, firms or individuals, thus engaged. The growth of the industry can be the better appreciated from the fact that while, in 1857, Nathan Winslow put up perhaps fifty cases of two dozen cans each, these figures had, by 1890, swelled to 600,000 cases, and in the years that have since elapsed the packing has ranged from 600,000 to 750,000 cases. Maine easily leads all other states in the volume of her corn pack, and its quality is unexcelled, no other section being able to approach the Maine article.

Maine also packs thousands of cases of gallon apples, one dozen to a case, and the same enjoy a wide demand. Pumpkin and squash are also packed to the extent of many thousands of cases. Tomatoes, pears and blueberries are also packed here in large quantities; "Boston baked beans" are also put up here in Maine in large quantities. Various kinds of meats and fish are likewise packed here. The canning of lobsters has assumed large proportions, there being numerous factories along the coast, the goods enjoying a widespread sale. Clams and clam chowders are packed in large quantities and sent all over the continent.

A leading branch of the canning industry is the putting up of sardines. This business was inaugurated a score of years or so ago at Eastport, and, although that city is still the center of the industry, factories have been established at numerous other points along the Maine coast. The business has steadily expanded until the pack averages 500,000 cases. In the vicinity of 20,000 barrels of oil are consumed annually and likewise many tons of mustard. The goods find a market largely throughout the West and South. The pack during 1895 has been very materially curtailed by a strike which resulted in the Eastport factories being generally shut down during quite a portion of the busy season.

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### COMMISSIONER OF INDUSTRIAL

Maine possesses exceptional advantages as a center of the packing industry, and this business, which originated on our own soil, should be kept in the ascendency here for all time. Every year opens new fields, and with steadily expanding markets both at home and abroad great possibilities are before us in this avenue of industry. Wonderful have been the changes in the machinery used in packing canned goods in recent years, and in few lines of industry has greater progress been made than in this.

### MINERAL SPRINGS.

An important element of wealth, the development of which has been largely confined to recent years, is to be found in the mineral springs. These are not to be found in any one section of the State but are widely distributed, nature having been very lavish in this par-The mineral spring industry is as yet only in its infancy, ticular. but great possibilities are before it. What may be done in this direction can be judged from what has been accomplished by Hiram Ricker & Sons at Poland Springs. The water from this famous spring goes all over this country and to foreign lands as well, the demand being large and steadily increasing, the volume of shipments having attained very large magnitude. The springs throughout the State vary materially in the quality of the waters, and likewise in the volume of the flowage. A marked characteristic of the spring water is its purity. Great benefits accrue to people because of the growing use of these waters.

### SUMMER RESORTS.

Maine has been justly styled the "Playground of the Nation." Its rare combination of mountain, lake and seacoast, together with a climate thoroughly invigorating, eminently fits this Northeastern section of Uncle Sam's domain to be the summer abode of the great tourist public. Remarkable indeed has been the growth of that tide of summer travel, which each season visits our shores, lakes and mountains in increasing numbers. Hotels innumerable, both great and small, have been reared at both inland and seashore resorts for the accommodation of this invading army, whose visitation is welcome to all.

Many of the visitors prefer summer homes of their own, and cottage life is popular among large numbers. The outcome of this

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growing tendency to prefer the cottage to the hotel has been the erection of cottages by the thousands, and involving many millions of dollars. At Bar Harbor and many other Maine resorts, summer cottages truly palatial have been reared, and here, through the months of summer, wealth and fashion from distant cities hold sway. And there are also accommodations at both seashore and the interior for those who prefer less pretentious quarters, summer boarding houses of an excellent character abounding everywhere.

While Maine has long been known as a resort par excellence in the summer months, yet it is only within recent years that the tourist business has assumed anything like its present immense Maine's attractions have only to be heralded abroad proportions. in order to draw people hither, and the limited advertising already done has resulted in benefiting the State and its people a thousand fold. With the growth and development of railroad and steamship lines, localities heretofore inaccessible have been brought into easy reach from the outside world, and resorts have sprung up all over The great transportation lines have labored earnestly the State. in spreading abroad information as to Maine's resort advantages and they have reaped substantial benefits in the rapidly expanding travel.

The summer resort industry is in reality one of the most profitable of all the lines of business in Maine, and its future development is exceptionally promising. Several hundreds of thousands come from away each year, and the amount of money this puts in circulation aggregates in the vicinity of \$10,000,000 annually.

### FISH AND GAME.

When first the early pioneers landed on these shores, they found the waters teeming with fish, and game abundant in the forests. So vigorous became the onslaught on the wild denizens of the woods with the advance of population, that these objects of the chase became materially decreased. In recent years, however, through the influence of beneficent laws, all this has been changed, and to-day the sportsman can find abundant opportunity to exercise his fondness for rod and rifle.

The measures taken by the State for restocking the inland waters with fish, and for the preservation and propagation of fish and game, have been productive of the best results, and at the present time there is no section of the country where trout, salmon, moose, caribou and deer are more abundant or easily attained than in Maine. And notwithstanding the great numbers taken each year, the restrictions are such and the conditions for their subsistence are so favorable that instead of being in danger of extermination they are rather on the increase. At the Bangor Salmon Pool, the lordly salmon as he proudly ascends the Penobscot, is arrested by rod and reel. And the moose, the biggest of all the game of the forest, has multiplied, as well as the deer, so that in the past two years they have been taken in greater numbers than for many decades, the record for 1895 being a truly remarkable one.

Since the opening of the Bangor & Aroostook Railroad's new line into Northeastern Maine, a record has been kept of the game shipped from stations, and these figures are very interesting, the data being thoroughly reliable. During the months of October, November and December, in 1894, the record was 1,001 deer, forty-five moose and fifty caribou, while during the same months this season, 1581 deer, 112 moose and 130 caribou were thus transported. As these figures cover only the shipments from the stations of one line of railroad the magnitude of the game interests of Maine can be appreciated. Through the enterprise of the Maine Central Railroad, the fish and game interests were ably represented at the Sportsmen's Exposition in New York last spring, and doubtless through this medium many sportsmen never before in Maine were induced to come here this past season. Outside sportsmen spend millions of dollars here each season, and this is an industry that should be fostered.

### RAILROAD DEVELOPMENTS.

The railroad has played a conspicuous part in the development of Maine. The cities and towns along the leading rivers, as well as those on the coast, have water transportation to the outside markets open to them, but the inland communities are almost entirely dependent upon the railroads for their transportation facilities, for both passengers and freight. The Maine Central Railroad with its nunerous branches enters into all of the sixteen counties of the State save one. The Bangor & Aroostook Railroad, recently completed into Aroostook, affords that county direct rail communication with the outside world over a line all on American soil, and the same privilege is soon to be vouchsafed the people of Washington county, the Shore Line Railroad being already in process of construction. These two lines mean much to Northern and Eastern Maine, being destined to play an important part in the development of that expansive section of the State.

In addition to the larger railroad systems of the State are numerous other lines, many of them very important in the sections which they traverse. Within the past few years a large number of these smaller lines have been constructed, and several others are at present under contemplation. Maine enjoys the reputation of having had, in the Veazie Railroad built from Bangor to Old Town and Milford in 1836, one of the pioneer railroads of the country, and in the line of railroad development she has kept fully abreast of her sister states. The phenomenal progress being made in the utilization of electricity as a motive power assures the rapid multiplication of electric railroads, not only in the cities and large towns. but in sections of the country not reached by the steam roads. These electric railroads will transport freight as well as passengers and are destined to play an important role in the industrial development of the State.

### DIVERSIFIED INDUSTRIES.

Maine is especially fortunate in having a great variety of resources, and therefore the conditions are exceptionally favorable for diversified industries. Far better is it for a State to have numerous lines of industry, than to be entirely given over to one business, the failure of which means disaster to all the people. There is about everything manufactured within the limits of Maine that one can conceive of, and it was because of this wonderful diversity that the State passed through the period of dull times so smoothly. The advantages that Maine offers for manufactures of almost every kind are unequaled, there being here an abundance of raw material, cheap fuel and power, low cost of living, superior transportation facilities, and rich markets easily accessible. The outlook for the future is auspicious, and with the development of those lines of industry which hold out the brightest promise, Maine should take her rightful place among the leading industrial states of the Union.

# A REPRESENTATIVE WOOD-WORKING ESTAB-LISHMENT.

Bangor has, from the early times, been a leading center of the lumber industry, and although the great sawmills are generally outside of the city there are within the limits of the "Queen City of the East" extensive lumber manufacturing and wook-working plants. The Kenduskeag river, whose waters unite with those of the majestic Penobscot at Bangor, has several excellent water powers within the limits of the city, and it was here amid the picturesque scenery that abounds along the banks of the Kenduskeag that William Hammond, one hundred years ago, in 1795, erected the first sawmill in Bangor. From that time down to the present lumber manufacturing has been carried on there, but the century that is gone has witnessed many changes, the unpretentious structure of one hundred years ago bearing little resemblance to the magnificent plant of Morse & Company now on its site.

Throughout the Penobscot valley, or in fact in the entire State, there are few firms that have been associated with the lumber industry as long as Morse & Company, the firm dating its origin from 1850, when they acquired possession of the mills on the Kenduskeag, although two members of the company, Llewellyn J. Morse and Hiram P. Oliver, had been associated with these mills some years prior to that time, and during this half a century great changes have been wrought, the primitive saws of the early times giving way to the modern bandsaw, and while for years great pine logs used to be floated down the Kenduskeag in ample quantities to keep these mills busy, for some decades past, the lumber sawn has been secured principally from other sources, great rafts of logs coming down the Penobscot and being floated up the Kenduskeag to the first dam, where by an ingenious device they are lifted over, and find a good storage place in the commodious mill pond above.

Morse & Company own four water powers on the Kenduskeag, all of them within the limits of Bangor, and on each of these dams are mills, although it is at the lower power at the head of

tidewater and distant but a half mile from the business center of Bangor where the greater portion of the numerous manufacturing establishments comprising their extensive plant are located. Thev have here a very hive of industry, and numerous lines of manufacture are represented. In addition to long lumber, of which they have this season sawn 7,500,000 feet, they manufacture short lumber as well, and are equipped for furnishing everything in the woodworking line. Their departments include also a grist mill. wool carding mill, box mill, salt mill, plaster mill, etc. While the business of Morse & Company has steadily expanded along most of these lines, it is in the wood-working department that the greatest strides have been made in recent years, and under the supervision of the hustling manager, W. L. Morse, Bangor's representative wood-working establishment has stepped to the front as the foremost in its line in New England. Prominent among their specialties have been wood mantels, and the superb specimen made here for the Maine building at the World's Fair was viewed by admiring throngs at Chicago's great exposition. Another important department is doors, sash and blinds, and everything in the line of house finish is turned out. All the latest and most up to date wood-working machinery is to be found here, and no establishment in New England in this line has a better equipment. Orders are filled not only from all parts of Maine, but all over New England and still more distant points, shipments having been made to the Pacific coast. A very large amount of work has been done for summer cottages at Mt. Desert and other resorts along the Maine coast and they now have in hand orders for the entire interior finish for seven palatial summer cottages.

Morse & Company have recently built for themselves a new business office, and it is a worthy headquarters for such an enterprising and progressive company, being one of the most unique and elegant office edifices in New England. Approaching the office, a curved retaining wall of granite paving blocks is seen, and then comes the building itself, which is  $25 \ge 60$  feet, and two stories, the lower portion being of granite. For ten feet of the second story, the wall is plastered outside with an imported cement, put on rough and having a soft gray tint that is very agreeable. This broad band of gray is relieved by elegantly carved panels, while the corners are supported by beautiful fluted pilasters, surmounted by Ionic capitals, a heavy four-foot cornice, finely carved, running all around the building. On the southerly end appears in carved work in a large square panel the firm name, "Morse & Company," while supporting it on either side is an oval panel, one of which bears the date of the founding of the firm, "1850," which the other, the date in which the edific has been reared, "1895." On the Valley avenue front are two square panels, carved, bearing the words in raised letters, "Interior Finish" and "Mantels and Tiling," indicative of their leading specialties.

Entering the office building through the arched entrance, the visitor passes into the vestibule, with its floor of tile, tile bases and sheathing of red quartered oak to a height of five feet, one will be prepared for the handsome interior to be seen through the door close by and which lets the visitor directly into the main office, a room  $25 \ge 18$ , which is finished in red guartered oak, this as well as all other rooms in the building being wainscoted to a height of five feet. A counter runs from between the window and the door at entrance, curving to the entrance to the next room, and having a bank gate at one end. Just behind this counter is a door leading into a handsomely finished oak cabinet, which in turn has a door opening into the book-keeper's special office. The cabinet contains the long distance telephone, and this room, like the other has a counter to separate the accountant's private apartments from the rest of the room. This room, 25 x 16, is finished in quartered white oak, and behind the counter are two desks. Next comes the firm's private office, a room slightly smaller than the last, and with a great fireplace as a central figure. The elegant roll top desks, the handsome mantel, the wainscoting and the finish throughout of figured tobasco mahogany, give a richness to this room that is still further enhanced by the tints that, shading from a color to accord with the rich mahogany color of the finish, will blend into a soft, light producing effect overhead. The light streaming into the rooms through the large windows, will above them be softened by silver ripple glass, centered on the front side with opalescent figures of fleur de lis. The finish and furniture, even to the roll top desks, are all made by the firm's own workmen.

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The second story of the office building is reached by a stairway on the left of the main entrance to the first office, and likewise by an entrance on the second floor. This story is given over to the display of mantels and tile, and the exhibit is an attractive one. Ranged around the sides are eighteen beautiful artificial fireplaces, while at the southerly end a genuine New England fireplace is in full blaze. The room has long tables for the display of tile, and the light admitted by means of the monitor roof is increased by the shading tints of the walls and ceiling, which, from a buff near the mantels, become a cream overhead. The floors throughout are of hard wood and the material invariably used is of the best. Architects, contractors, and all associated with the building trades unite in pronouncing the new edifice a gem.

From small beginnings the business of Morse & Company has expanded until it has reached its present immense proportions, the growth in the past few years having been very large. Some years ago the business was incorporated, the same name being retained, and Morse & Company is now a stock company with a capital of \$324,000, the officers being as follows: President, Llewellyn J. Morse; manager, Hiram P. Oliver; secretary, Walter L. Morse; treasurer, Frank Hight; directors, L. J. Morse, H. P. Oliver, W. L. Morse, Frank Hight and Wm. S. Higgins.

# THE OIL-CLOTH INDUSTRY.

Of the varied industries of Maine on which are dependent the welfare of our people, none have contributed more to their thrift and prosperity than the manufacture of floor oil-cloths, in proportion to the capital invested, a business which for more than sixty years has flourished and grown, made fortunes and built up communities of thriving, intelligent citizens. Unlike many of the industries, it has been confined to few localities and manufactories are not found scattered throughout the State. This business in common with nearly all others, has seen vicissitudes, in flush times yielding the proprietors munificent returns, and in years of financial stringency and slack demand for goods, but a small margin above the cost of production. Probably there is no business in the State which, in its palmy days, afforded greater profits to the manufacturer than that of the printing of oil-cloths. During the war it was highly remunerative and manufacturers made money rapidly. For a long term of years it was confined to but few hands, the successful manufacturers having the market all to themselves and not being troubled by any competition to speak of. Numerous small concerns started in the business but did not prosper and dropped out leaving the field for less than half a dozen men who were more firmly established or better acquainted with the business, and had greater capacity for management. To-day there is no lack of competition, the margin of returns being cut down to not more than a living rate, and manufacturers are relying upon the economy with which they can produce and place their goods upon the market, the question of profit and loss being governed thereby. The raw material must be closely purchased and the cost of labor and marketing kept at a minimum if the business is made a paying one. In cheapening the expense of production manufacturers have had recourse to various devices in the treatment of cloths so that there is hardly a concern which does not possess some secret method which is guarded jealously from competitors.

It is a somewhat surprising fact that for many years a monopoly of the business on a large scale in this country was confined almost exclusively to Kennebec county, but within a comparatively recent period extensive oil-cloth manufacturing plants have been established and maintained in Philadelphia and vicinity, where this industry seems to center in a measure. While Maine manufacturers suffer some disadvantage from the increased costs of freights, they are able to do business here more economically than in a large city.

The making of floor oil-cloths, which is the only kind now manufactured in the State, the producing of tablecloths having long since been discontinued, requires the erection of long and comparatively narrow buildings, as the drying and curing of the cloths which are cut in seventy-five foot lengths, necessitate the construction of racks sufficiently long to receive them. The buildings in Maine have been invariably constructed of wood, two or three stories in height, substantial, and heavily timbered, as the material and goods to be supported are exceedingly heavy. Such is the inflammable nature of the oils used in manufacturing, that it is very rare that factories escape without a fire, and there is not one standing in the State, with perhaps one exception, which does not stand on the site of a building which has been consumed. This liability to fires makes the risks on this class of property extremely hazardous, and the insurance is consequently a costly item of Besides space for the racks, room must be provided for expense. mixing paints, the sizing, paint, varnish and other machines, the printers and storage. A baking room for the cloths is also among the necessities. Power is required which is furnished by a steam engine.

An oil-cloth is simply a piece of coarse cloth filled with sizing and paint and stamped in colors and designs pleasing to the eye. There must be a foundation to build upon, a beginning, and burlaps are the material everywhere used as the skeleton for the finished goods. They are all imported, mostly from Scotland, their manufacture here not having proved a success. Although some are wider, oil cloths are usually made in four widths, viz: yard, yard and a quarter, yard and a half and two yards, which are known to the trade as four, five, six and eight quarters respectively, and burlaps are purchased of widths to correspond. Burlaps are woven of jute and specially prepared for oil-cloths, the price paid being from five to ten cents per yard, according to width and weight. The first process is to size the cloth by running it through a sizing machine and saturating it with glue and flour or a similar mixture. When dry and the cloth stretched and calendered on machines constructed for that purpose, the cloth is built up with paint, the amount applied varying with the quality and weight of the goods. There are four qualities, which are numbered, and the heavier the cloth the more paint it is given. No. 1, cloths receive eight coats; No. 2, six coats; No. 3, four coats; No. 4, three coats; which quantities may vary with different manufacturers in accordance with their standard of weight and finish. The application is made by a machine, the cloth passing under a steel knife which distributes the paint at a uniform thickness. After the first few coats, which are each thoroughly dried, the cloth is run through a machine which consists of a series of scouring stones moving with a rapid, rotary motion over the face of the cloth, scouring off all excrescences and leaving the surface smooth and even. The finishing coats are then applied when the cloth is ready for the printing room to be stamped with the designs.

One of the first steps in printing is to procure the designs which are purchased of designers located in the large cities, who make a specialty of this class of work. These designs must be transferred to the cloth in paints and colors, which process is accomplished through the medium of blocks, and entirely by hand labor before machinery was invented. The preparation of a block in readiness for the printer requires no little mechanical skill. Its form, ordinarily, is that of a square, eighteen by eighteen inches, and in thickness about two and one-eighth inches. The form and dimensions sometimes vary, however. Machines can carry almost any weight of blocks which can be made of sufficient size to extend across the piece of cloth printed. As a rule the material for blocks is wood, which is built up in separate sections of pine and hard wood, crossed to give strength and prevent splitting, and solidly glued together. The face is hard maple, which, after being brought to a perfect plane, is placed in a machine beneath a fine and sharp cutting circular saw, and sawed into lines, usually one-eighth of an inch in depth. The block is then turned around and sawed transversely so that when completed the surface presents the appearance of a vast number of pegs close together, and parallel to each other. The number of these pegs, or "pins" as they are usually termed, varies with the pattern, in many designs running 144 to the square

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inch, in others 100, or 64. George Fuller's Sons of Hallowell are the sole block manufacturers in Maine, and this firm has had a monopoly of the business in the State, as they did in the country, for a long period. They now employ three hands, turning out from two to three thousand blocks a year. But this little industry is not what it was once, as, with the establishment of oil-cloth manufactories in Philadelphia, blocks have been made elsewhere.

The concluding process is that of cutting the blocks and preparing them for the printer and is a trade of itself requiring experienced workmen. A block is demanded to each color in the pattern, and the cutter, with the design by his side, chips out all the pins excepting those which are to carry the paint for one hue of the pattern and from which the cloth is to be printed. One completed. another color is taken and a block treated to conform to it. This operation is continued until the pattern is exhausted. The cutter now has a complete set of blocks with surfaces representing all the colors and when properly supplied with paint and applied seriatim to the cloth give the perfect design. The finishing touch is the gouging out of portions of the block where the pins have been cut away, leaving air spaces so as to prevent adhesion to the cloth when printing. There are three block cutters in the State, Henry Winslow of Winthrop, who does nearly all the work for C. M. Bailey's Sons & Company; Frank A. Day of Hallowell, who is the cutter for Alden Sampson & Sons; and Harry Wood of South Portland, who cuts for Wilder & Company and other manufacturers. Thev employ from one to three hands each, as the demand admits, and are in possession of a profitable business giving employment the year round. The blocks then go to the printer who stands in a well At his back is a circular revolving table upon which lighted room. are arranged pads of sufficient size to receive the face of the blocks. There is a pad for each color used in the pattern of the cloth which the workman is printing and upon the pads the paint is The blocks are hung spread from the paint pots with brushes. within convenient reach of the operator, while in front of him is the prepared cloth which runs over a solid table with a plane surface, and is pulled into the racks as fast as printed. In practice, the workman seizes a block, applies it to the pad where it receives the paint, thence transferring to the cloth. A sharp blow is given the block with an iron maul sufficient to make a good impression, when it is removed and the blocks follow in rotation until each color is deposited and the square completed. Section after section of the cloth is thus treated until the entire piece of twenty-five vards glistens with color and design. The cloths lay upon the racks about a week, to dry, when they are removed to the bakehouse, remaining there until thoroughly hardened, a high temperature being maintained and running up with some manufacturers to one hundred and fifty degrees. The period of baking extends from ten days to four weeks. But temperature and time are not alike in all factories. The finishing touch is given in the varnish machine where the cloths are varnished by a rapid process. The varnish hardening in twenty-four hours, the goods are prepared for packing and shipment, being wound in rolls, numbered according to quality and weight and packed in boxes. A completed piece of No. 1 cloth, twenty-five yards long, will weigh from one hundred to one hundred and twenty-five pounds; No. 2, ninety pounds; No. 3, eighty pounds; No. 4, from fifty to sixty pounds.

But the printing of oil-cloths is not by any means confined to hand labor, but as in many other industries, machines have come into use and with them cloths are printed with far more rapidity than by the old way. The first oil-cloth printing machine was the invention of a man named Savage, early in the fifties. He resided in Hallowell, and having worked at the oil-cloth business, conceived the idea that the cloths might be printed by machinery, He set to work and after several years a plan for a power printer was evolved which proved a success. A patent was secured and the first machine was built by the late Isaiah McClench of Hallowell, a machinist. The patent and all the rights attached were purchased by Alden Sampson, and for upwards of forty years, this house had a monopoly of printing oil-cloths by power, the patent only lapsing very recently, having been renewed several times. The machine has been improved from time to time until it is now regarded by the makers as perfect. The printing is from blocks prepared in a similar manner to those for hand work. They are arranged in series within the machine, each carrying one color, and, the paint being applied by rollers, the prepared cloth passes beneath the blocks and receives the impression. The plain, painted cloth

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entering at one end of the machine, emerges at the other printed complete. One machine will print from sixty to one hundred and twenty pieces of cloth, twenty-five yards each, per day, and as it requires but three men to run a machine, its advantage over hand labor is manifest, as by hand printing one hundred yards is a good day's work for a man, yet there are manufacturers who say they can print as cheaply in the old way as by machines, and they are able to do business in competition with the power printing factories. A new machine costs in the neighborhood of \$8000. All the Sampson machines were built by the McClench family of machinists in Hallowell, now McClench & Company, the members of the firm being Mr. Geo. B. McClench, a son of the original proprietor, and Mr. William A. Winter. They have built in all, thirteen machines, eight of which are either in operation or in working order. They make a specialty of oil-cloth machinery, turning out sizing, paint and varnish machines, and other equipment constructed of iron in use about a factory. Six men are employed, but business is dull at the present time, the condition of the oil-cloth business not warranting the expenditure of money by manufacturers for more machinery than is absolutely needed. The use of printing machines is now by no means confined to the Sampson manufactories. George Williams, a Maine man, picked up some ideas in Hallowell, went to Philadelphia, and with his assistance machines have been built there within a recent period, and one used successfully by the leading manufacturers of Pennsylvania and New Jersey. It will thus be seen that, commencing with Savage's invention, power printing of oil-cloths has been a distinctively Maine process and been made successful by Maine men.

An important department of an oil-cloth factory is that where the paints are mixed and prepared. An immense quantity of oils and coloring matter is necessarily consumed in the manufacture of the goods so that these are leading items of expense. Every shop has a paint room, called the magazine, where the paints are ground and mixed by power. This is a very particular process, requiring an experienced paint mixer who is able to give the paints the necessary consistency and the desired colors and tints.

Workmen in oil-cloth factories earn fair wages. Printers work by the piece, the sum which they receive varying from a cent and a half to two cents per yard, and depending upon the complexity of the pattern and the number of blocks handled. They will average about \$1.75 a day, some making more, others less, according to skill and ability to turn off work. One hundred yards is a good day's labor, but many printers are able to do much better than that. Jobbers are paid from \$1.25 to \$1.75 per day. It has been claimed that this is an unhealthy business-the vapors from the oils and paints which permeate the air of the shops being injurious. While some individuals may be affected, yet the majority of the workmen follow the trade year after year and do not suffer, and after nearly a lifetime of continuous service are hale and rugged. The oil-cloth business is one which seems to tend to habits of thrift and industry, the operatives, who are mostly American born, being disposed to save their money. Many have purchased and own homes and are among the most respectable and prosperous citizens in the communities where they reside.

Oil-cloths are marketed throughout the country, the centers of the trade being in New York and Philadelphia. The great West is a prolific market, for there are no manufactories located beyond New York and Pennsylvania, and the eastern manufacturers maintain wholesale departments at Chicago and other points. The trade is also drummed, several firms selling direct to retailers, especially to those who do an extensive retail business. The wholesale prices of manufactured goods vary from sixteen to thirty cents per yard according to quality.

The story of the rise of the oil-cloth business in Maine is an interesting one. It is among the older industries of the State. In 1830, Alton Pope of Vassalboro commenced in a small way in that town, the manufacture of oil table-cloths, removing to Manchester Forks, four miles west of Augusta, in 1831, where he continued operations, employing two or three hands. Manufacturing was then conducted in an exceedingly primitive manner, the cloths being tacked on frames to dry, and when finished peddled about the country in teams. Such a thing as a floor cloth was hardly known and as a matter of fact, carpets of any kind were scarce in Maine homes. In 1832, Mr. Pope took into partnership, Alden Sampson, then a young man who had been doing farm work by the month. They conducted the business together for several years, when Sampson purchased his partner's interest in the business, conducting it alone afterwards. He was a man of superior capacity and energy, and the business having merged into the manufacture of floor cloths he saw the possibilities before him. The demand for carpets grew rapidly and to supply it additional facilities were required for manufacturing, and but a few years elapsed ere he had a large factory in full operation with an ample crew of men at work. In 1861 his factory at Manchester was burned and he decided not to rebuild, but, purchasing the Rice manufactory at Hallowell, transferred his business to that town. He soon found that the accommodations there were not sufficient and deciding to locate a branch factory, established a plant on Long Island, three miles from New York city, which has been in constant operation Here are six printing machines, all run at their fullest since. capacity, turning out an immense quantity of cloths. The factory at Hallowell was also operated until August 1893, when the oilcloth business felt the chill of the financial depression and it was shut down, remaining closed since. The closing of these works has been severely felt by the little city of Hallowell. They are thoroughly equipped for the manufacture of carpeting, two printing machines being included in the equipment. From fifty to sixty men were employed, many of them veteran workmen who had been connected with the shops for a long period, and all had to look elsewhere for employment. Not a few have been obliged to leave The pay-roll was \$2300 a month and 65,000 yards of the town. carpeting were produced monthly. The plant is valued at \$50,000. Since the death of Alden Sampson the business has been conducted by his sons under the firm name of Alden Sampson & Sons, their offices and headquarters being in New York.

The leading manufacturers of oil-cloths in Maine are C. M. Bailey's Sons & Company of Winthrop, which is one of the oldest, wealthiest and most successful firms in the State, doing business in any industrial line. Its history is a striking one, showing what one man can accomplish in a lifetime by pluck, enterprise and hard work, from a small and apparently insignificant beginning. Chas. M. Bailey of Winthrop was the founder of this business, and to his efforts is due its success. When Alton Pope and Alden Sampson were conducting their table-cloth manufactory at Manchester in the thirties, among their employes was Daniel R. Bailey, an older brother of Charles. Having mastered the business he returned to his home in Winthrop, and with his father, Ezekiel Bailey, a farmer, and Charles, began the manufacture of table-cloths on a small scale, peddling the goods in the neighboring towns. Thev had no factory, but used an out-building for manufacturing. Charles was a mere boy, but at the early age of seventeen years, went out on the road and sold the cloths, and there was not a town in the county which he did not visit. Thus early and in this manner he commenced his career. The business prospered and increased, as carpets came into use, but little attention being given to table-cloth manufacturing. In 1847, Charles was conducting a manufactory of his own at what is now Bailevville, Winthrop, owned a factory, employed a crew of men and was shipping a large quantity of goods for those days. On May 17th of that year his entire plant was swept away by fire. His loss was heavy and the prospect discouraging, but he at once re-built and paid every dollar he owed. His factory here he kept in operation successfully until Dec. 13, 1864, when it was again destroyed by fire. Meanwhile he established factories at Winthrop village, on the line of the railroad, and three miles from his home in Baileyville, and there he has remained up to the present time, the main office and headquarters of his extensive business being at the village. Several small concerns made a start in oil-cloth manufacturing in Winthrop and Monmouth, and not proving profitable Mr. Bailey purchased their factories, thereby increasing his own business and facilities. J. A. & Peter Sanborn owned an oil-cloth manufactory at East Readfield which they conducted successfully for many years, and they also sold out to the enterprising Winthrop manufacturer, but these shops have not been in operation for many years. Another purchase by Mr. Bailey was a plant at Skowhegan which he has kept running since becoming the owner. The late Moses Bailey, a brother of Charles was in the oil-cloth business for a term or years and after the latter left Baileyville owned factories there, besides a plant in Camden, N. J. At the present time C. M. Bailey's Sons & Company own the Baileyville shops, so that they have three separate plants, two in Winthrop and one in Skowhegan, all of which are in full operation. It is a well known fact that not for forty years have the Bailey works been shut down for a single day, Sundays excepted. On holidays the men are told that they can work or not as they choose, and a majority of them remain in the shops. Ten of the employes of the firm have been constantly in the business for forty years, and are still at work. Many own

their homes, while several have amassed from twenty-five to thirty thousand dollars each from their wages, and good investments. But few foreigners are employed, the policy of the firm being to hire native Americans. Several Canadian French are found among the workmen, but with hardly on exception the remainder were born in the Pine Tree State. The printing is all hand work. not a machine ever having been placed in the shops, Mr. Bailey not believing that a change would be profitable. Thus far he has been able to maintain his business in full operation in competition with machine made cloths, and did not curtail his production during the recent financial stringency of the country. Mr. Bailey's sons, Chas. I. Bailey and Elwood A. Bailey, and son-in-law, Joseph E. Briggs, each have a working interest in the firm. The company's works are valued at \$100,000. while their annual output of manufactured goods reaches two million yards, worth \$500,000. They employ 225 men distributed as follows : Seventy-five at Skowhegan, seventy-five at Winthrop village and fifty at Baileyville. The pay-roll amounts to \$10,000 a month. Oil-cloths, and the material which enters into them being weighty, the expenditure for freight is very large. All goods and material pass over the Maine Central Railroad, but New York freights are transported by the Maine Steamship Company which maintains a line of steamers between New York and Portland, and of which Mr. Bailey is president. More than a half of the firm's product is marketed west of New England, and wholesale warehouses are maintained in New York and Philadelphia. All the burlaps used are imported direct by the firm, Mr. Bailey having visited Scotland in 1862, and arranged for importations.

Wilder & Company of Hallowell, is the only oil-cloth manufacturing concern now doing business in the State with the exception of C. M. Bailey's Sons & Company. This is one of the oldest factories standing in Maine. It was established by S. L. Berry in 1840 having passed through several different hands. Dr. Amos Wilder of Augusta was an owner from 1868 for many years, up to the time of his death in 1894, and at the present time it is conducted by Wilder & Company, the members of the firm being Daniel D. Sewall and Julian Wilder of Augusta. They began operations in January 1895, and have since been doing a prosperous and growing business. This factory is equipped with several machines, the invention of Dr. Amos Wilder, which are not found in other establishments, by which the cloths in the process of manufacture receive special treatment. Notably among these is a mammoth drum for stretching the cloths and preventing cockling of the edges and surface. It is constructed of wood, seventy-five feet in circumference, fifty feet in length, and has a capacity for drying and stretching 300 yards every half hour. It was patented and put into operation by Dr. Wilder, 21 years ago, at an expense Thus "drum made" oil-cloths have been made a of \$20,000. specialty at this factory. Since this was invented machines of metal of far less dimensions and cost have been made to do this work. Dr. Wilder also invented a sizing machine, and a shaving machine, both of which can be seen in operation at the factory. The plant is valued at \$50,000 and it is well equipped and conveniently located. The output of manufactured goods is 30,000 yards per month, a market being found east of the Mississippi river. About thirty hands are employed of whom sixteen are printers, no machines being used. The pay-roll is \$1000 monthly, no man receiving less tham \$1.37 daily wages.

In 1888, Additon & Strout, a firm which did business several years in the Wilder factory as lessees, went to Bath and begun manufacturing in the car shops, with a capacity of some 50,000 yards per month. At the present time the works are idle.

# THE LIME INDUSTRY.

The magnitude and importance of the lime industry in Knox county is so great that, notwithstanding the fact that an extended account of the same was published in the report of the Labor Bureau in 1889, the commissioner feels warranted in devoting some space to it at this time.

Like the ice, the granite, and the slate industries, the income to the State is almost absolutely a net income. The raw material is all here, and is inexhaustible. The labor employed is Maine labor. The earnings of that labor go directly to feed Maine families, and to build Maine homes, and after doing this, it finds its way into various channels of Maine trade, until it is finally lost in the ebbing and flowing financial tide.

The lime industry in Knox county was founded more than one hundred and fifty years ago, in the primitive fashion of that fardistant time. It has steadily kept pace with the march of progress, and better machinery and improved methods have constantly been thrusting aside the old, so that, to-day, we may boast that nowhere are there to be found better equipped or better managed lime quarries than here in Maine.

One has only to visit the localities where the business is carried on, to be convinced that it has furnished to a large degree the impetus which pervades and stimulates the activities seen on every hand.

Nowhere in the State is unskilled labor better paid than in the case of those employed in the quarries and about the kilns. Nowhere can be found a better class of unskilled labor. The employes are, as a rule, men of good habits, intelligent, and respectable. During the last twenty years they have been almost entirely exempt from the vicissitudes which have sometimes so sorely harassed the workmen in other lines of industry. Their wages vary from two dollars to two and one-half per day. Ten hours constitute a day's labor. The men employed in and about the quarries commence work at half past five in the morning. The dinner hour is from half past ten to half past eleven, and the day's work ends at half past four in the afternoon. This arrangement is for the sole purpose of affording a time for rest or recreation in the latter part of the day. In summer, many of the men occupy this period in cultivating their garden, and field crops. Many of the employes live near the quarries, a mile or two from the city, where land and modest homes are comparatively cheap, so that many own their homes, and add materially to their comfort, and at the same time lessen the expense of living, by cultivating a half acre or an acre of land.

The main, and perhaps the only disadvantage, which operates against the employes, is that in winter, for several weeks the quarries are not operated. To some this is a hardship of course, but the greater part of the men enjoy the rest, or seek temporary employment of a different kind.

The quarries where these men work are wonderful evidences of what human toil is able to achieve. One of the largest is on the Blackington farm, so called, in the city of Rockland, about one mile from the business portion of the town. At this quarry there has been no excavation necessary to remove the earth, the limerock formation having been an outcrop. The quarry was opened about twenty or twenty-five years ago. Approaching it from the east, one walks up a gentle rise and suddenly stands on the edge of a chasm cut in the solid rock. This chasm is six hundred feet long, fifty to sixty feet wide, and two hundred feet in depth. At each end is a tower, that at the southern end being the higher. Α large wire cable sways between these towers. Near the higher tower is the power house containing the hoisting engine. Down in the quarry is a strong, square, wooden platform, called a drag, with box-like sides a foot or two high rising on three of its edges. the other side being open. Some men are piling rock upon this drag. The average load weighs about three tons. A hoisting cable connects the drag with a pulley on the tower cable, high The signal is given and the load is lifted from the overhead. quarry to the pulley on the lower cable, which is then drawn slowly, with its load, along the slightly upward incline of the tower cable to the surface platform, where the cars stand on the track to be loaded. The drag is lowered to the car, when one of the three chains which hold the drag in position is unhooked, and by hoisting on the other two chains the load is spilled. This arrangement is called the tramway system of hoisting, which is well adapted to the work of lifting rock from long, straight quarries where there is little or no obstruction.

While the general trend of the line rock deposit is north and south, the strata is often deflected, and is sometimes pinched out by "side rock" so that some valuable and extensive quarries are made up of a series of deep shafts, with low connecting tunnels, as high archways, leading from one to the other. In these quarries the derrick system of hoisting is used.

The quarrymen designate the various kinds of rock as "bottom rock," "lump rock," "bluff rock," "side rock, "and "grass-hopper." Bottom rock is the only sort sent to the kilns. Lump rock is softer than bottom rock, and is said to contain a larger per cent of magnesia. It is also said to make a lime which is superior to all others in strength and for general purposes, but it is rejected by the trade on account of its being somewhat darker in color. Bluff rock makes the strongest lime, better than any other for foundation work, but not uniform nor well adapted to other work. Side rock contains some lime, but in the main is talcose, or micaceous, with magnesia, and often many other constituents. Grass-hopper, although possessing the general appearance of other lime rocks is easily recognized by the quarry man. It is worthless for making lime, as plastering made from grass-hopper lime blisters in hardening. In all operations about the quarry, a cask of lime is the unit of measure. The owner of the quarry sells the right to remove rock at a certain price per cask, for the lime which the rock produces. The contracting quarrymen engage to blast, hoist and place the rock on the cars at the side of the quarry at a certain price per cask. The railroad company engage to haul the rock, and deliver it in the kilns This arrangement seems to have insured harmony by the cask. between all concerned. All parties engaged in these departments of the lime business seem to have a definite and correct knowledge of how many casks of lime constitute a day's work, and the result seems to have been of great benefit to the workmen. There seems to be a community of interest which is well preserved and cared for. There are existing the most friendly relations between superintendents and workmen. Therefore there is no servitude about the work. By diligent care, the hazards to life and limb have been reduced to a minimum, and we may say that, from the workingman's standpoint, the lime business is in an excellent condition.

But capital, business energy, and sagacity, as well as labor are necessary in all important business enterprises. This is emphatically true in the lime business. There are two sides to this industrial situation.

During the past few years the manufacturers have seen their profits dwindling, until they have in many instances entirely disappeared. For the last two seasons there has been little encouragement to do business; but the indomitable pluck of the men engaged has enabled them to go on. While the price of lime has been settling to the non-profit plane, there has been no reduction in the price of whatever goes to make a cask of lime, except some reduction in the cost of the wood used in burning, and in the cost of the cask. This slight relief has been gained at the expense of Maine The logic of the situation is, that unless relieved by legislabor. lation, the result will be that labor must make large concessions all along the line or that this great industry must languish. A movement has been made to unite the manufacturers and thus steady and somewhat control prices.

This will undoubtedly afford temporary relief. But the solution of the question lies in the application of economic principles which can never be reached by the makeshift of a trust or a combine. Its solution depends not altogether upon business energy but upon statesmanship; not upon the degradation of American labor, but upon a proper appreciation of its rights, and a due protection of American enterprise.

# THE PRESENT CONDITION OF THE SLATE INDUS-TRY IN MAINE.

The slate quarries of Piscataquis county, where all the Maine slate is manufactured, were visited late in August 1895, and, at that time, work was being carried on to a greater or less extent at ten different quarries. Four of these are on what is known as the village vein, two on the Burmah vein, and one on the Blanchard vein, all situated in the town of Monson, the last named, however, being at the point where the vein crosses the north line of Monson into Shirley, so that a small part of the pit is in the last named town; two in the town of Brownville and one in Barnard plantation on the Brownville vein. Only seven were then manufacturing roofing slate, two of which were also turning out mill stock. One was to commence on roofing slate September 1st, one was experimenting in a small way on school-slate machinery, and the other was yet engaged in removing the poor rock from the surface.

Five quarries had suspended operations during the year; three on account of a strike, one on account of a cave in and other difficulties of a legal nature between the owners and lessees, and the other had been abandoned, temporarily at least, and the machinery removed to another quarry.

Two of the quarries which had shut down on account of the strike were started up the 1st of June, 1895. The men employed working all these quarries, numbered 320, and the monthly output during the summer, amounted to 4,340 squares of roofing slate, and 14,000 square feet of mill stock. This is at the rate of an annual output of 52,080 squares of roofing slate and 168,000 feet of mill stock, but this is an over estimate on account of short days and bad weather during the winter months. The output at this time was confined to the towns of Monson and Brownville, the quarry at Blanchard having suspended, and that at Barnard not having progressed far enough to make slate. The monthly output at Monson amounted to 2,690 squares of roofing slate and 14,000 square feet of mill stock; at Brownville, 1,650 squares of roofing slate.

The monthly output on the different veins was as follows: village vein, 2,000 squares roofing slate and 10,000 feet of mill stock; Burmah vein, 200 squares roofing slate and 4,000 feet of mill stock; Blanchard vein, 490 squares roofing slate; Brownville vein, 1,650 squares roofing slate.

The wages paid the last year or two had ranged from \$1.35 to \$2.00 per day, but during the present year wages had picked up a little, many of the common workmen getting \$1.50 per day and some of the best workmen among the splitters and cutters had been advanced to \$2.25 per day.

The monthly pay-roll at all the quarries will amount in round numbers to some \$10,000.

The following detailed account will give an idea of the year's operations :

#### MONSON.

Four quarries on the village vein at Monson, the Kineo, Monson Pond, Forest and Oakland were run by the owners, the Monson Maine Slate Company, with a medium crew up to December 20, 1894, when a strike occurred on account of pay day being deferred, and a large part of the men went out. Those who did not go out were put to work at the Monson Pond quarry which continued to run, but the other three were shut down. On the first of June, 1895, the Oakland and Kineo were again started up and are now running, but the Forest has continued idle. The strike was most unfortunate for the men as it was over five months before many of them had an opportunity to return to work. The Kineo now employs thirty-five men, the Monson Pond fifty, and the Oakland thirty-five.

Connected with the Monson Pond Quarry is a slate mill where fifteen of the crew are employed. At this mill are manufactured natural slate wash tubs, sinks, urinals, tiles, hearths, chimney tops, slabs, counter tops, garden borders and walks, headstones, grave linings and covers, grave vaults, vestibule floors, green house shelves, base boards, wainscoting, refrigerator shelves, register frames, billiard table beds, school black-boards, electric switch boards, disks, spindles, etc. The monthly output at these three quarries amounts to about 2,000 squares of roofing slate and 10,000 square feet of mill stock, mostly manufactured at the mill.

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The work of the Paragon Noiseless School Slate Company at the Pine Tree Quarry is rather in the nature of testing and perfecting machinery. Their crew and output are very small.

The Burmah quarry on the Burmah vein which has been many years idle, was reopened November 1, 1894. A second derrick had just been completed and a crew of twenty men were at work. The monthly output is some 200 squares of roofing slate and 4,000 square feet of mill stock. The mill stock from this quarry is shipped to Portland where it is manufactured into a great variety of articles, useful and ornamental. Slate is superseding, to a considerable extent, the use of soapstone.

The West Monson quarry on the Burmah vein is now operated by the Monson Consolidated Slate Company where work was commenced July 18, 1895. A pit 60 by 18 feet had previously been opened to a depth of 18 feet. A length of 50 feet additional was being uncovered. Preparations were being made to commence slate making September 1st. Roofing slate only, will be made here at present. A crew of 15 men were employed.

The Deslauriers Slate Company at Oakdale in the northwest section of Monson, manufacture roofing slate only. The quarry is on the Blanchard vein. Thirty-two men were employed and the output for the last six months averaged 490 squares per month. This is one of the newly opened quarries but has been run continuously for two years.

The Monson Lakeside quarry situated in the easterly part of the town on or near a continuation of the village vein, a newly developed quarry, had made over 1,000 squares of roofing slate, and got out six car loads of mill stock, when, on the 1st of February, 1895, it was shut down and the machinery removed to the National quarry on the Burmah vein, though nothing has yet been done towards putting that quarry in operation.

## BLANCHARD.

The State of Maine Slate Company have been working the Blanchard quarry for several years under a lease **f** om the Blanchard Slate Mining Company, running a crew of 18 men and turning out some 400 squares of roofing slate per month, but on the 7th of April, 1895, occurred an immense cave in, said to be 100 feet long, 50 feet wide and 75 feet deep. Nothing has since been done at this quarry.

## BROWNVILLE.

The Norcross quarry, formerly known as the Crocker quarry near Brownville village, is now being worked by the Brownville Maine Slate Company. This is the oldest and one of the largest quarries in the county. The regular crew numbers sixty-five men, and the monthly output averages 850 squares of roofing slate. A large force had just completed the job of removing the gravel for a distance of 200 feet east of the pit, and sinking into the ledge was about to commence. When the sink is completed this quarry will show by far the longest working face to be found among all the Maine slate quarries.

The Merrill quarry west of the village is now owned and worked by the Monson Maine Slate Company. The superintendent refused to give any information in regard to this quarry, but it was ascertained that about sixty men were at work and that the probable output was some 800 squares of roofing slate per month.

### BARNARD.

The Union Slate Company have seven men at work developing what is known as the Louisiana quarry situated on the Brownville vein, but work had not progressed far enough to commence slate making.

The amount of slate shipped over the Monson narrow gauge railroad for the year ending June 30, 1894, amounted to 5,475 tons, and for the year ending June 30, 1895 it was 3,890 tons, a fall of 1,565 tons, largely on account of the strike, and shut down on the village vein. There is a better feeling, however, among the slate manufacturers and a fair prospect of an increase of the business as the depression of the last few years is wearing away. Many improvements in slate machinery have been made in recent years. Where, twenty years ago, about everything was done by hand work, now about everything except splitting is done by machinery. even to punching the nail holes in the slate. The power used is steam, and the fuel wholly wood, so that outside of those directly engaged at the quarries, a large number of men are engaged in chopping and hauling wood to supply the boiler furnaces.

The uniform product of the Maine quarries is a dark unfading blue-black slate which has no superior in this or any other country, and is bound to be, for years to come, an important Maine industry. The uses to which slate is being utilized are increasing year by year. Some of the most beautiful mantels in the State have recently been manufactured, and a recent article in the Maine papers stated that the Maine Central Railroad had decided to remove all the marble drinking fountains at the stations along their lines and substitute slate instead, on account of the marble becoming so badly discolored by the action of the water.

# THE SARDINE BUSINESS IN MAINE.

### HISTORY.

The name sardine, (fish of Sardinia,) is applied to a number of fishes of the Clupeidae family, of which there are some sixty members. The true sardine of the Mediterranean and near by waters, is the Pomolobus or Culpea Pilchardus, but the name now appertains to sprats, pilchards and to several varieties of small herring, when packed in oil and enclosed in tin boxes. The idea of packing small fishes in oil under the name of sardines, originated in France as early as 1850, when the annual pack was only about 3,000,000 cans, but the business increased about three hundred per cent in the following decade and since that time has developed to wonderful proportions. While this was going on in France, the work was taken up by Spain, Portugal, Italy, Germany, Sweden, Norway and Japan, and France gradually lost the monolopy of the These countries owing to their nearness to France and trade. to their close commercial relations with that country, had opportunity for observing the methods, details and progress of the busi-On the contrary, America had little knowledge of this work ness. beyond that obtained from the goods imported by the trade, and it was not till 1865 that our people came to understand that fishes different from those used in France were being put up as sardines. It was at this time that Mr. George Burnham of the firm of Burnham & Morrill, Portland, Maine, commenced the first investigations on record, in relation to the sardine business in this State. Of his work he wrote as follows :

"The idea of using the small herring as a substitute for sardines occurred to the writer in 1865. It was well known to me that myriads of small herring were annually caught at Eastport, Maine. These were too small to be of use for smoking or pickling, and I thought they might be used with profit as a substitute and if properly prepared they would be equally good."
He visited France and studied the question on the scene of actual operations, and became familiar with the details of French canneries. In 1867 he went to Eastport, secured a plant and commenced to work out the problem. He found great difficulty in drying the fish, owing to the dampness of the climate. Besides this there was a flavor of herring oil which could not be destroyed. This enterprise was therefore abandoned.

Subsequent developments have shown that Mr. Burnham paused in his efforts when on the very threshold of success. But he had done enough to call the attention of others to the work, and we may safely conclude that the rise and development of the business dates from the valuable work which he did.

About the year 1872, Germany was exporting to the United States, small herring under the name of "Russian sardines." These sardines were packed in small kegs holding four, seven, or eleven pounds each. This suggested the idea that the herring at Eastport might be used as a substitute, and experiments were at once undertaken with a view of doing this. The Eastport product was found to be superior to the imported article, and an important business was begun. This brought the study down to a practical basis, and in the fall of '1875, Mr. Henry Sellmann and Mr. Julius Wolff of New York, commenced to consider how to put up herrings in oil, under the direction of the Eagle Preserved Fish Company, with which they were associated. This was the second important step towards making the sardine industry the principal business of Eastport and Lubec, as well as being an important factor in the prosperity of many other towns in our State.

Mr. Sellmann says of his work: "The Franco-German war was the approximate if not the immediate cause of the American sardine industry. For about ten years previously there had been imported into the United States, from Hamburg, Germany, the 'Russian' sardines. The herrings used were caught on the coast of Norway. In the early part of the Franco-German war the French navy blockaded the ports of Germany. In consequence the importations were nearly abandoned, and owing to the scant supply, prices advanced fifty per cent." After considerable costly experiment and many vexatious delays he secured a part of the American trade and established a reputation for the home made "Russians." Later on he commenced to put up the fish in square and oblong tin boxes. This proved to be an attractive improvement over the small kegs which had been in use. It was also found that the domestic product had better keeping qualities than the foreign article. Finally, the home made "Russians" drove the German product from the American market. While all this was going on, Mr. Sellmann associated himself with the firm of Wolff & Reessing of New York, and had located himself at Eastport where he began to push the experiment of dressing the fish, frying them in oil, and putting them up in the French fashion. In the spring of 1879 the connection with Wolff & Reessing was dissolved, and Mr. Sellmann associated himself with Messrs. Martin & Balkam of Eastport and with Messrs. Rosenstein Brothers of New York. The new company was known as the American Sardine Company, and their first factory was built at About this time the firm discovered a new and better Eastport. way of preparing the fishes for sardines, which differed from the French method, and for this they secured a patent. Eastport has the distinction of being the only American town engaged in canning small herring as sardines prior to 1880. At this time only five canneries were in operation, and the processes were, as far as possible, kept secret. But business interest and enterprise became aroused, and during the summer of 1880, eight new factories were established at Eastport and five in other sections of the State. Since that time the preparation and use of sardines has wonderfully increased in the United States, and in Maine we now have nearly fifty factories. The pack of 1894 was at least 600,000 cases, for which was received in the aggregate, at least \$2,000,000. The industry gave profitable employment to about 3500 people on the fishing grounds and in the factories, while the shipment of the goods aided in no small degree in the support of many more employed by the transportation companies or in the coasting trade.

### METHOD OF CATCHING THE FISH.

One who travels by water along the coast of Eastern Maine, cannot fail to observe what might appear to him, to be sections of brush fence, which had leaped boldly from the shore and alighted in the ocean enclosing a part of it, or in other moods had waded boldly in from shore until deep water and a strong current had been reached, when as if frightened it turned abruptly and formed a sort

of irregular loop as if by accident. These fences are "brush weirs" and along our coasts the herring are caught in them. This device was introduced from Nova Scotia about 1820. It is built entirely of brush and poles. The proper location of a weir is of the first importance. A "bar" weir is placed near a ledge reef or a sand bar, which is exposed at half tide. At high water the fish pass over the bar and into the bowl of the weir, and as the tide falls the bar prevents their return. The "shore" weir is built near the land. It has a line of brush running out from the shore, which turns the fish from the course they are swimming in schools, and they work outward from the shallow water into the bowl or pocket, also made of brush, at the outer end. The "channel" weir is built from land to land, between which fish are accustomed to pass, so that all going that way are impounded. Sometimes a weir extends from the end of a point of land, occasionally one is seen in a little Often they are placed where the tide runs with force. In cove. one location the weir is so built as to catch fish on the ebbing of the tide. In another they are caught on the flowing of the tide. The fisherman thoroughly understands the fishing grounds and is governed by his experience gained only by a lifetime spent along shore and in his boat, and he adapts the style of his weir to conditions as he has found them. The outline plan of the weir is formed by driving pointed poles into the mud in an upright position. A strip of board is nailed to the top of these poles to hold them in relative distance to each other and to give stability to the structure. Brush is woven into these poles basket fashion, Below low water mark the brush is woven quite closely, but When the herring enter the bowl of the weir loosely above. their habit is to swim slowly about in a circle. They do not dart about seeking to escape through the numerous openings which are always to be found. This simple and crude device for catching fish owes its successful application to this and to the other well understood habits of the herring. At low water these fish remain in the channels where deep water is. He is a surface feeder. When the strong flood tide sets in from the ocean, it brings along and to the surface, myriads of small crustacea. The herring then simply rise to the surface, turn their heads to the current, and drift away shoreward, seizing what comes in their way for food, until they come in contact with some well located weir and a little later

they huddle contentedly in the pocket. From three to five men are required to transfer a good catch of fish from the weir to the boats. They are first enclosed by a net and are dipped out after they have been gathered into sufficiently close compass. The annual catch to each weir varies greatly, ranging from a few barrels to three hundred hogsheads in common weirs. Larger catches have often been made but they were owing to superior location and these larger amounts reported can hardly be assigned to common weirs.

The boats used in "fishing the weirs" are small row boats although the boats used in transporting the fish to the factories are for the most part stanch sail-boats some twenty feet long. These sail-boats are usually at hand to receive the fish when dipped from The sail-boats carry from five to eight hogsheads of fish. the net. Too many fish must not be carried in one boat, as they are liable to heat and spoil, while those at the bottom of the boat may be bruised by weight of the mass above. It is well to have different compartments in the boat so that the fish may not slip about as the boat pitches in the rough sea. It is said that more fish are taken in dark mights than at other times. It is indeed a picturesque sight, on a pleasant summer forenoon following a moonless night, to stand on some commanding point near Eastport or Lubec and watch the white sails of a hundred fishing boats standing across the bay with loads of fish. As the boats near the wharves, the factories sound their steam whistles in a deafening chorus when men, women and children rush to their work, creating a scene of the greatest excitement and enthusiasm.

In many places small steamers are employed in transporting the fish to the canneries. They are less subject to delay by reason of calms or headwinds. They are always better adapted to collecting from distant weirs, as it is absolutely necessary that but few hours shall elapse between the time of capture and delivery.

The price paid per hogshead for fish has varied greatly. In 1879 it went as high as twelve dollars. In 1880 the average was about four dollars and fifty cents. In 1895 the price reached the lowest point ever known, one dollar per hogshead, and in some parts of the season even lower than that. The supply of fish at the factories is intermittent. Sometimes the boats return empty, again with full fares. So too in consequence the price varies in all localities. The prices paid this season at Eastport and vicinity have been less than at other ports on the coast further west. At the prices paid this season the earnings of the average fisherman have indeed been small and it would seem that the lowest price possible had been reached.

Sardine factories are located on some wharf where the boats may They are ordinary wooden structures, and are not expencome in. sive either in construction or equipment, seldom costing above fifteen thousand dollars. When the fish are transferred from the boats to the factory they are placed on long low tables where the heads and entrails are removed by boys or girls whose dexterity is really wonderful. From this table the fish go to a large washing tank where by means of an abundant supply of clear running water they are made perfectly clean. They are then placed in very strong brine where they remain for forty-five minutes. They are then taken out, washed a second time and spread by hand on galvanized wire screens, called flakes. These flakes are about two and one-half feet long and about twenty inches wide. Fish which are seven or eight inches long are put up in mustard and are known as "mustards." The smaller fish are known as "oils." Up to this point the process for preparing fish for sardines, seems everywhere to be the same. Beyond this point the processes differ greatly both in American and in foreign countries. It is claimed that the best sardines are to be made only by drying the fish in the sunlight and in the open air, after they have been salted and washed as above described. Then after being dried they should be placed in wire baskets, a few at a time, and immersed for two or three minutes in vats of pure olive oil heated to a high The object of this, aside from cooking, is to drive out the degree. water left in the fish, and to allow the oil in some degree to take its After this is done the fish are packed horizontally in the place. well known little tin boxes, until the boxes are filled, then the spaces are filled by pouring in melted butter and oil, after which the boxes are sealed and packed for market. It is doubtful if genuine melted butter is now anywhere used in making sardines, clear oil being used instead.

There are several foreign factories, and a few in America, where the above process is followed in other particulars.

There has always been difficulty in getting uniformly good results in sun-drying, especially in the moist climate of the Maine coast, although the same difficulty is experienced abroad. Almost without exception, sardine packers have been compelled to provide a means for drying by artificial heat, and good results have been obtained. With rapidly increasing supply, and under the pressure of sharp competition, prices fell level with and even below the cost of production. Naturally, if not wisely, manufacturers have been seeking to cheapen cost. Cotton seed oil has gradually taken the place of olive oil.

It is charged that this is purely a "Yankee trick." But investigation shows that the use of cotton seed oil is quite as general in Europe as in America, and that the objection to its use arises more from prejudice than from a sound basis, provided, however, that only the best grade of cotton seed oil be used.

While it is undoubtedly true that sardines put up in strictly pure olive oil are better, it must be remembered they cost more and it must be conceded that those put up in cotton seed oil, *in the best possible manner*, are only slightly inferior, and are a wholesome and nutritious article of food.

The next step in the cheapening process was perhaps more serious in its ultimate effect upon the business. To meet the constant clamor for low priced goods, several factories, at home and abroad, adopted the plan of cooking the fish on flakes in hot air chambers instead of frying them in oil. But these changes and innovations have afforded only a temporary relief. All methods of reducing cost, have been pushed to the limit except on the line of labor.

A cut down in wages was made in Eastport and in Lubec during the past summer, (1895,) and a partial strike resulted. The wages paid boys and girls for dressing the fish had averaged from \$1.50 to \$2.00 per day. Sealers had received from \$3.00 to \$5.00 per day. Other help had been paid in about the same proportion. The manufacturers took the ground that wages had been too high. The employes replied that the work lasted but a few months in the year, and was intermittent even in the packing season.

While it is true that wages paid at Eastport and at Lubec were rather above wages paid at similiar other factories in the State, the force and truth of the rejoinder must be admitted. The effect of the strike was to materially lessen the output of sardines for the present year, but was finally settled and work was resumed at the old scale of prices. The sardines are sold by agents who handle them on commission. When the consignment is landed on the wharves of the transportation company, the agent may be drawn upon for a part of the value of the shipment. This arrangement in some instances has enabled the canneries to carry on more business than would otherwise have been undertaken. It may also have been an indirect cause of the rapid increase in the number of plants. From these or other causes, the combined capacity of our sardine factories seems to be greater than the demand, and prices have gone very low.

But this great industry, backed by Maine money and Maine enterprise will not die nor will it long languish. When once it receives a decided check, a careful analysis of the situation will reveal a way by which it will rise to greater prosperity than it has yet achieved. The fears that the fish would become exterminated do not seem to have been well grounded, and the legislature has wisely guarded against this by a close time from December 15th, to July 15th, of each year, so we need have no fears of the supply failing.

If an outside observer who claims to have no definite practical knowledge of the business conditions which govern the sardine business, may be allowed to make suggestions, the writer would say that the quite general custom of imitating the French labels seems to him to be altogether wrong. The first point should be to acquire and control the American market, and the manufacture of a superior and a distinctively American product should be the first step in this direction. An independent reliable trade should be undertaken and built up for an American brand of goods, and its claim on the public should be based solely on its excellence above all others. We cannot deny the fact to-day that certain French sardines are superior to ours. But it is a fact that a Maine sardine can be made equal to any in the world. It is already true that the average brand of foreign sardines is not superior to ours. There is a large class of consumers in the United States who insist on having only the best. They buy the best French goods.

With these superior goods comes in a large quantity of the cheaper grades which sell because they come from France. Let us be done with imitations as soon as consistent with sound compliance with business conditions. Let us thoroughly Americanize our sardine business. Let us cease to strive for quantity and rest our main case on quality. In a few years America and the world is ours. We must always make the cheaper grades, but let us call things by their right names, and establish a scale of prices to correspond with the quality of materials used and the amount of careful attention bestowed on the manufacture. Time will prove that only in this way can imported sardines be made to give way to the domestic, in a permanent and satisfactory way.

## THE BLUEBERRY INDUSTRY.

In many parts of Washington county the blueberry is indigenous. In the vicinity of Cherryfield, Harrington, Columbia Falls, and in some other localities as well, there are vast tracts of territory from which the axe of the lumbermen, and subsequent forest fires, long ago removed every vestige of the majestic forest which once grew there. The country is neither a plain nor is it mountainous. Long ridges of granite, gneiss, or micaceous rock, slightly covered with soil, stretch away from the southwest to the northeast. Some ridges are low and rounded like the swell of subsiding seas, while some are high and broken by abrupt declivities, and everywhere between are reaches of plain or of low land.

Here in summer, the hardy low growing blueberry bush spreads a green carpet on the level places and climbs the warm ledges, wherever there is an inch of soil, or wherever a crevice gives a foothold.

The lands above described are not usually divided into small holdings as is the case in the strictly agricultural sections of the State, but large tracts are owned by one person. In some cases the owner is not a resident, even of the State, and the custody and care of the lands is in the hands of a faithful attorney. It is the general and quite popular conviction that these lands, wherever located, are "wild lands," and that the right to hunt and fish thereon is somehow an inherent and a common right.

It is not strange, therefore, that the same views have been very stubbornly held, regarding the right to gather blueberries wherever they could be found. But when they were known to be in large demand, and to have considerable importance in the markets of the world, an entire lack of system in production, harvesting and selling, was the logical result of this belief that they were common property. Parties roamed everywhere at will, searching for some spot where fruit was more abundant than in another, utterly disdaining any but the best, picking here and there a few, and always leaving behind them thousands of bushels of ungathered berries. Fires were started, sometimes accidentally, and sometimes it is believed maliciously, which often swept everything before them for miles, and which in seasons of drought burned every vestige of vegetable matter in the scanty soil.

The men who were at that time engaged in an effort to build up the canning industry found it difficult and sometimes impossible to obtain a regular and adequate supply of berries to do even a small business. But sometime early in the seventies, Hon. William Freeman of Cherryfield, who owned, or controlled, much of the land which then produced berries, made the startling and revolutionary announcement that blueberries were property, like other products of the soil, and forbade all trespassing on his land. Certain firms persisted in buying berries gathered on Mr. Freeman, with sagacious foresight, which all now concede, took the ground that the business of canning blueberries could never grow and flourish until the great principle was established and acknowledged, that they were property.

After long and expensive litigation, Mr. Freeman's claims were fully sustained by the courts, and the blueberry business for the first time had a legitimate basis, and since then has risen in a systematic way till it has become both important and profitable especially to the former trespassers.

The blueberry fields are called "barrens." Many of these barrens lie quite remote from settlements. One may see only here and there a house of unpretentious and perhaps rather primitive construction. The owner of the barrens leases a certain amount of land, perhaps one or two hundred acres, to some one of these scattered settlers. The lease is a verbal one, and there is no cash consideration. The lessee agrees to cultivate and care for his leasehold, to look after trespassers, and to see that the berries are properly gathered and delivered at the factory which is sometimes fifteen or twenty miles distant. The lessor agrees to continue the lease as long as compliance is given to the above conditions. Strange as it may appear there are seldom disputes between lessor and lessee, the interests of both are well looked after, and the arrangement is mutually profitable.

To illustrate the method of cultivation we will suppose a lessee has control of 150 acres. The whole art of cultivation lies in burning the surface once in three years, to destroy grass, weeds, and twigs, thus keeping the barrens clean for the growth of the

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crop. In the fall, the sprouts of trees which here and there have grown up during the summer, are cut down. In the early spring, after the snow is gone and a few sunny days have dried the surface, the lessee carefully burns over one-third of his lease. At this season the soil is moist and the roots of the bushes are not injured. The burnt land will produce no crop until the following year. The next year another third is burned, and so on. Thus, on his 150 acres, the lessee will each year have fifty acres of burnt land and one hundred acres in bearing.

When the season of harvest approaches, the lessee secures his help. Pickers come from far and near. Men, women and children, whole families, camp on the barrens during the picking season which lasts from five to six weeks. The camps present scenes both picturesque and unique. Some are of canvas and some are of boughs laid over poles. They are usually pitched near a spring and in a sheltered spot. Camp life here is much the same as in the woods except for the presence of women and troops of children. The fare though not elaborate is abundant, fresh and wholesome, being brought daily from the village where the factory is located.

There are two pickings, one immediately following the other. The lessee has a general oversight over the work, and allots certain territory to each individual, or family. Careful and efficient service is required. The picking is done by the use of an implement called a picker, the invention of which may have been suggested by the old fashioned dust pan, as the handle, back, sides and general make up closely resemble that article of household use. The width of the picker varies from five to eight inches. The smaller sizes are used by women and children, and the larger by men. The back of the picker is about four inches high. The back. sides, and the bottom next to the back, are made of heavy tin. The outer part of the bottom is of straight steel prongs some six inches long, set a short distance apart. The operator grasps the short handle, and thrusts the prongs, slightly elevated, among the foliage of the bushes beneath the berries, when a dexterous turn of the wrist shakes off the ripe fruit which rolls down into the tight bottom of the pan.

Skillful men gather in this way from three to four bushels per day. In the afternoon the berries are collected and drawn to the factory by the lessee who takes back food and money to the people on the barrens. The factory pays the owner of the land one cent per quart for all the berries bought. The balance of the price paid goes to the lessee who pays the pickers. It is not unusual for a two horse team to bring in seventy-five bushels of berries. The first of the pick is not canned but is shipped to the large cities in crates, each holding thirty-two boxes. This is done for two reasons; first, because in the early part of the season prices are good for raw berries; second, because the supply is not at first in sufficient volume to admit of running all the departments of the factory in an economical way on full time.

When the receipts at the factory reach 200 to 300 bushels per day, the canning season commences. The principal factories which may be put down as distinctively noted for packing blueberries, are the Cherryfield Packing Company, and the J. & E. A. Wyman Packing Company, both at Cherryfield; the Harrington Packing Company at Harrington, and the Columbia Falls Packing Company at Columbia Falls. These four firms put up on an average about 30,000 bushels each year. We may safely add to this 10,000 which are sold raw, from the State at large. Therefore our blueberry crop at the present time may be conservatively stated as being 40,000 bushels. As the demand increases, the volume of the business may be increased to almost any required extent. It already gives employment during the season to hundreds of people, and, with the exception of materials used in making the cans the proceeds are a clear gain to the State of Maine.

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# Extracts from Proceedings of the Eleventh Annual Convention of Officials of Bureaus of Labor Statistics held at Minneapolis, Minn., September 17-19, 1895.

The eleventh annual convention of the National Association of Officials of Bureaus of Labor Statistics met in the rooms of the Commercial Club at Minneapolis, September 17, 1895, President Carroll D. Wright presiding.

The Maine commissioner was prevented by sickness in his family from attending this convention, the proceedings of which were of much interest. The following is the report of President Wright's opening remarks.

Gentlemen: In calling this our eleventh annual convention to order it is a great pleasure to congratulate the gentlemen composing it on their continued interest in the work in which we are all engaged. We have met here in the great Northwest. Our meetings, you know, are generally arranged with two objects in view: First, to accommodate the different parts of our great country, meeting alternately in some city in the East and then in the West; and, second, to meet in some locality where, independently of our discussions and deliberations, we can learn personally and officially something of the resources of the nation. We have been to Denver, and learned what Colorado can give us; and some of you who were there will remember that the Governor told us that "it was utterly impossible to tell the truth about Colorado without lying," Colorado being such a productive state. I am glad to know, that, when we come to Minnesota, we find that they have become so used to telling the great stories of their productions here that there is no necessity whatever of stretching the truth,-that the truth about Minnesota is sufficiently romantic to attract us all,-and now, as we study its resources and add to our own knowledge, and therefore to our own economic culture, we shall find those things which are advantageous to us all.

We have one sad reflection to-day. I think it is the first time in our meetings that we have had to mourn the departure of any of

our members. The genial Peelle of Indiana has gone over the river, and the venerable Bishop of New Jersey, for a long time the Chief of the Bureau of that state, has finally succumbed to age and infirmity. I think the latter was with us at the very first meeting of this convention, which was held at Columbus, Ohio, and he was always an interested spirit in our meetings. These are the sad reflections. All others are of a pleasant nature; and from my own position at Washington, where I have the reports of all your states relative to your work, I perhaps have a little broader outlook, covering all the bureaus of the country, than any one gentleman connected with the convention; and it is a constant source of gratification to me to find that your work is becoming more and more acceptable, and that the public of the different states considers your work as important to the welfare of each of the commonwealths represented, and now, with thirty-two states covering our work and the Federal Government in addition, we are in a position to represent the social and the economic conditions of a very large majority of the people of the whole country.

I will not detain you with further remarks, but will give way to the gentlemen who have kindly come here to welcome us to the State of Minnesota and to the city of Minneapolis. I have the honor of introducing to you in this connection His Excellency Governor Clough of Minnesota.

## ADDRESS OF WELCOME BY GOVERNOR CLOUGH.

Mr. President and Members of the Bureaus of Labor of the United States: Less than a quarter of a century has elapsed since the establishment of the first office for the systematic study of industrial subjects. That first office was the Massachusetts Bureau of Statistics of Labor. Since its establishment similar offices have been created in most of the states of the Union and in the leading civilized nations of the globe. It is the object of these bureaus, as I understand it, to gather exact information upon all disputed questions relating to labor and capital. These bureaus have been created, with this primary object, for this reason: Knowledge is one of the greatest factors in preventing strife. It is easy for men and parties to quarrel when neither is possessed of any exact or reliable information concerning the subject in dispute. It is also easy for the same persons to reach a settlement, even with

rival or opposing interests, when accurate information leaves no issues in dispute save those growing out of diverse interests. Tt. was a recognition of these facts that led to the creation of the first Since the creation Bureau of Labor Statistics in Massachusetts. of that first bureau thirty-four similar departments, including that of the general government, have been established in the United The rapid increase in the number is testimony to the fact States. that men have indeed found exact information a powerful factor in eliminating strife, strikes, and discord from the industrial world. The collection of information by these bureaus has in the United States assisted in lessening the hours of labor, in creating laws for the protection of toilers, and in awakening a great popular interest in every branch of the subject of labor and capital. The toiler, seeing his fight for shorter hours strengthened, and in many cases won, by reason of the facts collected by these bureaus, and seeing also good laws in his interest enacted in the same way, has been a great advocate and friend of such offices. The business man, from other reasons, has come to believe in and be benefited by these depart-We have, here in the North Star State, the greatest flour, ments. lumber, and iron interests to be found anywhere in the United States. Our state is growing in these and in all other industries. We have thus far been signally free from the bitter strife and discord in industrial matters that have so greatly disturbed some of our older communities. We hope by the gathering of exact information upon these questions and by the cultivation of a friendly spirit of co-operation among all classes to be able to avoid in the future, as in the past, these bitter and costly disputes. We trust that your meeting in our midst may give an impetus to the study of these questions, and aid in the growth of a spirit of kindly good will among our employers and employes. I believe that your presence here will be of great service to us. Believing this, I cordially and heartily, as well as formally, welcome you, on behalf of the state, to the hospitality of Minnesota. I trust, also, that, ere you leave our state, we may be able to show you something of our industries and the great resources of our commonwealth. Those industries and resources are well worthy of your study as statisticians in the industrial world. We are glad to offer you every possible facility for learning about these industries and resources. Again, permit me formally to welcome you to the State of Minne-Gentlemen, I thank you. sota.

Addresses of welcome were also made by the Mayor of the City and by the President of the Commercial Club. Officials of the city and also private citizens were hearty in their welcomes and profuse in their hospitalities during and subsequent to the session.

After the reading of the call by the secretary, the list of states and territories having Bureaus of Labor Statistics or kindred departments was read, as follows :

United States Department of Labor—Established as Bureau of Labor January 31, 1885; made a Department of Labor June 13, 1888. Annual reports. Commissioner of Labor, Carroll D. Wright, Washington, D. C.

Massachusetts Bureau of Statistics of Labor—Established June 23, 1869. Annual reports. Chief of the Bureau of Statistics of Labor, Horace G. Wadlin, Boston, Mass.

Pennsylvania Bureau of Industrial Statistics—Established April 12, 1872. Annual reports. Chief of Bureau of Industrial Statistics, James M. Clark, Harrisburg, Pa.

Connecticut Bureau of Labor Statistics—Established July 12, 1873. Abolished July 23, 1875. Re-established April 23, 1885. Annual reports. Commissioner of Labor, Samuel B. Horn, Hartford, Conn.

Kentucky Bureau of Agriculture, Labor and Statistics—First established March 20, 1876, as a Bureau of Agriculture, Horticulture, and Statistics; the duties of the bureau were enlarged and present name adopted April 2, 1892. Biennial reports. Commissioner of Agriculture, Labor, and Statistics, Nicholas McDowell, Frankfort, Ky.

Missouri Bureau of Labor Statistics and Inspection—Established March 19, 1879; enlarged March 23, 1883. Annual reports. Commissioner of Labor, Lee Meriwether, Jefferson City, Mo.

Ohio Bureau of Labor Statistics—Established March 5, 1877. Annual reports. Commissioner of Labor, W. T. Lewis, Columbus, Ohio.

New Jersey Bureau of Statistics of Labor and Industries—Established March 27, 1878. Annual reports. Chief of the Bureau of Statistics of Labor and Industries, Charles H. Simmerman, Trenton, N. J.

Illinois Bureau of Labor Statistics—Established May 29, 1879. Bienniel reports. Secretary of the Bureau of Labor Statistics. George A. Schilling, Springfield, Ill. Indiana Bureau of Statistics—Established March 29, 1879. Biennial reports. Chief of the Bureau of Statistics, Simeon J. Thompson, Indianapolis, Ind.

New York Bureau of Labor Statistics—Established May 4, 1883. Annual reports. Commissioner of Labor, Thomas J. Dowling, Albany, N. Y.

California Bureau of Labor Statistics—Established March 3, 1883. Biennial reports. Commissioner of Labor, E. L. Fitzgerald, San Francisco, Cal.

Michigan Bureau of Labor and Industrial Statistics—Established June 6, 1883. Annual reports. Commissioner of Labor, Charles H. Morse, Lansing, Mich.

Wisconsin Bureau of Labor Statistics—Established April 3, 1883. Biennial reports. Commissioner of Labor, Halford Erickson, Madison, Wis.

Iowa Bureau of Labor Statistics—Established April 3, 1884. Biennial reports. Commissioner of Labor, W. E. O'Bleness, Des Moines, Iowa.

Maryland Bureau of Industrial Statistics—Established March 27, 1884. Annual reports. Chief of the Bureau of Industrial Statistics, A. B. Howard, Jr., Baltimore, Md.

Kansas Bureau of Labor Statistics—Established March 5, 1885. Annual reports. Commissioner of Labor, W. G. Bird, Topeka, Kan.

Rhode Island Bureau of Labor Statistics—Established March 29, 1887. Annual reports. Commissioner of Labor, Henry E. Tiepke, Providence, R. I.

Nebraska Bureau of Labor and Industrial Statistics—Established March 31, 1887. Biennial reports. The Governor, ex-officio Commissioner. Deputy Commissioner of Labor and Industrial Statistics, J. H. Powers, Lincoln, Neb.

North Carolina Bureau of Labor Statistics—Established Feb. 28, 1887. Annual reports. Commissioner of Labor, B. R. Lacy, Raleigh, N. C.

Maine Bureau of Labor Statistics—Established March 7, 1887. Annual reports. Commissioner of Labor, Samuel W. Matthews, Augusta, Me.

Minnesota Bureau of Labor-Established as a Bureau of Labor Statistics March 8, 1887; enlarged and changed to Bureau of Labor April, 1893. Biennial reports. Commissioner of Labor, L. G. Powers, St. Paul, Minu.

Colorado Bureau of Labor Statistics—Established March 24, 1887. Biennial reports. Commissioner of Labor, W. H. Klett, Denver, Colorado.

Texas Bureau of Agriculture, Insurance, Statistics, and History —Established 1887. Annual reports. Commissioner of Agriculture, etc., A. J. Rose, Austin, Tex.

West Virginia Bureau of Labor—Established February 22, 1889. Annual reports. Commissioner of Labor, John M. Sydenstricker, Charleston, W. Va.

Arkansas Bureau of Mines, Manufactures, and Agriculture— Established 1889. Biennial reports. Commissioner, W. G. Vincenheller, Little Rock, Ark.

South Dakota Department of Labor and Statistics. Established 1890. Biennial reports. Commissioner of Labor, S. A. Wheeler, Lead, S. D.

North Dakota Department of Agriculture and Labor—Established October 1, 1890. Biennial reports. Commissioner of Labor, A. H. Laughlin, Bismarck, N. D.

Idaho Bureau of Immigration, Labor and Statistics—Established 1890. Commissioner of Labor, Boise City, Idaho. (The state constitution authorizes a bureau with the preceding title, but the legislature has never made appropriations for its support or enacted laws defining the powers and duties of the Commissioner. No person has been appointed by the present Governor for the position.)

Utah Bureau of Statistics—Established March 13, 1890. Annual reports. Territorial Statistician, Joseph P. Bache, Salt Lake City, Utah.

Tennessee Bureau of Labor Statistics and Mines—Established March 23, 1891. Annual reports. Commissioner of Labor, F. P. Clute, Nashville, Tenn.

New Mexico Bureau of Immigration and Industrial Statistics— Established 1891. Secretary of the Bureau of Immigration and Industrial Statistics, Max Frost, Santa Fe, N. M.

Montana Bureau of Agriculture, Labor and Industry—Established February 17, 1893. Annual reports. Commissioner of Labor, James H. Mills, Helena, Mont.

New Hampshire Bureau of Labor—Established March 30, 1893. Biennial reports. Commissioner of Labor, John W. Bourlet, Concord, N. H.

### AND LABOR STATISTICS.

## FOREIGN BUREAUS OF STATISTICS OF LABOR.

In Belgium the Office du Travail (Ministere de l'Industrie et du Travail) was established in 1895 at Brussels, the official head of the office being entitled "Chef." A superior council of labor (conseil superieur du travail,) which made investigations and reports on matters relating to labor, has been in existence since April 7, 1892. November 12, 1894, a separate labor bureau, similar to the American and French type, was created under the Department of Agriculture, Industry, and Public Works. But in 1895 this department was separated into two departments, known as Department of Agriculture and Public Works and Department of Industry and Labor, and the newly created labor bureau was made a division under this latter department.

In France the Office du Travail (Ministere du Commerce, de l'Industrie, des Postes, et des Telegraphes) was established July 21, 1891, at Paris, the official head of the office being entitled "directeur." The publications of the bureau consist of special reports on particular subjects, of which a number are issued each year, and since January 1, 1894, a monthly bulletin, "Bulletin de l'Office du Travail."

In Germany the Kommission fuer Arbeiter Statistik was established June 1, 1891, at Berlin. This is a permanent commission, which issues special reports from time to time on particular questions and reports of the minutes of its meetings. The material collected by it is compiled by the Imperial Statistical Bureau.

In Great Britain the labor department of the board of trade was established in 1893 at London, the official head of the office being entitled "commissioner." A service for the collection and publication of statistics of labor has been in existence under the board of trade since March 2, 1886. In 1893 this service was greatly enlarged and given its present name. Its reports, therefore, date from 1886-87, and consist of annual reports of operations and statistical abstracts, annual reports on strikes and lockouts, annual reports on trade unions, annual reports on wages (contemplated,) special reports, and, since May, 1893, a monthly "Labor Gazette."

In Switzerland the Secretariat Ouvrier Suisse was constituted December 20, 1886, at Berne. The "secretariat" is an officer of the federation of labor organizations, but is subsidized by the government, which directs him to make certain reports. His publications consist of annual and special reports.

In Ontario, Canada, a bureau of industries was organized under the commissioner of agriculture, March 10, 1882, the official head of the bureau being styled secretary. Annual and occasional special reports are issued.

In New Zealand a bureau of industries was created in 1892. In the following year the designation of the bureau was changed to that of department of labor. Its publications consist of annual reports and a monthly journal commenced in March, 1893, under the title "Journal of Commerce and Labor," which after the issue of a few numbers was changed to that of "Journal of the Department of Labor."

We have been informed unofficially that an office for the collection of labor statistics has recently been established in Spain.

The above statement is believed to include information concerning all bureaus of foreign governments especially created for the collection and publication of statistics relating to labor. It is not a statement, however, of the extent to which foreign governments publish labor statistics, as a great deal of valuable information on this subject is contained in the publications of the central statistical bureaus or other offices of foreign governments.—Bulletin of the United States Department of Labor, November, 1895.

The subject of current work of the various bureaus was then taken up and reports, from which we make some extracts, made as follows:

## THE UNITED STATES DEPARTMENT OF LABOR.

Mr. Wright: The United States Department of Labor has just completed its tenth annual report, an extended account of which I gave you last year, and which relates to the strikes and lockouts occurring in the country from January 1, 1887, to June 30, 1894. • This report will go to press at once.

The current work of the department consists of two general investigations ordered by congress and a few features of special work undertaken by the department on its own motion. The investigations which have been ordered by congress are: First, one relating to the employment of women and children. In 1887 we published the fourth annual report, which related to the employment of women and children in twenty-two of the large cities of the country. That report covered questions of wages, cost of living, physical conditions, home surroundings, nativities, education, etc. In the investigation now ordered by congress the department takes a departure from the investigation reported in the fourth annual report, and is endeavoring to find out something of the causes of women entering so largely the industrial field. During the past twenty years the number of women engaged in our productive industries has doubled, and it is becoming a very serious economical and ethical question as to the reasons for such a vast increase. So the department is trying to find out the facts. This work is being done, as we usually carry on our investigations, by clearly defined inquiries; so that the agents in the field are collecting their information along similar exact lines. The inquiries consist of such questions as these: What are the leading causes of the employment of women and girls to the extent that they are now employed? Is there an increasing tendency to the employment of women and girls? Another inquiry relates to the daily hours of work of the employes about whom information is sought. We also get at the age, the conjugal conditions, the education, and the character of the occupation of the women; whether they are paid by the piece or time; their earnings for one full week, taking so many hours; and then the quality, in fitness for duties, among those of the same occupation; that is to say, the comparative fitness of men and women when performing like services. These inquiries, when carefully carried out and classified, will show the earnings of men and women in the same lines, and will also demonstrate an exceedingly important feature; that is, whether men are being displaced by women or whether women are simply and to a general extent displacing girls and boys. In other words, whether women in our productive industries are, as a rule, performing the work formerly performed by men, or performing the work usually done by boys. These are very largely economic questions, but they will have a very important bearing upon the whole question of the employment of women. We shall secure a great deal of important information which we have not yet had except in a few instances. The bureaus of the different states have been taking up the question of the employment of women, and it is an exceedingly valuable one to be pursued. I give you only the general outline of this investigation, so as not to take up too much time.

The other investigation ordered by congress is a far more comprehensive one and far wider in its reach, and that relates to the influence which machinery or inventions have had upon wages, the time employed,---that is, the hours of labor,---and the cost of pro--The time is auspicious for duction, both in time and in money. such an investigation. It is a surprise to most, and it has been a constant surprise to me in conducting this investigation, to find how many of the industries of the country are carried on in a double sense -in some places by hand, under the old hand regime or method, and again, in other localities, often contiguous to the first, by the most improved modern methods. But the old methods are passing away, and the men who were familiar with them and who still can give the public the facts are passing away, too; so that the sooner an investigation of this kind is carried on to fair completion the better it will be. You will at once understand, gentlemen, that there is nothing whatever in an investigation of this kind upon which legislative action can be based; but such an investigation will have the very greatest importance in the consideration of the economic questions of our time, so the department is making it as complete and exhaustive as possible. It will take up every available feature of hand and machine production. from the very smallest elements in production to the most extensive operations, running from the manufacture of a pin, may be, to the production of lumber and ore. You, gentlemen of this state, are perhaps more familiar than the rest of us with the great changes which have taken place in the production of lumber, and yet, with all the methods which the Northwest now employs in making lumber, there are localities in the country that are still using the old upright saw; so that the factors of information, so to speak, exist now, and the department will carry its work on and on until it has covered the leading industries of the country and in the general localities where they prevail. It is not an investigation, as you will at once see, that involves any question of aggregation or totals, or that has any benefit to be derived from immediate completion; therefore, we shall carry on this investigation into the influence of machinery upon labor, upon hours of work, and cost of production, until we have practically made it exhaustive so far as the United States is concerned, and then, if there is any money left at our disposal, we shall try to carry it across the water. You will all see

the advantage of such an investigation and the contribution which the results will be to economic and ethical science.

There is a matter on which we are engaged, and which is being carried out on other lines by Mr. Wadlin of the Massachusetts office. That relates to wages in different parts of the country. Our department is doing this simply as "knitting work." When the services of a man can be spared from other things we collect from the official reports of different countries the wages so far as they have been reported. I presume those two reports will some time, perhaps, come together.

Congress has now ordered a new feature in our work, and I wish to call the especial attention of the commissioners represented here and throughout the whole country to this work, because I believe they will take as much interest in it as the department does. At the last session of congress the department was authorized to publish a bulletin. You know that the Department of Labor of Great Britain, the French Labor Department, the New Zealand Department, and now the Department of Labor in Russia are publishing bulletins. In some cases they are monthly and in other cases bi-monthly. They are having an exceedingly good effect, and congress thought it was wise for the Department of Labor to undertake the same class of work. This would have been done long ago, had it not been for two things. In the first place, there was a disposition to make the bulletin the official announcement of the scarcity or the abundance of labor in different localities. This would have been a most dangerous feature in a country like ours. It is all very well in France and England; but in the United States such work would have been exceedingly vicious. For instance, the Department of Labor might announce in one of its bulletins that there was a scarcity of weavers in the woolen mills of a certain place. The inevitable result would be a rush of unemployed weavers to that particular locality, and if a hundred only were wanted there might be a thousand traveling long distances to secure the one hundred places. Thus, the publication, instead of being of assistance to the unemployed weavers of the country, would impose a vast burden upon them, for they would have to be transported back again at somebody's expense or at their own loss. So after due deliberation, the committee of congress having the matter in charge saw at once that this would not do in a country the size of the United States. The second

reason why a bulletin has not been published before is that the demands for it were based upon the idea that such a bulletin should be the propaganda of certain theories, no matter what; that it should be a controversial publication instead of simply a publication confining itself to current facts. That would have been just as dangerous as the other. The government of the United States ought not to undertake to teach any particular economic theory or any particular political dogma. The country is composed of its citizens, and they have the right to know the truth when the government speaks. So these two ideas prevented the publication of the bulletin; but now it has been authorized along the basis of the collection of information for the general public, and it provides, also,-(of course you are all interested in a general way, but you are interested in it in a specific way,)-for the publication of abstracts of the state and foreign labor documents. So that each number of the bulletin (the first will appear in October, and then bi-monthly after that) will contain abstracts of the most important information in each one of your reports. This will enable us to spread broadcast over this country and foreign countries, in official and other directions, the crucial results of all your individual work, and it therefore becomes a matter of great interest to the members of this convention. We shall publish the abstracts of as many reports as possible in each number, always taking the latest; so it will be a very great favor if the members of this convention will see to it that the department always has advance sheets of their state reports, with a statement as to when your report will be published, so that we may not bring out an abstract before you bring out your report. In this way, the committee of congress having the matter in charge thought that the state and federal offices would be brought more into line with each other, because each would be interested then officially in the work of the other, and the results would become of national importance and of national benefit. You will at once comprehend the whole situation on the simple statement I have made.

Another department of this bulletin will be what we shall call the law or legislative department; and here again I wish to bespeak the good offices of the members of this convention. We want to publish in each bulletin, so far as conditions will allow, the bills that are pending in the various states relating to labor matters, and, furthermore, the acts that are passed; and, further, all decisions of courts which bear upon labor matters, either in the interpretation of existing laws or in relation to injunctions or other suits or causes that come up in which labor is in anywise involved. Here you can be of great assistance in making this bulletin a national vehicle for current information from your own states, and I know that I have simply to mention the matter to secure your hearty co-operation, because this bulletin will be absolutely a reciprocal matter, aiming always at preserving and disseminating information which is of national importance. Of course, those things in your reports which are merely local we ought not to touch, but where you report things, as you always do through your bureaus, that are of just as great value in one part of the country as another, you will now have a vehicle through which these particular features of your reports can become a part of a national document as well as a part of your own state documents.

These are the features of the departmental work, and they are features which it seems to me are exceedingly valuable, and in which we can—particularly with reference to the bulletin—co-operate with an efficiency which I am sure will be recognized.

A part of the call for reports on current work relates to financial The Department of Labor now has at its disposal matters. \$175,000 a year in round numbers. It usually employs a force of about 110 people on an average. Its clerical force and its special agency force are under civil service regulations, so that we run along in a smooth way, and with an equipment which, to my mind, shows not only the interest which congress takes in such work but really its generosity. People sometimes say: "You ought to have a million or at least half a million," or that sort of thing; but when it is understood, that, with the establishment of the bureau as it was originally, \$25,000 was appropriated; that four years later it was made an independent department, and that now it has an equipment of \$175,000 a year, I do not think that any labor statistician can complain of congress for its action in these matters. I know perfectly well that members of congress are using the state and federal reports more and more as time goes on, and that the value of the reports is recognized by them and by the very best men everywhere as sources of reliable, trustworthy information, so that we have only to go on, making our work scientific, at the same

time recognizing this one thing, gentlemen, that merely counting hogs and logs and dogs is not all there is to a statistician; that he should recognize the relation of the facts which he collects to other facts, and be able to see something of the philosophy and the economic and ethical forces underlying the facts which he presents, thus making his analyses vital in their importance and of far greater value than simply by publishing columns of figures and stating numbers. I believe that the members of our convention recognize this, and that it is the principle on which our own office works and and which enters more and more into these investigations to which I have called attention.

#### ADDRESS BY PROF. W. W. FOLWELL.

The President: The first matter on our program is a paper by Prof. W. W. Folwell of the Department of Political Economy of the University of Minnesota, on "The Relation of Statistics to the Economic Questions of the Day." I have the pleasure of introducing Professor Folwell.

Professor Folwell [speaking without notes:] Mr. President: Precious as is the time of this body, I want to say to you how pleased I am to meet again such a body of statists—I like the old and short word. I had the pleasure some years ago of meeting with you, and was very much refreshed, and was confirmed in some of the views I had of your work. I hope that what I may say on this occasion may not be unprofitable.

Political economy has been in considerable disrepute for a generation, I may say. The political economist is quite commonly condemned by the newspaper men as an unprofitable servant; as a kind of necromancer and dealer in wornout fancies, and I suppose that teachers and students of political economy must admit that there are some grounds for this reproach. Economic principles, of course, are as old as the race, but the discovery of those rules and the knowledge of them is comparatively modern. So far as we can learn from history, there was no science of political economy before the middle of the last century, and it is quite remarkable how suddenly there grew up during the last half of the eighteenth century a science of economics. It had its home in France, and was the outgrowth of a long period of philosophizing. This passion for philosophizing was not confined to economics; it spread into all things—into the social life, into religion, and especially into politics. The best picture of the conditions at this period that I know of is to be found in Taine's "Ancient Regime," and an excellent summary is contained in Guizot's "History of Civilization."

There was formed in France in the middle of the eighteenth century, with headquarters in Paris, a body who called themselves by the name, "Economistes." These "Economistes" have been nicknamed, after the title of one of their books, "Physiocrats," and the name of their system, "physiocracy," is a very good term, because it emphasizes the generative power of nature. The Mercantilists, before them, emphasized the importance of money and trade; the physiocrats came forward and said, "Money is not the first thing; Nature is the first thing." So they emphasized the generative power of nature, teaching that wealth consists alone in the produce of the soil, the waters, and the mine. Adam Smith went to France somewhere in the early 60's of the last century, and there associated for some time with the Physiocrats, and he learned a great deal from them. He learned that there was, or might be, an orderly science of political economy. Going home to Scotland, Adam Smith set to work, and in the course of ten years produced his "Wealth of Nations," that book which Buckle declares, in exaggerated phrase, to be "the most important book that ever was written." Nevertheless the work of Adam Smith will stand at the head of all writings in political economy, if it is not entitled to a corresponding place in general literature. Adam Smith used the deductive method of the Physiocrats, and he used it very powerfully; but he did not confine himself to the deductive method. With his practical Scotch-English notions, he was not content to spin his conclusions by the rules of logic out of certain assumed postulates, but he derived or confirmed his conclusions from a mass of information so varied and so great as to be a constant source of astonishment to all persons who read his book. Now, it would have been a happy thing if the successors of Adam Smith in England and elsewhere had followed his example. But the age of philosophizing was not ended, and the successors of Adam Smith did not follow his example, either on the Continent or They were carried away with the philosophizing spirit in England. of the time, and so they adopted and used to an excessive degree the deductive method. This was particularly so in France, and the political economy of France is still a deductive political economy.

The English, down to the present time, have pursued the deductive method almost exclusively. In Italy the French example has been followed, and in Germany, also, but with less uniformity and thoroughness. Now, it is this excessive use of the deductive method, this effort to spin conclusions of political economy according to the rules of logic, out of a comparatively few postulates, that has worked mischief. Some of the English political economists have gone so far as to draft a whole system from a half-dozen assumed postulates.

Now, the over-working of the deductive method has brought the science into disrepute. But one must be careful not to go to extremes. Alongside of this movement on the deductive road there began later and there has continued a movement on the inductive or "historical" road. The French, as I have suggested, have been the greatest sticklers for the exclusive use of the *a priori* method in political economy, but curiously enough it is among the French that we find the origin of a new movement, the historical movement. It was Auguste Comte, who, late in the 30's, in his "Positive Philosophy," laid the foundation for the new science of sociology, out of which a new political economy was to be one day born. The idea of Comte was that the "positive" or scientific method should be applied to the phenomena of society, and he invented the title "Sociology" for the new sciences whose evolution he predicted. John Stuart Mill was a friend and comrade of Auguste Comte, and he was very much affected by the views of Comte, as shown in their correspondence; but Mill was too solidly grounded in the old political economy-he had been trained too thoroughly by his father in the old system---to break away from it, and he made no changes in the text-book which he published in the middle of his life.

I say it was a Frenchman who first laid out the new sociological road, but the French have made but slight advance in that direction. The Germans took up the new study with eagerness, and I suppose the reason why the "positive" method found a larger hospitality in Germany was this, that the new sciences of comparative philology and law had been cultivated from the beginning of the century. They had already learned the historical method. What do we mean by the historical method? We simply mean the inductive method of logic applied to facts extending over great spaces and through long periods of time. Now this historical method in political economy has been widely extended in Germany. The great Roscher, who

#### AND LABOR STATISTICS.

has died within two years, Hildebrand, and Knies were the pioneers. In England this method has made but small advance, and it is only within the last ten or twelve years that we are learning in America In my judgment there is great hope from the applito apply it. cation of the historical method to political economy, and this application, let me say, of the method in any profitable degree depends upon the co-operation and the action of such gentlemen and such bodies as I see before me to-day. The historical method calls for the investigation of facts; not merely for the collection of facts but for the arrangement, tabulation, discussion, and interpretation The historical method stands, then, for knowledge, and of facts. the business of the statistician is to gather together the knowledge of things which is necessary to form a basis for reasoning Statistics, then, means reasoning on the basis of about them. knowledge, and here is the ground on which political economists, and statisticians are at one. The political economist, above all things, has need of the statistician to collect, and formulate, and interpret the facts which form the foundation of his studies. On the other hand, I think I may go so far as to say that the statistician would be quite disarmed without the assistance of the political The thinker will always be in demand. It is a large economist. part of the business of the political economist to inquire what are the things that it is necessary to investigate, and so the political economist and the statistician may work hand in hand.

As announced, the subject on which I am to speak here to-day is "The Relation of Statistics to the Economic Questions of the Day." I hardly think it necessary for me to go into much detail in regard to that. I did think it worth while that you should allow me to make these general remarks. But yet there are a few things, perhaps, that I might bring forward as they occur to me in illustration of the suggestion. I have been trying to throw out, that statistics means reasoning on the basis of knowledge. What the political economist now wants and what the whole world wants is more knowledge, more daylight. We have got as far as we can go in political economy, both public and private, and in political science without larger knowledge of facts, interpreted through the statistical method. Now, in illustration of that, I might refer to the population question. We have got just as far as we can go in the population question without larger knowledge of facts. The generalization of Malthus which was thrown out at the close of the

last century has been a very useful one. There is a startling amount of truth in it, and it must be admitted that it was based upon an induction. Here is a good example of the importance of Malthus looked over into the new world and correct inductions. he saw, at the suggestion of Dr. Franklin, that population was doubling every twenty-five years, and he made a hasty induction that population might under any circumstances double every twenty-five years. Of course, if that were a fact the state of things would become fearful in any of the older countries which have a dense population. It would mean misery and starvation for great multitudes. That was a hasty induction. What we are still looking for is the "principle of population," and that can be learned only from long and careful investigation of the actual facts of population in different countries at different times and under different circumstances. So far from its being true that population is always on the increase in the modern world, the latest statistics show that the population of France is rather running down. The death rate has increased and the birth rate has decreased, and French statesmen are in alarm for fear that one of these days there may not be soldiers enough in France to carry on the impending campaign against the Germans. In many of the smaller German states the population is almost stationary. What we want is no more speculation on the subject of population; we want the facts. Since the beginning of the century, it is true, we have been collecting census statistics in this and other countries, and we have already an exceedingly valuable body of information; but there is a great deal more to learn, as I am sure all will admit, and especially those who have given most attention to the subject.

Here is another illustration of the importance of statistics. Let us take the question of wages, one with which you are mostly occupied. What we want here is no more speculation; we want more and more daylight. We want no more speculation in regard to wage-funds; we want no more speculation in regard to wages as depending upon standard of living, or upon the length of the working day. What we want is the facts in regard to wages—what they are, what in amount, what in kind; who are the working people, under what circumstances are they employed, and so on. I am happy to say that we have a considerable body of those facts in existence now, and they have been used and interpreted in a very able manner; but there was never a time, it seems to me (I say this subject to correction,) when we needed daylight on the subject of wages so much as now. Take, further, the question of women's wages. I see lately in the newspapers assertions that the introduction of women into productive employments is having the effect of throwing men out of employment or of reducing the wages of men. Speculation upon that question will be to little purpose. We want some information on the subject. Again, we have had plenty of speculation in regard to the effect of machinery on labor, but I expect that the investigation which Colonel Wright is now making on that question will be worth more than all the palaver from the time of Adam Smith down to the present day.

The same remark holds good in the case of the question of profitsharing. We want no more speculation; we want knowledge. The same will apply to co-operation. For my own part, I have very considerable expectations in regard to co-operation in the future, and yet I am bound to say that my expectations have been moderated very much by an examination of the history of co-operation in this country.

I tell my good friend whom I see before me [Mr. J. S. Rankin,] and who is an enthusiast on the subject of agricultural co-operation, that the co-operative man has not yet been born. I hope he may at length appear.

In regard to the matter of the difference between real and nominal wages there is a question upon which we still need more light, and yet I am happy in being able to say that the Massachusetts report of 1885 upon that point was worth more than all the other discussions we have ever had on the subject.

As another illustration of what we need in the way of knowledge. let me take the tariff. The main questions at issue in the tariff discussion are just such questions as must be settled by knowledge, if they are ever to be settled. President Cleveland comes forward and tells us that the tariff duties are always added to prices. Mr. McKinley and others on the stump say that is not the fact at all; duties are not added to prices; and there is the issue between those gentlemen. They cannot settle it. I do not believe anybody can, except on a basis of solid statistical information. We are told on the one hand that the protective duty cheapens articles, and we are told on the other hand that it makes articles dearer. This question must be settled, but it cannot be settled by speculation. The

main thing I desire to lay before you is that political economists want daylight at the hands of you statisticians; but I do not think it necessary to illustrate this more in detail. There is not any branch of public economy in which this necessity is not felt, no matter what it is, whether it is transportation, or corporations, or trusts, or what not. Daylight we must have, not merely for economic reasons but for social reasons. We are living in a time now when such questions as I have referred to are not questions for the economist and for the philosopher in their closets, but they are questions for the newspaper man and for the working man in his trade-union meetings and at his work.

Now, let me say a word in regard to corporations, which I mentioned a moment ago. There is great complaint of corporations, trusts, and syndicates, and I suppose there is much ground for this complaint. There is certainly a great deal of suspicion in regard to all classes of corporations. It is constantly alleged that they are robbing the people, getting enormous returns from their enterprises without giving a fair equivalent. The only safe way, it seems to me, to treat this question is for those persons who have the knowledge or who can get it to furnish it to the public, so that the public may know-so that everybody who runs may read-the record of those institutions. We do that with regard to our national banks. They are obliged to show their transactions quarterly or monthly, as the case may be : they are obliged to show up what they are doing, and they ought to be obliged, as I think, to show up to a greater extent than they do. I should be glad to see the Canadian system of reporting bank transactions introduced in this country for the control of our national banks. Now, what is done for the national banks should be done for all corporations, syndicates, and trusts. So far as possible they should be obliged to show up. I am sorry to say "obliged." I wish it were not necessary, and I hope it may not be necessary to do that. My judgment is, that it is the wise way and the safe way for all persons who are now enjoying franchises and are in an advantageous position on that account to show their That is the best way for them, and I wish hands to the people. they might do that voluntarily and not wait to be forced to do it. I think, on the other hand, that our laboring people would be doing wisely to show the public what they are doing in their organizations. There should be daylight, and sunshine, and publicity all around.

## ADDRESS BY HON. HORACE G. WADLIN.

The President: The next feature of our program is an address by Hon. Horace G. Wadlin, chief of the Massachusetts Bureau of Statistics of Labor, on "Methods Pursued by the Massachusetts Bureau in Taking the Present Industrial Census of that State."

Mr. Wadlin: Mr. President and Gentlemen: I am announced, as the president has stated, to give you an account of the methods pursued by my bureau in taking the present industrial census of the state of Massachusetts. I shall interpret the term "industrial census" rather broadly, and speak to you of what we are doing through the census with respect to any matter which is of industrial interest, not restricting it to the census of manufactures simply but applying it to all topics which bear on industrial relations with • which we deal under our census system. I shall speak quite informally, and if you wish to interrupt me at any time, or to ask me questions when I have finished, I shall be glad to have you do so, because what I desire to do is to explain our methods fully, as I think these will be of some interest to you in the performance of your own work.

We have in Massachusetts what I do not hesitate to pronounce as well-organized machinery for the collection of facts relating to industrial questions as exists anywhere in the world. That is a broad statement, but I feel justified in making it because Massachusetts possesses, and has possessed for some time, a decennial census system, which is administered by a permanent bureau. Most censuses are taken by the aid of official machinery which is not permanent, but which is temporarily organized for the purpose of doing the work at that moment in hand. In order to explain what we propose to do in the present industrial census I shall first outline what we have previously done, inasmuch as our present methods are the result of many years' experience. From the earliest years of its existence as an independent commonwealth Massachusetts has taken a census under the provisions of its constitution and statutes made in conformity therewith. This census has for its prime object the enumeration of the people-and that was all that was attempted at first-for the purpose of redistricting the state every ten years for the election of senators and representatives. Something like fifty years ago,-in 1837, I think,-other things were taken on; for example, the collection of information relative to the products of the state, both agricultural and manufacturing. These facts were rather crudely collected, not very well assimilated, and brought together under some such general statement, as that, in the town of A, certain things were raised or manufactured, such things being specified; in the town of B certain other things were produced, and those were also specified, no uniform method of presentation being observed. Besides this, incomplete county statements were given, and finally a summary for the state, also more or less incomplete. All this was very imperfect Gradually other and better methods were and very inaccurate. Previous to 1875 the census had been taken in its variadopted. ous branches under the charge of the secretary of the commonwealth, but in that year, when my predecessor, Colonel Wright, now president of this convention, took charge of the Bureau of Statistics of Labor, which had become a well-established statistical office, the administration of the census was by law transferred to the bureau. At that time very much better methods were adopted for securing statistics of agriculture and manufactures, and other industrial statistics, and each of these subjects was made a separate and distinct branch of the work; yet the collection of data still remained in the hands of the enumerators. For example, when the enumerators collected the facts relative to the population they also secured the facts relative to agriculture and manufactures. Ten years later, in 1885, it was felt that the obtaining of accurate statistics of production, both in agriculture and in manufactures, was of such importance that it merited special attention. Therefore, instead of collecting information by means of the ordinary enumerator, he was simply directed, when he made his canvass in May for the purpose of enumerating the population, so far as relates to agriculture, to leave with every farmer a schedule relating to farm products, etc., which schedule the farmer was expected to fill, that it might be taken up by a special agent in the fall, at which time the crops for the year would be garnered and the facts fresh and complete in the farmer's mind. The manufacturers were reached through the mails. A very complete schedule was devised, containing more than 100 inquiries. This schedule was sent to every mauufacturer whose name had previously been returned by the enumerators, and the manufacturer was expected to fill the schedule and return it to the bureau by mail.

I may say that in 1885 the best results were reached that had up to that time been possible, but the experience of that year showed two or three defects in the plan which I have outlined. It showed, in the first place, to speak first of the production of the farms, that very few farmers would fill the schedule. Some would read it; others would manifest some slight interest in it; others would lay it aside with the intention of filling it at some period in the future which never arrived; others attempted to fill it, but so imperfectly that when the special agent called in the fall he had either to enter the replies de novo or make such important corrections in the few schedules which had been filled by the farmer that the advance distribution of schedules to the farmers was found to be of no practical value. And again, as to the statistics of manufactures, it was found, that, while there were about 23,000 establishments in the state, only a part of the manufacturers would fill the schedules and return them by mail. It was to them a novelty; it was elaborate in its form, containing a large number of questions, all of them of great importance,-all of great importance to the manufacturer himself, if he could have been brought to understand them. But as I say, it was an innovation, and besides this the schedule appeared to be quite complex. Manufacturers are generally busy men. If interested in the matter the recipient would glance at the schedule, saying to himself: "Yes, that is a good thing, and I will fill out the replies." He would then put it on his desk until the time should come when he would have leisure to fill it; but that time very seldom came. Many regarded some of the questions as inquisitorial; others considered them of no importance, and many of the smaller manufacturers thought that much of so complete a schedule could not apply to them. For these and other similar reasons only a small proportion of the schedules were at once returned by mail. Then letters were sent to delinquents asking that the schedules be filled and returned, and quite a number of manufacturers responded. A second notice was sent out, and that brought a few more. Then a third and more peremptory request mailed, and a few more schedules came in; and, finally, the collection was completed by sending special agents to those who still remained delinquent. In the long run they were all secured, but the method originally contemplated was found to be defective in the points I have named.

I have, I think, made it plain that the present census system of Massachusetts is an outgrowth of many years' experience. This experience has served to give us a basis for future work, and has also shown us some of the difficulties to be encountered in making inquiries so broad. Before the results of the census of manufactures of 1885 were tabulated it was found that an industrial census taken once in ten years was liable to be misleading, owing to abnormal conditions that might exist in the census year. Such a census would be used as a basis of comparison or deduction for the succeeding ten years; yet it might be taken in a year that for exceptional reasons was not adapted to show fairly the condition of affairs in the commonwealth. A business depression might exist, as was the case in 1885 in certain industries. Therefore Colonel Wright deemed it wise to suggest to the legislature that instead of taking an industrial census once in ten years annual statistics covering certain leading points should be taken. This suggestion was favorably received by Governor Robinson, at that time in office, and was supported by some of the principal manufacturers, and the legislature of 1886, the year following the decennial census year, authorized the collection of annual statistics of manufactures as part of the routine work of the bureau, and the plan has since been carried out by us. At its inception the intention was to abandon the decennial census of manufactures and rely entirely upon the annual statistics, and the law contemplated that the inquiries should go to every manufacturer in the commonwealth, thus making the annual inquiry practically an annual census of manufactures. Before the plan of operation was fully matured, however, Colonel Wright was called to Washington and I became connected with the bureau as his successor. The first schedules, I think, were sent out before Colonel Wright resigned, but they were collected and tabulated under my direction. It has been found impossible to take an annual census of manufactures, that is to say, covering every establishment without regard to size. There is not sufficient time within the period of twelve months, and moreover such a census would far exceed in cost the amount of our annual appropriation. We have found, however, that if the prime purpose of such an inquiry is to show the conditions surrounding our industries, the work may be as conclusively done by means of inquiries replied to by establishments covering perhaps eighty per cent of the capital
and product as it could be by a complete census. This has been made clear by careful comparisons made between our annual statistics and the returns of a complete census, and the evidence upon this point may be seen in our reports. We, of course, do not obtain census totals of either of the elements entering into production, but we do obtain facts which show the trend of business from year to year, whether up or down, as accurately as it could be shown by a response from every establishment, small as well as large; so that, in practice, the annual inquiry with respect to manufactures in Massachusetts, in which we receive 4,000 schedules from our leading industrial establishments made on exactly the same lines from year to year, identical establishments being compared for a series of years, is of more scientific value than an ordinary census of manufactures, in which schedules are received from a far greater number of concerns, many of whom have never made any prior return. The annual return, I repeat, is made upon the same general basis by identical establishments in each year compared, and therefore the basis of comparison is exactly the same from year to year. Variations of method, which too often vitiate statistical comparisons, are therefore as far as possible eliminated.

In 1895 we have again reached the limit of a decennial census period, but instead of abandoning the decennial census of manufactures, as was at first contemplated, that is still maintained; hence the Massachusetts census system now includes the decennial enumeration, covering all the manufacturing establishments in the commonwealth, and the annual inquiry covering the larger establishments and used as a basis of comparison from year to year.

So much for our system. I now speak of certain changes which have been made in our methods. The industrial statistics which we collect through the census are of three kinds. First, we secure certain personal facts which apply to every citizen of the commonwealth, such as information relative to his occupation and to the duration or continuity of his employment. Such information, although industrial in its character, falls properly under the classification of social statistics, and is collected by the enumerators who enumerate the population in May. These enumerators also return to the office a list of all the farmers and all the manufacturers in their respective enumeration districts, these districts each consisting of a small, accurately bounded territory, containing approximately 3,000 people, about 1,000 enumerators being required for the state.

The industrial facts relating to agriculture which are afterward collected comprise full information as to the value of farm property, —which may be termed agricultural plant, taking to the farmer the place which the factory occupies to the manufacturer,—the amount of capital invested in agriculture, value of product, number employed, wages paid, etc. These industrial statistics of agriculture will be collected under our present system, in November or December, after the crops are in, and for the same reason that that time of year was chosen in 1895; but our plan does not contemplate leaving the schedule in advance, as in 1885. We shall, on the contrary, employ a carefully selected force of special agents who will be sent into every district, each man working within exclusive territory, obtaining the facts directly from the farmers, and entering them in due form on the schedules.

Formerly the manufacturers were asked to make up their returns for the ending in May, the month in which the population is enumerated, but as we now have an annual inquiry relative to manufactures which ends with the thirty-first day of December, the decennial census relating to manufactures will be collected at the close of the year, so as to disclose the conditions on the 31st of December. Therefore that branch of our work will begin after the thirty-first day of January next, and will be conducted by special agents working in accurately bounded districts and equipped with the proper I have before stated that the names of manufacturers schedules. and farmers were to be returned by the enumerators of the popula-Their lists of farmers will be accepted without revision, but tion. the names of manufacturers will be compared with Bradstreet's lists, with directories wherever they are in existence, and with our own list of manufacturers which we have made up in the course of our annual work, covering, as I have said, all the larger firms, so that there can be no possible omission.

Now, before I go further, let me explain the manner in which the enumerators and agents are selected for the performance of this work. This year there has been a new departure in Massachusetts with reference to the selection of enumerators. Massachusetts is a compact state; it can be very accurately divided, on the basis of our township lines, into enumeration districts, the cities being divided on the basis of wards, and the wards being sub-divided into

precincts, if necessary, so that each enumerator shall cover approximately 3,000 persons, requiring altogether about 1,000 enumerators, who must be selected and appointed by the Chief of the Some of you are aware of the methods which are some-Bureau. times followed in the appointment of subordidate civil officers who are selected to perform minor political or public duties. There are not infrequently abuses in connection with such appointments, and of course census work has not been entirely free from such abuses. My own bureau in Massachusetts, in its general work, has been for many years entirely free from political dictation in such appointments. vet it is impossible for the chief of such an office to select and equip 1,000 men unaided. He cannot possibly know all those men personally, however good his intentions may be. He must take somebody's advice. Some years ago-I think in the census of 1885-my predecessor incorporated in the census law, afterward adopted by the legislature, a provision that lists of enumerators selected by the chief of the bureau should be subjected to the mayor and aldermen in cities and to the selectmen in towns for That was for the purpose of enlisting the co-opertheir approval. ation of the local authorities in the appointment of enumerators; for the local interest in the census, as you are aware, is very great. You know how intense is the interest of rival cities that their position in the census shall be fully and accurately shown. This local pride always shows itself in criticism of census work. Tt was therefore thought best that the co-operation of the local authorities should be invited and secured, to the end that, by requiring their approval of the appointments, only fit men might be selected. When it devolved upon me to draft the statute for the present census, I thought, that, if the local authorities were to approve the nominations, they might as well make them. I could not see any especial gain in the chief taking the initiative if the approval of the local authorities was essential, and felt that they might as well make them in the first place; provided, of course, a check was placed on unfit nomina-For in Massachusetts, as elsewhere, it is unfortunately true tions. that there are local authorities-not, of course, numerous, but there are some-who are not sufficiently patriotic to nominate good men regardless of political or personal considerations, and in order to prevent unfit men being foistered upon the bureau another provision was put into the census law. My experience has convinced

me that the civil service principle is a good one in its general application, and yet it was manifestly impossible, for such work as the enumerators were to perform (temporary in its nature and not highly paid, especially within the brief period at our command), to subject each applicant to the usual civil service examinations. I believed, however, that, as we had a civil service commission in Massachusetts, well established and acting under state law, it would be well to recognize that commission in the selection of the enumerators; therefore, while the local authorities might nominate twice as many men as were required for the performance of the work in their respective municipalities, it was also provided that the men thus named to the chief for consideration should be subject to a test under the approval of the civil service commission. That provision was put into the bill, it was submitted to the proper legislative committee, adopted without objection, and became a part of the law. I then districted the state, and notified each municipal board as to the number of men that would be required and as to their duty with respect to nominations. These officers nominated to me twice as many men as I needed. The test of capacity devised was not a scholastic one, not one requiring any special ability, but one adapted to the express purpose of determining the fitness of the men for doing the particular work we had in hand. This work is performed by the enumerator under special instructions which indicate explicitly just what we wish done. Each applicant or nominee was provided with a copy of these instructions, sent to him two weeks before he was expected to meet the examiner, and he was told to study them in preparation for the test of fitness. On the day appointed for the examination, the state being divided into examination districts, and an examiner being sent into that territory, the applicants were given a certain number of hypothetical facts relating to a family, in the form of a story, which they were required to then and there enter upon schedules similar to the census schedules in accordance with the instructions which they had received, --just such facts as the lady of the house would give the enumerators when making the actual enumeration. That was the test. Besides that, each applicant was asked to make a statement in writing showing his previous business experience, his habits with respect to the use of intoxicating liquors, whether he had ever been convicted of any offense, his age, and certain other personal facts that tended to show the char-

acter of the applicant. That method of testing a man's fitness for our work gave most admirable results. In the first place, there were about 2,000 men nominated. About five hundred dropped out at once; that is to say, the man who thought he was simply to have a "soft snap" but who felt himself unqualified did not care to enter into the contest. Of the others, the best were appointed, without the influence of personal considerations at all, except that other things being equal veteran soldiers were given preference in accordance with the spirit of our civil service law. Each applicant, the names being unknown to the markers, was graded by number upon the results shown in the test, and the men were appointed in order of merit, beginning at the top of the list and proceeding downward until a sufficient number were secured. By that method I obtained the best men, so far as we could determine their respective merit, and the office was relieved from political pressure during the time we were burdened with work in preparation for the census. As soon as it was known that there was to be an impartial test everybody let us alone politically. Besides this, and not of least importance, every enumerator had been able to study his instructions some four weeks before he was required to begin his actual work; and in the examination he had had the important points of the schedules brought forcibly to his mind, so that when he began his work he was not entirely unprepared, as census enumerators usually are, but he knew quite well what he was expected to do, and that, of course, increased his efficiency. The whole plan of appointment has worked very satisfactorily. It has increased the cost of the work undoubtedly, because the better your men and the more conscientious they are the more care they will use in the performance of their duties, and this usually means that somewhat more time will be consumed in it.

Now that is the way the thousand enumerators that took the population in May were selected. The industrial facts which they were expected to collect were the facts showing in great detail the occupations of the people and full information as to the extent of employment during the entire census year, for every person engaged in gainful occupations. That feature was first incorporated in the census in 1885. It has been extended under the present census so as to show employment and non-employment month by month, and just what employment if any is followed by each person when unemployed in his usual occupation. The results of this inquiry will include the fullest and most exact data ever secured relative to non-employment. All information, of whatever sort, for each person is entered on a card, the facts relating to a male being entered on a blue card; those relating to a female on a red card, while the facts for the family as a whole are shown on a yellow card; so that we have what may be termed a complete card catalogue of the population of Massachusetts under these three different heads. Besides that, as previously stated, the enumerator returns to the office a list of the firms and farmers in his enumeration district. These farmers will be visited in November by specially selected agents, many of whom have been enumerators in May. Respecting such agents, therefore, we have not only the civil service test but the test of actual work in the field. We shall need but a comparatively small number of men for the work in November, and we shall take the best men from among those who have worked for us in May. In 1885 we employed 250 men in this branch of the work. I have not yet determined how many we shall need this year, but I think not more than fifty or sixty, my object being to employ a smaller number of men of greater general efficiency. When they complete the collection of statistics relative to agriculture it will be about time to take up the work relative to manufactures, and the same agents who have been over the state, becoming familiar with the ground and acquiring increased efficiency, will be commissioned to take up all schedules relating to manufactures which have not previously been received by mail. These schedules are mailed to every manufacturer in the state, being practically the same as those we use in collecting our annual statistics, and all the schedules which come in by mail will be so much gained, and, as I have explained, the remainder will be collected by the agents, who by that time will have completed the work on agriculture.

The manufacturer's schedule, copies of which I have here and will submit for your examination, instead of containing 100 inquiries, as formerly, has, under the experience of the office, been reduced to four pages, and the questions practically reduced to eleven. In 1885 we had a very extensive schedule. It embraced many very valuable questions, and each question was very elaborately explained, so that those who were required to reply might understand exactly what was expected. It was, however, somewhat too elaborate and diffuse. Experience has shown that it is much better to reduce the schedule to comparatively small limits, putting the inquiries upon a single page [indicating] and a brief explanation on another, and if any further explanation, supplying it through a special agent who visits the manufacturer personally. The questions asked the manufacturer relate to the number of partners or stockholders in each establishment; the amount of capital invested; the value of stock used; the value of goods made or work done; the number of persons employed by sexes, for each month of the year; the total amount paid in wages, exclusive of salaries of agents, manager, book-keepers, and other persons of this class; classified weekly wages, by sexes; the proportion of business done during the year as compared with the greatest capacity for production of the establishment, and the number of days the establishment was in operation during the year. Those are subjects which the schedule covers, and it seems to me those are practically all that it is essential to cover in a census of manufactures, and few if any others The method of replying to the questions is briefly will be added. explained on the second page of the schedule so as to bring out any points of special importance.

In conclusion, allow me to say that the plan of the Massachusetts Bureau of Statistics of Labor has been to make all its investigations exhaustive. The original annual appropriation granted the bureau in 1869 has never been increased, although additional money was allowed the bureau when the publication of the annual statistics of manufactures was commenced. Despite the immense increase in the amount of work required to be done in the office, the appropriations allowed have been sufficient to pay for that work; but they would not have been had not the most improved appliances for tabulation and aggregation been adopted and used successfully.

With the exception of Thacher's Percentage Machine and the Comptometer, all the patented machines and printed devices used in connection therewith in use in the office since 1875, have been invented and successfully applied to the bureau and census work by the present chief clerk, Mr. Charles F. Pidgin, who has been connected with the office since 1873.

Perhaps a few words in reference to the penalty which our legislature imposes for refusals to furnish information may be of interest. As you are perhaps aware, all of our facts in the census are collected under penalty. I consider the penalty of value as a moral force, but it is of no other value, for it has never been the practice of the bureau to attempt to enforce the penalty, and I trust it never will be necessary to change that practice. The fact that the penalty exists is of assistance, in that it shows the intention of the legislature that the information shall be furnished; but it has never been necessary to resort to the law in order to secure returns, and I do not apprehend that it ever will be. We have always been able finally to secure replies voluntarily, but I would rather have 1,000 schedules which are thus filled by the persons from whom we are seeking information than to have 4,000 collected at the point of the bayonet. I went into this subject quite fully at our last convention, you will remember, and need only allude to it here.

Mr. Clark: How are the enumerators paid?

Mr. Wadlin : They are paid by the day. In 1885 they were paid two dollars and a half for ten hours' work. In the present census they are paid three dollars for nine hours' work. The enumerator is required to swear that the service has been actually performed. He may work eighteen hours per day if he desires to do so, and overtime is paid for at the same rate. The enumerators are paid out of a special appropriation for the decennial census, which so far is \$200,000 with a possible increase later on. The legislature is generous in that matter. We have never had any difficulty in getting appropriations to carry on the census work. The first appropriation I asked for was \$200,000. No one can guarantee just how much work of that character will cost. We exercise the greatest possible economy, but of course such work is expensive. The cost of the enumeration-that is, the field work -is inevitably large, and cannot be determined beforehand. If we need an additional appropriation I have no doubt we shall receive it.

Mr. Clark: In gathering your annual statistics you have regularly employed men, but you send out special agents in the performance of your census work, do you not?

Mr. Wadlin: In the work of gathering the annual industrial statistics our plan is this: The law contemplates that it shall be done by mail. About the 15th of December we send out the schedules, and about fifty per cent of these are returned by mail. Then we send out an additional postal card notice that the schedule has not been received as contemplated by law, and that it will be expected by a given date, and perhaps we receive ten per cent more in reply. Then we send out three or four special agents, assigned to specified territory, and they secure the delinquent schedules. The special agents are usually paid for this work three dollars per day and expenses. Of course, for the census work, we need a large number of people in order to get it done promptly.

Mr. Powers: How much do you estimate will be the cost of collecting the agricultural statistics of Massachusetts this year?

Mr. Wadlin: I have not made any estimate. It will cost us, I have no doubt, at least what it cost in 1885. It cost in that year about fifty cents per schedule, including compensation of the agents and their traveling expenses. I may say that the usual compensation allowed in the United States census of 1890 was fifteen cents for each schedule. The enumerator was paid fifteen cents for asking as many questions and recording as many answers as we paid fifty cents for. He did his work in the spring, when it was to the farmer's advantage to get away from him as quickly as possible, and of course it was for the enumerator's interest also to get away, because he was insufficiently paid, the result inevitably being in many cases a very defective schedule.

Mr. Powers: How closely will the acreage of farms in Massachusetts, as shown by the state census, approximate the acreage exhibited by the United States census?

Mr. Wadlin: We shall exceed it in every particular. The United States census of agriculture in Massachusetts bears no comparison, in completeness, with the state census, owing, principally, to the incompleteness of enumeration under the circumstances I have outlined. The United States census has sometimes drawn an arbitrary line as to what shall be called a farm, but in our census we make no such distinction. Besides this, our method of taking the census is adopted to secure results more nearly accurate. We gather our facts by specially selected agents, who are frequently interested in the agricultural prosperity of the state, and who are therefore actuated not only by the hope of compensation but by a patriotic pride in securing correct results, and we collect our facts at a time when they can best be determined, the crops having been recently harvested.

Mr. Powers: I do not ask for this information through selfish motives. Of course, we are all interested in studying the statistics we ourselves gather when brought into comparison with those of the census, and in this work of our tax investigation to which I have

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referred, one of the features I wish to present relates to the taxation of farms, as I mentioned this morning. In investigating the farm returns of the United States census for the State of Minnesota I find that the acreage of farms given is only about sixty per cent of the acreage actually subject to taxation, and I find that, in six agricultural counties of Minnesota, counties that are practically free from wild land or railroad land, the agricultural returns of the census give only eighty per cent of the taxable land. I want to know how the condition here, as I have described it, compares with the facts for Massachusetts. I think we ought to know just how valuable are the statistics which are being put forth by our government departments, and if we can gain a clear idea on this point from the results in Massachusetts it may help us in our individual studies.

Mr. Wadlin: It is only fair to say that probably under any system it would be impracticable to go into as fine details in a national agricultural census as we secure in a small, compact state like Massachusetts. I do not suppose that would be considered essential. I think that ought to be said, because I have suggested that we do not draw the line as they do in the United States census in determining what shall be considered a farm. I doubt if it would be worth while to attempt to go into details in the United States census of agriculture as we do in Massachusetts.

# LABOR LAWS OF MAINE

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## LABOR LAWS OF MAINE.

## Act Establishing the Bureau of Industrial and Labor Statistics, as Amended.

SECT. 1. There is hereby established a separate and distinct department, which shall be called the Bureau of Industrial and Labor Statistics.

SECT. 2. It shall be the duty of this department to collect, assort, systematize, and present in annual reports to the Governor, to be by him transmitted biennially to the Legislature statistical details, relating to all departments of labor in the State, especially in its relations to the commercial, industrial, social, educational and sanitary condition of the laboring people; and to the permanent prosperity of the productive industries of the State, and also to inquire into the immediate cause of strikes, lockouts or other disturbances of the relations between employers and employes.

SECT. 3. The governor shall, with the advice and consent of the council, appoint immediately after this act goes into effect, and thereafter biennially, on the first Wednesday in February, some suitable person, who is identified with the industrial and labor interests, and who shall be designated commissioner of industrial and labor statistics, with an office in such place as shall be designated by the governor.

SECT. 4. The commissioner herein named, shall receive an annual salary of fifteen hundred dollars, and to aid in carrying out the provisions of this act, said commissioner is hereby authorized to employ such assistance and incur such expense, not exceeding two thousand dollars per annum, as shall be necessary to carry out the provisions of this act.

SECT. 5. The commissioner shall have power to take and preserve evidence, examine witnesses under oath, and administer the same and in discharge of his duty, may enter any public institution of the state, and at reasonable hours when open for business, any factory, workshop, mine or other place where labor may be employed.

SECT. 6. All state, county, city and town officers, are hereby directed to furnish to said commissioner upon his request, all statistical information in reference to labor and labor industries, which shall be in their possession as such officers and said commissioner shall cause to be published and circulated in this state six thousand copies annually of the results of its labors, as to the objects for which commission is created.

SECT. 7. There is hereby appropriated out of any money remaining in the state treasury the sum of seven thousand dollars for the ensuing two years for the purpose of carrying out the provisions of this act; the commissioner herein named shall receive his salary in quarterly installments, and the expenses of the bureau shall be paid on the vouchers presented by the commissioner, after the same shall have been audited and approved by the governor and council.

## An Act to Regulate the Hours of Labor and the Employment of Women and Children.

SECT. 1. No female minor under eighteen years of age, no male minor under sixteen years of age, and no woman shall be employed in laboring in any manufacturing or mechanical establishment in this State more than ten hours in any one day, except when it is necessary to make repairs to prevent the interruption of the ordinary running of the machinery, or when a different apportionment of the hours of labor is made for the sole purpose of making a shorter day's work for one day of the week; and in no case shall the hours of labor exceed sixty in a week; and no male person sixteen years and over shall be so employed as above more than ten hours a day during minority, unless he voluntarily contracts to do so with the consent of his parents, or one of them, if any, or guardian, and in such case he shall receive extra compensation for his services; provided, however, any female of eighteen years of age or over may lawfully contract for such labor for any number of hours in excess of ten hours per day, not exceeding six hours in any one week or sixty hours in any one year, receiving additional compensation therefor; but during her minority the consent of her parents, or one of them, or guardian, shall first be obtained.

SECT. 2. Every employer shall post in a conspicuous place in every room where such persons are employed a notice, printed in plain, large type, stating the number of hours' work required of them on each day of the week, the exact time for commencing work in the morning, stopping at noon for dinner, commencing after dinner, and stopping at night; the form of such printed notice shall be furnished by the deputy commissioner of labor hereafter named, and shall be approved by the attorney general; and the employment of any such person for a longer time in any day than that so stated shall be deemed a violation of section one, unless it appears that such employment is to make up for time lost on some previous day of the same week, in consequence of the stopping of machinery upon which such person was employed or dependent for employment.

SECT. 3. Whoever, either for himself, or as superintendent, overseer, or agent for another, employs or has in his employment any person in violation of the provisions of section one, and every parent or guardian who permits any minor to be so employed, shall be punished by a fine of not less than twenty-five dollars nor more than fifty dollars for each offense. A certificate of the age of a minor made by him and by his parent or guardian at the time of his employment shall be conclusive evidence of his age in behalf of the hirer, upon any prosecution for a violation of the provisions of section one. Whosoever falsely makes and utters such a certificate with an intention to evade the provisions of this act shall be subject to a fine of one hundred dollars.

SECT. 4. It shall be lawful for any person, firm or corporation engaged in any manufacturing or mechanical business to contract with adult or minor employes to give one week's notice of intention on such employe's part to quit such employment under a penalty of forfeiture of one week's wages. In such case the employer shall be required to give a like notice of intention to discharge the employe; and on failure shall pay to such employe a sum equal to one week's wages. No such forfeiture shall be enforced when the leaving or discharge of the employe is for a reasonable cause. Provided, however, the enforcement of the penalty aforesaid shall not prevent either party from recovering damages for a breach of the contract of hire.

SECT. 5. No child under twelve years of age shall be employed in any manufacturing or mechanical establishment in this State. Whoever, either for himself, or as superintendent, overseer or agent of another, employs or has in his employment any child in violation of the provisions of this section, and every parent or guardian who permits any child to be so employed, shall be punished by a fine of not less than twenty-five nor more than fifty dollars for each offense.

SECT. 6. No child under fifteen years of age shall be employed in any manufacturing or mechanical establishment in this State except during vacations of the public schools in the city or town in which he resides, unless, during the year next preceding the time of such employment he has for at least sixteen weeks attended some public or private school, eight weeks of which shall be continuous; nor shall such employment continue unless such child in each and every year attends some public or private school for at least sixteen weeks, and no child shall be so employed who does not present a certificate made under or by the direction of the school committee, superintendent of the public schools, or the teacher of a private school, that such child has so attended school. And it shall be the duty of such committee, superintendent or teacher to furnish such a certificate in accordance with the fact, upon request and without charge. Provided, that this section shall not take effect until January one, eighteen hundred and eighty-eight.

SECT. 7. Any parent or guardian who procures a child to be employed contrary to section six, and any corporation, owner, superintendent, or agent of the owner of such establishment violating the provisions of said section, shall forfeit the sum of one hundred dollars, one-half to the use of the county and one-half to the use of the city or town where the offense is committed. Money so recovered to the use of the city or town shall be added to its school money. It shall be the duties of the school committees and superintendent of public schools to inquire into violations of said section, and report the same to the county attorney, who shall prosecute therefor.

SECT. 8. Every owner, superintendent or overseer of any such manufacturing or mechanical establishment shall require and keep

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on file a certificate of the age and place of birth of every child under sixteen years of age employed therein, so long as such child is so employed, which certificate shall also state in the case of a child under fifteen years of age the amount of his school attendance during the year next preceding such employment. Said certificate shall be signed by a member of the school committee of the place where such attendance has been had, or by some one authorized by such committee; and the form of said certificate shall be furnished by the State superintendent of schools, and shall be approved by the attorney general. The deputy commissioner of labor hereinafter named, or either of his assistants, may demand the names of the children under sixteen years employed in such establishment, in the several cities and towns of the State, and may require that the certificates of age and school attendance prescribed in this section shall be produced for his inspection, and a failure to produce the same shall be prima facie evidence that the employment of such child is illegal.

SECT. 9. The governor, by and with the advise and consent of the council, shall appoint a deputy commissioner of labor, at a salary of one thousand dollars a year, who shall hold office for two years, or until his successor is appointed, unless sooner removed. It shall be the duty of the deputy commissioner of labor to inquire into any violations of this act, and also to assist in the collection of statistics and other information which may be required for the use of the bureau of industrial and labor statistics; and said deputy commissioner, shall, in addition to his salary provided by law, be allowed his reasonable expenses. Whenever the governor of this state shall be satisfied the deputy commissioner of labor cannot perform all the duties of his said office required by this section, in person, he shall, with the advice and consent of the council, appoint a sufficient number of assistant deputies to assist him in so doing. Said assistants shall hold their office for the term of two years, and act under the direction of said deputy commissioner of labor, and shall receive the sum of two dollars per day and reasonable expenses while actually engaged in duty. Said assistants may, at any time, be removed for cause by the governor. All bills for the expenses of the deputy commissioner of labor, and for the services and expenses of such assistant deputies, shall be audited by the council. For the purpose of inquiring into any violation of the provisions of

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this act, and enforcing the penalties thereof, such deputy commissioner and assistants may, at all reasonable times, enter any manufacturing or mechanical establishment and make investigation concerning such violations. Such investigation shall be conducted with as little interruption as possible to the prosecution of the business of such establishment. Whoever interferes with said deputy commissioner or his assistants in the performance of their duties as prescribed in this act shall be fined fifty dollars.

SECT. 10. Nothing in this act shall apply to any manufacturing establishment or business, the materials and product of which are perishable, and require immediate labor thereon to prevent decay thereof or damage thereto.

## An Act to Change the Official Title of the Deputy Commissioner of Labor.

SECT. 1. The official title of the officer now known as the deputy commissioner of labor is hereby changed to inspector of factories, workshops, mines and quarries.

SECT. 2. Chapter one hundred and thirty-nine of the public laws of eighteen hundred eighty-seven, is hereby amended by striking out the words, "deputy commissioner of labor," wherever they occur in said chapter, and inserting in their place the words "inspector of factories, workshops, mines and quarries."

## An Act to Provide for the Fortnightly Payment of Wages.

SECT. 1. Every manufacturing, mining, quarrying, stone-cutting, mercantile, horse railroad, telegraph, telephone and municipal corporation, and every incorporated express and water company, any person or firm engaged in any of the above specified kinds of business, having in their employ more than ten persons, shall pay fortnightly each and every employe engaged in its business, the wages earned by such employe to within eight days of the date of said payment; provided, however, that if at any time of payment,

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any employe shall be absent from his regular place of labor, he shall be entitled to said payment at any time thereafter on demand.

SECT. 2. Any corporation violating any of the provisions of this act, shall be punished by a fine not less than ten nor more than twenty-five dollars on each complaint under which it is convicted, provided, complaint for such violation is made within thirty days from the date thereof.

SECT. 3. When a corporation against which a complaint is made under this act, fails to appear after being duly served with process, its default shall be recorded, the allegations in the complaint taken to be true, and judgment rendered accordingly.

SECT. 4. When judgment is rendered upon any such complaint against a corporation, the court may issue a warrant of distress to compel the payment of the penalty prescribed by law, together with costs and interest.

SECT. 5. The provisions of this act shall not apply to municipal officers whose services are paid for by the day, or to teachers employed by municipal corporations.

SECT. 6. This act shall take effect May one, eighteen hundred and eighty-seven.

## An Act Authorizing and Requiring the Inspector of Factories, Workshops, Mines and Quarries to enforce the Laws Relating to Fortnightly Payments, Sanitary Conditions of Factories, and to Require Him to Report Annually.

SECT. 1. It shall be the duty of the inspector of factories, workshops, mines and quarries, upon complaint, to inquire into, and prosecute for, any violations of chapter one hundred and thirty-four of the public laws of eighteen hundred and eighty-seven.

SECT. 2. It shall be the duty of the inspector of factories, workshops, mines and quarries to examine into the sanitary condition of factories, workshops, mines and quarries, and when any condition or thing is found that, in his opinion, endangers the health or lives of the employes he shall notify the local board of health, and it shall be the duty of said board to investigate the matter. SECT. 3. It shall be the duty of the inspector of factories, workshops, mines and quarries to enforce the due observance of sections twenty-five and twenty-six of chapter twenty-six of the revised statutes, relating to the swinging of doors in all factories and workshops.

SECT. 4. The inspector of factories, workshops, mines and quarries shall, on or before the first day of December annually, submit his report to the commissioner of industrial and labor statistics which shall be incorporated in, and printed with the annual report of the bureau of industrial and labor statistics.

SECT. 5. All acts and parts of acts inconsistent herewith, are hereby repealed.

SECT. 6. This act shall take effect when approved.

## An Act Relating to Employment of Labor, as Amended in 1891.

Any employer, employe, or other person, who by threats of injury, intimidation or force, alone or in combination with others, prevents any person from entering into, continuing in or leaving the employment of any person, firm or corporation, shall be punished by imprisonment not more than two years, or by fine not exceeding five hundred dollars.

## Labor's Holiday.

The first Monday in September of each year, being the day celebrated and known as labor's holiday, is hereby made a legal public holiday, to all intents and purposes, in the same manner as Thanksgiving, Fast and Christmas days, the twenty-second day of February, the thirtieth day of May and the fourth day of July, are now by law made public holidays.

## REPORT

OF THE

# Inspector of Factories, Workshops, Mines and Quarries.

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## STATE OF MAINE.

OFFICE OF INSPECTOR OF FACTORIES, WORKSHOPS, MINES AND QUARRIES, BIDDEFORD, December 1, 1895.

To Hon. Samuel W. Matthews, Commissioner of Industrial and Labor Statistics:

In compliance with the requirements of an act of the Legislature, approved March 29, 1893, directing the Inspector of Factories, Workshops, Mines and Quarries to make a report to the Commissioner of Industrial and Labor Statistics on or before December first annually, I have the honor to herewith submit my third annual report.

Very respectfully,

RICHARD F. CHALK,

Inspector.

## INTRODUCTION.

This department was created by an act of the legislature, entitled "An Act to regulate the Hours of Labor and the employment of Women and Children in manufacturing and mechanical establishments," approved March 17, 1887, and to take effect July 1, 1887. At the latter named date, L. R. Campbell, Esg., of Rockland, was appointed as "Deputy Commissioner of Labor," a misnomer which was corrected by chapter 220, public laws of 1893, changing the title of the executive officer from "Deputy Commissioner of Labor" to "Inspector of Factories, Workshops, Mines and Quarries." After Mr. Campbell had faithfully served for four years the present incumbent was appointed. By an act of the legislature approved March 29, 1893, it was made the duty of the inspector, in addition to his duties as they then existed, to examine into the sanitary condition of factories, workshops, mines and quarries, also to enforce due observance of sections twenty-five and twenty-six of chapter twenty-six of the revised statutes, relating to the swinging of doors in factories and workshops, and to submit a report to the commissioner of industrial and labor statistics on or before December first annually, to be incorporated in, and printed with the annual report of the bureau of industrial and labor statistics.

The State of Maine, with more than five hundred cities, towns and plantations within her borders, in nearly every one of which manufacturing of some kind is carried on to a greater or less extent, aggregating over 5,000 establishments, giving employment to more than 75,000 workmen and paying out nearly \$27,000,000 in wages, using over \$51,000,000 worth of raw material and producing over \$95,000,000 in manufactured products annually, is a field so vast and varied as to require the constant attention of the inspector to answer all the calls and attend to all the complaints which are constantly reaching him from among this vast army of toiling men and women. The times have been hard, some are out of remunerative employment, while wages in many cases are less than they were a few years ago. Feelings of unrest and discontent have manifested themselves in many sections of the State, and strikes threatened. Pay day in some cases has been deferred, and children have been illegally put to work in the mills. Such are some of the matters that have been investigated and acted upon during the year, reconciling differences or taking prompt and decided action as each individual case might warrant. The inspection of the more important mills and shops, matters in regard to child labor, dangerous machinery, pulp and paper mills, woolen mills, rag sorting, elevators, fire extinguishers and fire escapes, the payment of wages and sanitary matters, are all treated more or less briefly under appropriate heads.

#### INSPECTION OF FACTORIES AND WORKSHOPS.

During the year, 293 factories and workshops have been visited and inspected; twenty-six of which have been visited a second time, and ten a third time, making, in all, 329 visits. Of these, nineteen were cotton mills, forty-four woolen mills, fifty-nine shoe shops, eighteen paper and pulp mills, twenty-eight machine shops, fourteen box factories, twenty-six laundries, and forty-two bakeries, besides forty-three other manufacturing establishments of various The total number of children under sixteen years of age kinds. found employed was 1190, of which 643 were over fifteen, and 547 under fifteen years old. By far the larger part, 970, were at work in the cotton mills, while 154 were in the woolen mills, and fortythree in the shoe shops, leaving but twenty-three in all other employments. Of the children between fifteen and sixteen years old, 513 were in the cotton mills, eighty-seven in the woolen mills, twentysix in shoe shops, and seventeen in all other industries, while of those under fifteen years, 457 were in cotton mills, sixty-seven in woolen mills, seventeen in shoe shops, and six in all others. Of the ninetythree children, illegally employed, ordered out of the mills, sixtyseven were found in cotton mills, twenty-four in woolen mills, and In eight cotton mills, two woolen mills, and two in shoe shops. one shoe shop, sanitary improvements were ordered. Of the total number inspected, 160 pay weekly, 115 pay fortnightly, and eighteen pay monthly. As a general rule, the cotton and woolen mills, and pulp and paper mills pay fortnightly, while all other industries. very generally, pay weekly. But few, only eighteen out of the 293,

pay monthly, and these are scattered through a large number of industries, and are the exception to the general rule. Pulp and paper mills and bakeries average eleven hours' work per day, spruce gum manufacturers, ten and a half, and all others, ten hours. In the general conditions of the mills and shops, a considerable improvement is noted over former years. A careful study of the following table will show the matter in detail :

## INSPECTION OF FACTORIES

Consecutive number.	Name of Company.	Location.	Business.
$\begin{array}{c} 1\\ 2\\ 3\\ 3\\ 4\\ 4\\ 5\\ 5\\ 6\\ 6\\ 6\\ 7\\ 8\\ 9\\ 9\\ 10\\ 1\\ 12\\ 3\\ 14\\ 4\\ 15\\ 1\\ 1\\ 12\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2\\ 2$	Androscoggin Mills Bates Manufacturing Company Continental Mills Hill Manufacturing Company Lewiston Bich'y & Dye Works. Barker Mill Cabot Manufacturing Company Laconia Company Cabot Manufacturing Company Laconia Company Pepperell Manufacturing Co York Manufacturing Company R. W. Lord & Company Westbrook Manufacturing Co Portsmouth Company L. L. Shaw & Company Dana Warp Mills Farwell Mills Farwell Mills Farwell Mills Farwell Mills Porter Woolen Mill No. 2 Dexter Woolen Mill No. 3 Newichawanick Company Lewis Anderson & Company Dexter Woolen Mill No. 3 Newichawanick Company Lewis Anderson & Company Dexter Woolen Company Dexter Woolen Company Dexter Woolen Mill No. 3 Newichawanick Company Dexter Woolen Mill No. 3 Newichawanick Company Dexter Woolen Mills Coumbia Woolen Company Pioneer Woolen Mills Coumbia Woolen Company Dennison Walker Pioneer Woolen Mills Cumberland Mills Coumbia Woolen Mills Coumbia Woolen Mills Cowan Woolen Mills Company Manufacturing Co W. C. Jack & Company Sangerville Woolen Company F. R. Knowles Carleton Mills Company Farnsworth Company Worumbo Manufacturing Co Vassalboro Woolen Company Farnsworth Company	Lewiston Lewiston Lewiston Auburn Waterville Brunswick Biddeford Saco West Kennebunk Westbrook Springvale Augusta South Berwick Yarmouth Westbrook Lisbon Alfred Newport. Guifford Dexter Dexter Dexter South Berwick Dexter South Berwick Dexter Stowhegan Madison Pittsfield Pittsfield Pittsfield Pittsfield Pittsfield Pittsfield Pittsfield Pittsfield Bridgton B	Cottons Woolens Wool
55 56 57 57 57 57 57 57 57 57	Webster Woolen Mill No. 1 Webster Woolen Mill No. 1 1-2 Kezar Falls Woolen Mfg. Co North Berwick Company Linn Woolen Company Old Town Woolen Company Mt. Battie Manufacturing Co Camden Woolen Company	Sabattus Sabattus Kezar Falls North Berwick Hartland Old Town. Camden Camden	Woolens. Woolens. Woolens. Woolens. Woolens. Woolens. Woolens. Woolens. Woolens.

#### AND WORKSHOPS.

Consecutive number.	Total number of children employed.	Number between fifteen and sixteen years.	Number under fifteen years old.	Number hours work per day.	How often paid.	Sanitary improvements.	Cost of sanitary improvements.	General condi- iton of mill.
$\begin{array}{c} 1 \\ 2 \\ 3 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 9 \\ 10 \\ 11 \\ 11 \\ 13 \\ 4 \\ 15 \\ 6 \\ 7 \\ 8 \\ 9 \\ 9 \\ 10 \\ 11 \\ 12 \\ 13 \\ 4 \\ 15 \\ 6 \\ 7 \\ 8 \\ 9 \\ 20 \\ 12 \\ 22 \\ 23 \\ 4 \\ 22 \\ 22 \\ 22 \\ 22 \\ 22$	32         62         70         31         28         29         104         64         129         No         31         43         74         Shut         14         19         37         No         21         1         No         21         3         4         20         No         No         22         No         No         22         No         No         22         No         No         22         No         No         11         12         3         4         20         No         No         No         No         No         No         14         4         7         3         6	14         29         50         15         13         14         90         35         32         67         18         No         22         31         16         No         11         16         No         9         1         16         No         9         1         16         No         11         16         No         11         16         No         11         16         No         11         16         No         15         No         No         No         No         No         No         118         No         No         No         No         No         No         No         No	18         18         20         16         15         15         45         69         32         61         29         3         8         21         No         12         29         3         No         12         No         1         No         2         No         2         No         2         No         2         No         1         No         1         No         1         No         1         No         1         No	10          10          10 <td>Fortnightly Fortnightly</td> <td>No         No           Yes         Yes           Yes         Yes           No         Yes           No         Yes           No         Yes           No         Yes           No         Yes           No         No           No</td> <td>No         \$585           \$500         680           650         80           No         \$250           1000         1000           No        </td> <td>Good. Good.</td>	Fortnightly Fortnightly	No         No           Yes         Yes           Yes         Yes           No         Yes           No         Yes           No         Yes           No         Yes           No         Yes           No         No           No	No         \$585           \$500         680           650         80           No         \$250           1000         1000           No	Good. Good.
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Consecutive number.	Name of Company.	Location.	• Business.
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$     \begin{array}{r}       115 \\       116 \\       117 \\       118 \\       119 \\       120     \end{array} $	Bloomtield Shoe Company David Cummings & Company E. H. Vaughan S. T. Pease Reuben Pierce Evans, Bell & Clark	Skowhegan South Berwick Strong Vinalhaven Waldoboro	Shoes Shoes Shoes Shoes Shoes Shoes

#### AND WORKSHOPS.

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Consecutive number.	Total number children employed.	Number between fifteen and sixteen years.	Number under fifteen years.	Number hours work per day.	How often paid.	Sanitary improvement.	Cost of sanitary improvements.	General condi- tion of mill.
$\begin{array}{c} 611\\ 623\\ 633\\ 644\\ 655\\ 666\\ 677\\ 071\\ 773\\ 774\\ 776\\ 775\\ 776\\ 775\\ 776\\ 775\\ 776\\ 775\\ 818\\ 823\\ 848\\ 855\\ 866\\ 877\\ 79\\ 818\\ 823\\ 848\\ 855\\ 866\\ 877\\ 919\\ 999\\ 999\\ 999\\ 999\\ 999\\ 999\\ 9$	No         4           2         7           No            No	No         4           1         4           No            No <t< td=""><td>No            No            No        </td><td><math display="block">\begin{array}{c} 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\</math></td><td>Monthly Fortnightly Fortnightly Fortnightly Weekly Weekly Fortnightly Fortnightly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Weekly Weekly Weekly Weekly Fortnightly Weekly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly</td><td>No           No           No</td><td>No           No           No</td><td>Good. Good.</td></t<>	No            No	$\begin{array}{c} 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\$	Monthly Fortnightly Fortnightly Fortnightly Weekly Weekly Fortnightly Fortnightly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Weekly Weekly Weekly Weekly Fortnightly Weekly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly Fortnightly Weekly	No           No	No           No	Good. Good.
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Consecutive number.	Name of Company.	Location.	Business.
$\begin{array}{c} 121\\ 1222\\ 1233\\ 1244\\ 1265\\ 127\\ 128\\ 129\\ 1333\\ 1344\\ 135\\ 138\\ 138\\ 138\\ 138\\ 138\\ 138\\ 138\\ 138$	Rice & Hutchins G. A. Bass & Co Gay, Woodman & Co Cushnoc Fibre Co S. D. Warren & Co S. D. Warren & Co Molingsworth & Whitney Co Moosehead Pulp & Paper Co Moosehead Pulp & Paper Co Forest Paper Co Forest Paper Co Forest Paper Co Vebster Paper Co Outs Falls Pulp Co Jay Paper Man'f'g Co Katahdin Pulp and Paper Co Jay Paper Man'f'g Co Katahdin Pulp and Paper Co Jay Paper Man'f'g Co Katahdin Pulp and Paper Co Joson Falls Fiber Co Penobscot Chemical Fiber Co. Boston Filnt Paper Co Southworth Bros Jefferson Chase & Co Orr & Jennings C. M. & H. T. Piummer Mills & Gilmour Jones & Hitchings C. M. & H. T. Piummer Mills & Gilmour Portland Stove Foundry Co Saco Water Power Mach. Shop Hardy Machine Co Morse, Trussell & McLoon Machine Co The Island Machine Co Gardiner Tool Co Fay & Scott Waterman Machine Tool Co Com Picker Co	Warren	Shoes. Shoes. Shoes. Pulp. Paper. Paper. Paper and Pulp. Paper and Pulp. Paper and Pulp. Paper and Pulp. Paper and Pulp. Paper and Pulp. Paper. Paper. Paper. Paper. Paper. Paper. Paper. Sand Paper. Machinist. Mach
$169 \\ 170 \\ 171 \\ 172 \\ 173 \\ 174 \\ 175 \\ 176 \\ 177 \\ 178 \\ 179 \\ 180 \\ 180 \\ 180 \\ 180 \\ 100 $	North Wayne Tool Co Electrotype Foundry G. F. Quinn Refrigerator Co Portland Tinware Co Portland Star Match Co. Geo. G. Page Box Co Auburn Paper Box Co Standard Box Co James Walker & Co. Bickford & Rollins Smith Planing Mill Co	Portland Portland Portland Portland Portland Portland Bar Mills, Buxton. Auburn Bangor Belgrade Brewer	Tools and Bollers Plates Refrigerators Tinware Matches Boxes Boxes Boxes Boxes Boxes Boxes Boxes Boxes Boxes Boxes

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Consecutive number. Total number of children employed.	Number between fifteen and sixteen years. Number under fifteen years.	Number hours work per day.	How often paid.	Sanitary improvements.	Cost of sanitary improvements.	General condition of mill.
121         No           122         No           123         No           124         No           125         No           126         No           127         No           128         No           129         No           129         No           129         No           130         No           133         No           134         No           135         No           136         No           137         No           138         No           139         No           134         No           135         No           136         No           137         No           138         No           139         No           140         No           142         No           144         No           144         No           150         No           151         No           152         No           153         No           154         No <td>No         No           No         &lt;</td> <td><math display="block"> \begin{array}{c} 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\</math></td> <td>Forthightly Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Weekly Weekly Fortnightly Wortnightly Fortnightly Wortnightly Fortnightly Monthly Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Weekly Weekly Weekly Weekly Weekly Fortnightly Fort</td> <td>No           No           No</td> <td>No         No           No         No           No         No           No         No           No         No           No         S100           No         \$\$500           \$\$100         No           No         \$\$150           No         \$\$400           No         \$\$100           No         \$\$100           No         \$\$100           No         \$\$100           No         No           No         No           No         \$\$100           No         \$\$100           No         \$\$100           No         \$\$100           No         \$\$100</td> <td>Good. Good.</td>	No         No           No         <	$ \begin{array}{c} 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\$	Forthightly Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Weekly Weekly Fortnightly Wortnightly Fortnightly Wortnightly Fortnightly Monthly Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Weekly Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Fortnightly Weekly Weekly Weekly Weekly Weekly Fortnightly Fort	No           No	No         No           No         No           No         No           No         No           No         No           No         S100           No         \$\$500           \$\$100         No           No         \$\$150           No         \$\$400           No         \$\$100           No         \$\$100           No         \$\$100           No         \$\$100           No         No           No         No           No         \$\$100           No         \$\$100           No         \$\$100           No         \$\$100           No         \$\$100	Good. Good.
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Consecutive number.	Name of Company.	Location.	Business.
1 = 1812183 18121833 188231844 18861887 18861887 1899192001200220042005200000000000000000000000	Bridgton Lumber Company Brunswick Box Manf. Co Richard Cook & Son J. A. & P. B. Young J. S. Billings J. W. Penney & Sons J. W. Penney & Sons M. Hobson & Co The Williams Manf. Co Bangs Brothers H. H. Harvey & Son C. M. Bailey's Sons & Co J. F. Hughes & Son True Brothers Forest City Creamery Willimantic Spool Co C. F. Hathaway & Co Portland Stoneware Co Jacob Judelshon Rumery Libby Co Casco Tanning Co Ayer, Houston & Co. Greenville Manf. Co F. C. Merrill Smith & Reid Gannett & Morse Concern Vickery & Hill South worth Brothers Monsam Manf. Co James E. Morgan & Co H. K. Dana & Co The Groder Medicine Co Abert E. Pool. Bichner & Sanborn F. Delavina L. E. Cram Carey & Mullin E. B. Spearing George E. Bachelder Robert Robertson, Jr William Brown E. C. Herrin J. I. Hayden Troy Steam Laundry Crescent Steam Laundry Crescent Steam Laundry Crescent Steam Laundry Crescent Steam Laundry Standard Steam Laundry	Bridgton Brunswick	Boxes. Boxes. Boxes. Boxes. Boxes. Boxes. Machinsts. Boxes. Wood workers. Wood workers. Stone tools. Oil clotn. Pianos. Butses. Butter. Spools. Shirts. Stone ware. Clothing. Wood workers. Leather. Hats. Yeneer. Agricultural implements. Book binders. Publisher. Publisher. Publisher. Publisher. Publisher. Publisher. Publisher. Publisher. Publisher. Publisher. Publisher. Publisher. Publisher. Publisher. Publisher. Cligars. Cl
235 236 237 238 238 239 24(	Globe Steam Laundry J. W. Frye T. C. Freeman Eureka Laundry Empire Laundry Dirigo Laundry	Portland Portland Portland Portland Portland Portland Portland	Laundry. Laundry. Laundry. Laundry. Laundry. Laundry.

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184	NO	NO	NO	10	Monthly	No	No	Good
185	No	No	No	10	Weekly	No	No	(lead
100	No	No	N	10	Weekiy	10	NO	Good.
120	NO	NO	NO	10	weekly	NO	No	Good.
- 187	No	No	No	10	Monthly	No	No	Good
188	1	1	No	10	Wooklar	No	110 ·····	good.
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197	NO	NO	NO	10	Fortnightly	No	No	Good
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-204	No	No	No	10	Foutainhtis	NT.		Good.
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205	NO	NO	NO	10	Weekly	No	No	Good
206	No	No	No	10	Weekly	No	No	Cloud
-007	No	No	No	10	Monthlin	110	NO	Good.
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208	NO	No	No	10	Weekly	No	No	Good
209	9	2	No	10	Weeldy	No	NT-	audu
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210	10	10	NO · ····	10	weekly	res	\$20 00	Good.
211	NO	NO	No	9	Weekly	No	No	Good
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.019	No	No	No	10	Monthly		NO	G00a.
210	NO	10 ·····	NO	10	weekly	NO	No	Good.
214	NO	NO	NO	10	Weekly	No	No	Good
215	No	No	No	10	Weekly	No	No	Good.
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217	NO	No	No	10	Weekly	No	No	Good
-218	No	No	No	10	Wookhy	No	NT.	acou.
516	No	No	No	10	Woolsla	37.	1 <u>10</u>	G000.
410	10	NU	<u>no</u>	10	weekly	NO	No	Good.
$^{-220}$	NO	NO	NO	10	Weekly	No	No	Good
221	No	No	No	10	Weekly	No	No	Cond.
- 656	No	No	N.	10	W CORTY	NO	NO	Good.
444	10	10	NO	10	weekly	NO	No	Good.
223	NO	No	No	10	Weekly	No	No	Good
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225	NO	NO	NO	10	weekly	NO	No	Good.
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240	No	No	No!	10	Weekly	No	No	Good
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## INSPECTION OF FACTORIES

Consecutive number.	Name of Company.	Location.	Business.
2411 2422 243 244 2456 2452 2555 2555 2555 2555 2555	Acme Laundry         L. B. Wing         F. E. Towle         City Laundry         Seth Hobart         Seth Hobart         Bath Baking Company         C. E. Rising         W. T. Hewitt         Flint Brothers         George A. Wiseman         G. H. Thomas         E. K. Smith         H. Haas         John F. Dickson         George W. Babb         William DeLaitre         N. Fontaine         P. Beaudoin         Coutre & Pelletier         D. Cote         George A. Osborn         E. J. Fortier         W. DeLisle         Goudy & Kent         Calderwood         Calderwood Brothers         John Fleming         Samuel E. Smardon         William M. Wood         George D. Robinson         J. & R. Headley         J. J. C. Preston         Albert H. Libby         Smith Brothers         S. Wannofsky.         Curtis Brothers         J. P. Finnigan & Company         Fred M. Hayes         E. N. Trask.         West & Company.         Parell Brothers	Portland Gardiner Gardiner Bath Bath Bath Rockland Rockland Rockland Rockland Lewiston Lewiston Lewiston Lewiston Lewiston Lewiston Lewiston Biddeford Bidde	Laundry. Laundry. Laundry. Bakery. Bak
290 291 291 293	Nathan Wood & Son Bridgton Canning Company Fryeburg Manufacturing Co Oriental Powder Mills	Portland Bridgton Fryeburg South Windham	Gum Canned goods. Chairs Powder.
#### AND WORKSHOPS.

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941	No	No	No	10	Weekly	No	No	Good.
049	No	No.	No	10	Weekly	No	No	Good.
542	No	No.	No	10	Weekly	No	No	Good.
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945	No	No	No	ĩõ	Weekly	No	No	Good.
246	No	No	No	10	Weekly	No	No	Good.
947	No	No	No	10	Weekly	No	No	Good.
248	No	No	No	10	Weekly	No	No	Good.
040	No	No	No	12	Weekly	No	No	Good.
250	No	No	No	12	Weekly	No	No	Good.
251	No	No	No	10	Weekly	No	No	Good.
252	No	No	No	11	Weekly	No	No	Good.
253	No	No	No	10	Weekly	No	No	Good.
254	No	No	No	10	Weekly	No	No	Good.
255	No	No	No	10	Monthly	No	No	Good.
258	No	No	No	10	Weekly	No	No	Good.
257	No	No	No	12	Fortnightly	No	No	Good.
258	No	No	No	12	Weekly	No	No	Good.
259	No	No	No	12	Weekly	No	No	Good.
260	No	No	No	12	Weekly	No	No	Good.
261	No	No	No	12	Weekly	No	No	Good.
262	No	No	No	10	Weekly	No	No	Good.
263	No	No	No	10	Weekly	Yes	\$100	Good.
264	No	No	No	12	Weekly	No	No	Good.
265	No	No	No	12	Weekly	No	No	Good.
266	No	No	No	12	Fortnightly	No	No	Good.
267	No	No	No	12	Weekly	No	No	Good.
268	No	No	No	12	Weekly	No	No	Good.
269	No	No	No	12	Weekly	No	No	Good.
-270	No	No	No	12	Weekly	No	No	Good.
271	No	No	No	10	Weekly	NO	NO	Good.
272	No	No	No	12	Weekly	NO	NO	Good.
273	No	No	No	12	Weekly	NO	NO	Good.
274	No	No	No	12	Weekly	NO		Good.
275	No	No	NO	11	Weekly	NO	No	Good
276	NO	No	NO	10	Wookly	No	No	Good
277	NO	NO	NO	12	Wookly	No	No	Good
278	NO	NO	No	12	Weekly	No	No	Good.
219	NO	No	No	10	Weekly	No	No	Good.
280	NO	No	No	10	Fortnightly	No	No	Good.
201	No	No	No	12	Fortnightly	No	No	Good.
982	No	No	No	$12^{-12}$	Weekly	No	No	Good.
- 200	No	No	No	$\overline{12}$	Monthly	No	No	Good.
285	No	No	No	12	Weekly	No	No	Good.
286	No	No	No	12	Monthly	No	No	Good.
287	No	No	No	9	Weekly	No	No	Good.
288	No	No	No	12	Weekly	No	No	Good.
289	7	5	2	10	Weekly	No	No	Good.
290	3	2	1	9	Weekly	No	No	Good.
291	4	3	1	10	Fortnightly	No	No	Good.
292	1	1	No	10	Monthly	No	NO	Good.
293	No	No	No	12	Fortnightly	NO	NO	Good.
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Consecutive number.	Business.	Mills visited once.	Mills visited twice.	Mills visited three times.	Total number of visits made.
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\end{array} $	Cotton mills. Woolen mills Shoe shops. Paper and pulp mills Box makers Medicine manufacturers . Jewelry manufacturers. Cigar manufacturers. Laundries Bakeries Spruce gum makers Leather board manufacturers Leather tanning Mattress manufacturers. Various others. Totals.	$     \begin{array}{r}       19 \\       44 \\       59 \\       18 \\       28 \\       14 \\       3 \\       26 \\       42 \\       42 \\       41 \\       1 \\       28 \\       293     \end{array} $	10 12 3 1 - - - - - - - - - - - - - - - - - -	7 3 - - - - - - - - - - - - - - - - - -	36 59 62 19 28 14 3 2 6 42 4 1 1 1 28 329

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Consecutive number.	Number children employed.	Number from fifteen to sixteen years.	Number under fifteen years.	Number ordered out of mills.	Sanitary improvements ordered.	Number who pay weekly.	Number who pay fortnightly.	Number who pay monthly.	Hours work per day.	Cost of sanitary improvements.
1 2 3 4 5 6 7 8 9	970 154 43 1 - 1 - 2 -	513 87 26 1 - 1 - 1 -	457 67 17 - - 1 -	67 24 2 - - - - -	8 2 1 - - -	- 40 4 22 7 2 2 3	19 41 19 12 6 5 - - -	- 3 - 2 - 2 1 -	10 10 10 11 10 10 10 10	\$4,865 06 500 00 870 00 750 00 600 00 500 00
$10 \\ 11 \\ 12 \\ 13 \\ 14 \\ 15$	- 10 2 -	- 7 2 -	- - 3 - -		-	$     \begin{array}{r}       26 \\       38 \\       4 \\       1 \\       1 \\       1       1       1       1       1       $	2 - - -	_2 	$     \begin{array}{r}       10 \\       11 \\       10^{\frac{1}{2}} \\       10 \\      10 \\  $	100 00 300 00
15 16 17	-7 1,190	5 643	2 547			9 160	11 115	8 18	10	\$8,505 00

## CHILD LABOR.

One of the duties of the inspector is the investigation of child labor as it exists in our manufacturing establishments. Much is expected in the enforcement of this law, but very little is known of it by those who criticise at long range. A thorough investigation of any question will generally disabuse the mind of many pet fallacies. One question to be answered in this connection is of what advantage is it to drive children out of employment only to be allowed to run in the streets when they should be in school. Everybody will admit that the better educated one is, the better citizen he will be. It is equally true that an uneducated boy rarely, if ever, becomes a first-class mechanic. His mind has its limit. Without, at least, the rudiments of a common school education, his mind is not trained to think, and he is handicapped from the start. Ignorance is said to be the mother of vice, but whether this be true or not, it is unquestionably a fact that, as a general rule, it is productive of poverty, and poverty often leads to crime.

Thus it will be seen that one of the great drawbacks to a proper solution of the question of child labor can be removed by a vigorous enforcement of the compulsory education laws at present on our statute books. And the laws should be so amended as to compel the larger cities, at least, to provide a sufficient number of truant officers to ensure the attendance, at school, of all children under fourteen years of age.

There is at present a woful lack in this respect in some of the larger manufacturing cities of the State. A walk through the streets of almost any of our large manufacturing towns will discover little children wandering around the streets during school hours, apparently without any one to shield them from the many dangers that threaten them.

A natural result of this terrible neglect, first, on the part of parents who in many cases are themselves illiterate and consequently unable to understand or appreciate the value of an education, and, secondly, of the city, which does not provide an officer efflcient enough to see that every child under fourteen years of age is at school, is that a large number of children between fourteen and seventeen years of age are working in the mills, who are without the first rudiments of an education, and are wasting the bright days of their youth supporting their indolent and often drunken parents. As a rule the mill owners are just and humane in their treatment of the children in their employ.

Many complaints of the violation of the child labor laws have been received and investigations made. During the year, ninetythree children, illegally employed, have been ordered out of the mills, sixty-seven being from cotton mills, twenty-four from woolen mills and two from shoe shops.

This is a difficult matter to deal with as many questionable devices are resorted to by parents in order to deceive the overseers and thus smuggle their children into the mills without having received the number of weeks of schooling required by law.

# DANGEROUS MACHINERY.

The inspector would respectfully call the attention of the legislature to the present condition of machinery in our mills and shops throughout the State.

There are nearly five thousand manufacturers in Maine who use machinery, shafting and belts, some of which are very dangerously located, while others are provided with the necessary guards to protect the operative.

As a general rule, the cotton mills may be mentioned among the latter class. They are fast replacing their old machinery with new, which, in nearly all cases, is supplied with sufficient guards, so that the danger of injury to the operative is much less than formerly. The few who have failed thus far to keep up with the march of progress in this respect will soon be obliged to do so as a matter of self protection, for competition is so sharp, and the new machinery does its work so much better and faster, that the saving in labor alone will suggest to such delinquents the advisability of replacing the old with the new, so it is reasonable to expect that in a very few years there will be but little danger from the machinery used in our cotton mills.

In our woolen mills the change from the old to the new and improved machinery has not been so rapid, for the reason, probably, that the woolen market has not been very encouraging for some years past, but, as a whole, there is but little reason to find fault in either of the above named industries. It is suggested, however, that greater care be exercised to protect the operative from the danger of running belts and revolving pulleys. Belts that run at a high rate of speed and pulleys that revolve with tremendous rapidity, should be boxed or covered in some way so as to avoid the dangerous suction that lurks in their immediate vicinity, which is liable to draw and catch any article of loose clothing, thus endangering the life of the operative. The disastrous results of the possible breaking of a belt would thus be guarded against.

But it is to other lines of manufacturing than those already mentioned that your particular attention is called. Among these, saw mills, and wood-working shops of all kinds are the most dangerous. Many cases of almost criminal neglect, to use no harsher term, have been noted. While passing through some of these shops, workmen have been seen cleaning dangerous machinery while in motion, and so imminent seemed the danger that the almost irresistible thought was to hurry from the place, lest a horrible death be witnessed or human flesh seen to fly in all directions. Others have been noticed, having shafting with dangerous set-screws, making all the way from 150 to 500 revolutions per minute, and the employes passing in close proximity thereto.

Ninety per cent of all the people who have lost fingers, or the whole hand, have met with such accidents in wood-working shops of some kind.

As railroads have the reputation of depriving humanity of its legs, so wood-working shops should be credited with appropriating the fingers and hands of our people. Such accidents are a loss, not only to the unfortunate individual to whom the accident happens, but to the State as well. As fast as one man is injured, another able-bodied workman is ready to take his place, and, in turn, to be killed or mangled. This is an industry in which a large number of our people find employment, and they are certainly entitled to all the protection which ingenuity can devise and good laws enforce.

# PULP AND PAPER MILLS.

The manufacture of pulp and paper has become within the past few years one of the leading industries of our State. While perfection in the construction of these mills seems to be the point aimed at, the percentage of accidents is unduly large. But we must take into consideration the carelessness of the operatives as well as the character of the machinery used, for there is no class of workmen. so far as your inspector has been able to observe, who are so unmindful of the dangers from machinery as those working in these mills, the reason for which is not easily explained. The sanitary condition is of the best. Particularly in the paper mills where many women are at work, neat and convenient toilet rooms as well as comfortable work rooms are provided, and the general surroundings for health, comfort and convenience will average better than the business houses in our cities. The provisions for protection from fire seem almost perfect.

## WOOLEN MILLS.

A large majority of the woolen mills have been equipped with the proper safe-guards against fire, and the cost of sanitary improvements exceeds that of 1894, yet the mills in some of the smaller towns are very deficient in these matters, a condition of things which will be looked after during the coming year.

#### RAG SORTING.

Rag sorting is an industry of considerable importance in our State, but the business depression of the last two years has rendered it unprofitable, and where, in former years, quite a large number of women and girls found employment, only small crews are at work at the present time. Not only are domestic rags handled in our Maine shops but the foreign article as well. Bales of rags from foreign countries, often coming from localities where contagious diseases prevail, are dumped into the shops to be assorted without any restrictions whatever, not even an attempt at fumigation, and in years past, small-pox and other infectious diseases have been communicated by them, which have run a fatal course in some sections of the State. The sanitary condition of these shops is decidedly poor, being as a general rule, poorly ventilated, cold and dusty. It would seem that the occupation of a rag sorter, working in a cold room, amid polluted air, and constantly inhaling the dust, must be an unhealthy one, yet many of these women and girls seem to be contented with their surroundings and ply their vocation cheerfully, without any thought, apparently, of the unhealthy condition of the work room. What is urgently needed in these shops is better ventilation more warmth and a thorough disinfection of imported rags.

#### ELEVATORS.

The matter of elevators was treated at length in my last report and a few words only need be added here. There is still room for improvement along this line as several serious accidents have occurred during the past year. While elevators have become an indispensable adjunct in the equipment of our modern mills, factories, hotels and business houses, they should be constructed upon the principle of protection both from accident and fire, for the ordinary elevator shaft as well as a stairway, in case of fire, is a source of danger. Elevators should be located as far as possible from stairways. The cut of an elevator showing many excellent features is herewith given.



# FIRE EXTINGUISHERS.

While small fire extinguishers capable of stopping fires in their incipient stage are being introduced into many private houses as a matter of economy, there is absolute need of a very generous equipment of hotels, large boarding houses, and all mills or shops where large numbers of workmen are employed, on account of the loss of life in case of a serious conflagration, as well as their utility in the saving of property. The old adage, "An ounce of prevention is worth a pound of cure," is often and very aptly verified by having at hand some sort of a fire extinguisher. No doubt the most perfect system of protection from fire is the automatic sprinkler, but whatever system is used, whether hand extinguisher, steam pump or the automatic, it is absolutely necessary to see that they are always ready for use by giving them thorough and frequent inspec-It is pleasing to note that within the last few years much tions. has been done in the way of equipping mills, workshops and hotel<sup>8</sup> with automatic and hand fire extinguishers, yet there is room for much more work in the same line. Cuts of two very efficient hand devices for putting out fire are herewith given.



EMERGENCY PORTABLE FIRE TANK MF'D. By THE EMERGENCY FIRE EX. Co. MANCHESTER. N.H. 15



MANUFACTURED BY THE EMERCENCY FIRE EX. CO., MANCHESTER, N. H.

#### FIRE ESCAPES.

My attention has often been called during the year to the lack of fire escapes on our mills, workshops, business blocks and large hotels. In my reports of 1893 and 1894 this matter was treated at length, and although some improvements are noted every year, yet far too many of these buildings are absolutely without means of escape in case of a serious fire. This is a matter which is receiving a great deal of attention from the factory inspectors throughout the country. They are not only urging their general adoption as a life saving device but are also lending their assistance in investigating the merits of all the different makes of fire escapes placed upon the market, with a view to efficiency and low cost. and are recommending those which combine these two elements to the greatest degree. This matter cannot be too strongly urged upon the attention of the owners of buildings. A serious fire, with all avenues of escape cut off excepting by the windows, and the structure without fire escapes, is a terrible thing to contemplate. Yet scores of such fires have occurred in the past, attended with fearful loss of life, and will continue to occur so long as this important matter is neglected. Many calls have recently been received for the law relating to fire escapes and to supply this demand it is here introduced. The law touching this matter, as found in chapter twenty-six of the Revised Statutes, is as follows :

SECT. 26. Every public house where guests are lodged, and every building in which any trade, manufacture, or business is carried on, requiring the presence of workmen or other persons above the first story, and all rooms used for public assembly or amusement, shall at all times be provided with suitable and sufficient fireescapes, outside stairs, or ladders from each story or gallery above the level of the ground, easily accessible to all inmates in case of fire or of an alarm of fire; the sufficiency thereof to be determined as provided in the following section.

SECT. 27. In towns or parts of towns having no organized firedepartment, the municipal officers shall annually make careful inspection of the precautions and safeguards provided in compliance with the foregoing requirements, and pass upon their sufficiency as to arrangement and number, and upon their state of repair; and direct such alterations, additions and repairs as they adjudge necessary. In towns, cities and villages having an organized fire department, the duties aforesaid shall be discharged by the board of fire engineers.

SECT. 28. Such municipal officers or fire engineers shall give written notice to the occupant of such building, also to the owner thereof, if known, of their determination as to the sufficiency of said precautions and safeguards, specifying in said notice any alteration, addition or repair which they require. Sixty days are allowed for compliance with such notice and order.

SECT. 29. Any ownerr or occupant who neglects to comply with such order, within the time so allowed, forfeits fifty dollars, besides five dollars for every day's continuance of such neglect; and the building or part of a building so occupied shall be deemed a common nuisance, without any other evidence than proof of its use; and the keeper shall be punished accordingly. Said officers may forbid the use of such building for any public purpose until their order has been complied with. And if the owner or occupant of said building lets or uses the same in violation of such order, he forfeits not less than twenty, nor more than fifty dollars for each offence.

SECT. 30. Whenever the municipal officers or engineers, upon inspection, find that proper safeguards and precautions for escape in case of fire, or of alarm, have been provided, they shall give to the occupant of such building a certificate, under their hands, of such fact; which shall be valid for one year only from its date. Such officers shall return to the clerk's office of their town, monthly, a list of such certificates by them issued, which the clerk shall record in a suitable book.

SECT. 31. Every person receiving such certificate shall pay to such officers two dollars therefor, and shall keep such certificate posted in such building. Such annual certificate, so posted, is prima facie evidence of the inspection of such building, and of the presence of such suitable safeguards and precautions. Every occupant of such building who neglects or refuses to procure such certificate, or to post the same as aforesaid, forfeits ten dollars for every week that he so neglects and refuses.

SECT. 32. Every municipal officer or fire engineer who refuses or neglects to perform the duties imposed upon him by the seven preceding sections forfeits fifty dollars.

SECT. 33. All fines and forfeitures imposed by the four preceding sections may be recovered by the town where the building is located, by an action on the case, or by an indictment.

The following details apply to the outside fire-escape shown on page 229:



A balcony to include one or more windows on the same floor and supported by brackets of 3-4 inch square iron, bolted firmly to balcony and fastened securely through wall by 7-8 inch bolts with a 5 inch washer on the inside. Brackets to be not over 3 1-2 feet apart. The top pieces of these brackets to be 2x2x3-8 inch angle iron.

Top rail of balcony of  $1\ 1-2x3-8$  inch iron drilled for 5-8 inch rods not over 4 inches on centers and firmly fastened to building. The flooring of the balconies to be of  $1\ 1-2x3-8$  inch iron laid flat-wise with spaces of 1 inch.

Where extra support for flooring is needed a strip 2 1-2x3-8 inches to be riveted to under side.

The ladder opening in each balcony to be guarded by railing of same construction as in balcony. The ladders between balconies to be not less than 24 inches wide and to have a pitch of not greater than 48 degrees. The stringers to be of iron not less than 4x3-8 inch properly drilled for treads composed of two pieces of 1-2 inch round iron 2 inches on centres and securely riveted to side stringers. Ladders to connect with the ground where practical or a drop ladder from the lower story landing to ground. Ladders to have hand rails of 3-4 inch round iron of sufficient length to assure safety. All materials to have one coat of Prince's metallic paint before leaving shop and at least one coat after erection.

# THE PAYMENT OF WAGES.

The fortnightly payment law, passed in 1887, has, in its practical workings, shown the wisdom of its originators in that it has been of great advantage to the vast army of working men and women throughout our State, by giving them the means to pay their bills at short intervals, thus avoiding the accumulation of large bills which is always a source of discouragement. Without doubt a large saving is annually made in the purchase of supplies on short time or for cash, a state of things made possible by this wise law. Our employers of labor have very generally accepted without complaint the requirements of the law, and where formerly from one to two months elapsed between payments, under present conditions twice every month our workmen are made happy by receiving the wages which will carry comfort to their homes. Not only has this law brought nearly all of our large establishments into the line of fortnightly payments, but its influence has gone further than its legal requirements, for it is safe to say that at the present time, among those who employ small crews, a majority throughout the State have voluntarily adopted weekly payments.

During the year 1895, eleven complaints of the evasion of the law have reached the inspector. These were thoroughly investigated and in every instance it was found that the trouble came, not from any unwillingness to comply with the law, but from the inability of the corporations to turn their manufactured products into ready To force payment to the letter of the law under such circash. cumstances, in the trying and unsettled condition of business which we have been passing through of late, would simply mean a suspension of business and heavy loss on the part of the manufacturer, and loss of employment on the part of the workmen. These have been delicate cases to handle, but when the employes have fully understood the situation, they have very generally withdrawn their complaints and voluntarily agreed to accept payments at longer intervals until the times became a little easier, and the corporations agreeing on their part to return to fortnightly payments as soon as it was possible to do so. Thus have several threatened strikes been averted and good feeling restored.

#### SANITARY MATTERS.

Although considerable has been done during the year in the line of sanitary improvements in our mills and work shops, yet many of them are still in a deplorable condition. Looking at the question from a merely selfish standpoint it would seem that the proprietors of our manufacturing establishments might readily see the economy of healthy surroundings, for every improvement for the better protection of the health of employes is a factor to draw from them labor that would otherwise be lost on account of the deadly lethargy produced by the germs of disease constantly being taken into the system. Our working men and women are generally intelligent, and possess, in a majority of cases, a fair common school educa-One of the studies they have pursued is hygiene wherein tion. they have learned the effect on the health by being confined in ill ventilated and foul work rooms. Although they fully realize the situation and can see their fellow workmen breaking down, and feel the inroads of disease in their own systems, they are yet

powerless to protect themselves or better their condition. Humanity should dictate a reform, or the strong arm of the law should step in and compel the removal of this cause of human suffering, by requiring all places where workmen are employed to be put into the most healthy condition possible. But the inspector is pleased to note that improvements are going on in this direction. Many new devices have been put in during the year, the exact cost of which could not be obtained on account of being mixed with general repairs, but it is safe to say that the entire cost of sanitary improvements in the State for the year 1895 will exceed \$30,000, and a good prospect that a larger amount will be expended in 1896. So far as exact figures could be ascertained the following table will show the amounts and at what establishments expended, though this is estimated to cover only a little more than one-quarter of the amount so expended in the State.

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Name of Company.	Location.	Goods manu- factured.	Cost of sanitary Improve- ments.
Bates Manufacturing Company Continental Mills Hill Manufacturing Company Lewiston Bleachery and Dye Works Cabot Manufacturing Company Pepperell Manufacturing Company Edwards Manufacturing Company Edwards Manufacturing Company St. Croix Shoe Company St. Croix Shoe Company Sterling & Allen. Butler & Clark. David Cummings & Company Forest Paper Company Katahdin Pulp and Paper Company Sonthworth Brothers Orr & Jennings Auburn Paper Box Company Southworth Brothers Orr & Jenning Company James E. Morgan & Company George A. Calderwood Portland Stove Foundry Company Total	Lewiston Lewiston Lewiston Brunswick Biddeford Biddeford Augusta Skowhegan Calais Portland Portland South Berwick. Waldoboro Yarmouth Jay Portland Portland Portland Portland Portland Portland Portland Portland Portland Portland Portland Portland	Cottons Cottons Cottons Cottons Cottons Cottons Cottons Shoes Shoes Shoes Shoes Shoes Paper Paper Machinist Machinist Boxes Boxes Eather Mathresses Baker Foundry	\$ 585 00 500 00 680 00 250 00 1,000 00 200 00 200 00 200 00 20 00 500 00 100 00 500 00 100 00 100 00 500 00 100 00 100 00 20 00 100 00 100 00 500 00 \$00 00 100 00 500 00 \$00

# COST OF SANITARY IMPROVEMENTS.

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