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TWELFTH ANNUAL REPORT

OF THE

BUREAU

OF

Industrial and Labor Statistics

FOR THE

STATE OF MAINE.

1898.

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STATE OF MAINE.

OFFICE OF COMMISSIONER OF
INDUSTRIAL AND LABOR STATISTICS,
AUGUSTA, December 31, 1898.

To His Excellency, Llewellyn Powers, Governor of Maine:

SIR: I have the honor to present the report of the Bureau of Industrial and Labor Statistics for 1898.

Very respectfully,

SAMUEL W. MATTHEWS,
Commissioner.

INTRODUCTION.

The work of the Bureau during the past year has been mainly confined to a few special lines of investigation, and the information obtained along those lines, is new and practical. The industries included in the investigation, are those of cotton, wool, and the manufactories of iron, steel, and furniture. The latter industries are much more extensive and important than has generally been known, and the facts and figures contained in extended articles in this report, will be found instructive and valuable. Other features of the report are, compilation of retail prices of articles of family consumption, made up from returns of retail dealers in all sections of the State; a compilation from census reports at different periods, and from reports of State valuation commissioners and assessors, of farm animals, in connection with which is an instructive article on the horse industry of the State; statistics relating to the liquor traffic in Maine; statistics of railroads, with an article descriptive of the Maine Central shops at Waterville, and the usual returns from assessors, of factories and workshops erected, enlarged and completed during the year.

The report of the Inspector of Factories, Workshops, Mines and Quarries, is required by law to be submitted annually to the Commissioner of Industrial and Labor Statistics, and is, accordingly, published in this report.

The conditions of labor have, during the past year, been, generally, encouraging. In most lines of industry employment at fair wages has been continuous and abundant and the relations between employers and employed amicable and undisturbed. The principal exception to this general rule, has been in the cotton mills where, in several cases, extensive strikes occurred in the early part of the year, involving several thousand workmen and lasting for several weeks. These strikes were the result of reductions in wages made necessary, as was claimed by mill owners, by the small margin of profits in the manufacture

of cotton goods. Estimates based on investigation and reliable information, place the losses in wages to the employes, at about $200,000.

The work of the Bureau, as the Commissioner is well aware, is limited and representative in character. With the means at its disposal, any attempt to investigate in any one year, all the varied and important industries of the State, would result in practical failure to show the magnitude and extent of any. The plan adopted to thoroughly canvass a few each year, makes it possible, in a series of reports, to give such full and explicit showings of Maine's vast resources and accomplishments as makes its work truly educational. Even our own citizens do not fully realize the attainments and capabilities of our goodly State. That the information imparted through the work of the Bureau, is recognized and appreciated at home and abroad, is attested by the constantly increasing demands for its publications.

The Commissioner desires to acknowledge his obligations to Major C. J. House, the able and efficient clerk of the Bureau, and to special agents Francis Wiggin, Henry A. Wing and W. A. Newcomb, for valuable assistance in the investigation of industries herein reported.

THE COTTON INDUSTRY.

In 1897 complete returns were received from ten out of the sixteen cotton mills in the State and the same were tabulated and certain deductions drawn from the figures shown. The present year an equal number of returns have been received, eight of which are identical with those received last year. The following is the tabulation of the ten returns received in 1898.

COTTON GOODS.

	Capital invested.	Cost of material used.	Value of product.	Number weeks in operation.	Average Number Hands Employed.				Average Weekly Wages.			Total wages paid.
					Total.	Men.	Women.	Children under 16 years.	Men.	Women.	Children under 16 years.	
1	$1,500,000	$258,574	$647,732	52	860	275	580	5	7 80	5 40	$3 87	$247,546
2	2,250,000	552,471	1,102,751	52	1,277	605	522	150	6 68	4 92	2 68	363,846
3	2,000,000	779,098	1,195,392	46	1,463	622	728	113	6 79	5 18	2 68	380,917
4	100,000	37,566	112,699	50	133	65	60	8	8 00	7 00	4 00	48,600
5	500,000	80,000	200,000	50	263	140	91	32	8 74	5 94	2 10	80,779
6	1,200,000	559,567	1,380,000	52	1,746	728	992	26	8 04	6 23	3 00	508,777
7	1,168,500	237,650	460,000	40	702	326	320	56	7 70	5 78	2 76	178,433
8	1,000,000	394,014	729,297	37	1,150	496	617	37	7 81	5 03	2 04	248,337
9	340,000	74,650	167,645	47	230	85	125	20	8 30	5 60	3 08	62,912
10	2,500,000	932,158	1,459,876	46	1,759	591	990	178	7 11	5 68	2 91	475,984
	$12,558,500	$3,905,748	$7,455,394	47.2	9,583	3,933	5,025	625	7 45	5 55	$2 74	$2,596,131

A comparison is made of the results of the above table and those obtained from a similar tabulation last year, with those given by the United States census reports of the cotton industry for the State in 1880 and 1890. The two main items entering into the production of cotton goods are raw material and labor. Outside of these, which we will lump together under the name

of "margin," are included interest on capital invested, wear and tear of machinery, taxes and insurance, repairs of building, salaries, breakage and waste, profits, etc. Taking the value of the product as a basis, the following table will show the percentages of the three items, raw material, wages and margin at the dates indicated.

Items.	1880.	1890.	1897.	1898.
Raw material	55.0	55.2	57.9	52.4
Wages	22.0	28.5	33.1	34.8
Margin	23.0	16.3	9.0	12.8
Total	100	100	100	100

Referring to the above table, it will be seen that the percentage of raw material entering into a given product, which stood at 55 in 1880 and increased very slightly in 1890 and up to 57.9 in 1897, has fallen off to 52.4 or a decrease of 5.5 per cent during the past year. The percentage of wages shows a large and quite uniform increase from 22 in 1880 to 34.8 in 1898 or 12.8 in the eighteen years. The percentage of margin, which fell off from twenty-three in 1880 to nine in 1897, has recovered 3.8 per cent during the year and now stands at 12.8, which would indicate a somewhat healthier condition of the cotton industry in the State than for several years past.

The following table will show the average annual product and the average annual earnings per employe, including men, women and children, for the years named.

Per employe.	1880.	1890.	1897.	1898.
Average annual product	$1,132 70	$1,094 61	$873 89	$777 98
Average annual earnings	249 73	312 50	289 50	270 91

The average annual product per employe shows a constant decrease; from 1880 to 1890 of $38.09, from 1890 to 1897 of $220.72, an annual average of $31.53, and from 1897 to 1898 a decrease of $95.91, making a total of $354.72. It will be noticed, however, that the large decrease during the last year may be accounted for through certain unfortunate conditions. The average running time for the ten mills in 1897 was 48.1 weeks,

while for 1898 it was 47.2 weeks, an average shortening of nine-tenths of a week, and the shortening of time occurred among our largest mills, brought about principally by a strike early in the present year.

In average annual earnings per employe there was an increase from 1880 to 1890 of $62.77, since which there has been a decrease. The fall off from 1890 to 1897 was $23.00 or a yearly average of $3.28 per employe, which may be considered a normal decrease on account of the downward tendency of wages in recent years. The decrease during the last year was $18.59. Allowing the continuance of $3.28 as a normal decrease, the losses to employes on this basis, on account of the strike would amount to $145,000, which covers only three of the four mills where strikes occurred.

As before indicated, eight of the ten returns received this year are from the same mills from which certain eight returns were received in 1897, and fair comparisons can be made between the results of the tabulations of these two sets of returns for 1897 and 1898.

Capital invested 1897	$ 9,738,500
Capital invested 1898	10,208,500
Increase	$470,000
Cost of material used 1897	$3,717,981
Cost of material used 1898	3,315,710
Decrease	$402,271
Total wages paid 1897	$2,291,455
Total wages paid 1898	2,183,685
Decrease	$107,770
Value of product 1897	$6,585,974
Value of product 1898	6,239,942
Decrease	$346,032
Average weekly wages of men 1897	$7 72
Average weekly wages of men 1898	7 58
Decrease	$ 14

Average weekly wages of women 1897	$5 78
Average weekly wages of women 1898	5 60
Decrease	$ 18
Average weekly wages of children 1897	$2 72
Average weekly wages of children 1898	2 73
Increase	$ 01
Average number of men employed 1897	3,301
Average number of men employed 1898	3,263
Decrease	38
Average number of women employed 1897	4,168
Average number of women employed 1898	4,443
Increase	275
Average number of children employed 1897	430
Average number of children employed 1898	467
Increase	37
Average total number of employes 1897	7,899
Average total number of employes 1898	8,173
Increase	274
Average number of weeks in operation 1897	50.1
Average number of weeks in operation 1898	46.2
Decrease	3.9

THE WOOLEN INDUSTRY.

In 1897 returns from twenty-five woolen mills were tabulated, while the present year but twenty-two complete returns were received. The following table will show the condition of the industry during the past year and furnishes a basis from which comparisons are made with former years.

WOOLEN GOODS.

	Capital invested.	Cost of material used.	Value of product.	Number weeks in operation.	Average Number Hands Employed.				Average Weekly Wages.			Total wages paid.
					Total.	Men.	Women.	Children under sixteen years.	Men.	Women.	Children under sixteen years.	
1	$144,000	$84,743	$136,345	52	98	69	29	–	$8 21	$4 65	–	$35,800
2	100,000	146,083	239,207	52	129	107	22	–	8 00	5 80	–	51,183
3	225,000	61,621	145,366	48	131	80	51	–	8 90	5 65	–	45,612
4	150,000	143,700	201,270	44	142	76	66	–	8 00	6 50	–	45,423
5	169,800	192,278	314,841	52	160	127	33	–	7 50	5 00	–	60,485
6	50,000	100,000	200,000	52	113	69	44	–	7 30	5 60	–	38,758
7	50,000	103,239	180,557	52	102	75	25	2	8 50	5 50	$3 90	37,881
8	50,000	30,000	60,000	50	64	54	10	–	9 00	6 25	–	24,000
9	200,000	253,333	342,897	46	175	118	45	12	9 75	6 92	3 63	66,727
10	75,000	116,000	228,000	52	120	60	60	–	9 00	6 00	–	46,700
11	300,000	115,713	205,058	50	137	93	44	–	9 00	6 25	–	52,115
12	50,000	69,818	100,000	51	50	30	20	–	9 00	7 50	–	20,188
13	120,000	107,888	180,000	48	102	60	42	–	9 67	6 75	–	41,450
14	113,000	34,405	66,666	48	80	52	28	–	7 00	5 00	–	22,964
15	64,995	52,080	87,000	43	55	37	18	–	8 40	6 00	–	16,228
16	38,000	55,994	82,358	52	45	30	15	–	9 30	7 50	–	20,358
17	146,000	83,212	140,000	52	102	62	40	–	8 00	6 25	–	44,046
18	200,000	95,038	136,183	52	80	50	30	–	8 00	6 00	–	30,000
19	50,000	65,000	87,000	52	45	25	20	–	8 64	6 90	–	17,000
20	100,000	294,200	490,900	52	227	165	60	2	9 00	6 00	4 50	88,871
21	125,000	131,266	221,176	46	137	87	50	–	8 40	5 70	–	47,884
22	300,000	123,936	250,000	48.5	261	184	71	6	9 60	5 80	4 20	104,959
	$2,820,795	$2,459,547	$4,094,824	49.7	2,555	1,710	823	22	$7 99	$6 02	$3 89	$958,632

Similar tables are deduced and comparisons made as in the cotton industry. On the basis of the value of the product, the following shows the percentage of raw material, wages and margin at different periods:

Items.	1880.	1890.	1897.	1898.
Raw material	64.2	65.9	65.4	60.1
Wages	15.6	21.7	25.1	23.4
Margin	20.2	12.4	09.5	16 5
Total	100	100	100	100

The above figures show that, up to 1897, while in the percentage of raw material little change is indicated, the percentage of wages steadily increased and that of margin decreased to a figure which would warrant no profit in the business. In fact the industry was very much demoralized, but the percentages for the past year show the business in a much better condition than for several years.

The average annual product and earnings per employe are shown as follows for the different periods named.

Per employe.	1880.	1890.	1897.	1898.
Average annual product	$2,160 28	$1,739 84	$1,389 86	$1,602 67
Average annual earnings	337 51	377 03	348 79	375 20

The average annual product per employe which fell off $770.42 between 1880 and 1897 shows an increase in the past year of $212.81, and the average annual earnings per employe, including men, women and children, which increased $39.52 from 1880 to 1890 and fell off $28.24 from 1890 to 1897, has increased $26.41 during the past year and now stands at a figure $37.69 higher than in 1880.

On the basis of twenty-one woolen mills from which complete returns were received in both 1897 and 1898 the following comparisons are made.

Capital invested 1897	$2,428,800
Capital invested 1898	2,770,795
Increase	$341,995

Cost of material used 1897	$2,061,804
Cost of material used 1898	2,389,729
Increase	$327,925
Total wages paid 1897	$790,448
Total wages paid 1898	938,444
Increase	$147,996
Value of product 1897	$3,171,312
Value of product 1898	3,994,824
Increase	$823,512
Average weekly wages of men 1897	$8 40
Average weekly wages of men 1898	7 97
Decrease	$ 43
Average weekly wages of women 1897	$6 21
Average weekly wages of women 1898	5 98
Decrease	$ 23
Average weekly wages of children 1897	$3 76
Average weekly wages of children 1898	3 89
Increase	$ 13
Average number of men employed 1897	1,496
Average number of men employed 1898	1,680
Increase	184
Average number of women employed 1897	750
Average number of women employed 1898	803
Increase	53
Average number of children employed 1897	26
Average number of children employed 1898	24
Decrease	4

Average total number of employes 1897.....	2,272
Average total number of employes 1898.....	2,505
Increase	233
Average number of weeks in operation 1897.....	45.3
Average number of weeks in operation 1898.....	49.7
Increase	4.4

FACTORIES, MILLS AND SHOPS BUILT DURING 1898.

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 1898?" "Estimated cost of same?" "Probable number of hands they will employ?" answers have been returned by the officers of nearly every city and town. Sixty-four cities, towns and plantations report building in this line as follows:

ANDROSCOGGIN COUNTY.

Towns.	Buildings.	What done.	Cost.	Help.
East Livermore	Wood working shop	New	$7,000	8
East Livermore	Foundry	New		
East Livermore	Machine shop	New		
Leeds	Canning shop	Enlarged.		
Turner	Butter factory	New	3,000	8

AROOSTOOK COUNTY.

Caribou	Two roller flour mills	New	7,500	5
Fort Fairfield	Flour mill	Enlarged	2,000	
Fort Fairfield	Wood working shop	Enlarged		
Frenchville	Grist mill	New	1,000	
Limestone	Three starch factories	Improved	1,500	14
New Sweden	Starch dry house	New	600	2
Perham	Lumber mill	Enlarged	5,000	4
Connor Pl	Starch factory	New	4,000	20
Eagle Lake Pl	Steam saw mill	New	4,500	30
Merrill Pl	Starch factory	New	4,500	12
Westfield Pl	Shingle mill	New	500	10
Winterville Pl	Steam saw mill	New	5,000	20

CUMBERLAND COUNTY.

Baldwin	Cooper shop	Rebuilt	$ 100	2
Gorham	Electric power house	New	8,000	4
Gray	Woolen mill	Machinery	3,700	20
Portland	Grain elevator	Enlarged	5,000	
Portland	Coal pockets	New	13,000	
Standish	Excelsior mill	New	4,000	30
Yarmouth	Electrical appliances	Refitted	3,000	15

FRANKLIN COUNTY.

Jay	Lumber and cooperage mill	New	$6,000	20

HANCOCK COUNTY.

Towns.	Buildings.	What done.	Cost.	Help.
Dedham	Saw mill	Machinery	$600	8
Eastbrook	Shingle mill	Enlarged	350	7
Surry			400	3
Swan's Island	Sardine factory	Enlarged	500	80

KENNEBEC COUNTY.

Augusta	Box factory	Refitted	5,000	15
Belgrade	Cider mill	New	200	
Monmouth	Woolen mill	Improved	2,500	50
Wayne	Edge tool shop	Enlarged	200	
Winthrop	Woolen mill	Enlarged.		
Winslow	Sulphite paper mill	Commenced	275,000	100
Winslow	Paper mill	Enlarged	30,000	

KNOX COUNTY.

Rockland	Lumber and stave mill	New	4,000	6
Vinalhaven	Horse net factory	New	3,000	20

LINCOLN COUNTY.

Boothbay Harbor	Sardine factory	Enlarged	$600	30

OXFORD COUNTY.

Hiram	Lumber and box mill.	New	3,000	20
Norway	Carriage shop	New	400	1

PENOBSCOT COUNTY.

Corinna	Woolen mill	Rebuilt	10,000	25
Dexter	Woolen mill	Enlarged	15,000	175
Dexter	Dry house	New	3,000	50
Kenduskeag	Lumber mill	New	2,000	10
Kingman	Kindling wood factory	New	3,000	30
Lagrange	Shingle mill	New	300	5
Old Town	Canal for woolen mill	New	75,000	
Passadumkeag	Kindling wood factory	New	1,000	20

PISCATAQUIS COUNTY.

Foxcroft	Fancy iron work mill	New	3,000	10
Wellington	Saw mill	Enlarged	200	3
Lake View Pl	Spool bar mill	New	1,800	30

SAGADAHOC COUNTY.

Bath	Shirt factory	Leased		200
Topsham	Paper mill	Commenced	50,000	50
Woolwich	Lumber mill	Machinery	400	4

SOMERSET COUNTY.

Canaan		New	1,000	20
Pittsfield	Electric plant	New	20,000	10
Pittsfield	Lumber mill	Enlarged		
Pittsfield	Woolen mill	Enlarged		
St. Albans	Canning factory	Enlarged	300	*10
Skowhegan	Pulp mill	Improved	8,000	10
Flagstaff Pl	Lumber mill.	New	2,500	10
Lexington Pl	Birch bar mill	New	1,500	14
Mayfield Pl	Lumber mill	New	1,000	10

* During canning season 150.

WALDO COUNTY.

Towns.	Buildings.	What done.	Cost.	Help.
Frankfort	Granite works	Enlarged	$40,000	500

WASHINGTON COUNTY.

Jonesboro	Box machine	Added	200	15
Lubec	Sardine factory	New	10,000	200
Pembroke	Sardine factory	New	500	15
Whiting	Shook mill	Enlarged	250	8

YORK COUNTY.

Kennebunk	Paper mill	New	3,000	5
Lyman	Lumber mill	New	500	4
North Berwick	Box mill	Enlarged	7,000	17

RECAPITULATION.

Counties.	Number of towns.	Number of buildings.	Total cost.	Hands employed.
Androscoggin	3	5	$10,000	16
Aroostook	11	12	36,100	117
Cumberland	6	7	36,800	71
Franklin	1	1	6,000	20
Hancock	4	4	1,850	98
Kennebec	6	7	312,900	165
Knox	2	2	7,000	26
Lincoln	1	1	600	30
Oxford	2	2	3,400	21
Penobscot	7	8	109,300	315
Piscataquis	3	3	5,000	43
Sagadahoc	3	3	50,400	254
Somerset	7	9	34,300	84
Waldo	1	1	40,000	500
Washington	4	4	10,950	238
York	3	3	10,500	26
Total	64	72	$675,100	2,024

TOTALS FOR EIGHT YEARS.

Years.	Number of towns.	Number of buildings.	Total cost.	Hands employed.
1891	86	110	$3,023,850	4,278
1892	89	114	2,128,000	4,312
1893	81	108	841,725	2,526
1894	48	55	663,700	1,039
1895	75	102	1,367,800	2,797
1896	62	77	1,055,900	1,470
1897	74	95	827,600	2,339
1898	64	72	675,100	2,024

RETAIL PRICES.

The following tables of retail prices of the necessaries of life are made up from returns received from retail dealers in thirty different cities and towns in different sections of the State, and are intended to give the average price of medium grades of goods for the month of July in each of the four years named. The recapitulation shows the general average of the thirty towns.

AUBURN.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.28	.28	.20	.25
2	Apples, dried, pound	.11	.10	.09	.10
3	Apples, evaporated, pound	.16	.16	.13	.13
4	Beans, white, peck	.65	.67	.50	.50
5	Beans, yellow eyes, peck	.68	.72	.58	.58
6	Beef, corned, pound	.07	.07	.08	.08
7	Beef, steak, pound	.19	.19	.21	.24
8	Beef, roasts, pound	.15	.15	.11	.12
9	Beef, soup, pound	.05	.05	.04	.05
10	Butter, best, pound	.25	.25	.22	.24
11	Cabbage, pound	.03	.03	.03	.03
12	Cheese, pound	.15	.15	.16	.14
13	Coal, stove, ton	6.75	6.75	7.00	6.50
14	Cod, fresh, pound	.10	.10	.10	.10
15	Cod, dried, pound	.07	.07	.09	.09
16	Coffee, roasted, Rio, pound	.28	.29	.20	.20
17	Coffee, roasted, Java, pound	.36	.36	.30	.30
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart	.12	.10	.10	.12
20	Cracked wheat, pound	.06	.06	.02	.02
21	Crackers, pound	.07	.07	.08	.08
22	Eggs, dozen	.21	.19	.16	.18
23	Flour, family, barrel	4.38	4.25	5.75	5.50
24	Flour, best, barrel	4.90	4.50	6.25	6.00
25	Ham, sliced, pound	.19	.18	.17	.16
26	Halibut, fresh, pound	.15	.14	.18	.16
27	Kerosene, gallon	.10	.10	.13	.11
28	Lamb, pound	.14	.14	.14	.14
29	Lard, pound	.12	.12	.09	.09
30	Mackerel, fresh, pound	.14	.12	.15	.18
31	Mackerel, salt, No. 2, pound	.11	.11	.10	.10
32	Milk, quart	.06	.06	.05	.05
33	Molasses, good, gallon	.47	.47	.45	.45
34	Mutton, pound	.11	.10	.12	.12
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.05	.05	.05	.05
37	Pickles, quart	.13	.13	.08	.08
38	Pork, clear, pound	.11	.12	.09	.09
39	Potatoes, peck	.28	.27	.20	.20
40	Raisins, cooking, pound	.10	.11	.08	.08
41	Rice, pound	.09	.09	.08	.08
42	Salt, twenty pounds, box or bag	.20	.20	.20	.20
43	Sausage, pound	.13	.13	.10	.12
44	Soap, hard, pound	.05	.05	.05	.05
45	Sugar, granulated	.05	.06	.07	.06
46	Tea, Oolong, pound	.50	.50	.50	.50
47	Tripe, pickled, pound	.09	.09	.07	.07
48	Vinegar, gallon	.20	.20	.19	.19
49	Wood, hard, sawed and split, cord	7.00	7.00	7.00	6.50
50	Wood, soft, sawed and split, cord	4.00	4.00	5.50	5.00

LEWISTON.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck			.25	.20
2	Apples, dried, pound			.09	.09
3	Apples, evaporated, pound			.12	.12
4	Beans, white, peck	.70	.60	.46	.47
5	Beans, yellow eyes, peck	.70	.70	.55	.58
6	Beef, corned, pound			.08	.08
7	Beef, steak, pound			.19	.21
8	Beef, roasts, pound			.10	.11
9	Beef, soup, pound			.05	.05
10	Butter, best, pound			.22	.24
11	Cabbage, pound			.03	.03
12	Cheese, pound	.15	.15	.14	.14
13	Coal, stove, ton	7.00	7.00	7.00	6.50
14	Cod, fresh, pound			.10	.10
15	Cod, dried, pound	.08	.07	.08	.08
16	Coffee, roasted, Rio, pound	.26	.27	.20	.20
17	Coffee, roasted, Java, pound	.36	.36	.30	.30
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart			.10	.10
20	Cracked wheat, pound	.06	.06	.02	.02
21	Crackers, pound	.07	.06	.08	.08
22	Eggs, dozen	.21	.19	.16	.18
23	Flour, family, barrel	4.62	3.62	5.70	5.75
24	Flour, best, barrel	5.13	4.62	6.25	6.25
25	Ham, sliced, pound			.15	.15
26	Halibut, fresh, pound			.14	.12
27	Kerosene, gallon	.10	.10	.12	.10
28	Lamb, pound			.12	.12
29	Lard, pound	.13	.10	.09	.09
30	Mackerel, fresh, pound			.15	.20
31	Mackerel, salt, No. 2, pound			.10	.10
32	Milk, quart			.05	.05
33	Molasses, good, gallon	.35	.35	.45	.45
34	Mutton, pound			.11	.12
35	Oat meal, pound	.04	.04	.03	.03
36	Onions, pound			.05	.05
37	Pickles, quart			.09	.09
38	Pork, clear, pound	.14	.10	.09	.09
39	Potatoes, peck			.20	.20
40	Raisins, cooking, pound	.12	.08	.09	.09
41	Rice, pound	.08	.08	.08	.08
42	Salt, twenty pounds, box or bag	.18	.18	.20	.20
43	Sausage, pound			.10	.11
44	Soap, hard, pound	.07	.06	.05	.05
45	Sugar, granulated	.06	.05	.06	.06
46	Tea, Oolong, pound	.45	.45	.50	.50
47	Tripe, pickled, pound			.06	.07
48	Vinegar, gallon	.20	.20	.20	.20
49	Wood, hard, sawed and split, cord	7.00	7.00	7.00	6.00
50	Wood, soft, sawed and split, cord	5.00	5.00	5.50	5.00

FORT FAIRFIELD.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck				
2	Apples, dried, pound	.10	.11	.07	.09
3	Apples, evaporated, pound	.15	.17	.09	.12
4	Beans, white, peck	.75	.75	.42	.57
5	Beans, yellow eyes, peck	.80	.90	.50	.63
6	Beef, corned, pound	.06	.06	.07	.07
7	Beef, steak, pound	.14	.14	.14	.14
8	Beef, roasts, pound	.10	.10	.10	.10
9	Beef, soup, pound	.03	.03	.03	.04
10	Butter, best, pound	.22	.20	.18	.15
11	Cabbage, pound	.02	.02	.03	.03
12	Cheese, pound	.14	.15	.15	.15
13	Coal, stove, ton				
14	Cod, fresh, pound	.06	.06	.06	.06
15	Cod, dried, pound	.06	.06	.06	.06
16	Coffee, roasted, Rio, pound	.30	.30	.24	.20
17	Coffee, roasted, Java, pound	.40	.40	.35	.33
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart				
20	Cracked wheat, pound	.05	.05	.05	.05
21	Crackers, pound	.08	.08	.09	.09
22	Eggs, dozen	.12	.12	.10	.10
23	Flour, family, barrel	5.00	4.25	5.85	5.85
24	Flour, best, barrel	5.75	4.75	5.75	6.10
25	Ham, sliced, pound	.18	.18	.15	.15
26	Halibut, fresh, pound	.15	.15	.14	.13
27	Kerosene, gallon	.15	.15	.15	.15
28	Lamb, pound	.13	.11	.14	.15
29	Lard, pound	.13	.11	.08	.09
30	Mackerel, fresh, pound	.12	.12	.15	.15
31	Mackerel, salt, No. 2, pound	.13	.08	.13	.13
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.40	.40	.39	.38
34	Mutton, pound	.10	.10	.08	.10
35	Oatmeal, pound	.05	.05	.05	.05
36	Onions, pound	.04	.04	.05	.05
37	Pickles, quart	.15	.15	.13	.13
38	Pork, clear, pound	.13	.10	.08	.09
39	Potatoes, peck	.25	.25	.20	.20
40	Raisins, cooking, pound	.09	.09	.09	.09
41	Rice, pound	.07	.07	.08	.09
42	Salt, twenty pounds, box or bag	.25	.25	.25	.25
43	Sausage, pound	.15	.14	.13	.13
44	Soap, hard, pound	.06	.06	.05	.04
45	Sugar, granulated	.06	.055	.06	.07
46	Tea, Oolong, pound	.44	.44	.48	.48
47	Tripe, pickled, pound	.10	.10	.10	.10
48	Vinegar, gallon	.25	.25	.25	.25
49	Wood, hard, sawed and split, cord	4.00	4.00	3.50	3.50
50	Wood, soft, sawed and split, cord	2.50	2.50	2.75	2.75

BRUNSWICK.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck			.23	.25
2	Apples, dried, pound			.09	.10
3	Apples, evaporated, pound			.13	.14
4	Beans, white, peck			.49	.48
5	Beans, yellow eyes, peck			.55	.53
6	Beef, corned pound			.08	.08
7	Beef, steak, pound			.20	.20
8	Beef, roasts, pound			.13	.14
9	Beef, soup, pound			.04	.04
10	Butter, best, pound			.20	.20
11	Cabbage, pound			.03	.03
12	Cheese, pound			.15	.14
13	Coal, stove, ton			7.00	6.25
14	Cod, fresh, pound			.10	.10
15	Cod, dried, pound			.08	.08
16	Coffee, roasted, Rio, pound			.20	.20
17	Coffee, roasted, Java, pound			.30	.30
18	Corn meal, pound			.02	.02
19	Cranberries, quart			.11	.12
20	Cracked wheat, pound			.02	.02
21	Crackers, pound			.07	.07
22	Eggs, dozen			.16	.17
23	Flour, family, barrel			5.85	5.50
24	Flour, best, barrel			6.25	6.00
25	Ham, sliced, pound			.16	.17
26	Halibut, fresh, pound			.17	.17
27	Kerosene, gallon			.12	.10
28	Lamb, pound			.13	.14
29	Lard, pound			.09	.08
30	Mackerel, fresh, pound			.18	.20
31	Mackerel, salt, No. 2, pound			.10	.10
32	Milk, quart			.06	.06
33	Molasses, good, gallon			.40	.40
34	Mutton, pound			.12	.11
35	Oat meal, pound			.04	.04
36	Onions, pound			.05	.05
37	Pickles, quart			.08	.08
38	Pork, clear, pound			.09	.09
39	Potatoes, peck			.20	.18
40	Raisins, cooking, pound			.10	.10
41	Rice, pound			.08	.08
42	Salt, twenty pounds, box or bag			.20	.20
43	Sausage, pound			.12	.11
44	Soap, hard, pound			.05	.05
45	Sugar, granulated			.065	.06
46	Tea, Oolong, pound			.50	.50
47	Tripe, pickle, pound			.07	.07
48	Vinegar, gallon			.19	.19
49	Wood, hard, sawed and split, cord			7.00	6.00
50	Wood, soft, sawed and split, cord			5.50	5.00

BUCKSPORT.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.25	.25	.....	.....
2	Apples, dried, pound	.....	.....	.06	.07
3	Apples, evaporated, pound	.....	.....	.12	.13
4	Beans, white, peck	.65	.75	.45	.50
5	Beans, yellow eyes, peck	.70	.80	.50	.55
6	Beef, corned, pound	.08	.07	.06	.07
7	Beef, steak, pound	.18	.16	.18	.16
8	Beef, roasts, pound	.18	.16	.14	.15
9	Beef, soup, pound	.04	.03	.03	.03
10	Butter, best, pound	.23	.20	.18	.17
11	Cabbage, pound	.02	.02	.03	.03
12	Cheese, pound	.16	.15	.13	.14
13	Coal, stove, ton	.....	.....	5.50	6.00
14	Cod, fresh, pound	.....	.....	.05	.05
15	Cod, dried, pound	.08	.06	.07	.07
16	Coffee, roasted, Rio, pound	.30	.30	.20	.20
17	Coffee, roasted, Java, pound	.35	.35	.32	.32
18	Corn meal, pound	.....	.....	.03	.03
19	Cranberries, quart	.....	.....	.....	.....
20	Cracked wheat, pound	.06	.05	.04	.04
21	Crackers, pound	.10	.08	.09	.08
22	Eggs, dozen	.18	.18	.14	.13
23	Flour, family, barrel	5.00	4.00	5.00	5.50
24	Flour, best, barrel	5.75	5.00	5.50	6.00
25	Ham, sliced, pound	.18	.16	.17	.18
26	Halibut, fresh, pound	.....	.....	.14	.14
27	Kerosene, gallon	.10	.10	.12	.12
28	Lamb, pound	.14	.12	.12	.13
29	Lard, pound	.14	.12	.08	.09
30	Mackerel, fresh, pound	.....	.....	.12	.13
31	Mackerel, salt, No. 2, pound	.....	.....	.10	.10
32	Milk, quart	.06	.06	.05	.05
33	Molasses, good, gallon	.50	.45	.40	.40
34	Mutton, pound	.12	.10	.10	.11
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.04	.03	.00	.04
37	Pickles, quart	.10	.10	.10	.10
38	Pork, clear, pound	.13	.11	.08	.08
39	Potatoes, peck	.20	.18	.25	.25
40	Raisins, cooking, pound	.13	.08	.08	.09
41	Rice, pound	.07	.06	.09	.08
42	Salt, twenty pounds, box or bag	.20	.20	.20	.20
43	Sausage, pound	.....	.....	.12	.12
44	Soap, hard, pound	.05	.05	.05	.05
45	Sugar, granulated	.06	.055	.055	.06
46	Tea, Oolong, pound	.50	.50	.45	.45
47	Tripe, pickled, pound	.06	.06	.08	.08
48	Vinegar, gallon	.25	.25	.20	.20
49	Wood, hard, sawed and split, cord	.....	.....	5.00	5.00
50	Wood, soft, sawed and split, cord	.....	.....	4.00	4.00

AUGUSTA.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.25	.20	.20	.20
2	Apples, dried, pound	.10	.08	.09	.10
3	Apples, evaporated, pound	.15	.15	.12	.13
4	Beans, white, peck	.65	.65	.45	.50
5	Beans, yellow eyes, peck	.70	.70	.45	.50
6	Beef, corned, pound	.08	.08	.09	.09
7	Beef, steak, pound	.20	.20	.22	.22
8	Beef, roasts, pound	.20	.20	.20	.20
9	Beef, soup, pound	.04	.04	.04	.04
10	Butter, best, pound	.26	.26	.22	.20
11	Cabbage, pound	.02	.02	.02	.02
12	Cheese, pound	.16	.16	.15	.15
13	Coal, stove, ton	6.50	6.00	6.50	6.50
14	Cod, fresh, pound	.10	.09	.08	.08
15	Cod, dried, pound	.07	.07	.07	.07
16	Coffee, roasted, Rio, pound	.28	.30	.20	.20
17	Coffee, roasted, Java, pound	.35	.35	.35	.35
18	Corn meal, pound	.025	.025	.025	.025
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.05	.05	.05	.05
21	Crackers, pound	.08	.08	.07	.07
22	Eggs, dozen	.20	.20	.18	.18
23	Flour, family, barrel	4.00	3.75	4.50	5.00
24	Flour, best, barrel	5.25	5.50	4.75	5.25
25	Ham, sliced, pound	.24	.18	.18	.18
26	Halibut, fresh, pound	.20	.18	.16	.16
27	Kerosene, gallon	.10	.10	.12	.12
28	Lamb, pound	.17	.13	.15	.15
29	Lard, pound	.15	.12	.08	.08
30	Mackerel, fresh, pound	.16	.14	.17	.18
31	Mackerel, salt, No. 2, pound	.13	.14	.12	.12
32	Milk, quart	.06	.06	.06	.06
33	Molasses, good, gallon	.40	.40	.40	.40
34	Mutton, pound	.10	.10	.10	.10
35	Oat meal, pound	.05	.05	.05	.05
36	Onions, pound	.05	.03	.04	.04
37	Pickles, quart	.13	.13	.10	.10
38	Pork, clear, pound	.14	.12	.08	.08
39	Potatoes, peck	.40	.30	.25	.20
40	Raisins, cooking, pound	.09	.09	.10	10
41	Rice, pound	.09	.09	.08	.08
42	Salt, twenty pounds, box or bag	.25	.25	.25	.25
43	Sausage, pound	.12	.10	.10	.10
44	Soap, hard, pound	.06	.06	.06	.06
45	Sugar, granulated	.06	.06	.055	.06
46	Tea, Oolong, pound	.45	.45	.40	.40
47	Tripe, pickled, pound	.10	.09	.08	.08
48	Vinegar, gallon	.25	.25	.25	.25
49	Wood, hard, sawed and split, cord	7.00	7.00	7.00	7.00
50	Wood, soft, sawed and split, cord	5.00	5.00	5.00	5.00

OAKLAND.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.13	.13	.15	.20
2	Apples, dried, pound	.04	.11	.06	.08
3	Apples, evaporated, pound	.10	.18	.10	.12
4	Beans, white, peck	.65	.65	.60	.60
5	Beans, yellow eyes, peck	.65	.65	.60	.60
6	Beef, corned, pound	.07	.07	.04	.05
7	Beef, steak, pound	.18	.18	.18	.20
8	Beef, roasts, pound	.13	.13	.16	.18
9	Beef, soup, pound	.04	.04	.03	.03
10	Butter, best, pound	.20	.17	.20	.22
11	Cabbage, pound	.01	.02	.02	.02
12	Cheese, pound	.16	.15	.15	.15
13	Coal, stove, ton	7.50	8.00	7.75	7.75
14	Cod, fresh, pound	.08	.08	.08	.07
15	Cod, dried, pound	.07	.07	.07	.07
16	Coffee, roasted, Rio, pound	.28	.28	.28	.18
17	Coffee, roasted, Java, pound	.35	.35	.35	.30
18	Corn meal, pound	.03	.03	.02	.02
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.06	.06	.05	.05
21	Crackers, pound	.07	.07	.06	.07
22	Eggs, dozen	.16	.17	.15	.15
23	Flour, family, barrel	4.25	4.00	4.75	5.00
24	Flour, best, barrel	5.50	5.00	5.25	5.50
25	Ham, sliced, pound	.14	.16	.16	.16
26	Halibut, fresh, pound	.20	.18	.16	.15
27	Kerosene, gallon	.10	.10	.10	.10
28	Lamb, pound	.11	.11	.11	.13
29	Lard, pound	.10	.11	.10	.10
30	Mackerel, fresh, pound	.16	.16	.15	.15
31	Mackerel, salt, No. 2, pound	.10	.10	.12	.12
32	Milk, quart	.05	.05	.06	.06
33	Molasses, good, gallon	.35	.35	.35	.35
34	Mutton, pound	.08	.08	.08	.08
35	Oat meal, pound	.05	.05	.05	.05
36	Onions, pound	.04	.04	.03	.04
37	Pickles, quart	.14	.14	.12	.12
38	Pork, clear, pound	.12	.10	.08	.10
39	Potatoes, peck	.18	.18	.13	.15
40	Raisins, cooking, pound	.08	.08	.07	.07
41	Rice, pound	.08	.08	.08	.08
42	Salt, twenty pounds, box or bag	.17	.17	.15	.15
43	Sausage, pound	.12	.11	.10	.10
44	Soap, hard, pound	.05	.05	.05	.05
45	Sugar, granulated, pound	.05	.06	.06	.06
46	Tea, Oolong, pound	.45	.45	.45	.45
47	Tripe, pickled, pound	.08	.07	.08	.08
48	Vinegar, gallon	.20	.20	.20	.20
49	Wood, hard, sawed and split, cord	5.75	5.75	5.00	5.00
50	Wood, soft, sawed and split, cord	3.75	3.75	4.00	4.00

WATERVILLE.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.28	.25	.30	.28
2	Apples, dried, pound	.10	.08	.09	.10
3	Apples, evaporated, pound	.16	.16	.15	.15
4	Beans, white, peck	.65	.65	.45	.50
5	Beans, yellow eyes, peck	.70	.65	.45	.50
6	Beef, corned, pound	.08	.07	.06	.08
7	Beef, steak, pound	.20	.20	.21	.24
8	Beef, roasts, pound	.22	.20	.20	.22
9	Beef, soup, pound	.05	.04	.05	.05
10	Butter, best, pound	.26	.25	.24	.23
11	Cabbage, pound	.04	.03	.04	.04
12	Cheese, pound	.16	.16	.15	.15
13	Coal, stove, ton	7.25	7.00	7.00	7.25
14	Cod, fresh, pound	.10	.09	.08	.08
15	Cod, dried, pound	.07	.07	.07	.07
16	Coffee, roasted, Rio, pound	.30	.30	.25	.20
17	Coffee, roasted, Java, pound	.38	.38	.35	.30
18	Corn meal, pound	.03	.03	.03	.03
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.05	.05	.05	.05
21	Crackers, pound	.08	.08	.07	.08
22	Eggs, dozen	.20	.19	.17	.16
23	Flour, family, barrel	4.50	4.00	5.25	5.50
24	Flour, best, barrel	5.25	5.00	5.75	6.00
25	Ham, sliced, pound	.24	.20	.18	.18
26	Halibut, fresh, pound	.20	.19	.18	.18
27	Kerosene, gallon	.10	.10	.10	.10
28	Lamb, pound	.16	.14	.15	.16
29	Lard, pound	.14	.12	.10	.10
30	Mackerel, fresh, pound	.15	.14	.17	.17
31	Mackerel, salt, No. 2, pound	.14	.14	.14	.14
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.40	.40	.40	.40
34	Mutton, pound	.10	.10	.10	.10
35	Oat meal, pound	.05	.05	.05	.05
36	Onions, pound	.04	.03	.04	.04
37	Pickles, quart	.14	.13	.10	.10
38	Pork, clear, pound	.13	.12	.08	.08
39	Potatoes, peck	.30	.30	.20	.20
40	Raisins, cooking, pound	.09	.08	.08	.08
41	Rice, pound	.09	.09	.08	.08
42	Salt, twenty pounds, box or bag	.25	.20	.20	.20
43	Sausage, pound	.12	.10	.10	.10
44	Soap, hard, pound	.06	.06	.05	.05
45	Sugar, granulated	.06	.06	.06	.06
46	Tea, Oolong, pound	.45	.45	.45	.45
47	Tripe, pickled, pound	.10	.09	.08	.08
48	Vinegar, gallon	.25	.25	.25	.25
49	Wood, hard, sawed and split, cord	7.00	7.00	7.00	7.00
50	Wood, soft, sawed and split, cord	5.00	4.75	4.50	4.50

WINTHROP.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.20	.18	.25	.25
2	Apples, dried, pound	.07	.09	.10	.10
3	Apples, evaporated, pound	.13	.18	.12	.10
4	Beans, white, peck	.65	.70	.50	.48
5	Beans, yellow eyes, peck	.65	.70	.50	.48
6	Beef, corned, pound	.10	.09	.07	.08
7	Beef, steak, pound	.23	.22	.19	.21
8	Beef, roasts, pound	.18	.16	.15	.17
9	Beef, soup, pound	.05	.04	.04	.04
10	Butter, best, pound	.24	.20	.23	.23
11	Cabbage, pound	.03	.03	.03	.03
12	Cheese, pound	.13	.14	.14	.14
13	Coal, stove, ton	7.50	6.75	6.50	6.50
14	Cod, fresh, pound	.10	.09	.08	.08
15	Cod, dried, pound	.07	.07	.09	.10
16	Coffee, roasted, Rio, pound	.28	.28	.28	.24
17	Coffee, roasted, Java, pound	.38	.38	.33	.30
18	Corn meal, pound	.02	.02	.03	.03
19	Cranberries, quart	.12	.10	.10	.10
20	Cracked wheat, pound	.05	.06	.07	.08
21	Crackers, pound	.07	.07	.08	.08
22	Eggs, dozen	.19	.17	.20	.19
23	Flour, family, barrel	4.75	4.00	5.25	5.50
24	Flour, best, barrel	5.25	4.50	6.00	6.25
25	Ham, sliced, pound	.18	.16	.16	.16
26	Halibut, fresh, pound	.18	.16	.17	.16
27	Kerosene, gallon	.10	.10	.12	.12
28	Lamb, pound	.16	.15	.14	.14
29	Lard, pound	.15	.12	.10	.10
30	Mackerel, fresh, pound	.16	.15	.16	.16
31	Mackerel, salt, No. 2, pound	.12	.09	.12	.12
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.40	.40	.35	.35
34	Mutton, pound	.12	.10	.10	.10
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.05	.04	.05	.05
37	Pickles, quart	.10	.10	.10	.10
38	Pork, clear, pound	.14	.12	.10	.10
39	Potatoes, peck	.27	.25	.20	.20
40	Raisins, cooking, pound	.12	.12	.10	.09
41	Rice, pound	.05	.07	.07	.07
42	Salt, twenty pounds, box or bag	.22	.22	.18	.18
43	Sausage, pound	.12	.11	.10	.10
44	Soap, hard, pound	.07	.07	.06	.06
45	Sugar, granulated	.055	.05	.06	.06
46	Tea, Oolong, pound	.50	.50	.40	.40
47	Tripe, pickled, pound	.08	.06	.08	.08
48	Vinegar, gallon	.20	.20	.20	.20
49	Wood, hard, sawed and split, cord	6.50	6.25	6.00	6.00
50	Wood, soft, sawed and split, cord	4.25	4.25	4.00	4.00

CAMDEN.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.25	.27	.25	.25
2	Apples, dried, pound	.10	.09	.08	.08
3	Apples, evaporated, pound	.20	.19	.13	.13
4	Beans, white, peck	.70	.70	.60	.60
5	Beans, yellow eyes, peck	.75	.75	.65	.68
6	Beef, corned, pound	.08	.08	.07	.07
7	Beef, steak, pound	.20	.20	.19	.19
8	Beef, roasts, pound	.16	.15	.11	.11
9	Beef, soup, pound	.05	.05	.04	.05
10	Butter, best, pound	.28	.27	.22	.23
11	Cabbage, pound	.03	.03	.03	.03
12	Cheese, pound	.14	.16	.16	.16
13	Coal, stove, ton	6.50	6.25	6.00	6.00
14	Cod, fresh, pound	.06	.06	.05	.05
15	Cod, dried, pound	.08	.08	.07	.07
16	Coffee, roasted, Rio, pound	.28	.27	.20	.20
17	Coffee, roasted, Java, pound	.35	.37	.32	.32
18	Corn meal, pound	.03	.03	.03	.03
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.06	.06	.06	.06
21	Crackers, pound	.07	.07	.08	.08
22	Eggs, dozen	.22	.22	.15	.15
23	Flour, family, barrel	4.00	4.25	5.50	5.50
24	Flour, best, barrel	5.40	4.75	6.00	6.25
25	Ham, sliced, pound	.18	.18	.16	.16
26	Halibut, fresh, pound	.14	.13	.12	.12
27	Kerosene, gallon	.10	.09	.12	.12
28	Lamb, pound	.16	.15	.14	.14
29	Lard, pound	.11	.12	.10	.10
30	Mackerel, fresh, pound	.12	.12	.14	.13
31	Mackerel, salt, No. 2, pound	.10	.09	.10	.12
32	Milk, quart	.06	.06	.06	.06
33	Molasses, good, gallon	.45	.47	.40	.40
34	Mutton, pound	.09	.09	.08	.08
35	Oat meal, pound	.05	.05	.05	.05
36	Onions, pound	.03	.05	.04	.04
37	Pickles, quart	.15	.14	.10	.10
38	Pork, clear, pound	.11	.11	.09	.09
39	Potatoes, peck	.15	.20	.25	.25
40	Raisins, cooking, pound	.07	.08	.10	.10
41	Rice, pound	.09	.09	.08	.08
42	Salt, twenty pounds, box or bag	.20	.20	.20	.20
43	Sausage, pound	.14	.14	.12	.12
44	Soap, hard, pound	.05	.07	.05	.05
45	Sugar, granulated	.05	.055	.06	.06
46	Tea, Oolong, pound	.50	.50	.45	.45
47	Tripe, pickled, pound	.08	.08	.06	.06
48	Vinegar, gallon	.25	.25	.22	.22
49	Wood, hard, sawed and split, cord	5.00	5.00	7.00	7.00
50	Wood, soft, sawed and split, cord	4.00	4.00	5.00	5.00

ROCKPORT.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.25	.30	.25	.25
2	Apples, dried, pound	.12	.11	.10	.10
3	Apples, evaporated, pound	.18	.17	.12	.12
4	Beans, white, peck	.70	.70	.50	.50
5	Beans, yellow eyes, peck	.75	.70	.65	.65
6	Beef, corned, pound	.09	.08	.07	.07
7	Beef, steak, pound	.25	.20	.22	.22
8	Beef, roasts, pound	.17	.16	.14	.14
9	Beef, soup, pound	.05	.05	.04	.04
10	Butter, best, pound	.26	.25	.20	.20
11	Cabbage, pound	.03	.03	.025	.025
12	Cheese, pound	.14	.14	.15	.15
13	Coal stove, ton	6.50	6.00	6.15	6.00
14	Cod, fresh, pound	.05	.05	.04	.04
15	Cod, dried, pound	.09	.08	.06	.06
16	Coffee, roasted, Rio, pound	.28	.28	.22	.22
17	Coffee, roasted, Java, pound	.35	.35	.33	.33
18	Corn meal, pound	.02	.02	.01	.01
19	Cranberries, quart	.10	.12	.10	.15
20	Cracked wheat, pound	.06	.05	.04	.04
21	Crackers, pound	.08	.08	.10	.10
22	Eggs, dozen	.20	.19	.18	.18
23	Flour, family, barrel	5.00	4.50	5.00	6.00
24	Flour, best, barrel	5.50	5.00	5.50	6.50
25	Ham, sliced, pound	.20	.19	.16	.16
26	Halibut, fresh, pound	.16	.15	.12	.12
27	Kerosene, gallon	.12	.10	.14	.14
28	Lamb, pound	.16	.16	.15	.15
29	Lard, pound	.14	.12	.08	.09
30	Mackerel, fresh, pound	.15	.14	.14	.13
31	Mackerel, salt, No. 2, pound	.12	.12	.10	.12
32	Milk, quart	.06	.06	.06	.06
33	Molasses, good, gallon	.45	.45	.38	.38
34	Mutton, pound	.12	.12	.11	.11
35	Oat meal, pound	.05	.05	.05	.05
36	Onions, pound	.05	.05	.05	.05
37	Pickles, quart	.15	.14	.13	.13
38	Pork, clear, pound	.11	.10	.08	.08
39	Potatoes, peck	.20	.25	.40	.40
40	Raisins, cooking, pound	.10	.10	.13	.13
41	Rice, pound	10	.09	.08	.08
42	Salt, twenty pounds, box or bag	.25	.25	.25	.25
43	Sausage, pound	.14	.13	.14	.14
44	Soap, hard, pound	.06	.06	.06	.06
45	Sugar, granulated	.05	.055	.055	.065
46	Tea, Oolong, pound	.48	.48	.45	.45
47	Tripe, pickled, pound	.10	.08	.07	.07
48	Vinegar, gallon	.25	.25	.23	.23
49	Wood, hard, sawed and split, cord	5.50	5.50	6.00	6.00
50	Wood, soft, sawed and split, cord	3.50	3.50	3.00	3.00

WALDOBORO.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.10	.10	.50	.50
2	Apples, dried, pound	.07	.07	.10	.07
3	Apples, evaporated, pound	.15	.15	.15	.12
4	Beans, white, peck	.70	.70	.50	.50
5	Beans, yellow eyes, peck	.75	.75	.55	.55
6	Beef, corned, pound	.08	.08	.07	.07
7	Beef, steak, pound	.16	.16	.18	.18
8	Beef, roasts, pound	.14	.14	.15	.15
9	Beef, soup, pound	.05	.05	.04	.04
10	Butter, best, pound	.20	.20	.20	.20
11	Cabbage, pound	.02	.02	.03	.03
12	Cheese, pound	.14	.14	.15	.15
13	Coal, stove, ton	6.25	6.25	6.00	5.75
14	Cod, fresh, pound	.03	.03	.03	.03
15	Cod, dried, pound	.08	.08	.08	.08
16	Coffee, roasted, Rio, pound	.30	.30	.20	.16
17	Coffee, roasted, Java, pound	.35	.35	.37	.35
18	Corn meal, pound	.02	.02	.03	.03
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.03	.03	.03	.03
21	Crackers, pound	.08	.08	.08	.08
22	Eggs, dozen	.22	.22	.19	.16
23	Flour, family, barrel	4.00	4.00	4.75	5.75
24	Flour, best, barrel	5.50	5.50	5.50	7.50
25	Ham, sliced, pound	.16	.16	.16	.16
26	Halibut, fresh, pound	.13	.13	.11	.10
27	Kerosene, gallon	.10	.10	.12	.11
28	Lamb, pound	.12	.14	.14	.16
29	Lard, pound	.12	.12	.10	.08
30	Mackerel, fresh, pound	.07	.07	.10	.10
31	Mackerel, salt, No. 2, pound	.08	.08	.11	.10
32	Milk, quart	.06	.06	.06	.05
33	Molasses, good, gallon	.45	.45	.40	.40
34	Mutton, pound	.09	.09	.10	.10
35	Oat meal, pound	.04	.04	.04	.04
36	Onions, pound	.03	.03	.04	.04
37	Pickles, quart	.12	.12	.08	.08
38	Pork, clear, pound	.10	.10	.10	.08
39	Potatoes, peck	.15	.15	.28	.15
40	Raisins, cooking, pound	.08	.08	.10	.10
41	Rice, pound	.08	.08	.08	.08
42	Salt, twenty pounds, box or bag	.22	.22	.20	.20
43	Sausage, pound	.14	.14	.13	.125
44	Soap, hard, pound	.07	.07	.07	.07
45	Sugar, granulated	.055	.055	.055	.06
46	Tea, Oolong, pound	.45	.45	.48	.42
47	Tripe, pickled, pound	.06	.06	.05	.05
48	Vinegar, gallon	.20	.20	.20	.20
49	Wood, hard, sawed and split, cord	6.00	6.00	6.00	6.00
50	Wood, soft, sawed and split, cord	3.50	3.50	4.00	4.50

WISCASSET.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.10	.10	.40	.40
2	Apples, dried, pound	.06	.06	.10	.10
3	Apples, evaporated, pound	.15	.15	.15	.14
4	Beans, white, peck	.50	.50	.40	.35
5	Beans, yellow eyes, peck	.65	.65	.50	.45
6	Beef, corned, pound	.08	.08	.09	.09
7	Beef, steak, pound	.18	.18	.20	.19
8	Beef, roasts, pound	.16	.16	.16	.15
9	Beef, soup, pound	.05	.05	.05	.04
10	Butter, best, pound	.22	.22	.20	.20
11	Cabbage, pound	.02	.02	.04	.03
12	Cheese, pound	.16	.16	.15	.14
13	Coal, stove, ton	6.50	6.00	6.00	6.00
14	Cod, fresh, pound	.03	.03	.04	.04
15	Cod, dried, pound	.08	.08	.09	.09
16	Coffee, roasted, Rio, pound	.30	.30	.19	.20
17	Coffee, roasted, Java, pound	.40	.40	.33	.35
18	Corn meal, pound	.02	.02	.03	.03
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.03	.03	.03	.03
21	Crackers, pound	.08	.08	.07	.07
22	Eggs, dozen	.17	.17	.15	.14
23	Flour, family, barrel	4.50	3.50	5.65	5.50
24	Flour, best, barrel	5.75	4.75	6.00	5.75
25	Ham, sliced, pound	.12	.12	.18	.16
26	Halibut, fresh, pound	.16	.15	.14	.14
27	Kerosene, gallon	.08	.08	.12	.12
28	Lamb, pound	.20	.20	.16	.16
29	Lard, pound	.10	.10	.10	.08
30	Mackerel, fresh, pound	.12	.12	.12	.12
31	Mackerel, salt, No. 2, pound	.10	.10	.12	.12
32	Milk, quart	.06	.06	.06	.06
33	Molasses, good, gallon	.40	.40	.40	.40
34	Mutton, pound	.10	.10	.11	.11
35	Oat meal, pound	.06	.06	.04	.04
36	Onions, pound	.05	.05	.05	.04
37	Pickles, quart	.10	.10	.10	.10
38	Pork, clear, pound	.10	.10	.10	.10
39	Potatoes, peck	.20	.20	.30	.25
40	Raisins, cooking, pound	.10	.10	.08	.08
41	Rice, pound	.08	.08	.07	.06
42	Salt, twenty pounds, box or bag	.20	.20	.25	.25
43	Sausage, pound	.12	.12	.13	.13
44	Soap, hard, pound	.06	.06	.05	.05
45	Sugar, granulated	.06	.05	.06	.06
46	Tea, Oolong, pound	.60	.60	.50	.50
47	Tripe, pickled, pound	.07	.07	.08	.07
48	Vinegar, gallon	.40	.40	.28	.25
49	Wood, hard, sawed and split, cord	6.50	6.50	6.00	6.00
50	Wood, soft, sawed and split, cord	4.00	4.00	4.50	4.25

NORWAY.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.20	.23	.....	.....
2	Apples, dried, pound	.06	.08	.06	.07
3	Apples, evaporated, pound	.12	.18	.10	.14
4	Beans, white, peck	.70	.65	.55	.50
5	Beans, yellow eyes, peck	.70	.70	.55	.53
6	Beef, corned, pound	.....	.....	.06	.07
7	Beef, steak, pound	.....	.....	.15	.15
8	Beef, roasts, pound	.....	.....	.13	.13
9	Beef, soup, pound	.....	.....	.05	.05
10	Butter, best, pound	.22	.22	.20	.22
11	Cabbage, pound	.02	.03	.04	.04
12	Cheese, pound	.15	.15	.15	.15
13	Coal, stove, ton	6.75	6.75	.....	.....
14	Cod, fresh, pound	.....	.....	.....	.....
15	Cod, dried, pound	.....	.....	.08	.08
16	Coffee, roasted, Rio, pound	.25	.25	.28	.23
17	Coffee, roasted, Java, pound	.35	.35	.34	.30
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart	.12	.14	.....	.....
20	Cracked wheat, pound	.....	.....	.....	.....
21	Crackers, pound	.05	.05	.....	.....
22	Eggs, dozen	.20	.20	.14	.14
23	Flour, family, barrel	4.00	3.50	5.25	5.75
24	Flour, best, barrel	4.50	4.00	5.50	6.00
25	Ham, sliced, pound	.....	.....	.16	.16
26	Halibut, fresh, pound	.....	.....	.....	.....
27	Kerosene, gallon	.09	.09	.13	.12
28	Lamb, pound	.....	.....	.16	.16
29	Lard, pound	.10	.10	.08	.10
30	Mackerel, fresh, pound	.....	.....	.....	.....
31	Mackerel, salt, No. 2, pound	.10	.10	.12	.12
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.35	.35	.40	.40
34	Mutton, pound	.....	.....	.12	.12
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.05	.05	.04	.04
37	Pickles, quart	.15	.15	.20	.20
38	Pork, clear, pound	.10	.10	.08	.08
39	Potatoes, peck	.25	.25	.40	.37
40	Raisins, cooking, pound	.06	.06	.10	.10
41	Rice, pound	.06	.08	.10	.10
42	Salt, twenty pounds, box or bag	.22	.22	.25	.25
43	Sausage, pound	.....	.....	.10	.10
44	Soap, hard, pound	.05	.05	.07	.07
45	Sugar, granulated	.05	.05	.055	.065
46	Tea, Oolong, pound	.40	.40	.50	.50
47	Tripe, pickled, pound	.....	.....	.06	.06
48	Vinegar, gallon	.16	.16	.20	.20
49	Wood, hard, sawed and split, cord	6.00	6.00	.....	.....
50	Wood, soft, sawed and split, cord	4.50	5.25	.....	.....

BANGOR.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.25	.25	.25	.25
2	Apples, dried, pound	.07	.10	.07	.06
3	Apples, evaporated, pound	.12	.14	.12	.12
4	Beans, white, peck	.63	.65	.35	.40
5	Beans, yellow eyes, peck	.73	.75	.40	.45
6	Beef, corned, pound	.05	.04	.06	.08
7	Beef, steak, pound	.12	.18	.17	.20
8	Beef, roasts, pound	.08	.07	.12	.14
9	Beef, soup, pound	.04	.05	.04	.05
10	Butter, best, pound	.25	.23	.17	.16
11	Cabbage, pound	.02	.02	.03	.03
12	Cheese, pound	.15	.15	.12	.12
13	Coal, stove, ton	6.00	5.00	6.50	6.25
14	Cod, fresh, pound	.06	.06	.05	.05
15	Cod, dried, pound	.08	.08	.06	.05
16	Coffee, roasted, Rio, pound	.28	.28	.20	.20
17	Coffee, roasted, Java, pound	.37	.37	.30	.30
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.05	.05	.04	.04
21	Crackers, pound	.07	.08	.08	.07
22	Eggs, dozen	.18	.17	.15	.14
23	Flour, family, barrel	4.87	4.25	5.00	5.25
24	Flour, best, barrel	5.50	4.75	5.50	5.75
25	Ham, sliced, pound	.16	.18	.14	.15
26	Halibut, fresh, pound	.12	.15	.16	.17
27	Kerosene, gallon	.11	.10	.11	.10
28	Lamb, pound	.10	.10	.13	.16
29	Lard, pound	.11	.10	.07	.08
30	Mackerel, fresh, pound	.10	.15	.16	.16
31	Mackerel, salt, No. 2, pound	.08	.07	.13	.13
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.38	.33	.35	.35
34	Mutton, pound	.08	.08	.06	.06
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.04	04	.04	.04
37	Pickles, quart	.13	.13	.10	.10
38	Pork, clear, pound	.10	.09	.08	.08
39	Potatoes, peck	.18	.15	.25	.30
40	Raisins, cooking, pound	.08	.08	.07	.07
41	Rice, pound	.07	.08	.08	.08
42	Salt, twenty pounds, box or bag	.18	.18	.18	.17
43	Sausage, pound	.10	.10	.10	.11
44	Soap, hard, pound	.06	.06	.05	.05
45	Sugar, granulated	.055	.05	.055	.06
46	Tea, Oolong, pound	.45	.50	.40	.40
47	Tripe, pickled, pound	.10	.10	.09	.10
48	Vinegar, gallon	.25	.27	.20	.20
49	Wood, hard, sawed and split, cord	6.00	5.50	6.00	6.00
50	Wood, soft, sawed and split, cord	4.00	4.00	4.50	4.50

BREWER.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.25	.20	.25	.25
2	Apples, dried, pound	.05	.08	.06	.06
3	Apples, evaporated, pound	.10	.10	.12	.11
4	Beans, white, peck	.60	.65	.38	.40
5	Beans, yellow eyes, peck	.55	.60	.43	.45
6	Beef, corned pound	.08	.08	.06	.07
7	Beef, steak, pound	.18	.20	.16	.18
8	Beef, roasts, pound	.15	.18	.14	.16
9	Beef, soup, pound	.04	.05	.04	.04
10	Butter, best, pound	.25	.20	.16	.17
11	Cabbage, pound	.02	.02	.03	.03
12	Cheese, pound	.15	.16	.12	.12
13	Coal, stove, ton	6.00	5.00	6.50	6.25
14	Cod, fresh, pound	.03	.04	.05	.05
15	Cod, dried, pound	.06	.06	.05	.05
16	Coffee, roasted, Rio, pound	.28	.33	.22	.22
17	Coffee, roasted, Java, pound	.30	.35	.33	.33
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart	.10	.08	.10	.10
20	Cracked wheat, pound	.05	.05	.04	.04
21	Crackers, pound	.08	.07	.08	.08
22	Eggs, dozen	.20	.15	.13	.12
23	Flour, family, barrel	5.00	4.50	5.00	5.25
24	Flour, best, barrel	7.00	5.00	5.50	5.75
25	Ham, sliced, pound	.18	.18	.14	.15
26	Halibut, fresh, pound	.12	.15	.15	.15
27	Kerosene, gallon	.10	.07	.10	.11
28	Lamb, pound	.10	.10	.13	.14
29	Lard, pound	.13	.10	.07	.08
30	Mackerel, fresh, pound	.10	.15	.15	.16
31	Mackerel, salt, No. 2, pound	.08	.08	.10	.10
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.40	.30	.40	.40
34	Mutton, pound	.08	.08	.09	.10
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.04	.05	.04	.04
37	Pickles, quart	.10	.10	.10	.10
38	Pork, clear, pound	.10	.10	.08	.08
39	Potatoes, peck	.20	.20	.25	.25
40	Raisins, cooking, pound	.15	.12	.07	.08
41	Rice, pound	.07	.07	.08	.08
42	Salt, twenty pounds, box or bag	.15	.15	.20	.18
43	Sausage, pound	.10	.10	.09	.10
44	Soap, hard, pound	.05	.05	.06	.06
45	Sugar, granulated	.055	.05	.055	.06
46	Tea, Oolong, pound	.30	.40	.38	.38
47	Tripe, pickle, pound	.10	.10	.08	.09
48	Vinegar, gallon	.30	.25	.20	.20
49	Wood, hard, sawed and split, cord	6.00	5.50	6.00	6.00
50	Wood, soft, sawed and split, cord	4.00	4.00	4.50	4.50

LEE.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.25	.20	.20	.20
2	Apples, dried, pound	.06	.08	.04	.05
3	Apples, evaporated, pound	.09	.12	.07	.08
4	Beans, white, peck	.75	.75	.50	.50
5	Beans, yellow eyes, peck	.75	.80	.55	.50
6	Beef, corned, pound	.06	.06	.06	.07
7	Beef, steak, pound	.12	.13	.12	.12
8	Beef, roasts, pound	.10	.15	.08	.08
9	Beef, soup, pound	.04	.04	.03	.04
10	Butter, best, pound	.20	.18	.15	.15
11	Cabbage, pound	.03	.03	.02	.02
12	Cheese, pound	.15	.14	.13	.13
13	Coal, stove, ton				
14	Cod, fresh, pound	.05	.05	.05	.05
15	Cod, dried, pound	.07	.07	.06	.06
16	Coffee, roasted, Rio, pound	.26	.26	.20	.20
17	Coffee, roasted, Java, pound	.32	.30	.25	.25
18	Corn meal, pound	.03	.03	.02	.02
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.05	.05	.04	.04
21	Crackers, pound	.10	.09	.07	.07
22	Eggs, dozen	.20	.15	.13	.12
23	Flour, family, barrel	4.75	4.00	5.25	6.00
24	Flour, best, barrel	5.50	4.50	7.75	6.50
25	Ham, sliced, pound	.15	.14	.12	.12
26	Halibut, fresh, pound	.11	.14	.13	.12
27	Kerosene, gallon	.12	.12	.14	.15
28	Lamb, pound	.10	.10	.11	.12
29	Lard, pound	.10	.09	.07	.08
30	Mackerel, fresh, pound	.09	.12	.10	.10
31	Mackerel, salt, No. 2, pound	.10	.10	.08	.08
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.45	.40	.38	.40
34	Mutton, pound	.09	.08	.10	.10
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.05	.05	.04	.04
37	Pickles, quart	.12	.11	.10	.10
38	Pork, clear, pound	.12	.10	.08	.08
39	Potatoes, peck	.30	.25	.25	.25
40	Raisins, cooking, pound	.09	.08	.08	.08
41	Rice, pound	.09	.08	.08	.08
42	Salt, twenty pounds, box or bag	.25	.25	.25	.25
43	Sausage, pound	.10	.10	.10	.10
44	Soap, hard, pound	.07	.06	.06	.06
45	Sugar, granulated	.06	.05	.065	.07
46	Tea, Oolong, pound	.42	.40	.38	.35
47	Tripe, pickled, pound	.08	.08	.07	.06
48	Vinegar, gallon	.25	.20	.20	.20
49	Wood, hard, sawed and split, cord	4.00	4.00	3.75	3.75
50	Wood, soft, sawed and split, cord	1.00	1.00	1.00	1.00

LINCOLN.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking peck				
2	Apples, dried, pound	.09	.10	.08	.10
3	Apples, evaporated, pound	.10	.16	.12	.13
4	Beans, white, peck	.65	.70	.45	.50
5	Beans, yellow eyes, peck	.65	.70	.55	.60
6	Beef, corned, pound	.07	.06	.06	.06
7	Beef, steak, pound	.15	.16	.14	.15
8	Beef, roasts, pound	.12	.15	.10	.10
9	Beef, soup, pound	.04	.04	.04	.04
10	Butter, best, pound	.25	.23	.20	.20
11	Cabbage, pound	.03	.03	.03	.03
12	Cheese, pound	.15	.14	.14	.15
13	Coal stove, ton				
14	Cod, fresh, pound	.05	.05	.05	.05
15	Cod, dried, pound	.06	.07	.06	.05
16	Coffee, roasted, Rio, pound	.30	.30	.25	.25
17	Coffee, roasted, Java, pound	.35	.35	.30	.30
18	Corn meal, pound	.03	.03	.03	.03
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.05	.05	.05	.05
21	Crackers, pound	.10	.11	.09	.10
22	Eggs, dozen	.20	.16	.14	.15
23	Flour, family, barrel	5.25	4.25	5.25	5.50
24	Flour, best, barrel	5.75	5.00	6.25	6.50
25	Ham, sliced, pound	.16	.16	.15	.15
26	Halibut, fresh, pound	.13	.14	.15	.15
27	Kerosene, gallon	.12	.12	.14	.15
28	Lamb, pound	.08	.09	.10	.10
29	Lard, pound	.10	.09	.07	.07
30	Mackerel, fresh, pound	.10	.14	.14	.13
31	Mackerel, salt, No. 2, pound	.11	.11	.10	.10
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.42	.42	.40	.40
34	Mutton, pound	.07	.07	.08	.08
35	Oat meal, pound	.05	.05	.05	.05
36	Onions, pound	.05	.05	.05	.05
37	Pickles, quart	.12	.11	.10	.10
38	Pork, clear, pound	.13	.11	.07	.08
39	Potatoes, peck	.25	.20	.25	.20
40	Raisins, cooking, pound	.10	.08	.08	.09
41	Rice, pound	10	.09	.08	.08
42	Salt, twenty pounds, box or bag	.20	.20	.20	.20
43	Sausage, pound	.10	.10	.12	.12
44	Soap, hard, pound	.05	.05	.05	.05
45	Sugar, granulated	.06	.05	.06	.065
46	Tea, Oolong, pound	.45	.42	.45	.45
47	Tripe, pickled, pound	.10	.10	.10	.10
48	Vinegar, gallon	.25	.25	.20	.20
49	Wood, hard, sawed and split, cord	4.50	4.50	4.00	4.00
50	Wood, soft, sawed and split, cord	3.50	3.50	3.00	3.00

OLD TOWN.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.....	.....	.....	.....
2	Apples, dried, pound	.08	.10	.08	.09
3	Apples, evaporated, pound	.12	.18	.12	.12
4	Beans, white, peck	.75	.75	.50	.56
5	Beans, yellow eyes, peck	.75	.75	.55	.60
6	Beef, corned, pound	.08	.08	.08	.09
7	Beef, steak, pound	.17	.18	.16	.17
8	Beef, roasts, pound	.14	.17	.12	.12
9	Beef, soup, pound	.04	.04	.03	.04
10	Butter, best, pound	.23	.20	.18	.18
11	Cabbage, pound	.03	.03	.03	.03
12	Cheese, pound	.16	.14	.14	.14
13	Coal, stove, ton	6.25	5.50	6.00	6.25
14	Cod, fresh, pound	.05	.05	.05	.05
15	Cod, dried, pound	.06	.07	.06	.06
16	Coffee, roasted, Rio, pound	.28	.28	.22	.22
17	Coffee, roasted, Java, pound	.37	.35	.33	.33
18	Corn meal, pound	.03	.03	.03	.03
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.05	.05	.05	.05
21	Crackers, pound	.10	.10	.08	.08
22	Eggs, dozen	.22	.16	.14	.15
23	Flour, family, barrel	5.00	4.00	5.50	5.75
24	Flour, best, barrel	5.75	4.75	6.00	6.25
25	Ham, sliced, pound	.17	.16	.14	.15
26	Halibut, fresh, pound	.12	.15	.15	15
27	Kerosene, gallon	.10	.10	.12	.11
28	Lamb, pound	.11	.12	.14	.15
29	Lard, pound	.12	.10	.09	.09
30	Mackerel, fresh, pound	.10	.14	.13	.12
31	Mackerel, salt, No. 2, pound	.12	.12	.10	.10
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.45	.40	.40	.40
34	Mutton, pound	.08	.08	.09	.10
35	Oatmeal, pound	.05	.05	.05	.05
36	Onions, pound	.05	.05	.05	.05
37	Pickles, quart	.12	.10	.12	.11
38	Pork, clear, pound	.13	.10	.08	.08
39	Potatoes, peck	.35	.30	.30	.35
40	Raisins, cooking, pound	.10	.08	.08	.08
41	Rice, pound	.10	.08	.08	.09
42	Salt, twenty pounds, box or bag	.20	.20	.20	.20
43	Sausage, pound	.11	.10	.12	.12
44	Soap, hard, pound	.05	.05	.05	.05
45	Sugar, granulated	.05.5	.05	.05.5	.06
46	Tea, Oolong, pound	.50	.50	.48	.50
47	Tripe, pickled, pound	.10	.10	.09	.10
48	Vinegar, gallon	.25	.25	.20	.20
49	Wood, hard, sawed and split, cord	6.00	6.00	5.00	5.00
50	Wood, soft, sawed and split, cord	4.50	4.50	3.00	3.00

FOXCROFT.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.30	.30	.18	.28
2	Apples, dried, pound	.07	.08	.04	.06
3	Apples, evaporated, pound	.12	.15	.10	.12
4	Beans, white, peck	.68	.65	.45	.45
5	Beans, yellow eyes, peck	.68	65	.55	.55
6	Beef, corned, pound			.07	.08
7	Beef, steak, pound			.16	.18
8	Beef, roasts, pound			.15	.16
9	Beef, soup, pound			.04	.04
10	Butter, best, pound	.19	.19	.16	.18
11	Cabbage, pound			.03	.03
12	Cheese, pound	.15	.14	.14	.14
13	Coal, stove, ton	7.00	7.50	7.00	7.25
14	Cod, fresh, pound			.05	.05
15	Cod, dried, pound	.07	.07	.06	.06
16	Coffee, roasted, Rio, pound	.28	.28	.25	.18
17	Coffee, roasted, Java, pound	.35	.35	.35	.33
18	Corn meal, pound	.03	.03	.02	.02
19	Cranberries, quart	.12	.11	.10	.10
20	Cracked wheat, pound			.07	.07
21	Crackers, pound	.08	.08	.08	.09
22	Eggs, dozen	.17	.18	.14	.14
23	Flour, family, barrel	4.87	4.00	5.25	5.25
24	Flour, best, barrel	5.50	4.75	5.75	5.75
25	Ham, sliced, pound			.16	.16
26	Halibut, fresh, pound			.16	.16
27	Kerosene, gallon	.10	.10	.14	.12
28	Lamb, pound			.16	.16
29	Lard, pound	.14	.11	.09	.09
30	Mackerel, fresh, pound			.12	.14
31	Mackerel, salt, No. 2, pound	.10	.10	.10	.10
32	Milk, quart			.05	.05
33	Molasses, good, gallon	.42	.42	.35	.35
34	Mutton, pound				
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.05	.04	.05	.05
37	Pickles, quart	.10	.10	.10	.10
38	Pork, clear, pound	.11	.10	.09	.10
39	Potatoes, peck	.25	.25	.25	.25
40	Raisins, cooking, pound	.10	.10	.08	.08
41	Rice, pound	.07	.07	.07	.07
42	Salt, twenty pounds, box or bag	.20	.20	.20	.20
43	Sausage, pound			.10	.10
44	Soap, hard, pound	.06	.06	.06	.06
45	Sugar, granulated	.06	.05	.06	.065
46	Tea, Oolong, pound	.45	.45	.40	.45
47	Tripe, pickled, pound			.09	.09
48	Vinegar, gallon	.20	.20	.20	.20
49	Wood, hard, sawed and split, cord	5.50	5.00	4.75	4.75
50	Wood, soft, sawed and split, cord	4.00	3.75	3.50	3.50

RICHMOND.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.25	.20	.20	.40
2	Apples, dried, pound	.10	.10	.07	.10
3	Apples, evaporated, pound	.12	.18	.08	.12
4	Beans, white, peck	.75	.68	.62	.60
5	Beans, yellow eyes, peck	.75	.70	.66	.68
6	Beef, corned, pound	.07	.06	.08	.10
7	Beef, steak, pound	.20	.18	.20	.22
8	Beef, roasts, pound	.18	.15	.16	.18
9	Beef, soup, pound	.04	.04	.05	.05
10	Butter, best, pound	.25	.23	.21	.24
11	Cabbage, pound	.04	.03	.03	.03
12	Cheese, pound	.15	.15	.15	.15
13	Coal, stove, ton	6.50	6.25	.....	.....
14	Cod, fresh, pound	.10	.10	.08	.08
15	Cod, dried, pound	.07	.07	.07	.07
16	Coffee, roasted, Rio, pound	.30	.29	.21	.21
17	Coffee, roasted, Java, pound	.35	.35	.30	.31
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart	.10	.10	.10	.09
20	Cracked wheat, pound	.....	.....	.....	.....
21	Crackers, pound	.08	.08	.07	.08
22	Eggs, dozen	.20	.20	.16	.18
23	Flour, family, barrel	5.00	4.00	4.75	5.75
24	Flour, best, barrel	5.75	4.87	5.25	6.25
25	Ham, sliced, pound	.16	.18	.17	.16
26	Halibut, fresh, pound	.16	.15	.14	.12
27	Kerosene, gallon	.10	.10	.12	.10
28	Lamb, pound	.17	.16	.15	.15
29	Lard, pound	.10	.11	.08	.09
30	Mackerel, fresh, pound	.10	.10	.10	.10
31	Mackerel, salt, No. 2, pound	.10	.10	.10	.10
32	Milk, quart	.06	.06	.06	.06
33	Molasses, good, gallon	.50	.45	.45	.45
34	Mutton, pound	.13	.11	.12	.12
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.05	.04	.04	.04
37	Pickles, quart	.10	.10	.10	.10
38	Pork, clear, pound	.14	.10	.08	.09
39	Potatoes, peck	.40	.25	.30	.32
40	Raisins, cooking, pound	.10	.08	.08	.11
41	Rice, pound	.08	.08	.08	.07
42	Salt, twenty pounds, box or bag	.20	.20	.20	.22
43	Sausage, pound	.13	.12	.12	.12
44	Soap, hard, pound	.08	.08	.07	.06
45	Sugar, granulated	.06	.05	.05	.06
46	Tea, Oolong, pound	.50	.40	.46	.46
47	Tripe, pickled, pound	.08	.08	.08	.08
48	Vinegar, gallon	.25	.23	.20	.23
49	Wood, hard, sawed and split, cord	7.00	6.75	6.50	6.50
50	Wood, soft, sawed and split, cord	4.75	4.50	4.00	4.00

FAIRFIELD.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.25	.25	.25	.20
2	Apples, dried, pound	.10	.12	.08	.10
3	Apples, evaporated, pound	.13	.18	.12	.13
4	Beans, white, peck	.60	.60	.45	.45
5	Beans, yellow eyes, peck	.70	.70	.45	.45
6	Beef, corned, pound	.07	.07	.07	.09
7	Beef, steak, pound	.18	.18	.18	.21
8	Beef, roasts, pound	.12	.12	.12	.15
9	Beef, soup, pound	.05	.05	.05	.06
10	Butter, best, pound	.25	.25	.25	.25
11	Cabbage, pound	.05	.03	.03	.03
12	Cheese, pound	.16	.16	.16	.16
13	Coal, stove, ton	.....	.....	7.00	7.25
14	Cod, fresh, pound	.08	.08	.07	.07
15	Cod, dried, pound	.07	.07	.07	.06
16	Coffee, roasted, Rio, pound	.28	.28	.28	.23
17	Coffee, roasted, Java, pound	.35	.35	.35	.35
18	Corn meal, pound	.03	.03	.03	.025
19	Cranberries, quart	.11	.10	.12	.11
20	Cracked wheat, pound	.05	.05	.05	.05
21	Crackers, pound	.08	.08	.09	.10
22	Eggs, dozen	.20	.20	.17	.16
23	Flour, family, barrel	4.75	4.00	5.50	5.25
24	Flour, best, barrel	5.00	4.50	6.00	5.75
25	Ham, sliced, pound	.18	.18	.16	.16
26	Halibut, fresh, pound	.19	.18	.18	.18
27	Kerosene, gallon	.09	.09	.12	.12
28	Lamb, pound	.12	.10	.15	.16
29	Lard, pound	.15	.12	.09	.09
30	Mackerel, fresh, pound	.16	.15	.16	.17
31	Mackerel, salt, No. 2, pound	.12	.08	.15	.16
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.35	.35	.40	.40
34	Mutton, pound	.10	.08	.08	.08
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.05	.05	.05	.05
37	Pickles, quart	.10	.10	.12	.12
38	Pork, clear, pound	.12	.10	.08	.08
39	Potatoes, peck	.30	.15	.25	.20
40	Raisins, cooking, pound	.10	.08	.08	.08
41	Rice, pound	.06	.06	.09	.10
42	Salt, twenty pounds, box or bag	.22	.22	.25	.25
43	Sausage, pound	.10	.10	.10	.10
44	Soap, hard, pound	.07	.07	.04	.04
45	Sugar, granulated, pound	.06	.05	.06	.06
46	Tea, Oolong, pound	.50	.50	.50	.50
47	Tripe, pickled, pound	.10	.10	.09	.10
48	Vinegar, gallon	.25	.25	.25	.25
49	Wood, hard, sawed and split, cord	5.50	5.50	6.00	6.00
50	Wood, soft, sawed and split, cord	3.50	3.50	4.00	4.00

PITTSFIELD.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.20	.20	.25	.25
2	Apples, dried, pound	.08	.08	.06	.07
3	Apples, evaporated, pound	.14	.16	.10	.11
4	Beans, white, peck	.63	.63	.45	.50
5	Beans, yellow eyes, peck	.63	.63	.45	.50
6	Beef, corned, pound	.08	.07	.07	.07
7	Beef, steak, pound	.17	.16	.15	.15
8	Beef, roasts, pound	.14	.13	.12	.12
9	Beef, soup, pound	.05	.05	.05	.05
10	Butter, best, pound	.22	.20	.16	.16
11	Cabbage, pound	.03	.02	.02	.02
12	Cheese, pound	.13	.12	.13	.13
13	Coal, stove, ton	7.50	7.00	7.00	7.00
14	Cod, fresh, pound	.08	.08	.09	.09
15	Cod, dried, pound	.07	.06	.06	.06
16	Coffee, roasted, Rio, pound	.30	.30	.28	.23
17	Coffee, roasted, Java, pound	.35	.35	.35	.28
18	Corn meal, pound	.02	.02	.01	.01
19	Cranberries, quart	.12	.10	.10	.10
20	Cracked wheat, pound	.05	.05	.05	.05
21	Crackers, pound	.08	.08	.08	.09
22	Eggs, dozen	.16	.16	.14	.14
23	Flour, family, barrel	4.75	3.87	5.00	5.50
24	Flour, best, barrel	5.50	5.00	5.50	6.00
25	Ham, sliced, pound	.17	.16	.14	.14
26	Halibut, fresh, pound	.15	.15	.13	.13
27	Kerosene, gallon	.10	.10	.12	.12
28	Lamb, pound	.14	.13	.12	.12
29	Lard, pound	.10	.10	.08	.09
30	Mackerel, fresh, pound	.12	.11	.14	.13
31	Mackerel, salt, No. 2, pound	.12	.10	.11	.11
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.40	.40	.30	.33
34	Mutton, pound	.11	.10	.11	.12
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.05	.05	.05	.05
37	Pickles, quart	.10	.10	.09	.09
38	Pork, clear, pound	.10	.10	.07	.08
39	Potatoes, peck	.20	.20	.25	.25
40	Raisins, cooking, pound	.13	.10	.10	10
41	Rice, pound	.07	.07	.07	.08
42	Salt, twenty pounds, box or bag	.20	.20	.20	.20
43	Sausage, pound	.12	.11	.10	.10
44	Soap, hard, pound	.06	.06	.06	.05
45	Sugar, granulated	.06	.05	.055	.06
46	Tea, Oolong, pound	.40	.40	.40	.40
47	Tripe, pickled, pound	.10	.09	.08	.08
48	Vinegar, gallon	.20	.20	.20	.20
49	Wood, hard, sawed and split, cord	5.50	5.50	5.00	5.00
50	Wood, soft, sawed and split, cord	3.50	3.50	3.75	3.75

SKOWHEGAN.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.18	.13	.20	.20
2	Apples, dried, pound	.07	.07	.06	.06
3	Apples, evaporated, pound	.11	.16	.11	.12
4	Beans, white, peck	.65	.63	.42	.45
5	Beans, yellow eyes, peck	.60	.63	.45	.48
6	Beef, corned, pound	.07	.08	.06	.08
7	Beef, steak, pound	.16	.16	.22	.24
8	Beef, roasts, pound	.13	.13	.15	.18
9	Beef, soup, pound	.04	.04	.04	.06
10	Butter, best, pound	.20	.19	.18	.18
11	Cabbage, pound	.03	.04	.03	.04
12	Cheese, pound	.15	.14	.14	.14
13	Coal, stove, ton	7.50	7.00	7.00	6.87
14	Cod, fresh, pound	.08	.08	.09	.09
15	Cod, dried, pound	.07	.06	.07	.07
16	Coffee, roasted, Rio, pound	.27	.27	.22	.21
17	Coffee, roasted, Java, pound	.35	.35	.33	.33
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.05	.05	.04	.04
21	Crackers, pound	.08	.07	.08	.08
22	Eggs, dozen	.18	.17	.15	.14
23	Flour, family, barrel	4.87	3.87	5.00	5.25
24	Flour, best, barrel	5.50	4.37	5.25	5.50
25	Ham, sliced, pound	.18	.18	.18	.18
26	Halibut, fresh, pound	.20	.20	.17	.18
27	Kerosene, gallon	.10	.10	.12	.12
28	Lamb, pound	.14	.13	.12	.13
29	Lard, pound	.12	.11	.09	.09
30	Mackerel, fresh, pound	.10	.10	.17	.17
31	Mackerel, salt, No. 2, pound	.12	.09	.12	.12
32	Milk, quart	.06	.06	.06	.06
33	Molasses, good, gallon	.38	.38	.32	.30
34	Mutton, pound	.09	.09	.10	.12
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.05	.05	.04	.04
37	Pickles, quart	.12	.12	.10	.10
38	Pork, clear, pound	.12	.10	.06	.08
39	Potatoes, peck	.35	.20	.25	.25
40	Raisins, cooking, pound	.09	.08	.07	.07
41	Rice, pound	.06	.08	.06	.06
42	Salt, twenty pounds, box or bag	.19	.19	.22	.22
43	Sausage, pound	.12	.10	.10	.10
44	Soap, hard, pound	.07	.07	.05	.05
45	Sugar, granulated	.06	.05	.05	.055
46	Tea, Oolong, pound	.40	.40	.38	.38
47	Tripe, pickled, pound	.08	.08	.09	.09
48	Vinegar, gallon	.20	.20	.20	.20
49	Wood, hard, sawed and split, cord	6.00	5.75	5.00	5.00
50	Wood, soft, sawed and split, cord	3.75	3.50	4.00	3.90

BELFAST.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.30	.20	.....	.....
2	Apples, dried, pound	.08	.10	.07	.07
3	Apples, evaporated, pound	.18	.12	.13	.14
4	Beans, white, peck	.65	.65	.50	.50
5	Beans, yellow eyes, peck	.70	.70	.55	.55
6	Beef, corned, pound	.07	.07	.07	.08
7	Beef, steak, pound	.18	.18	.20	.22
8	Beef, roasts, pound	.15	.15	.14	.15
9	Beef, soup, pound	.04	.04	.03	.04
10	Butter, best, pound	.22	.22	.20	.20
11	Cabbage, pound	.025	.025	.03	.03
12	Cheese, pound	.13	.14	.12	.13
13	Coal, stove, ton	6.50	5.80	6.00	6.25
14	Cod, fresh, pound	.06	.055	.10	.10
15	Cod, dried, pound	.07	.065	.08	.08
16	Coffee, roasted, Rio, pound	.28	.28	.16	.16
17	Coffee, roasted, Java, pound	.38	.38	.25	.25
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart	.....	.....	.....	.....
20	Cracked wheat, pound	.05	.05	.04	.04
21	Crackers, pound	.07	.07	.08	.08
22	Eggs, dozen	.18	.18	.15	.14
23	Flour, family, barrel	5.00	4.00	5.75	6.00
24	Flour, best, barrel	5.50	4.50	6.00	6.25
25	Ham, sliced, pound	.20	.20	.18	.18
26	Halibut, fresh, pound	.16	.15	.17	.18
27	Kerosene, gallon	.10	.10	.12	.12
28	Lamb, pound	.12	.12	.14	.15
29	Lard, pound	.14	.11	.08	.09
30	Mackerel, fresh, pound	.10	.11	.12	.12
31	Mackerel, salt, No. 2, pound	.10	.11	.10	.10
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.45	.45	.35	.38
34	Mutton, pound	.10	.10	.08	.08
35	Oat meal, pound	.05	.05	.04	.035
36	Onions, pound	.04	.04	.05	.045
37	Pickles, quart	.12	.12	.12	.12
38	Pork, clear, pound	.13	.10	.07	.08
39	Potatoes, peck	.28	.19	.25	.25
40	Raisins, cooking, pound	.05	.05	.07	.07
41	Rice, pound	.08	.08	.07	.07
42	Salt, twenty pounds, box or bag	.20	.20	.20	.20
43	Sausage, pound	.12	.12	.11	.12
44	Soap, hard, pound	.05	.05	.05	.05
45	Sugar, granulated	.05	.05	.055	.06
46	Tea, Oolong, pound	.40	.40	.40	.40
47	Tripe, pickled, pound	.08	.08	.08	.07
48	Vinegar, gallon	.25	.25	.20	.20
49	Wood, hard, sawed and split, cord	6.00	6.00	6.50	6.50
50	Wood, soft, sawed and split, cord	4.00	4.00	4.00	4.00

STOCKTON SPRINGS.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.....	.....	.....	.....
2	Apples, dried, pound	.09	.10	.07	.08
3	Apples, evaporated, pound	.14	.15	.14	.14
4	Beans, white, peck	.65	.70	.50	.55
5	Beans, yellow eyes, peck	.70	.70	.50	.55
6	Beef, corned, pound	.08	.07	.07	.08
7	Beef, steak, pound	.18	.18	.17	.18
8	Beef, roasts, pound	.16	.15	.14	.15
9	Beef, soup, pound	.04	.04	.03	.03
10	Butter, best, pound	.23	.22	.20	.18
11	Cabbage, pound	.04	.03	.03	.03
12	Cheese, pound	.14	.13	.12	.13
13	Coal, stove, ton	6.50	6.00	5.75	6.00
14	Cod, fresh, pound	.09	.08	.05	.05
15	Cod, dried, pound	.08	.07	.08	.08
16	Coffee, roasted, Rio, pound	.30	.28	.20	.20
17	Coffee, roasted, Java, pound	.38	.37	.28	.28
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart	.10	.10	.10	.10
20	Cracked wheat, pound	.05	.05	.04	.04
21	Crackers, pound	.10	.10	.07	.07
22	Eggs, dozen	.18	.17	.15	.14
23	Flour, family, barrel	5.00	4.00	5.25	5.50
24	Flour, best, barrel	5.50	4.50	6.75	6.00
25	Ham, sliced, pound	.....	.....	.14	.14
26	Halibut, fresh, pound	.16	.16	.15	.14
27	Kerosene, gallon	.11	.10	.12	.12
28	Lamb, pound	.14	.13	.13	.13
29	Lard, pound	.13	.11	.08	.09
30	Mackerel, fresh, pound	.11	.11	.14	.13
31	Mackerel, salt, No. 2, pound	.10	.10	.10	.10
32	Milk, quart	.05	.05	.05	.05
33	Molasses, good, gallon	.45	.45	.40	.38
34	Mutton, pound	.12	.11	.10	.11
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.04	.04	.04	.04
37	Pickles, quart	.12	.12	.10	.10
38	Pork, clear, pound	.13	.11	.07	.08
39	Potatoes, peck	.28	.20	.25	.25
40	Raisins, cooking, pound	.09	.08	.10	.10
41	Rice, pound	.09	.08	.07	.08
42	Salt, twenty pounds, box or bag	.20	.20	.20	.20
43	Sausage, pound	.12	.12	.11	.12
44	Soap, hard, pound	.06	.06	.05	.05
45	Sugar, granulated	.06	.05	.055	.06
46	Tea, Oolong, pound	.45	.45	.45	.45
47	Tripe, pickled, pound	.10	.09	.08	.08
48	Vinegar, gallon	.25	.25	.25	.25
49	Wood, hard, sawed and split, cord	5.00	5.00	5.00	5.00
50	Wood, soft, sawed and split, cord	3.75	3.75	3.75	3.75

CALAIS.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck			.25	.30
2	Apples, dried, pound			.10	.10
3	Apples, evaporated, pound			.11	.14
4	Beans, white, peck			.45	.55
5	Beans, yellow eyes, peck			.55	.58
6	Beef, corned, pound			.08	.08
7	Beef, steak, pound			.18	.19
8	Beef, roasts, pound			.14	.15
9	Beef, soup, pound			.03	.03
10	Butter, best, pound			.17	.18
11	Cabbage, pound			.03	.03
12	Cheese, pound			.14	.13
13	Coal, stove, ton			5.75	5.75
14	Cod, fresh, pound			.05	.05
15	Cod, dried, pound			.06	.06
16	Coffee, roasted, Rio, pound			.25	.25
17	Coffee, roasted, Java, pound			.35	.35
18	Corn meal, pound			.025	.025
19	Cranberries, quart			.13	.14
20	Cracked wheat, pound			.06	.06
21	Crackers, pound			.08	.09
22	Eggs, dozen			.13	.13
23	Flour, family, barrel			5.00	5.50
24	Flour, best, barrel			5.50	6.00
25	Ham, sliced, pound			.18	.18
26	Halibut, fresh, pound			.15	.16
27	Kerosene, gallon			.13	.13
28	Lamb, pound			.10	.12
29	Lard, pound			.07	.08
30	Mackerel, fresh, pound			.13	.14
31	Mackerel, salt, No. 2, pound			.08	.08
32	Milk, quart			.06	.06
33	Molasses, good, gallon			.33	.35
34	Mutton, pound			.10	.12
35	Oat meal, pound			.03	.04
36	Onions, pound			.04	.05
37	Pickles, quart			.10	.10
38	Pork, clear, pound			.07	.08
39	Potatoes, peck			.25	.25
40	Raisins, cooking, pound			.07	.08
41	Rice, pound			.06	.07
42	Salt, twenty pounds, box or bag			.25	.25
43	Sausage, pound			.10	.12
44	Soap, hard, pound			.05	.05
45	Sugar, granulated			.05	.06
46	Tea, Oolong, pound			.42	.42
47	Tripe, pickled, pound			.06	.07
48	Vinegar, gallon			.25	.25
49	Wood, hard, sawed and split, cord			6.00	6.00
50	Wood, soft, sawed and split, cord			3.00	3.50

EASTPORT.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.40	.45	.45	.60
2	Apples, dried, pound	.10	.10	.07	.08
3	Apples, evaporated, pound	.14	.15	.10	.13
4	Beans, white, peck	.70	.70	.50	.50
5	Beans, yellow eyes, peck	.75	.75	.55	.55
6	Beef, corned, pound			.08	.08
7	Beef, steak, pound			.18	.20
8	Beef, roasts, pound			.12	.14
9	Beef, soup, pound			.04	.04
10	Butter, best, pound	.22	.25	.20	.20
11	Cabbage, pound			.03	.03
12	Cheese, pound	.15	.16	.12	.12
13	Coal, stove, ton			5.00	6.00
14	Cod, fresh, pound				
15	Cod, dried, pound			.04	.04
16	Coffee, roasted, Rio, pound			.23	.21
17	Coffee, roasted, Java, pound	.35	.35	.35	.33
18	Corn meal, pound	.03	.03	.01	.01
19	Cranberries, quart			.10	.10
20	Cracked wheat, pound			.08	.08
21	Crackers, pound	.10	.10	.10	.11
22	Eggs, dozen	.18	.18	.17	.16
23	Flour, family, barrel	4.50	3.50	5.00	5.50
24	Flour, best, barrel	5.50	4.75	5.50	6.00
25	Ham, sliced, pound			.18	.18
26	Halibut, fresh, pound			.12	.15
27	Kerosene, gallon	.14	.12	.12	.12
28	Lamb, pound			.12	.14
29	Lard, pound	.12	.12	.09	.10
30	Mackerel, fresh, pound				
31	Mackerel, salt, No. 2, pound				
32	Milk, quart			.06	.06
33	Molasses, good, gallon	.40	.40	.35	.35
34	Mutton, pound			.10	.12
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.04	.04	.05	.05
37	Pickles, quart	.10	.10	.08	.09
38	Pork, clear, pound	.12	.10	.08	.09
39	Potatoes, peck	.20	.20	.30	.28
40	Raisins, cooking, pound	.10	.10	.06	.08
41	Rice, pound	.08	.08	.08	.08
42	Salt, twenty pounds, box or bag	.25	.25	.25	.25
43	Sausage, pound			.12	.12
44	Soap, hard, pound	.05	.05	.05	.05
45	Sugar, granulated	.06	.06	.05	.07
46	Tea, Oolong, pound	.40	.40	.40	.43
47	Tripe, pickled, pound			.10	.10
48	Vinegar, gallon	.30	.30	.25	.25
49	Wood, hard, sawed and split, cord				
50	Wood, soft, sawed and split, cord				

BIDDEFORD.

	Articles.	Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.....	.....	.08	.10
2	Apples, dried, pound	.....	.....	.09	.10
3	Apples, evaporated, pound	.....	.....	.11	.12
4	Beans, white, peck	.50	.60	.40	.45
5	Beans, yellow eyes, peck	.75	.65	.50	.50
6	Beef, corned, pound	.09	.08	.10	.10
7	Beef, steak, pound	.25	.20	.20	.20
8	Beef, roasts, pound	.10	.10	.12	.15
9	Beef, soup, pound	.05	.05	.06	.06
10	Butter, best, pound	.23	.28	.22	.25
11	Cabbage, pound	.02	.01	.03	.03
12	Cheese, pound	.13	.14	.16	.14
13	Coal, stove, ton	6.25	5.75	7.00	6.25
14	Cod, fresh, pound	.....	.....	.11	.11
15	Cod, dried, pound	.07	.07	.10	.10
16	Coffee, roasted, Rio, pound	.25	.28	.20	.20
17	Coffee, roasted, Java, pound	.35	.35	.28	.30
18	Corn meal, pound	.02	.02	.02	.02
19	Cranberries, quart	.....	.....	.11	.11
20	Cracked wheat, pound	.05	.05	.02	.02
21	Crackers, pound	.09	.08	.08	.08
22	Eggs, dozen	.23	.20	.16	.19
23	Flour, family, barrel	4.50	3.25	5.25	5.50
24	Flour, best, barrel	5.00	4.35	5.85	6.00
25	Ham, sliced, pound	.22	.20	.13	.13
26	Halibut, fresh, pound	.....	.....	.18	.16
27	Kerosene, gallon	.10	.10	.12	.10
28	Lamb, pound	.16	.13	.12	.12
29	Lard, pound	.13	.10	.09	.09
30	Mackerel, fresh, pound	.15	.11	.12	.12
31	Mackerel, salt, No. 2, pound	.15	.11	.10	.10
32	Milk, quart	.06	.06	.05	.05
33	Molasses, good, gallon	.40	.40	.40	.40
34	Mutton, pound	.10	.10	.11	.11
35	Oat meal, pound	.05	.05	.04	.04
36	Onions, pound	.03	.04	.04	.04
37	Pickles, quart	.10	.10	.08	.08
38	Pork, clear, pound	.12	.10	.09	.09
39	Potatoes, peck	.20	.15	.18	.20
40	Raisins, cooking, pound	.08	.08	.10	.10
41	Rice, pound	.07	.08	.07	.07
42	Salt, twenty pounds, box or bag	.20	.20	.20	.20
43	Sausage, pound	.10	.12	.10	.12
44	Soap, hard, pound	.05	.05	.04	.04
45	Sugar, granulated	.06	.05	.065	.06
46	Tea, Oolong, pound	.50	.50	.50	.50
47	Tripe, pickled, pound	.08	.08	.07	.07
48	Vinegar, gallon	.20	.20	.20	.20
49	Wood, hard, sawed and split, cord	5.00	5.00	6.75	6.25
50	Wood, soft, sawed and split, cord	4.00	4.00	5.50	5.00

SACO.

	ARTICLES.	AVERAGE FOR JULY.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.15	.13	.10	.10
2	Apples, dried, pound	.08	.10	.10	.10
3	Apples, evaporated, pound	.12	.17	.12	.12
4	Beans, white, peck	.70	.70	.40	.43
5	Beans, yellow eyes, peck	.70	.70	.45	.48
6	Beef, corned, pound	.07	.07	.11	.12
7	Beef, steak, pound	.17	.17	.19	.20
8	Beef, roasts, pound	.12	.15	.11	.12
9	Beef, soup, pound	.05	.05	.06	.06
10	Butter, best, pound	.30	.30	.20	.25
11	Cabbage, pound	.01	.01	.03	.03
12	Cheese, pound	.14	.12	.16	.12
13	Coal, stove, ton	6.50	5.75	7.00	6.25
14	Cod, fresh, pound	.....	.06	.10	.10
15	Cod, dried, pound	.....	.07	.09	.09
16	Coffee, roasted, Rio, pound	.....	.28	.20	.20
17	Coffee, roasted, Java, pound	.....	.35	.29	.29
18	Corn meal, pound	.....	.02	.025	.03
19	Cranberries, quart	.....	.....	.12	.11
20	Cracked wheat, pound	.....	.05	.03	.03
21	Crackers, pound	.....	.05	.09	.09
22	Eggs, dozen	.....	.22	.18	.19
23	Flour, family, barrel	.....	3.50	5.50	5.87
24	Flour, best, barrel	.....	4.25	5.93	6.25
25	Ham, sliced, pound	.....	.18	.12	.14
26	Halibut, fresh, pound	.....	.16	.16	.15
27	Kerosene, gallon	.08	.08	.12	.10
28	Lamb, pound	.14	.14	.12	.13
29	Lard, pound	.14	.12	.09	.09
30	Mackerel, fresh, pound	.12	.10	.12	.12
31	Mackerel, salt, No. 2, pound	.14	.13	.10	.10
32	Milk, quart	.06	.06	.05	.05
33	Molasses, good, gallon	.40	.40	.43	.43
34	Mutton, pound	.10	.12	.12	.12
35	Oat meal, pound	.04	.04	.03	.03
36	Onions, pound	.04	.03	.04	.05
37	Pickles, quart	.08	.08	.08	.08
38	Pork, clear, pound	.10	.09	.09	.09
39	Potatoes, peck	.18	.15	.18	.20
40	Raisins, cooking, pound	.10	.07	.10	.10
41	Rice, pound	.06	.06	.08	.08
42	Salt, twenty pounds, box or bag	.18	.18	.22	.22
43	Sausage, pound	.13	.12	.10	.11
44	Soap, hard, pound	.05	.05	.04	.04
45	Sugar, granulated	.05	.055	.07	.06
46	Tea, Oolong, pound	.50	.50	.50	.50
47	Tripe, pickled, pound	.06	.06	.08	.08
48	Vinegar, gallon	.20	.20	.19	.19
49	Wood, hard, sawed and split, cord	.....	6.00	7.00	6.00
50	Wood, soft, sawed and split, cord	.....	4.50	5.50	5.00

RECAPITULATION.

Number.	Articles.	General Average for July.			
		1893.	1894.	1897.	1898.
1	Apples, cooking, peck	.231	.232	.245	.267
2	Apples, dried, pound	.082	.092	.077	.084
3	Apples, evaporated, pound	.135	.161	.116	.125
4	Beans, white, peck	.662	.667	.473	.495
5	Beans, yellow eyes, peck	.699	.713	.527	.543
6	Beef, corned, pound	.075	.069	.072	.079
7	Beef, steak, pound	.181	.179	.181	.192
8	Beef, roasts, pound	.145	.14	.134	.144
9	Beef, soup, pound	.044	.042	.041	.044
10	Butter, best, pound	.235	.23	.197	.202
11	Cabbage, pound	.027	.023	.029	.029
12	Cheese, pound	.148	.147	.142	.14
13	Coal, stove, ton	6.66	6.40	6.48	6.45
14	Cod, fresh, pound	.069	.061	.069	.069
15	Cod, dried, pound	.072	.067	.071	.07
16	Coffee, roasted, Rio, pound	.283	.286	.224	.207
17	Coffee, roasted, Java, pound	.357	.359	.321	.312
18	Corn meal, pound	.024	.021	.022	.022
19	Cranberries, quart	.105	.11	.103	.106
20	Cracked wheat, pound	.048	.048	.044	.044
21	Crackers, pound	.081	.077	.081	.082
22	Eggs, dozen	.191	.179	.154	.153
23	Flour, family, barrel	4.67	3.95	5.24	5.54
24	Flour, best, barrel	5.47	4.68	5.75	6.06
25	Ham, sliced, pound	.179	.177	.158	.159
26	Halibut, fresh, pound	.158	.154	.151	.148
27	Kerosene, gallon	.104	.10	.122	.117
28	Lamb, pound	.136	.132	.133	.14
29	Lard, pound	.124	.11	.086	.089
30	Mackerel, fresh, pound	.122	.111	.139	.143
31	Mackerel, salt, No. 2, pound	.111	.099	.109	.11
32	Milk, quart	.054	.055	.054	.053
33	Molasses, good, gallon	.415	.41	386	.389
34	Mutton, pound	.099	.095	.099	.103
35	Oat meal, pound	.05	.049	.042	.042
36	Onions, pound	.044	.042	.045	.045
37	Pickles, quart	.118	.11	.103	.103
38	Pork, clear, pound	.119	.104	.082	.086
39	Potatoes, peck	.25	.228	.249	.242
40	Raisins, cooking, pound	.096	.086	.086	.089
41	Rice, pound	.078	.076	.078	.079
42	Salt, twenty pounds, box or bag	.208	.207	.213	.213
43	Sausage, pound	.12	.111	.109	.113
44	Soap, hard, pound	.059	.058	.053	.052
45	Sugar, granulated	.056	.054	.058	.061
46	Tea, Oolong, pound	.457	.462	.447	.447
47	Tripe, pickled, pound	.087	.079	.078	.079
48	Vinegar, gallon	.239	.235	.216	.216
49	Wood, hard, sawed and split, cord	5.81	5.92	5.81	5.67
50	Wood, soft, sawed and split, cord	3.89	4.21	4.08	4.01

In gathering information for the above set of tables, an average or medium retail price was taken of the fifty articles named, for the month of July in the years 1893, 1894, 1897 and 1898, covering thirty cities and towns in different sections of the State. The list includes the principal articles of food, fuel and light, used in the average family.

In a general survey of the tables it will be noticed that prices in different towns are not uniform, some will be higher and others lower in some towns than in others similarly situated, for the only apparent reason that some dealers make a specialty of low prices on one article and others on another. The only article on the list, the retail price of which is much affected by freights, is coal, this almost invariably showing an advance in price in the interior where railroad freights have to be added, over that of port towns. The prices of fresh mackerel and halibut fluctuate from week to week according to the available supply, but fresh cod seems to have a standard price, varying considerably in different towns, but not fluctuating from time to time, as the supply is more constant and uniform. The price of early cooking apples in July seems to depend almost wholly on the supply offered in a given locality, as a far greater range of prices is shown than in any other article. The prices of dried and evaporated apples depend largely on the abundance or scarcity of previous crops. The price of cranberries in July is nominal, being at that time practically out of the market. The prices of eggs and butter in midsummer would naturally be lower, and that of new potatoes higher, than at other times of year. The prices given for flour in 1898 are abnormally high. The war speculation started in the West had carried July prices up to a point which could not be maintained, so the figures given are not a fair standard of the year's prices.

The table of average prices was made up by adding the price of each article named in the several towns and dividing the amount by the number of towns represented. A study of this last table is of interest as it shows the tendency of prices as a whole for the years named and also the tendency of special articles up or down and whether slight or very marked. In the first instance, by adding the average price of all the articles in each of the years named, and taking that of 1893 as a basis, we

find that in 1894 the prices averaged 4.3 per cent lower, in 1897 three-tenths of one per cent higher, and 1898 1.7 per cent higher than in 1893.

The articles showing the most downward tendency of prices are beans, coffee, pork, lard, ham, eggs and butter. Cheese shows a constant though slight decline, but beef, lamb and mutton show higher prices than in 1893. Coal, with small fluctuations, shows a slight downward tendency. The average prices of wood as a whole, though influenced by constantly changing local prices, are now not much different from 1893, hard being a little lower and soft a little higher. Kerosene is somewhat higher, and soap, vinegar and some minor articles lower than in 1893.

FARM ANIMALS.

This bureau has made some careful compilations, from the reports of the United States census, from the United States government estimates, and from the various reports of the Maine Valuation Commissions and Maine State Assessors, covering the numbers of the different classes of farm animals at different periods since the date of the admission of Maine into the Union in 1820, which are herewith presented in the form of tables, comparisons, etc. The information contained in the census reports for 1820 and 1830 is very meager compared with that contained in those of a later date, and the desired facts and figures are entirely lacking, but the following table taken from that admirable work, "A Survey of the State of Maine," by Moses Greenleaf, published in 1829, will partly supply the deficiency.

FARM ANIMALS IN MAINE IN 1820.

COUNTIES.	Horses 3 years old and upward.	Oxen 4 years old and upward.	Cows and steers 3 years old and upward.	Swine 6 months old and upward.
York	3,074	8,324	16,365	9,266
Cumberland	2,965	7,443	14,310	9,314
Lincoln	2,468	7,756	15,445	8,873
Waldo	1,395	4,088	7,559	5,481
Hancock	520	3,012	6,235	3,600
Washington	184	1,467	2,666	2,211
Kennebec	3,051	6,521	12,915	10,478
Oxford	2,041	4,502	9,102	7,393
Somerset	1,414	3,180	6,807	6,641
Penobscot	737	1,931	3,687	3,382
Total	17,849	48,224	95,091	66,639

It will be noticed that in 1820, Maine contained but ten counties and, at that time, had a population of 298,269. Approximately, the number of horses to each 100 of population was 6; of oxen, 16; of cows and three-year-old steers, 32, and of swine, 22. Sheep are not mentioned, and neat cattle under three years old are also omitted. York county contained the largest number of horses, oxen and cows and steers, but was surpassed by Kennebec and Cumberland in the number of swine, while Washington county contained the smallest number of all classes of farm animals.

The next available figures are from the census of 1840. It should always be borne in mind that the census enumerations cover only such animals as are kept on farms of three acres or more. The number of counties had increased to thirteen, Aroostook, Franklin and Piscataquis having been added to the list, and the population had increased to 501,793. In this count sheep were included, but neat cattle were all lumped together. The following table shows the number of

FARM ANIMALS IN MAINE IN 1840.

COUNTIES.	Horses.	Neat cattle.	Sheep.	Swine.
Aroostook	1,715	6,109	9,905	4,303
Cumberland	6,944	37,586	59,585	12,033
Franklin	4,115	19,835	64,717	6,733
Hancock	1,825	17,950	32,758	6,716
Kennebec	7,649	35,595	82,759	11,825
Lincoln	5,739	39,904	71,473	12,066
Oxford	4,246	24,995	63,507	8,229
Penobscot	5,088	19,416	35,312	9,442
Piscataquis	1,934	8,642	17,830	4,720
Somerset	6,139	27,366	66,062	11,650
Waldo	4,955	27,826	55,318	10,451
Washington	1,699	12,021	20,561	4,827
York	7,160	50,010	69,477	14,391
Total	59,208	327,255	649,261	117,386

While the figures given for 1820 include only such neat cattle as are three years old or older, it is evident that the census of 1840, as well as those taken since that date, include all neat cattle of one year old or older. The census enumerators for 1850 had specific instructions to include in the count of neat cattle all animals of one year old or older. In 1840, Kennebec county contained the largest number of horses, while York possessed the largest number of neat cattle, sheep and swine. The least number of horses were owned in Washington county, while in neat cattle, sheep and swine, Aroostook stood at the foot of the list.

It is somewhat remarkable that the number of sheep and swine in the State were at this time far in excess of what they have attained since, and that the number of neat cattle had then nearly reached its highest point. But existing conditions favored large flocks and herds. Forage was abundant. A large part of our population were opening up new farms in the wilderness and the acreage of burnt land under cultivation was far in excess of the acreage under cultivation on the same farms today. The virgin soil was rich and produced abundant crops of corn, beans, grain and hay, year after year, without dressing. The abundant crops of hay supplemented by large amounts of "loose fodder" consisting of straw, corn fodder and bean fodder, which were gathered from twenty to thirty acres of crops such as were then ordinarily grown on a single farm, required a large stock of cattle and sheep to consume them, while the field of pumpkins and the potatoes which, before the days of the potato rot, grew almost spontaneously, as well as the large amount of green pig corn, and the corn and grain to be fed later on, all tended to increase the number of swine and make fat hogs. Then the family had to depend almost wholly on the farm for supplies of food and clothing. The wool was spun on the hand wheel, woven on the hand loom, and the cloth cut and made into clothing for the family by the good housewife and her daughters, under clothing and outer clothing for men, women and children. But few then wore "store clothes." The flour and meal were ground at the mill from wheat and corn grown on the farm. All the pork and lard the farmer used were of his own production, while his fresh meat outside of pork came from lambs slaughtered during the summer and fall and perhaps a "beef creature" killed

late in the season and the meat frozen for winter use. . There was no "Chicago fresh beef" in those days, nor meat and fish carts run through the country as now.

The number of horses at this time to each 100 of inhabitants was 12; of neat cattle, 65; of sheep, 129; of swine, 23, and of all farm animals, 229.

FARM ANIMALS IN MAINE IN 1850.

COUNTIES.	Horses.	Cows.	Oxen.	Other cattle.	Sheep.	Swine.
Aroostook	1,274	3,285	1,809	3,499	11,411	2,086
Cumberland	4,982	15,914	9,313	11,453	33,693	6,845
Franklin	2,730	7,790	5,409	10,201	48,018	3,174
Hancock	986	5,986	3,810	4,150	25,420	1,846
Kennebec	5,756	15,798	9,501	14,323	48,448	6,146
Lincoln	3,778	13,950	9,016	11,671	41,525	5,113
Oxford	4,441	13,617	8,739	18,960	49,755	6,764
Penobscot	3,438	10,252	5,301	7,096	27,228	4,581
Piscataquis	1,530	4,396	2,651	4,256	17,856	2,254
Somerset	4,136	11,145	7,731	14,286	60,024	3,646
Waldo	3,445	11,381	7,404	10,295	44,522	3,802
Washington	1,040	4,718	2,929	2,698	13,642	1,444
York	4,185	15,324	10,280	13,002	30,035	6,897
Total	41,721	133,556	83,893	125,890	451,577	54,598

In 1850 the United States census divided the neat cattle into three classes, viz: Cows, oxen, and "other cattle," including all one year old or older, a division which it has followed ever since. The population of the State had increased to 583,169, but no change had been made in county lines during the decade. Kennebec county contained the largest number of horses, Cumberland of cows, York of oxen and swine, Oxford of other cattle, and Somerset of sheep. Since that time Somerset county has ever kept the lead in the number of sheep. Washington county contained the least number of horses, other cattle, and swine, and Aroostook of cows, oxen and sheep. The number of horses to each 100 of population was 7; of cows, 23; of oxen, 14; of other cattle, 22; of all neat cattle, 59; of sheep, 77; of swine, 9, and of

all farm animals, 152. The number of horses had fallen off during the decade from 59,208 to 41,721, a loss of 17,478. The total of neat cattle showed an increase of 16,084, from 327,255 in 1840 to 343,339 in 1850. Sheep showed a fall off from 649,261 to 451,577, or a total fall off in the ten years of 197,684. The decline in the number of swine was the most marked of any class of farm animals, dropping from 117,386 in 1840 to 54,598, a loss of 62,788 or 53½ per cent.

FARM ANIMALS IN MAINE IN 1860.

COUNTIES.	Horses.	Cows.	Oxen.	Other cattle.	Sheep.	Swine.
Androscoggin	3,129	8,105	4,410	7,721	15,155	3,148
Aroostook	3,654	6,541	2,496	7,156	18,043	4,521
Cumberland	4,768	13,137	6,568	8,785	16,377	5,037
Franklin	3,686	7,315	5,070	10,529	48,462	2,275
Hancock	1,819	7,445	3,769	5,943	26,167	2,254
Kennebec	6,817	14,664	7,854	13,197	43,552	5,760
Knox	1,531	4,806	2,168	4,157	12,651	1,640
Lincoln	2,135	7,117	4,058	6,569	15,501	2,344
Oxford	6,068	13,531	8,244	18,715	42,006	4,837
Penobscot	6,846	14,034	6,913	14,080	40,617	4,676
Piscataquis	2,436	4,811	2,488	6,030	18,634	1,835
Sagadahoc	1,288	3,719	1,958	3,728	8,777	1,134
Somerset	5,625	11,252	7,449	14,611	76,001	3,684
Waldo	4,091	9,444	5,084	9,902	34,873	3,390
Washington	1,786	6,306	2,377	5,674	13,581	2,146
York	4,958	15,087	8,892	13,030	22,075	6,102
Total	60,637	147,314	79,792	149,827	452,472	54,783

In 1860 we find the number of counties in the State to be sixteen, Androscoggin, Knox and Sagadahoc having been added since 1850. No change in counties has since been made except some slight changes in county lines, which do not materially affect the settled portions of the State. The population had increased to 628,279. Kennebec county contained the largest number of horses, York of cows, oxen and swine, Oxford of

other cattle, and Somerset of sheep, while the least number of all classes of farm animals were owned in Sagadahoc county. The number of horses in the State to each 100 of population was 9; of cows, 22; of oxen, 13; of other cattle, 24; of all neat cattle, 59; of sheep, 72; of swine, 9, and of all farm animals, 149. The increase in the number of horses was very marked but the percentage of increase in the number of neat cattle was very small, while the number of sheep and swine remained practically the same.

FARM ANIMALS IN MAINE IN 1870.

COUNTIES.	Horses.	Cows.	Oxen.	Other cattle.	Sheep.	Swine.
Androscoggin	3,645	7,872	2,996	6,557	12,281	2,372
Aroostook	5,072	7,190	1,681	8,331	24,369	4,017
Cumberland	5,925	13,354	4,890	8,775	13,413	5,201
Franklin	4,096	7,108	4,321	9,580	57,093	1,604
Hancock	1,958	5,777	2,399	5,103	20,084	1,444
Kennebec	7,563	13,252	5,481	12,163	31,975	4,086
Knox	1,785	4,608	1,653	3,790	10,600	1,291
Lincoln	2,260	6,136	3,656	6,469	13,936	1,437
Oxford	6,001	13,105	7,263	17,537	35,220	3,333
Penobscot	9,263	14,815	4,378	15,482	46,429	5,050
Piscataquis	2,938	4,714	2,250	5,764	21,805	2,295
Sagadahoc	1,340	3,125	1,668	2,835	8,151	1,098
Somerset	7,222	11,132	5,886	14,954	78,400	3,590
Waldo	5,116	8,861	3,913	10,598	31,343	3,064
Washington	2,139	5,341	1,446	4,702	15,211	1,431
York	5,191	12,869	6,649	10,632	14,356	4,447
Total	71,514	139,259	60,530	143,272	434,666	45,760

From 1860 to 1870, the period covered by the Civil War, the population of the State had decreased from 628,279 to 626,915, a net loss of 1,364, and, while the number of horses had materially increased, there was nearly a uniform, but not a very marked, decrease in all other classes of farm animals. Penobscot county contained the largest number of horses and cows, Oxford of oxen and other cattle, Somerset of sheep and Cumberland of

swine, while Sagadahoc county contained the least number of horses, cows, other cattle, sheep and swine, and Washington of oxen. The number of horses to each 100 of population was 11; of cows, 22; of oxen, 10; of other cattle, 23; of all neat cattle, 55; of sheep, 69; of swine, 7, and of all farm animals, 142.

FARM ANIMALS IN MAINE IN 1880.

COUNTIES.	Horses.	Cows.	Oxen.	Other cattle.	Sheep.	Swine.
Androscoggin	4,236	8,733	1,869	5,907	13,160	5,191
Aroostook	9,054	12,461	2,252	14,031	39,615	6,638
Cumberland	7,087	13,590	2,916	7,682	11,799	6,040
Franklin	4,201	6,391	3,161	8,913	77,547	3,056
Hancock	3,154	7,312	2,079	5,214	23,525	2,402
Kennebec	8,407	13,718	3,275	10,600	43,940	7,430
Knox	2,704	5,399	1,502	3,231	11,366	2,368
Lincoln	2,894	6,070	2,698	4,428	10,580	2,832
Oxford	6,886	12,620	5,296	19,349	39,371	5,239
Penobscot	11,116	17,172	3,205	17,694	72,596	9,205
Piscataquis	3,372	5,027	1,282	5,389	35,192	3,388
Sagadahoc	1,755	3,143	1,008	2,586	6,722	1,454
Somerset	7,987	10,429	3,911	12,259	116,910	5,509
Waldo	5,821	8,763	2,636	8,333	38,417	4,924
Washington	3,186	7,379	1,270	6,582	15,019	2,547
York	5,988	12,638	4,689	8,329	10,189	6,056
Total	87,848	150,845	43,049	140,527	565,918	74,369

In 1880 the population of the State had increased to 648,936. There was a large increase in the number of horses, cows, sheep and swine, while the number of oxen showed a decided decrease and other cattle a slight loss. Penobscot county contained the largest number of horses, cows, other cattle and swine, Oxford of oxen and Somerset of sheep, while Sagadahoc county contained the smallest number in all classes of farm animals. The number of horses to each 100 of population was 14; of cows, 23; of oxen, 7; of other cattle, 22; of all neat cattle, 52; of sheep, 87; of swine, 11, and of all farm animals, 164.

The reports thus far received from the census bureau for 1890 do not give the number of farm animals by counties, but the totals for the State are as follows:

FARM ANIMALS IN MAINE IN 1890.

Horses	109,156
Cows	157,278
Oxen	33,105
Other cattle	108,727
Sheep	370,484
Swine	91,297

The population in 1890 had increased to 661,086. Compared with 1880, horses and swine show a large increase and cows had made a moderate gain, while oxen, other cattle and sheep showed a large fall off in numbers. The number of horses to each 100 of population was 17; of cows, 24; of oxen, 5; of other cattle, 16; of all neat cattle, 45; of sheep, 56; of swine, 14; and of all farm animals, 132.

FARM ANIMALS IN MAINE.

Showing the difference between the estimates of the United States Department of Agriculture and the compilations of the State Board of Assessors, covering all the years for which both the estimates and compilations are available.

HORSES.

YEAR.	United States Department of Agriculture estimates.	Maine State Assessors compilations.	DIFFERENCE BETWEEN U. S. ESTIMATES AND STATE COMPILATIONS.	
			Estimates more.	Estimates less.
1889	96,754	102,141		5,387
1892	110,719	117,332		6,613
1893	111,051	120,851		9,800
1894	116,604	125,184		8,580
1895	115,438	128,151		12,713
1896	116,592	132,334		15,742
1897	115,426	132,480		17,054
1898	114,272	132,592		18,320

COWS.

1889	174,207	142,032	32,175	
1892	175,879	138,994	36,885	
1893	174,120	142,649	31,471	
1894	177,602	141,262	36,340	
1895	182,930	142,967	39,963	
1896	192,077	146,044	46,033	
1897	192,077	141,522	50,555	
1898	195,919	137,444	58,475	

OXEN AND OTHER CATTLE.

1889	185,160	163,673	21,487	
1892	152,664	138,601	14,063	
1893	145,031	133,502	11,529	
1894	130,528	110,643	19,885	
1895	124,002	100,643	23,359	
1896	117,802	108,178	9,624	
1897	108,378	112,627		4,249
1898	107,294	118,415		11,121

SHEEP.

1889	547,725	350,392	197,333	
1892	569,577	370,602	198,975	
1893	398,704	356,182	42,522	
1894	326,937	324,550	2,387	
1895	284,435	314,432		29,997
1896	258,836	276,386		17,550
1897	230,364	227,178	3,186	
1898	232,668	238,319		5,651

SWINE.

1889	73,188	37,509	35,679	
1892	76,688	33,445	43,243	
1893	76,918	33,561	43,357	
1894	79,995	37,634	42,361	
1895	79,195	44,517	34,678	
1896	78,403	48,831	29,572	
1897	76,835	42,716	34,119	
1898	76,067	37,915	38,152	

In the above table the figures for 1889, in the column of Maine State Assessors' Compilations, were compiled by the State Valuation Commission of 1890, all the others by the State Assessors. The limit of age is the same in both the estimates and compilations, viz: Horses four years old and older, neat cattle one year old and older, and sheep and swine six months old and older. The estimates are made up for January 1st and the compilations for April 1st, for each year. The compilations include all farm animals whether on farms or in villages and cities, while the entimates omit all animals owned on places of less than three acres except those small places from which there was actually sold during the year, produce of $500 or over in value. The compilations are made up from the sworn returns of the local assessors of each city, town and plantation in the State, made up by them from actual count, while the estimates are made up from reports from some thirty-five intelligent correspondents living in various parts of the State and averaged by a local government statistician. The compilations omit all farm animals owned by settlers on townships which have not attained the dignity of plantations, while all such animals would properly be included in the estimates, but, as the population living in such unorganized places was but 3,067 according to the census of 1890, the number of each class of animals owned by them would be small. On the other hand a considerable majority of the families in Maine are living on places of less than three acres, 88,233 according to the census of 1890, while but 62,122 families lived on farms of three acres or more, so the omissions in the estimates, and in the census enumerations as well, of all animals owned by the residents of these 88,233 homes, would in the aggregate be large, particularly so in horses and cows.

Again, during the three months which elapse (January 1st to April 1st) between the time of making up the estimates and the making of the inventories by town assessors from which the compilations are made, some loss is sustained by disease among all farm animals, while in some classes the number slaughtered would be considerable.

Taking all these conditions into account and reviewing the estimates of the different classes of farm animals, it would seem that considering the large number of horses owned in cities and

villages which would be the only large item of difference, the recent estimates of the number on farms is very nearly correct. Of cows, there is no good reason why there should not be as many on the 1st of April as the 1st of January, and taking into account the fact that a great many are kept on small places, the estimate seems very much too large. Of oxen and other cattle comparatively few are kept on small places, and as the animals slaughtered are practically all from this class of neat stock, the estimates of those on farms as a rule cannot be very far out of the way except in the last two or three years. The earlier estimates on sheep appear to be over 50 per cent too high, while those of more recent years, though not uniform, come very much nearer the actual number. In regard to swine, there are several conditions that might affect the correctness of the estimate. On the one hand is the number of animals slaughtered during the first three months of the year which should be deducted from the estimate, and on the other, the number of pigs which come during the months of July, August and September, and consequently less than six months old on January 1st, but old enough to be counted on April 1st, and also the number of swine kept on the places of less than three acres, which should be added to the estimates in order to approximate the number on April 1st. Whether the last two items in the count would equal the number slaughtered is a question hard to determine, but it would seem that the estimates for January 1st are excessive, as in several cases they are more than double the number found by the assessors on April 1st.

STATE COMPILATIONS OF FARM ANIMALS.

The following tables compiled from the reports of the State Valuation Commissioners and Board of State Assessors, show by counties, for the years named, the number of each class of animals, with colts and young cattle classified by age.

HORSES, COLTS, SHEEP AND SWINE.

ANDROSCOGGIN COUNTY.

YEAR.	Horses.	COLTS.			Total horses and colts.	Sheep.	Swine.
		3-years old.	2-years old.	1-year old.			
1879	5,029	.....	.....	*702	5,731	12,157	2,475
1889	5,854	286	369	402	6,911	6,229	2,191
1892	6,506	460	474	404	7,844	5,664	1,769
1893	6,846	437	458	438	8,179	6,158	1,825
1894	7,401	403	428	303	8,535	5,556	2,209
1895	6,788	323	354	219	7,684	4,702	2,482
1896	7,074	286	220	182	7,762	3,995	2,517
1897	7,310	198	131	147	7,786	3,042	2,092
1898	7,073	133	113	134	7,453	3,320	2,032

AROOSTOOK COUNTY.

1879	6,790	.....	.....	*2,034	8,824	32,173	5,518
1889	10,245	1,066	1,332	1,448	14,091	35,530	5,191
1892	12,329	1,431	1,597	1,146	16,503	35,240	4,834
1893	13,342	1,264	1,431	1,257	17,294	39,400	5,321
1894	13,802	1,142	1,634	1,342	17,920	38,210	5,746
1895	15,172	1,338	1,677	1,053	19,240	48,943	6,635
1896	15,263	1,335	1,289	889	18,776	32,138	7,168
1897	15,362	1,122	976	795	18,255	27,399	6,560
1898	15,506	795	826	590	17,717	28,415	7,283

CUMBERLAND COUNTY.

1879	7,757	.....	.....	*782	8,539	11,170	3,761
1889	9,871	231	286	293	10,681	6,105	2,746
1892	11,254	375	462	399	12,490	6,332	2,661
1893	11,303	390	441	428	12,562	6,007	2,573
1894	11,635	429	451	348	12,863	5,907	2,903
1895	12,061	428	361	237	13,087	5,168	3,491
1896	12,374	328	280	141	13,123	4,683	3,488
1897	12,051	246	186	99	12,582	4,173	2,987
1898	12,373	131	122	57	12,683	3,825	2,854

FRANKLIN COUNTY.

1879	4,128	.....	.....	*1,000	5,128	70,245	1,646
1889	4,101	476	696	787	6,060	45,859	1,327
1892	4,721	699	781	733	6,934	46,736	1,268
1893	4,968	653	855	575	7,051	43,989	1,350
1894	5,114	730	624	450	6,918	37,408	1,480
1895	5,170	563	473	262	6,468	34,428	1,953
1896	5,396	383	332	213	6,324	30,877	2,090
1897	5,432	247	245	210	4,134	23,710	1,872
1898	5,346	188	217	176	5,927	26,346	1,453

HANCOCK COUNTY.

1879	3,418	.....	.....	*512	3,930	21,720	1,498
1889	4,380	189	223	208	5,000	13,204	1,162
1892	4,878	172	251	233	5,534	13,212	911
1893	*4,594	205	271	198	5,268	12,723	791
1894	5,360	276	263	240	6,139	12,843	996
1895	4,905	224	232	154	5,515	12,787	1,220
1896	5,736	222	182	82	6,222	11,241	1,420
1897	5,944	148	139	90	6,321	9,688	1,279
1898	6,212	119	113	73	6,517	10,134	1,070

*Includes colts 2 and 3 years old.

KENNEBEC COUNTY.

YEAR.	Horses.	COLTS.			Total horses and colts.	Sheep.	Swine.
		3-years old.	2-years old.	1-year old.			
1879	8,818	.....	.....	*1,696	10,514	38,392	3,743
1889	9,543	725	848	990	12,106	25,020	3,855
1892	10,773	954	1,010	983	13,720	29,231	2,947
1893	10,910	954	1,056	866	13,786	27,152	3,086
1894	11,248	977	912	628	13,765	24,070	3,519
1895	11,843	817	702	367	13,729	21,251	4,404
1896	12,021	678	492	267	13,458	20,702	4,764
1897	11,832	436	381	237	12,886	16,803	4,033
1898	11,921	309	285	189	12,704	18,416	3,622

KNOX COUNTY.

1879	3,316	.....	.....	*429	3,745	10,712	1,339
1889	3,914	104	161	176	4,355	7,197	994
1892	4,391	154	250	183	4,978	7,375	1,018
1893	4,547	191	212	221	5,171	7,388	880
1894	4,513	196	197	146	5,052	7,767	922
1895	4,602	223	167	98	5,090	7,354	1,196
1896	4,649	191	125	84	5,049	6,795	1,352
1897	4,821	116	85	52	5,074	5,799	1,174
1898	4,546	61	70	35	4,712	6,017	928

LINCOLN COUNTY.

1879	2,828	.....	.....	*524	3,352	10,687	1,384
1889	2,904	211	196	191	3,502	7,944	1,185
1892	3,509	235	266	249	4,259	8,625	992
1893	3,549	289	244	278	4,360	8,577	937
1894	3,665	257	253	191	4,366	8,297	1,054
1895	3,848	245	238	132	4,463	8,247	1,455
1896	3,938	233	153	92	4,416	7,413	1,391
1897	3,880	127	107	53	4,167	5,781	1,200
1898	3,880	102	66	43	4,091	6,227	1,026

OXFORD COUNTY.

1879	6,397	.....	.....	*1,801	8,198	39,772	4,328
1889	6,898	687	849	876	9,310	20,897	2,919
1892	8,466	877	1,041	984	11,368	24,478	2,882
1893	8,710	973	994	880	11,557	24,405	2,683
1894	8,687	882	874	634	11,077	21,575	3,012
1895	8,926	679	645	343	10,593	19,301	3,762
1896	9,519	603	373	235	10,730	17,490	3,960
1897	9,559	333	266	198	10,356	14,718	3,326
1898	9,377	241	222	143	9,983	15,280	3,032

PENOBSCOT COUNTY.

1879	10,528	.....	.....	*2,153	12,681	58,401	5,509
1889	12,518	1,105	1,313	1,268	16,194	47,269	4,782
1892	14,410	1,170	2,069	960	18,609	51,804	3,916
1893	14,570	1,118	1,640	1,289	18,617	50,576	3,879
1894	15,013	1,087	1,858	879	18,837	46,008	4,602
1895	15,471	1,273	1,004	669	18,417	43,083	5,453
1896	15,823	952	921	429	18,125	39,394	9,760
1897	16,086	559	550	382	17,577	33,551	5,420
1898	15,942	407	497	253	17,099	36,092	4,473

* Includes colts 2 and 3 years old.

PISCATAQUIS COUNTY.

YEAR.	Horses.	COLTS.			Total horses and colts.	Sheep.	Swine.
		3-years old.	2-years old.	1-year old.			
1879	2,902	.....	.....	*646	3,548	27,147	1,461
1889	3,416	425	457	471	4,769	17,925	1,380
1892	4,115	413	630	502	5,660	21,682	1,254
1893	4,426	463	643	453	5,985	18,883	1,358
1894	4,213	517	410	300	5,440	17,089	1,515
1895	4,441	443	367	156	5,407	16,656	1,570
1896	4,541	290	219	162	5,212	15,509	1,977
1897	4,505	201	172	103	4,981	12,849	1,832
1898	4,411	142	99	90	4,742	13,457	1,244

SAGADAHOC COUNTY.

1879	2,048	.....	.....	*235	2,283	6,427	500
1889	2,016	71	83	65	2,235	4,256	374
1892	2,320	101	130	112	2,663	4,097	392
1893	2,623	111	122	103	2,959	3,987	357
1894	2,647	127	122	81	2,977	3,539	456
1895	2,732	98	127	43	3,000	3,282	547
1896	2,762	71	78	43	2,954	2,924	479
1897	2,665	69	54	34	2,822	2,447	422
1898	2,738	29	52	19	2,838	2,671	412

SOMERSET COUNTY.

1879	7,325	.....	.....	*1,809	9,134	98,915	3,332
1889	7,624	841	1,154	1,102	10,721	71,074	3,159
1892	8,927	970	1,327	1,023	12,247	73,489	2,957
1893	8,853	1,153	1,046	1,127	12,179	63,501	2,969
1894	9,104	948	1,019	763	11,834	54,451	3,222
1895	9,377	837	827	423	11,464	51,385	3,698
1896	9,639	717	530	390	11,276	46,765	4,137
1897	9,738	396	417	334	10,885	37,243	3,655
1898	9,665	296	360	296	10,617	38,371	2,868

WALDO COUNTY.

1879	5,367	.....	.....	*1,164	6,531	34,042	2,587
1889	6,043	638	712	811	8,204	25,095	2,564
1892	6,886	952	672	557	9,067	26,609	2,118
1893	7,024	678	786	563	9,051	26,764	2,207
1894	7,232	587	719	379	8,917	24,970	2,422
1895	6,993	537	597	255	8,382	22,357	2,898
1896	7,380	434	319	209	8,342	22,108	3,368
1897	7,339	280	231	184	8,034	17,662	2,925
1898	7,243	194	175	158	7,770	17,789	2,377

WASHINGTON COUNTY.

1879	3,590	.....	.....	*561	4,151	13,687	1,585
1889	4,648	216	303	275	5,442	10,255	1,148
1892	5,060	371	361	370	6,162	10,334	1,047
1893	5,195	372	398	302	6,267	11,022	1,020
1894	5,509	363	378	319	6,569	11,231	1,019
1895	5,681	352	290	233	6,556	10,285	1,265
1896	5,834	313	258	167	6,572	9,828	1,532
1897	5,658	240	189	144	6,231	8,552	1,631
1898	5,918	185	168	156	6,427	8,194	1,282

* Includes colts 2 and 3 years old.

YORK COUNTY.

YEAR.	Horses.	COLTS.			Total horses and colts.	Sheep.	Swine.
		3-years old.	2-years old.	1-year old.			
1879	7,110	.....	.....	*601	7,711	10,078	4,275
1889	8,121	199	240	264	8,824	6,533	2,532
1892	8,787	266	320	287	9,660	5,694	2,479
1893	9,331	298	320	275	10,284	5,700	2,325
1894	10,041	304	327	225	10,897	5,628	2,557
1895	10,141	280	272	104	10,797	5,203	2,488
1896	10,385	257	214	72	10,928	4,554	2,428
1897	10,298	184	134	70	10,686	3,761	2,302
1898	10,441	134	115	57	10,747	3,765	1,995

THE STATE.

1879	87,345	.....	.....	*16,654	103,999	466,626	44,927
1889	102,141	7,470	9,222	9,627	128,460	350,392	37,509
1892	117,332	9,600	8,645	9,125	144,702	370,602	33,445
1893	120,851	9,549	10,917	9,253	150,570	356,182	33,561
1894	125,184	9,225	10,469	7,228	152,106	324,550	37,634
1895	128,151	8,660	8,333	4,748	149,892	314,432	44,517
1896	132,334	7,293	5,985	3,657	149,269	276,386	48,831
1897	132,480	4,902	4,263	3,132	144,777	227,178	42,710
1898	132,592	3,466	3,500	2,469	142,027	238,319	37,915

*Includes colts 2 and 3 years old.

Perhaps sufficient comment has already been made on the increase or decrease of horses, sheep and swine, in connection with preceding general tables which cover these figures in connection with the census figures of former years. It will be of interest to note the tendency of colts, one, two and three years old, in connection with horses, as a factor in farm animals. We find the number of horses and the total number of colts to be as follows:

	Horses.	Colts.
1879	87,345	16,654
1889	102,141	26,319
1892	117,332	27,370
1893	120,851	29,716
1894	125,184	26,922
1895	128,151	21,741
1896	132,334	16,935
1897	132,480	12,297
1898	132,592	9,435

It will be seen that from 1879 to 1889, the number of horses increased 14,796, while colts increased 9,665, and from 1889 to 1893, the year that colts had reached the highest number, horses increased 18,710 while colts had increased 3,397. For the next three years, or until 1896, horses increased at the average rate of nearly 4,000 per year, and since that date only at the rate of 129 per year, while colts since 1893 have rapidly decreased from 29,716 to 9,435, a diminution of 20,281 in five years. A like decrease for two years more would cut off entirely our home supply of horses. Have our people decided that it is cheaper to import horses than to raise them? It would seem that the supply of horses must be kept up at some rate, for there is no disposition to substitute oxen in their stead, but rather the reverse.

NEAT CATTLE.

ANDROSCOGGIN COUNTY.

YEAR.	Cows.	Oxen.	3 year olds.	2 year olds.	Yearlings.	Total.
1879	7,609	1,579	.....	.....	*6,941	16,129
1889	8,962	1,248	1,845	2,308	2,435	16,798
1892	9,507	1,060	1,572	2,188	2,193	16,520
1893	8,820	621	1,671	1,923	2,003	15,038
1894	9,030	664	1,577	1,846	1,483	14,600
1895	9,138	443	1,416	1,409	1,521	13,927
1896	9,541	419	1,297	1,779	2,304	15,340
1897	9,357	235	1,459	2,162	2,484	15,697
1898	8,892	263	1,871	2,416	2,538	15,980

AROOSTOOK COUNTY.

1879	9,743	1,577	.....	.....	*13,956	25,276
1889	13,143	2,478	3,602	6,041	7,795	33,059
1892	12,825	1,478	2,124	4,067	6,108	26,602
1893	12,542	1,240	1,859	4,612	10,995	31,248
1894	12,351	1,041	2,051	4,749	5,636	25,828
1895	12,781	873	2,346	4,420	5,541	25,961
1896	12,763	748	2,139	3,926	5,963	25,539
1897	12,325	550	1,916	4,378	5,656	24,825
1898	11,936	466	2,193	4,289	5,823	24,707

CUMBERLAND COUNTY.

1879	13,012	2,756	.....	.....	*8,388	24,156
1889	13,473	2,262	1,874	2,803	3,053	23,465
1892	14,698	1,742	1,460	2,211	2,377	22,488
1893	14,065	1,188	1,272	2,142	2,462	21,129
1894	14,248	1,100	1,234	1,963	1,851	20,396
1895	13,733	906	1,195	1,568	1,954	19,356
1896	13,665	823	957	1,613	2,252	19,310
1897	13,248	520	1,121	1,800	2,251	18,940
1898	12,203	507	1,139	2,236	2,530	18,615

* Includes 2 and 3 year olds.

FRANKLIN COUNTY.

YEAR.	Cows.	Oxen.	3-year-olds.	2-year-olds.	Yearlings.	Total.
1879	6,288	2,308	.....	.....	*8,443	17,039
1889	5,659	2,678	1,935	2,821	2,559	15,652
1892	5,433	1,992	1,581	2,335	2,652	13,993
1893	5,103	1,562	1,561	2,505	2,253	12,984
1894	5,136	1,577	1,981	2,034	1,690	12,418
1895	5,503	1,309	1,690	1,752	1,689	11,943
1896	5,781	1,509	1,449	1,851	2,566	13,156
1897	5,717	986	1,434	2,448	2,830	13,415
1898	5,425	837	2,011	2,511	2,472	13,256

HANCOCK COUNTY.

1879	7,297	1,676	.....	.....	*6,092	15,065
1889	6,220	1,009	834	1,399	1,459	10,921
1892	6,284	845	731	1,291	1,231	10,382
1893	5,604	660	671	1,105	1,101	9,141
1894	6,075	598	598	1,025	977	9,273
1895	6,169	518	452	775	989	8,903
1896	6,232	533	422	886	1,403	9,476
1897	6,005	440	486	1,558	1,434	9,923
1898	6,099	346	657	1,467	1,441	10,010

KENNEBEC COUNTY.

1879	12,587	2,719	.....	.....	*13,154	28,460
1889	12,198	2,399	2,765	3,464	3,552	24,378
1892	12,903	2,321	2,521	3,507	3,901	25,153
1893	12,190	1,444	2,638	3,436	3,690	23,398
1894	12,174	1,328	2,619	3,498	2,377	21,996
1895	12,612	1,179	2,400	2,559	2,826	21,576
1896	13,054	1,329	1,977	2,804	3,679	22,843
1897	12,575	804	2,017	3,624	3,878	22,898
1898	12,239	678	2,680	4,060	3,460	23,117

KNOX COUNTY.

1879	5,505	1,080	.....	.....	*4,124	10,709
1889	5,039	935	709	1,222	1,277	9,182
1892	5,203	860	805	1,143	1,164	9,175
1893	5,114	604	797	1,088	1,015	8,618
1894	4,917	498	732	960	766	7,873
1895	4,929	520	670	671	771	7,561
1896	4,944	450	526	729	1,022	7,671
1897	4,853	334	534	990	1,004	7,715
1898	4,786	273	730	1,013	923	7,725

LINCOLN COUNTY.

1879	5,932	2,084	.....	.....	*6,228	14,244
1889	4,984	2,035	1,067	1,598	1,620	11,304
1892	5,057	1,795	891	1,437	1,446	10,626
1893	4,874	1,468	959	1,290	1,371	9,962
1894	4,705	1,401	949	1,233	838	9,126
1895	4,624	1,333	894	839	1,118	8,808
1896	4,797	1,369	572	978	1,378	9,094
1897	4,321	956	700	1,272	1,280	8,529
1898	4,464	929	885	1,217	1,259	8,754

* Includes 2 and 3 year olds.

OXFORD COUNTY.

YEAR.	Cows.	Oxen.	3-year-olds.	2-year-olds.	Yearlings.	Total.
1879	11,687	4,796			*18,718	35,201
1889	11,356	5,142	4,353	5,716	6,513	33,080
1892	12,121	3,558	3,401	4,630	5,300	29,010
1893	12,012	2,822	3,103	4,596	4,789	27,322
1894	11,531	2,359	3,147	3,943	3,327	24,307
1895	12,138	1,939	2,963	3,047	3,298	23,385
1896	12,604	2,161	2,639	3,195	4,641	25,240
1897	12,358	1,428	2,482	4,341	5,311	25,920
1898	12,057	1,037	3,324	4,788	4,807	26,013

PENOBSCOT COUNTY.

1879	15,304	2,307			*17,014	34,625
1889	15,868	2,223	4,240	5,432	5,487	33,245
1892	16,997	1,617	3,294	5,285	5,575	32,768
1893	16,352	964	3,300	5,282	5,980	31,878
1894	15,852	716	3,151	4,244	3,175	27,138
1895	16,434	642	3,011	3,392	3,264	26,743
1896	16,957	608	2,289	3,494	4,656	28,004
1897	16,206	326	2,388	4,598	4,782	28,300
1898	15,646	254	3,178	4,725	4,469	28,272

PISCATAQUIS COUNTY.

1879	4,166	926			*5,124	10,216
1889	4,511	911	1,527	1,940	1,920	10,809
1892	4,744	639	1,095	1,491	1,637	9,606
1893	4,704	404	1,000	1,433	1,410	8,951
1894	4,521	302	1,025	1,192	978	8,018
1895	4,590	295	928	905	1,046	7,764
1896	4,514	279	764	1,131	1,393	8,081
1897	4,326	167	859	1,349	1,405	8,106
1898	4,256	143	1,090	1,347	1,240	8,076

SAGADAHOC COUNTY.

1879	3,111	1,122			*2,659	6,892
1889	3,047	829	422	779	720	5,797
1892	3,230	649	470	603	745	5,697
1893	3,076	467	414	630	645	5,232
1894	2,991	516	394	575	560	5,036
1895	2,960	419	374	472	568	4,793
1896	3,048	408	334	527	661	4,978
1897	2,984	271	318	610	659	4,842
1898	2,948	278	429	688	782	5,125

SOMERSET COUNTY.

1879	9,385	2,694			*11,990	24,069
1889	9,513	2,908	2,957	3,863	3,587	22,828
1892	9,737	2,713	2,324	3,230	4,156	22,160
1893	9,814	1,831	2,284	3,642	3,260	20,831
1894	9,673	1,668	2,465	3,014	2,686	19,506
1895	9,795	1,563	2,310	2,359	2,799	18,826
1896	10,502	1,689	1,940	2,600	3,962	20,693
1897	10,052	965	2,119	3,747	4,028	20,911
1898	9,719	744	2,927	3,719	3,575	20,684

* Includes 2 and 3 year olds.

WALDO COUNTY.

YEAR.	Cows.	Oxen.	3-year-olds.	2-year-olds.	Yearlings.	Total.
1879	7,755	1,799			*9,183	18,737
1889	7,221	1,896	2,244	2,565	2,374	16,300
1892	7,750	1,687	1,742	2,693	2,599	16,471
1893	7,579	1,104	1,950	2,418	3,194	16,245
1894	7,325	923	1,795	2,063	1,579	13,685
1895	7,323	925	1,745	1,561	1,690	13,244
1896	7,724	1,001	1,334	1,737	2,595	14,391
1897	7,596	600	1,374	2,394	2,552	14,516
1898	7,252	568	2,102	2,575	2,389	14,886

WASHINGTON COUNTY.

1879	8,407	828			*6,605	15,840
1889	7,786	569	737	2,185	2,637	13,914
1892	7,730	364	626	1,828	1,160	11,708
1893	7,555	290	519	1,623	1,968	11,955
1894	7,365	193	418	1,444	1,743	11,163
1895	7,357	162	424	1,257	1,734	10,934
1896	7,226	159	348	1,297	1,980	11,010
1897	7,084	114	343	1,485	1,946	10,972
1898	6,992	84	337	1,324	2,092	10,829

YORK COUNTY.

1879	13,234	4,598			*9,305	27,137
1889	13,057	3,922	1,884	3,020	3,090	24,973
1892	13,889	3,289	1,667	2,928	2,577	24,350
1893	13,245	2,595	1,403	2,747	2,212	22,202
1894	13,368	2,450	1,392	2,379	1,953	21,542
1895	12,881	1,775	1,286	1,762	1,752	19,456
1896	12,692	1,988	1,017	1,700	1,969	19,366
1897	12,515	1,627	930	1,874	2,094	19,040
1898	12,530	1,491	1,089	2,246	2,454	19,810

THE STATE.

1879	141,006	34,847			*147,716	323,569
1889	142,032	33,444	32,995	47,156	50,078	305,705
1892	138,994	26,609	26,304	40,867	44,821	277,595
1893	142,649	19,282	25,401	40,472	48,347	276,151
1894	141,262	17,334	25,528	36,162	31,619	251,905
1895	142,967	14,801	24,104	28,748	32,578	243,198
1896	146,044	15,473	20,034	30,247	42,424	254,222
1897	141,522	10,323	20,480	38,230	43,594	254,149
1898	137,444	8,898	26,642	40,621	42,254	255,859

* Includes 2 and 3 year olds.

By adding the numbers of young cattle, one, two and three years old, in the above table, we find the totals for the different years as follows:

1879	147,716
1889	130,229
1892	111,992
1893	114,220
1894	93,309
1895	85,430
1896	92,705
1897	102,304
1898	109,517

It will be noted that the decrease in this class of animals during the ten years from 1879 to 1889, was 17,487, and from 1889 to 1892 it was 18,237, or 35,724 in thirteen years. During the next year from 1892 to 1893, there was a gain of 2,228, but the two years following show a further decrease of 28,790. The increase since 1895 has been 24,087.

TABLE

Showing total numbers of the different classes of farm animals on farms of three acres or more in the State, according to the United States census figures for the years indicated up to and including 1890; also the numbers since that date from the compilations of the State Assessors, which include all animals whether on farms or kept in cities and villages.

YEARS.	Horses.	Cows.	Oxen.	Other cattle.	Sheep.	Swine.
1820	17,849	.....	48,224	.....	.....	66,639
1840	59,208	.....	.....	*327,255	649,261	117,386
1850	41,721	133,556	83,893	125,890	451,577	54,598
1860	60,637	147,314	79,792	149,827	452,472	54,783
1870	71,514	139,259	60,530	143,272	434,666	45,760
1880	87,848	150,845	43,049	140,527	565,918	74,369
1890	109,156	157,278	33,105	108,727	370,484	91,297
1892	117,332	138,994	26,609	111,992	370,602	33,445
1893	120,851	142,649	19,282	114,220	356,182	33,561
1894	125,184	141,262	17,334	93,309	324,550	37,634
1895	128,151	142,967	14,801	85,430	314,432	44,517
1896	132,334	146,044	15,473	92,705	276,386	48,831
1897	132,480	141,522	10,323	102,304	227,178	42,710
1898	132,592	137,444	8,898	109,517	238,319	37,915

* Includes all neat cattle.

By referring to the above table it will be noticed that, from 1820 to 1840, the period of the most rapid increase in the population of the State, the number of horses increased 41,359 or 232 per cent, falling off during the next decade 17,487, but since 1850 each decade has shown a very marked increase, the number in 1898 reaching 132,592. Comparing oxen with horses it will be seen that since 1850 the number has steadily fallen off until from 83,893 in 1850, there are now but 8,898 in the State. It is a peculiar fact that the increase in horses and the fall off in oxen have so balanced each other that at no time since 1850 has the number of horses and oxen taken together been less than twenty-one nor more than twenty-two per 100 of inhabitants. In regard to cows it seems quite remarkable that the number kept through all these years has been so uniform, the variations from decade to decade being comparatively small. There was quite an increase in other cattle from 1850 to 1860, a gradual fall off up to 1880, then a sharp decline during the next decade, since which a small increase is shown up to 1893, a considerable decline to 1895, since which time there has been a satisfactory increase. After the great fall off in the number of sheep from 1840 to 1850, there was but little variation up to 1870. The increase from 1870 to 1880 was 131,252, and the fall off from 1880 to 1890 was 195,434. From 1890 to 1893 there was practically no change, from 1893 to 1897 the number had decreased 143,424, but the past year shows an increase of 11,141. The number of swine increased very rapidly from 1820 to 1840, but the decrease from 1840 to 1850 was much more marked. The number remained practically the same for the next ten years, but from 1860 to 1870 there was a considerable decrease, then a rapid increase, the number in 1890 being double that of 1870. In 1892, according to the State compilations, the number had fallen off nearly two-thirds in the two years, since which time the numbers show a considerable increase up to 1896, but the last two years show a large decrease. By referring to other tables it will be noted, according to the State compilations, the number of swine owned in the State in 1879 was 44,927, while the United States census for 1880, a year later, gives the number 74,369, a difference in one year of 29,442; and again for 1889, the State compilations show the number to be 37,509, and the

United States census for 1890, a year later, gives 91,297, a difference of 53,788. The correctness of these figures seems improbable, and might suggest the question whether some of our farmers may not own more hogs when the census enumerator calls, than when the tax assessor makes his rounds.

TABLE.

Showing totals of horses and oxen, work animals, in the State at different periods. The numbers for 1850, 1860, 1870, 1880 and 1890, are from United States census figures, and for 1879, 1889, and 1892 to 1898 inclusive, are from compilations of State Valuation Commissioners and State Assessors. The State figures include all animals in the State, while the United States figures omit all on places of less than three acres.

YEARS.	Horses.	Oxen.	Total.
1820	17,849	48,224	66,073
1850	41,721	83,893	125,614
1860	60,637	79,792	140,429
1870	71,514	60,530	132,044
1880	87,848	43,049	130,897
1890	109,156	33,105	142,261
1879	87,345	34,847	122,192
1889	102,141	33,444	135,585
1892	117,332	26,609	143,941
1893	120,851	19,282	140,133
1894	125,184	17,334	142,518
1895	128,151	14,801	142,952
1896	132,334	15,473	147,807
1897	132,480	10,323	142,803
1898	132,592	8,898	141,490

It will be noted that in 1820, the number of horses compared with that of oxen was in the ratio of a little more than one to three, while in 1898 the ratio is nearly fifteen to one. The number of oxen up to 1860, was largely in excess of horses, but since that time horses have largely increased and oxen decreased until

they have nearly ceased to be a factor among farm animals, particularly so in the eastern section of the State, where, in the fourth Congressional district, comprising the four great counties of Aroostook, Penobscot, Piscataquis and Washington, with a population much larger than either of the other three districts, the total number of oxen owned is but 947, or an average of less than four and a half to each city, town and plantation in the district.

The totals of work animals increased up to 1860, reaching 140,429 at that date; for the next thirty years the number was somewhat less but generally ranging from about 130,000 to 135,000, dropping to 122,192 in 1879, but the number in 1890 had gone above 140,000 and with small fluctuations has since remained above that figure, the loss in oxen being generally offset by the gain in horses.

TABLE.

Showing the totals of all farm animals in the State at the different periods named. The figures for 1840, 1850, 1860, 1870, 1880, and 1890 are compiled from the United States census and do not include colts under four years old nor any animals owned on places of less than three acres; the figures for 1879, 1889, and 1892 to 1898 inclusive, are compiled from the works of the State Valuation Commissions and State Assessors, and include all colts of one year old or older, as well as all animals whether on farms or in cities and villages.

Years.	Horses and colts.	Neat cattle.	Sheep.	Swine.	Total.
1840	59,208	327,255	649,261	117,386	1,153,110
1850	41,721	343,339	451,577	54,598	891,235
1860	60,637	376,933	452,472	54,783	944,825
1870	71,514	343,061	434,666	45,760	895,001
1880	87,848	334,421	565,918	74,369	1,062,556
1890	109,156	299,110	370,484	91,297	870,047
1879	103,999	323,569	466,626	44,927	939,121
1889	128,460	305,705	350,392	37,509	822,066
1892	144,702	277,595	370,602	33,445	826,344
1893	150,570	276,151	356,182	33,561	816,464
1894	152,106	251,905	324,550	37,634	766,195
1895	149,892	244,998	314,432	44,517	753,839
1896	149,269	254,222	276,386	48,831	728,708
1897	144,777	254,149	227,178	42,710	668,814
1898	142,027	255,859	238,319	37,915	674,120

It will be noted that the total number of farm animals in the State in 1840 amounted to 1,153,110, which has never since been equaled, and in only one instance, that of 1880, has the number exceeded 1,000,000. Since that date the tendency has been constantly downward except a very slight gain the last year, reaching its lowest point, 668,814, in 1897.

TABLE

Showing the numbers of different classes of farm animals in the State, according to the United States census figures, to each 100 of population, for the years indicated.

YEARS.	Horses.	Cows.	Oxen.	Other cattle.	All neat cattle.	Sheep.	Swine.	All farm animals.
1820	6	.....	16	.....	.....	.....	22	.....
1840	12	.....	.....	.....	65	129	23	229
1850	7	23	14	22	59	77	9	152
1860	9	22	13	24	59	72	9	149
1870	11	22	10	23	55	69	7	142
1880	14	23	7	22	52	87	11	164
1890	17	24	5	16	45	56	14	132
†1898	*20	21	1	16	38	35	6	100

* Including colts, 21.

† The figures for 1898 are based on the compilations of the State Assessors for that year, and an estimated population of 674,120 for the State.

The above table is of interest as it shows, instead of actual numbers, the number compared with the population at the different periods. It will be noted that on the basis of population, horses have generally increased, cows show but small fluctuations, oxen have decreased rapidly and quite uniformly, young cattle show slight fluctuations up to 1880, then a large decrease, all neat cattle a quite gradual decrease, sheep with one exception show a considerable and constant decrease, swine large fluctuations, and all farm animals, except in 1880, a constant decrease.

MAINE HORSES.

The State of Maine, almost from the date of settlement, has been noted for its fine horses. Eminent authorities state that there is something in the natural advantages of the State particularly favorable to supplying to the horse strength, endurance and speed, the three qualifications most necessary for an ideal horse.

The many establishments in the State devoted exclusively to breeding of the gentleman's driving horse, and the trotter, show the interest in this industry, as well as that many thousands of dollars are invested in it.

The height of the horse breeding industry in Maine was reached in 1893, when the great panic affected this branch of business more disastrously, perhaps, than any other in this section of the country. Conservative judges estimate that during the most flourishing years this industry has brought into the State more than a half million of dollars in a single year. The business is improving, and it is the opinion of those best qualified to speak of this matter, that the time is near at hand when breeding of horses in Maine will regain its lost vantage.

The annals of the development of the horse breeding industry in Maine, form an account both interesting and important in the history of the State, and the following facts and figures have been carefully compiled, and are believed to be as nearly correct as it is possible to make them.

The recorded history of Maine horses begins in the early years of the present century, with the advent of Winthrop Messenger into the State in 1816. But little later came the Morgans and the Quicksilvers.

The law of the survival of the fittest, like the other unalterable laws of nature, was operative then as now, and while the latter have long been forgotten even by the oldest inhabitant, and are only known to the searchers of ancient history, the former sur-

vived, and mingled and inter-mingled, crossed and re-crossed, and formed the foundations on which the reputation of the State as a breeding center was built.

In those early days before the introduction of steam, when the stage coach and the two-wheeled chaise were the only means of travel, the long distance roadster was the horse sought for; and the performance of "Old Trim" who was driven from Waterville to Boston, a distance of nearly two hundred miles, in two days; of Zuarrow, (afterwards called Boston,) who won a big stake by trotting a mile inside of three minutes; of "Lion," who gained great fame as a fast, stylish, powerful and enduring roadster, together with their unsurpassed feats of strength and endurance on the stage coach, early called attention to the Messengers.

And their reputation was enhanced, as trotting came into vogue, by the performances of Fanny Pullen, Daniel D. Tompkins, Zach Taylor, Blanc Negre, Tom Benton, Lady Swan, Henry, Independence, Sorrel Hiram, Post Boy, Ice Pony, Dying Sergeant, and many others, which in their day were in the front ranks, and regarded as high in the trotting circles as are the Directums, Nancy Hanks, and the Alixs of the present.

The descendants of Winthrop Messenger have always passed as Messengers without question, although the claim rests on internal, rather than external evidence, from the fact that all the papers concerning the breeding of the horse were destroyed by fire, and no man knows to this day who bred him, or the pedigree of his dam, and even the belief that he was the son of imported Messenger rests upon tradition and hearsay. The internal evidence is however strongly in favor of the claim.

He came to Maine when the get of imported Messenger were numerous, and in the height of their popularity. He and his get possessed the family characteristics, and he was said to be, and the claim was undisputed, a son of imported Messenger, which he undoubtedly was.

But while the Messengers were entrenching themselves in the favor of the people, the Morgans were also gaining great renown in their particular sphere, and there was great rivalry between the two breeds. The Morgans, while possessing less size, inherited beauty of form, amiable dispositions, with plenty of spirit, and were great favorites as family beasts, good either in

harness or in saddle, and in the latter position they were favorite parade animals for the officers in the old militia days, their style, dash and nerve rendering them almost unapproachable for this particular purpose.

As time passed, and the breeds became intermingled, the results were found to be a success. Mac, one of the old time champions, was by a Morgan sire out of a Messenger dam. He was as famous on the turf in his time as any of the later cracks, and Frank Forrester, in his "Horses of America," says of him that his performances "were enough to prove him what he was, a first-rate animal for his day."

The descendants of the two families became numerous, and furnished the principal stock of the State; producing such horses as Whalebone, and Blackstone Belle, and Lewiston Boy, and the Eaton Horse, (sire of Shepherd E. Knapp, that, besides being a trotter, went to England and became a noted Hackney sire,) and many others of note.

In the early forties came two horses which were so prominent as sires that they founded families which were always regarded as distinctively Maine families. One was the Eaton, the horse being the result of a union between the Morgan and Messenger strains, he being sired by the Morgan Avery horse, and his dam by Winthrop Messenger; and the other was the Drew family, descended from the old Drew horse, which was by a colt brought from the province of New Brunswick, and his dam, Benton Girl, was by a horse called Sir Henry, whose sire was said to be a son of American Eclipse, while the grand-dam of the Drew Horse was by Winthrop Messenger out of a Morgan mare, thus showing that the two families had their foundation in the breeds which we have described.

About this time the Brandywine family became somewhat noted. It originated in Canada, and the founder of the family in Maine was brought into the State and died shortly after, leaving a small number of descendants some of which have added to the reputation of the State on the turf, and as sires and dams of trotters.

The year 1855 marked an important epoch in Maine horse history, for in that year were foaled two horses which were destined to add greatly to the reputation of the State in that direction. I refer to Gen. Knox and Winthrop Morrill. Both

were descendants of the Morgan tribe, the former through the Black Hawk sub-family, and the latter through the Morrills, and what was a remarkable co-incident, each was known when he came into Maine by the name of Slasher.

General Knox came in 1858 as a three-year-old, and was placed at the head of the stud of his owner, the late Col. Thomas S. Lang of North Vassalboro,, when he had the best advantages, both in training and in the stud, that Maine afforded at that time. He filled both requirements with such high honor that he became known on the turf as the "Champion of New England," and in the stud as one of the great sires of the country; the first Maine horse to take a record better than 2.20 being a son of his, Camors, 2.19¾, and at the same time one of his daughters, Lady Maud, held the world's record for a five-year-old mare, 2.22¼, which she reduced the next year after Camors' performance, to 2.18¼.

Winthrop Morrill came into the State without reputation or influential friends, and only became popular after his get had demonstrated his worth as a sire. He was a Morgan of the Morgans, being strongly inbred to that family. Other horses Col. Lang brought into the State, as Trenton, by Geo. M. Patchen, Telegraph, by Vermont Black Hawk, and Gideon, by Rysdyk's Hambletonian; but all the latter passed away leaving no impress in the stock of the State.

Gideon was as intensely inbred in the Messenger lines as Winthrop Morrill was in the Morgan, and when the writer once asked that eminent authority, Mr. John H. Wallace, if he could name any horse more strongly inbred to Messenger than was Gideon, or to the Morgan horse than Winthrop Morrill, he answered, "while the question is interesting, it is not easy to give a correct answer, but from my knowledge and experience with pedigrees, I am not prepared to say there was."

In the seventies, breeding horses became more and more popular, until it became a "fad," and many men went into it who had no horse knowledge and but little horse sense.

Daniel Boone, by Rysdyk's Hambletonian, was brought to Maine by Fred Doane of Skowhegan. He was out of Old Kate, a famous brood mare from Canada. She was the dam of the famous Bruno and Brunette family, of which Daniel Boone was a full brother. He has made a mark in Maine breeding affairs,

siring speed himself and imparting that power to his sons and daughters.

It became fashionable about this time to look to Kentucky for breeding stock, as Kentucky and California had earlier looked to Orange county, New York, and many sons of Almont found their way to Maine, among them the first being Constellation; then came General Withers and Harbinger, and later, Albrino and Olympus. All have made, crossed upon the earlier stock of the State, an impress for good. The fastest trotting mare bred in the State was got by Albrino, and the fastest trotting gelding was out of a daughter of Olympus, while the fastest pacing mare was by a son of that horse; and the next fastest was by a son of Daniel Boone, and the second fastest trotting gelding was by a grandson of Constellation. The most of these successes have been the result of crossing the sires named on the foundation stock of the State, which I have earlier described.

In 1882 was foaled a colt which was destined to turn anew the eyes of the breeding world to Maine. This was afterwards known as the horse Nelson, 2.09, a horse that has been believed and is yet believed by many to be the peer of any horse that was ever raised.

In 1885, as a three-year-old, he trotted to the world's record for that age, on a half mile track, in 2.26¾, and later took the world's stallion record of 2.11½ at Kankakee, Ill., September 26, 1890, lowered it to 2.11¼ October 9, at Terre Haute, Ind., and again to 2.10¾ October 21, at Cambridge City. On September 10, 1891, Allerton lowered this to 2.10 at Independence, on a kite track, and at Grand Rapids, Mich., September 17, Nelson equalled the mark, ever since holding the world's record to high wheeled sulky, over a regulation track.

He is gaining as great fame as a sire as he did when on the turf, and his get are fast making records for him and for themselves on the tracks of the country. He was got by Young Rolfe, who was by Tom Rolfe, a son of the world renowned pacer Pocahontas, and whose dam was an inbred Morgan mare; and the dam of Nelson was by Gideon, the inbred Messenger, so that the component parts which go to make up the pedigrees of Maine horses are, in later as well as in earlier times, primarily Messenger and Morgan. Later still have come the representa-

tives of the Wilkes family, one of the sub-families of the house of Hambletonian, through his son, George Wilkes, and his descendants. Hambletonian 10, as he is now more popularly designated, was about as intensely inbred to Messenger as was Gideon, having one direct outcross through his dam, the Charles Kent mare, by the English Norfolk trotter, imported Bellfounder.

Among the earliest representatives of the Wilkes family to locate in Maine was Messenger Wilkes, by Red Wilkes, son of George Wilkes, and Bayard Wilkes by Alcantara, and Wilkes by Alcyone, also sons of George Wilkes. All have added to the reputation of the State, Messenger Wilkes not only proving a sire of speed, but of horses that have won in that severest of all tests, the Horse Show prize ring. Bayard Wilkes is well known for his performances on the turf and as a sire of Bismarck, 2.13¾, and Wilkes as the sire of Fred Wilkes, 2.13½ and St. Croix, 2.14¾.

The great Electioneer family has also sent its representatives into the State. All through the time since Zuarrow, (afterwards Boston), "gained great renown" by trotting a mile in three minutes, and Pelham won the world's champion record of 2.28 in 1849, up to the time when Nelson placed the stallion record at 2.10, Maine has produced trotters bred outside the lines as laid down above, and has shown that speed, like genius in the human family, is confined to no race or breed, but crops out at times where least expected or looked for, and such was the case with many horses which have in times past added to the fame of the State.

Of these the writer recalls Blackbird, that made his debut in New York in 1835 as a "green one from Maine;" W. H. Taylor, Lew Pettee Readfield, Carlotta, Alice Gray, and that reminds one that of the four animals that competed in the celebrated double team race on Long Island in 1855, Alice Gray, Stella and Whalebone were bred in the State of Maine.

With such a host, with dams by the sires mentioned and descended from the foundation stock of the State, with sires of the latest and most approved breeding, with intelligent breeders studying and using the proper combinations and crosses, the future of this State from a breeder's standpoint seems assured.

A circular embodying the following questions was recently sent out to those men best qualified to answer thereto.

1. What is the best type of horse for Maine farmers to breed?

2. Should extreme speed be the object, or is there a type which if speed is not obtained, will produce a fine carriage horse?

3. How can Maine breeders best devote their energies to make the business a success?

4. In your opinion, how much money is brought into the State annually from the sale of carriage and trotting horses?

5. Give any facts relating to this subject, in a general way, which your experience in horse breeding tells you will be of value?

It is impossible to quote the entire number of answers which these queries have received, but from several given by the well known men whose names are attached, can be drawn a fair estimate of the opinions prevalent throughout the State.

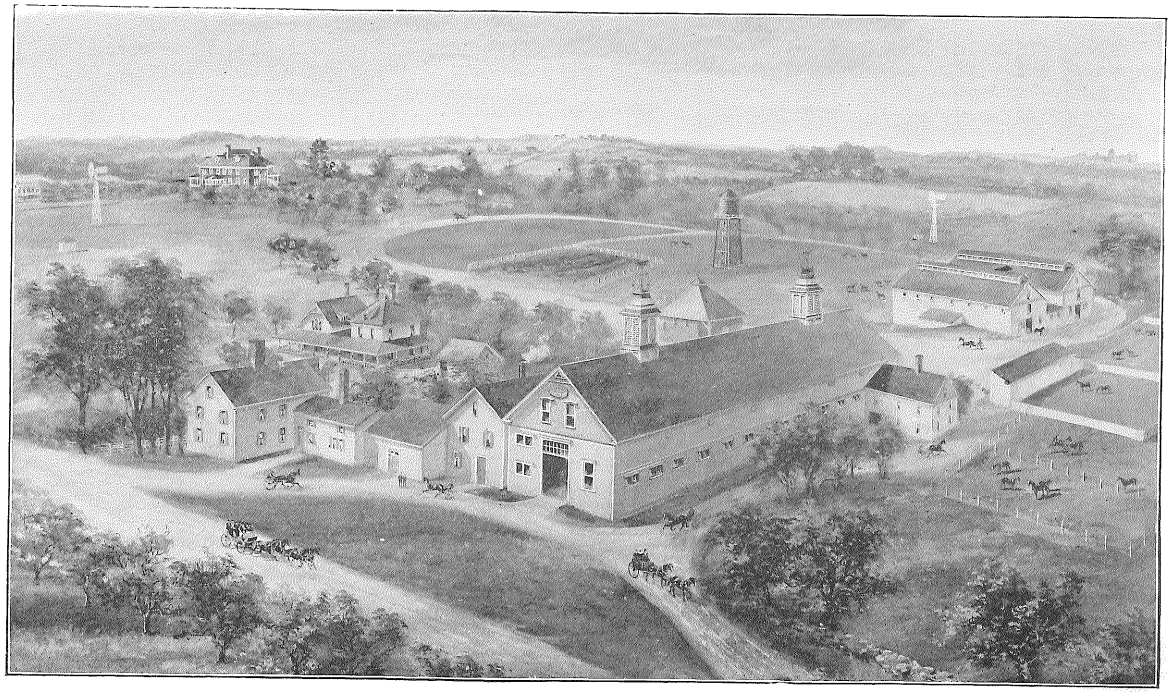
Frank H. Briggs, of Maple Grove Stock Farm, in Auburn, whose fine horses are known all over Maine, writes at length, as follows:

"I consider the gentleman's road horse the best type of horse for Maine farmers to breed. By this I mean a horse standing from 15-2 to 16 hands, of good color, beauty of form, with graceful, easy action and some speed; for a horse cannot be a fine roadster, one that will give a thrill of pleasure to his driver, unless he can, in places where conditions are favorable, brush along a bit.

"Such a horse possesses size and serviceable qualities so that the farmer can make him earn his keep after he is three or four years old. The demand for this kind of horses is always good, and they can be bred with remarkable uniformity.

"Extreme speed should not be the object of breeding, for the reason that it cannot be produced with sufficient uniformity, with the material obtainable by the average farmer, and secondly, because in order to obtain the price for extreme speed a great amount of training is necessary, and the average farmer is not qualified, nor can he afford to take the chances of failure and accident in producing that speed.

"For the reason that a certain amount of speed can be had with considerable uniformity, and that this speed can be found com-



ELMWOOD STOCK FARM, LEWISTON, J. S. SANBORN, PROPRIETOR.

bined with the other essential qualities of style and size, disposition and action in certain well established trotting horse families now represented in this State, I believe that this branch of the business offers the best promises for success to the Maine farmer.

"The State of Maine established a reputation forty years ago for producing the best roadsters in the world. Its Messengers, Morgans, Eatons, Drews, possessed in a marked degree the qualities so desirable in the roadster. The sale of this stock brought many thousands of dollars into the State. The farmers kept selling, so that about fifteen or twenty years ago we found ourselves in need of replenishing the stock. About that time the craze for extreme speed was well under way in Kentucky and California. In replenishing our stock and in the management of it afterward, the extreme speed cut too prominent a figure. For the gamble of raising a two-minute trotter the other essential qualities of a road horse were largely overlooked, so that when the business depression of 1893 came upon us we not only found the demand for horses largely cut off from us, but we found that we had been raising too many small, ill-shaped horses. The last few years have changed the views of many breeders, and it has happened that in these last few years several strains of blood that have been imported from the South and West have blended so well with our native blood that many high class animals have been sent to market which have achieved national reputation for their style, conformation and action.

"So it happens that the thinking farmer is 'catching on' to these pointers and is breeding better than ever before; and he will succeed in saving to Maine its well earned reputation of being the best place on earth to find the ideal roadster."

J. S. Sanborn, proprietor of Elmwood Stock Farm at Lewiston Junction, whose displays of coaching horses have won so much admiration at the recent Maine State Fairs, writes thus:

"The best type of horse for the Maine farmers to breed is the good sized, high stepping, carriage, road or coach horse, with the best of quality, conformation, action, style, with a certain amount of speed, standing 15-3 to 16 hands high, weighing from 1,050 to 1,200 lbs. Extreme speed should not be the object in breeding, and there is a type, which, if extreme speed is not obtained, will produce a fine carriage horse.

"The Maine farmers can best devote their energies to make the business a success by mating their well bred native mares of good conformation and as much size as possible without being misshapen, with a sire possessing the essential type of the ideal coach horse, known to reproduce his kind and to belong to a breed which has done so for generations, or the progeny will be very uncertain."

C. H. Nelson, of Waterville, owner of Nelson 2.09, says briefly: "I consider the best type of horse to be one which shall stand 15 to 16 hands high, with good neck, shoulders, back, loins, legs, feet, with good action.

"The best way to make this business a success is to be mindful in breeding of size, style, color, action, with speed as well, and then to feed the animal well, and break and educate it young. Farmers many times breed colts like sheep, let them run wild until three to five years old, when as a matter of fact colts should be handled early, as they are more easily governed then, and make better horses than when broken later on, and are more suitable for family driving and safer to use. Farmers do not want to see how many they can raise, but how good an animal they can raise to command a good price."

C. P. Drake of Lewiston, advocates the high class trotting bred horse, and says: "Stick to the high class trotting bred horse. You may get extreme speed thereby, and if you do not, you will still have a high class road horse which gives you two chances to dispose of him. The only way to obtain the best results is by breeding the very best mares to the best stallions obtainable. While I think the question relating to the income derived by the State from this business a hard one, I think it is safe to say that it exceeds the amount obtained from any other live stock in Maine." Mr. Drake says further: "Try in-breeding ventures to produce the high-headed, high knee-acting, high back-acting horse. By so doing you will have produced a salable animal, and the way to obtain these results is by breeding our most likely high stepping, trotting bred mares to our best high stepping, trotting bred stallions."

James Edgecomb of South Hiram, at the head of whose stud is placed Francisco, by Stamboul, 2.07½, speaks in favor of "a 16-hands horse, with substance, style and speed." Extreme speed should be an object, but not the only object in breeding.

Size, style, substance and extreme speed are not, however, incompatible qualities. The way to make a business a success, is by producing what the market demands, and by "telling the truth, the whole truth and nothing but the truth," when disposing of the property. Mr. Edgecomb concludes: "In my opinion the prevalent idea that speed in the horse must be at the expense of other desirable qualities, and that to produce speed you must produce an animal that is good for nothing else, has done the horse business in the State of Maine irreparable injury. Personally, I can say I have had more calls for good horses in the last few weeks than for as many years just passed."

Editor George M. Twitchell, of the Maine Farmer, advocates the carriage horse, with style, courage, speed and action, but thinks extreme speed is not to be desired. There is, however, a desirable type when speed is not sought after, in the old time Messenger and Morgan cross, typified to-day in the half blood French coach horse. Referring to the money brought into Maine by this business, Mr. Twitchell says: "It is impossible to estimate, but one man has brought in over $125,000 this year."

Mayor F. O. Beal of Bangor, a well known lover of fine horse flesh, advocates also the French coach horse, stating that when extreme speed is not sought, a fine carriage horse is most sought after. This is obtainable only by breeding good sized mares, and being most particular in breeding for style, and conformity. Mr. Beal, while unable to give figures, expressed his knowledge that a very large amount is annually received in the State from this important industry.

Colonel Walter G. Morrill of Pittsfield, says: "By all means the best type of horse to breed is the gentleman's driving horse, 15½ to 16 hands high, a good type with good action." Mr. Morrill says: "Breed good gaited, good sized and stylish horses, but by no means make extreme speed the prime object. The best way to make the business a success is to pay strict attention to breeding, refusing to breed from inferior stock. I estimate the annual income to be in the neighborhood of $750,000. And in my opinion the time is near at hand when a good class of horses will be yet more profitable to raise, if one breeds for size and style."

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, 1897 and 1898.

Name of Road.	Number employes, 1897.	Wages paid, 1897.	Number employes, 1898.	Wages paid, 1898.	Average Daily Compensation.	
					1897.	1898.
Bangor and Aroostook Railroad.	849	$328,605 30	765	$294,006 98	$1 56	$1 62
Boston and Maine Railroad	481	259,924 67	485	274,780 20	1 81	1 87
Bridgton and Saco River Railroad	32	13,521 72	30	12,425 58	1 52	1 52
Canadian Pacific Railway	386	166,263 94	431	186,473 31	1 51	1 78
Franklin and Megantic Railroad.	20	7,646 34	35	9,770 35	1 46	1 25
Georges Valley Railroad	10	3,611 40	10	3,611 40	1 00	1 56
Grand Trunk Railway.....	639	333,810 58	693	352,071 27	1 68	1 62
Kennebec Central Railroad	13	5,385 44	14	5,508 77	1 60	1 58
Lime Rock Railroad	20	9,974 58	20	9,737 17	1 70	1 71
Maine Central Railroad.....	2,545	1,367,492 25	2,570	1,355,127 52	1 69	1 73
Monson Railroad	8	3,402 56	10	3,609 07	1 60	1 53
Patten and Sherman Railroad ...	9	3,102 15	8	3,845 31	1 44	1 34
Phillips and Rangeley Railroad..	56	16,947 61	53	13,916 97	1 34	1 43
Portland and Rochester Railroad	215	102,394 06	235	107,627 48	1 64	1 67
Portland and Rumford Falls Railroad	221	74,206 51	234	88,487 95	1 51	1 52
*Rockport Railroad	3	1,192 00				
Rumford Falls and Rangeley Lakes Railroad.....	148	36,978 92	72	27,690 13	1 48	1 52
Sandy River Railroad	35	12,455 09	35	12,882 30	1 41	1 41
Sebasticook and Moosehead Railroad	11	3,674 00	11	3,735 28	1 05	1 28
Somerset Railway.....	57	25,542 36	58	25,988 70	1 46	1 42
St. Croix and Penobscot Railroad	32	11,232 89	28	8,160 60	1 31	1 36
Wiscasset and Quebec Railroad..	28	12,869 60	28	12,869 60	1 40	1 40
York Harbor and Beach Railroad	24	11,053 30	27	10,224 93	1 75	1 76
	5,842	$2,811,287 47	5,852	$2,822,550 87		

* Not operated.

RAILROAD EMPLOYES.

Under the system now required by law, the reports of the railroad companies doing business in the State of Maine, to the Railroad Commissioners, give definite knowledge of the number of men employed in all the departments of railroad operation. The foregoing table gives the number of men employed (excluding general officers), the amount of wages paid by each company and the average day pay. This list of railroad employés are known as, general office clerks, station agents, other station men, enginemen, firemen, conductors, other trainmen, machinists, carpenters, other shopmen, section foremen, switchmen, flagmen, watchmen, telegraph operators and dispatchers, and other laborers.

Enginemen receive the larger pay, which is from $2.75 to $3.25 per day; conductors next, who receive $2.50 to $2.75 per day, and so down the list to very nearly $1.50 per day for common labor.

As will be seen by reference to the table, there were for the year ending June 30, 1898, 5,852 persons employed in Maine, against 5,842 in 1897. The amount of wages paid was $2,822,-550.87 in 1898, against $2,811,287.47 in 1897, an increase of $11,263.40.

Small as the number in employed and increase in wages paid, it shows that the business interests of the State were continually increasing, when throughout the country a general depression prevails, in the fields of labor.

Upon the Street Railways, there were 725 persons employed, against 600 in 1897, a gain of 125. The amount of wages paid, as near as can be ascertained, was $325,000, against $300,000 in 1897.

The number employed upon steam and street railways was 9,577 persons, and $3,136,287.47. paid in wages.

Dependent upon this army of men, were not less than 38,000 persons.

This summary does not include the employment of labor upon railroads and railways in process of construction. While railroad building in other states has been almost at a stand still, in Maine constant additions are being made to the railroad mileage. The report of the Railroad Commissioners shows that some 124 miles

of steam railroads have been completed since June 30, 1898, and 32 miles of street railway.

There has been paid for labor in the construction of this mileage not less than $500,000.

PROSPECTIVE BENEFITS.

There was in Maine, in operation on June 30, 1898, 1,748.95 miles of steam railroads, and by January, 1899, there will be added about 124 more miles, making a total of 1,872.95 miles. This is by the addition of the Washington County Railroad, 118 miles, and by an extension of the Bridgton and Saco River Railroad from Bridgton to Harrison, 5.25 miles.

It has been a long struggle of the progressive business men of Washington county—the building of that important road—which must be not only a great convenience to the citizens of that county, but the prime factor in its future development. Among the leading men who have finally brought to consummation this enterprise are the officers of the company, Hon. Geo. A. Curran, Calais, president; Gen. Samuel D. Leavitt, Eastport, treasurer; Hon. Geo. A. Murchie of Calais, clerk. In addition to those named are the directors, N. B. Nutt of Eastport; E. H. Sprague of Pembroke; W. R. Allan of Dennysville; Hon. Austin H. Harris and Hon. John C. Talbot of East Machias; Hon. J. K. Ames and E. B. Curtis of Machias; Cornelias Sullivan of Whitneyville; Horace M. Leighton of Columbia Falls; F. H. Chandler of Addison; V. L. Coffin of Harrington. G. R. Campbell and Wm. N. Nash of Cherryfield; Frank A. Sawyer of Milbridge; L. B. Noyes of Steuben. It would hardly seem that such an undertaking could have been trusted to better hands. The additional amount of wages which will be annually paid to labor in conducting the operation of this road, will reach $130,000. Unlike a railroad to accommodate traffic between and through large towns, this road becomes an agency for the development of new business, adding increased wealth to the large area of timber lands in that section, and giving additional employment to thousands of men whose hands will be needed in the preparation and conducting of large business enterprises. Taking this road in connection with the Bangor and Aroostook Railroad, the Portland and Rumford Falls Railway, and Rum-

ford Falls and Rangeley Lakes Railroad, the Sandy River, Phillips and Rangeley, the Franklin and Megantic and Somerset Railroads, each of which aid in penetrating the rich forests of Maine, the prosperity of our good State must be materially enhanced.

The great Maine Central trunk line and its branches will feel the stimulus of increased business activity, and its finances benefited thereby. One of the most pleasing things connected with the management of the railroads of Maine, is the lack of friction between interests that an outside observer might think would occur. On the contrary, the utmost harmony seems to prevail, the Maine Central management aiding in the successful operation of these separate diverging roads. In connection with this, our attention has been brought to that part of the Railroad Commissioners' report, which shows that through the reduction in passenger and freight rates, under the management of Mr. Geo. F. Evans, manager of the Maine Central Railroad, $164,812.85 was saved to the people of the State. We therefore predict that the coming year will show increased prosperity in the permanent business interests of our people.

Some thirty-two miles of street railway have also been added to the street railways of Maine. A. F. Gerald of Fairfield, and I. C. Libby of Waterville, have been largely intrumental in bringing this increase about. This means additional avenues for labor, and increased accommodation to those who desire to avail themselves of this mode of travel. It is therefore to be seen that not only will business increase, but it will be carried on with greater ease and convenience, the gain and comfort of which can not be readily estimated.

From all the examinations into the various business interests of the State, having in view the making of desirable homes, with their attainable comforts, no longer need it be said that "Maine is a good State to go from," but instead, is is a good State to stay and live in.

MAINE CENTRAL RAILROAD SHOPS IN WATERVILLE.

The maintenance and operation of a great railroad is not the simple matter of pulling the throttle and seeing the train go humming along through the country; not alone the collection of tickets by a uniformed conductor from passengers taking their ease in a modern car of luxurious design, but involves a vast amount of labor, care and expense not always evident to the traveler and which he seldom considers. Notice the excellent condition of the woodwork, the freshness of the paint and the brilliancy of the varnish on any of the cars running on the main lines of railroad, and the well groomed condition of the locomotive. A casual observer glancing at a passenger train on the through line of the chief railroad of Maine, the Maine Central, would say that the whole outfit was new or nearly so. But it is far from this. Some of the locomotives and cars may have run through the storm and sunshine for years, and it is self-evident that exposed to all weathers of this changeable climate, and subject to the jar and racking of express train speed, they would, in a brief period, become dingy and rickety. Cars in the freight service are built solidly and substantially for the business of carrying loads, not for show, many of them going on other lines to remote parts of the country returning to the Maine Central after long periods of service. Nothing in the way of iron and wood which will make them strong is omitted. Obliged to bear heavy burdens, and continually receiving hard knocks, it is no wonder they frequently become maimed or worn out. The locomotive itself, built of the stoutest steel and iron and by the most skilled mechanics, when in service, is limited in its life as well as suffering occasional break downs. To keep the rolling stock of a big railroad in condition to perform its work, as well as to render it safe for the transportation of freight and passengers, requires the services of hundreds of trained men and the expenditure of

large sums of money, and is an industry of itself which has grown up and increased throughout the country with the extension of railroads, to conform to the needs of transportation.

The Maine Central Railroad, which is one of the best conducted in New England as well as the most extensive in Maine, established at Waterville in 1886 permanent shops which were occupied in 1887. There was much competition among various cities to secure their location, it being realized that a large number of men would be employed in the shops, which meant much to the business interests of the community where they resided. Waterville secured the prize and gave a large tract of land which was accepted as a site. Here the shops were built and here it is that the locomotives and cars take a rest for repairs and renovation. To erect them required the expenditure of a large sum of money, but completed, have served the company well as they will for many years to come. They are conveniently located on the west bank of the Kennebec river, about a mile above Waterville proper, and adjacent to the main tracks of the railroad, in line with them. The buildings alone cover two and one-half acres of land. The walls are of brick throughout, one story in height, with the exception of the mill, which is about equivalent in altitude to two stories of an ordinary dwelling house, and one standing on the ground floor can gaze at the roof. There is necessity for an abundance of light in shops of this kind and it is furnished by numerous windows which appear on every side and in the roof of the buildings. There are four large buildings viz: The motive power and machine shop, 300 feet 8 in. by 100 ft. 8 in.; the blacksmith and boiler shop, 275 ft. 8 in. by 52 ft. 8 in.; the passenger and freight car shop, 384 ft. 10 in. by 80 ft. 8 in. and the paint shop, 290 ft. 4 in. by 80 ft. 8 in. Then there is a coal and store house, 126 ft. 8 in. by 30 ft. 8 in. The motive power and car repair departments are entirely distinct from each other, each having a foreman and keeping separate accounts. But the buildings are adjacent to each other, standing end to end. Directly east of the structures devoted to these departments, close to and in line with them, is the transfer table pit, which is 798 feet in length and 60 feet in width. It contains six tracks, running upon which is the transfer table supported by trucks, which is operated by machinery of its own, driving it from one end of the pit to the other as required. A track is laid on the

table which can, by moving the table, be made to connect with any one of numerous tracks which run into a line of stalls extending nearly the entire length of the interiors of the motive power and car buildings. A locomotive or car is brought down from the main yard on a spur track, rolled upon the table, which carries it to any stall which may be vacant. The door being shut, it is in a position to undergo repairs. Cars can also be transferred from this same table to the paint shop on the east side of the pit. One of the most interesting sections of the entire plant in the motive power department, where the engines which haul the people about the country go for repairs. It comprises not only the machine shop proper, but the blacksmith shop, boiler shop, tinning room, brazing room, etc. Throughout the interior, the hum of the machinery and the clink of the hammer, are manifest, and make a decidedly businesslike impression.

There are 157 locomotives in the Maine Central service, of various sizes, shapes and designs, some of the new ones with tenders weighing 220,600 pounds. As well as the cars, locomotives have been increasing in size year by year, so that recently it was found that the stalls were too small to accommodate several of the heaviest, and it was necessary to erect a narrow wooden addition on the outer wall, to cover them. Yet when the building was erected a little over ten years ago, it was supposed that the stalls were of sufficient size to meet all requirements for a long period. The time a locomotive remains upon the road depends largely upon the number of miles covered. It comes into the shop for general repairs after running from fifty to seventy-five thousand miles, and on the main line averages from 3,500 to 4,000 miles a month; on the branches much less. A locomotive is considered rebuilt when equipped with a new boiler, new cylinders and new tires. It requires in the neighborhood of two weeks to make general repairs. Six or seven locomotives are in the shop at a time, and that number will usually be found there in the hands of the company's machinists. On entering the shop, a locomotive it run upon what is known as a "drop pit," which is a table flush with the surrounding floor that, by mechanical means controlled by the hand, can be lowered or raised at will. Above is a powerful device which is connected with the superstructure of the engine, holding it suspended securely. The fastenings of the wheels being liberated the table

is lowered and they are separated from the remainder of the locomotive and rolled away. The upper portion is then transferred to the stall where the repairs upon it are to be made.

The motive power shop is equipped with every sort of a machine known to the building of locomotives, and they can be constructed complete with the exception of the castings and the boilers. Several have been built entire. Besides steam power, compressed air is employed throughout, being put to every use possible. It is exceedingly serviceable for hoisting purposes, air lifters being found where needed throughout the buildings. An interesting little contrivance is what is known as a "woodpecker," or pneumatic hammer. In this a cold chisel is inserted and by a mechanical device operated by air which enters through a flexible tube, a succession of hard, sharp blows is given the head of the chisel. In the hands of a workman, applied to hard metal or steel, it will chip off a section of the surface with great rapidity, in marked contrast with the old way of using a hammer and chisel by hand. A powerful lathe for turning down the tires of wheels, attracts the attention of the visitor. The drive wheels of a locomotive after long and hard usage on the road, become so badly worn, that grooves from one-eigth to one-quarter of an inch in depth appear on the faces of the tires. To reduce these the wheels are placed in the lathe two at a time and, slowly revolving, the tires are turned down until the depressions disappear and the running surfaces are true and even. In the blacksmith shop there are numerous forges, triphammers and machines for bending and working iron. A bolt machine is among the number. The foundry work for the shop is mostly done by Webber & Philbrick of Waterville, under contract, but some of the car castings are made at the Bath Iron Works. The boilers are generally purchased at locomotive works. All boilers before leaving the Waterville shop for road work, are carefully tested in the presence of the foreman of the motive power department and the foreman of the boiler shop, being given one-fourth more pressure than the maximum which they are permitted to carry. A detailed statement of deflections and measurements while under this pressure is required to be made to the general offices in Portland. All locomotive boilers in use by the company are thus tested as often as once a year, and to this may be

largely attributed the freedom from boiler explosions on the Maine Central, one of which never occurred in the history of the road.

Steam power for all the shops, is furnished by a 175 horse-power engine, and compressed air, by a separate air compressing engine, both of which are located in a special engine room.

For the year ending June 30th, 1898, the sum of $105,479.42 was expended by the company for ordinary repairs and renewals of locomotives. Two engines were sold, and one broken up, which were small and unsuitable for the service required. In addition to the main shop at Waterville there is a branch repair shop at Portland.

About 100 men are employed in the motive power department on the average, and the pay roll is $5,000 a month. Wages average as follows per day:

Machinists	$2 20
Machinists' helpers	1 37
Boiler makers	2 26
Boiler makers' helpers	1 21
Blacksmiths	2 26
Blacksmiths' helpers	1 40
Carpenters	2 24
Tinsmiths	2 25
Laborers	1 25
Others	1 81

It is in the car repairing department that all the company's passenger cars are maintained in such a trim and presentable condition, and the freight cars in running order. The passenger equipment numbers 226 cars; freight, 3,378, and the road service, 358. Submitted as they are to the constant rack of railroad service, it is an expensive task to keep them in repair and in readiness for business, notwithstanding the best steel, iron and wood that can be obtained, enter into their construction. There are two sections in the car repairing shop, one of which contains seven tracks for passenger cars, and the other, six for freight. Cars will always be found on these tracks undergoing repairs. The cars enter the shop from the transfer table outside in the same manner that locomotives reach the motive power shop. By various appliances they can be handled, the trucks and running

gear removed and repaired when necessary, and woodwork renewed. New wheels are substituted for old ones when needed.

The car department does not deal with iron and steel to the extent of the motive power shop, and the men are largely woodworkers here. The first requirement, is a mill where the timber, as it arrives in large manufactured sticks, can be worked up into the necessary sizes. It is located at the south end of the shop, and separated from the car shop proper by a partition. Here are found many kinds of saws and wood-working machinery, necessary in fitting the woods used in modern passenger cars and the coarser work of freight cars, including several power planers, one of which takes a stick of timber used for drawbars and planes it on all four sides at one time. Bay wood is now chiefly used for finishing passengers cars, the tendency being to atain lighter effects on the interior of cars. Formerly black walnut was employed almost wholly, but being a dark colored wood has been discarded, bay wood taking its place.

Above the mill is a second story which is known as the upholstering shop, where the comfortable and almost luxurious plush enveloped passenger seats are repaired and can be manufactured. The dust and dirt is blown out of the plush with which the seats are covered, by means of compressed air blowers, and after being in use several years, the material is sometimes colored. It is found to be an impossibility to rid plush seats in smoking cars from the odor of tobacco smoke, and artificial leather is being used freely for seat coverings in smokers and second-class cars. Plush upholstered seats will last from five to eight years, when the covering must be renewed. The plush used by the company comes mostly from the Sanford mills. In connection with the upholstering shop is the pattern room where all the patterns for castings are made.

An interesting spot, is the brass cleaning room on the first floor of the shop. Annually all the brass fixtures of a passenger car, lamps, trimmings, plates, screws, etc., both inside and outside, are removed and thoroughly cleansed. Taken to the cleaning room, they are plunged into a tank of potash lye where they are allowed to soak until all the lacquer, oil and foreign substances are removed. Thence they go into a bath of sulphuric and nitric acids combined, which acts on the metal. After being

dipped in hot and cold water, the articles are dried in sawdust and submitted to a compressed air blower to drive off the dust. The brass comes out gleaming and bright, and is finally lacquered to preserve the lustre. The oil vessel of lamps is not submitted to the bath but is cleaned and polished on a burnishing wheel. When articles of brass come out of this shop, they will usually maintain their brilliancy on the interior of a car for a year if properly cared for, and not become noticeably tarnished.

Passenger cars do not depreciate in value as rapidly as freight, for the simple reason that they are more carefully looked after and go through the shops every year, making their egress about as good as when new. But even with the best of care the average life of a passenger car is only something like twenty years. A car will sometimes fail in running 1,000 miles when it should have completed 5,000 or more.

The busy season for passenger car repairing, is from October 1st to July 1st, and then it is that the men engaged on this class of work have all they can do. July, August and September constitute the busy season on Maine railroads, and every car that can be mustered is brought into service. It is no time then for cars to lie idle. There was expended in repairs of passenger cars by the Maine Central Railroad Company last year, $62,573.86 which included the cost of thorough general repairs to 217 cars, and of air signals and quick action brakes for 222. Four new cars were constructed viz: One baggage and postal car, one postal and two combination cars, in addition to the regular repairing work performed.

For repairs of freight cars, there was expended during the year ending June 30, 1898, the sum of $72,573.86, which included general repairs to 400 cars, and the cost of one caboose car rebuilt. There were condemned or destroyed during the year, seventy-eight freight and work cars, worn out in service. The full capacity of the shop is the repairing of seventy cars per month. Unlike passenger coaches, cars in the freight service are only brought in for repairs when they break down or absolutely require them. Carrying the many loads they do, the cars frequently become maimed and must be put in condition. Only the best quality of oak, ash and southern pine is used, and no expense spared in making the work performed strong and durable.

A most important improvement which is being made in the freight cars of the company is the adding of safety appliances, and the work is being pushed forward as rapidly as possible. In the last railroad year, there was expended $26,641.88 for such appliances, which included the cost of automatic air brakes for 236 freight cars, standard couplers for 240 cars, and driving wheel brakes of the most approved pattern for nineteen engines. A large percentage of the cars is already equipped and it is expected that by the year 1900 all, or nearly all, will be supplied. Controlled by air brakes in the locomotive, a train can be handled with much more ease and economy than by the old way, and the numerous accidents which occur by the breaking apart of trains will be escaped, as when a break takes place the automatic brakes immediately set and the train is stopped. The general use of standard couplers in freight cars will prove a boon to train employes, and the frequent injuries which the men now sustain, in some instances resulting in death, will be largely avoided, and they will no longer be in constant danger of losing life or limb. The work of equipping the cars with safety appliances is all being performed at these shops, and adds largely to the labor and expense.

The paint shop, which is included in the car department, is a division of itself. The passenger cars and locomotives of the road are painted here. It contains seventeen tracks, fifteen for cars, one for locomotives, and one is a track for miscellaneous rolling stock. The shop is continually pushed with work, and there is no spare room, as all the passenger cars pass through once a year, requiring the painting of some twenty-eight cars a month, or more than one a day. Prepared paints are chiefly used for painting exteriors, as they dry quicker than white lead, the color being what is known as the Pullman color, which supersedes the yellow tint formerly employed. When the paint on a car becomes worn out and cracked, it is burned off and removed. This is done once in from seven to ten years. Some cars will run ten years without a crack appearing in the paint. Gold leaf is employed in lettering and striping. In finishing, varnish is applied. There are two ways of finishing the interiors, one the dead finish and the other in the gloss. It costs some $15,000 a year for car colors, and three barrels of varnish, one barrel of

spirits of turpentine, five barrels of benzine and eight hundred pounds of Pullman color are used a month. Locomotives are painted black throughout, and lettered in nickel. Very few freight cars are painted in the shop, this work being done in the yard during the open season. White lead is chiefly used, the tint being what is known to painters as a mineral brown. It is applied by a compressed air apparatus.

There are 143 men employed in and around the car department, and the monthly pay roll is $5,450. The majority are carpenters, thirty-nine being employed on passenger cars and forty-seven on freight, their wages varying all the way from $1.50 to $2.00 per day. The passenger car men receive more than those employed on freight work. There are twenty painters, receiving from $1.50 to $2.00 a day, nineteen car washers at $1.25, eight car inspectors at $1.70, three car cleaners at $1.30, and seven laborers at $1.25.

Nothing is left undone by the company in providing for the comfort and health of its employes while they are in the shops. The buildings are heated throughout by steam, an agreeable temperature being maintained in the coldest weather. Oil lamps are used for lighting. A noticeable feature and a most desirable one, is a lavatory located in the motive power building. The room is commodious and well lighted and, running the length of it, is a series of long troughs in which flow hot or cold water as desired. A supply of soap is at hand, and towels as well. The men find the room a great convenience. The closets are models of cleanliness and no offensive odor can be detected. The drainage is perfect, connection with the river close at hand being had. The work in every department is healthy and the men are long-lived and rugged. Employes often remain with the company for a long term of years, so that there is quite a number who have passed over twenty years, and two more than thirty, in the shops, and are hale and hearty.

The men are contented, and a strike is never known. Nine hours work constitutes a day, from October 1st until early spring, and the remainder of the year ten hours. Last season, during the shortest months, but eight hours a day were worked. Formerly young men were employed as apprentices who served a given period before acquiring their trade, but this plan has been given up and men are now hired as they come, and paid accord-

ing to their ability and knowledge of the business. The employes, with few exceptions, are American born, and are prosperous, a goodly percentage owning their homes. Their houses are neat and attractive and well kept. The shops being located half way between Waterville and Fairfield, they reside at both places and on the street which connects these places. Several have laid by snug sums and are forehanded, even being able to own a summer cottage at the seashore where they send their families during the hot months. The monthly distribution of $10,000 in wages is no small matter, and adds materially to the business and prosperity of the community.

John Ellis is master mechanic; H. N. Webber, foreman of the motive power shops; Amos Pilsbury, superintendent of motive power; Charles H. Kennerson, master car builder; P. W. Hannaford, foreman of the car shops, and Edward Hartshorn, foreman of the paint shop.

THE LIQUOR TRAFFIC IN MAINE.

Compiled from the Twelfth Annual Report of the United States Commissioner of Labor.

Outside of the intoxicating liquors wholesaled by the State liquor commissioner to towns and retailed by town agents, the liquor business in the State of Maine is wholly illegitimate and is carried on in open defiance of law. For this reason it is impossible to gather reliable statistics of the volume or profits of the traffic. It is to be presumed that a large majority of those who follow this traffic as a business, protect themselves from prosecutions by the United States by purchasing a revenue stamp at a cost of $25.00 to one engaged in the retail business. The number of such stamps purchased, or taxes paid, by residents of the State for the year ending June 30, 1896, was 1,145. Total amount paid for same, $26,393.20.

From the basis of a partial canvass of purchasers of special tax receipts, it is estimated that 120 of the above 1,145 tax receipts are for additional taxes paid by predecessors of present liquor dealers, in the same places of business, within the year. This would leave the total number of places of business in the State where special tax receipts are held, at 1,025. It is also estimated, from the same basis, that 113 of the 1,025 dropped out of the business during the year. This would show that 912 places of business, holding United States tax receipts, were run for the entire year, and 113 others for a portion of the year.

PUBLIC REVENUES.

In the following recapitulation of public revenues derived from the liquor traffic in the State of Maine, those for the United States and for counties are given in gross, while for the State and for municipalities the amounts given are net:

United States, for special taxes.....	$26,393 20
State of Maine, for profits on liquors sold.....	860 09

Counties, for fines and sales of confiscated liquors,	$92,964 26
Municipalities, for profits on liquors sold.....	8,606 01
Total	$128,823 56

FINES AND CONFISCATED LIQUORS.

The fines collected by the courts from liquor dealers for the benefit of the several counties for the same year, including the revenue derived from the sale of confiscated liquors, are as follows:

Androscoggin county	$8,404 66
Aroostook county	5,747 47
Cumberland county	16,196 92
Franklin county	948 29
Hancock county	4,624 25
Kennebec county	16,583 93
Knox county	5,105 00
Lincoln county	985 00
Oxford county	530 00
Penobscot county	17,160 96
Piscataquis county	950 00
Sagadahoc county	3,454 06
Somerset county	3,962 49
Waldo county	2,448 77
Washington county	3,108 00
York county	2,754 46
Total	$92,964 26

PROFITS OF SALES.

The following shows the net profits of the State liquor agency to the State, and the combined net profits of town agencies by counties, for the year ending June 30, 1896.

State agency	$ 860 09
Town agencies, Androscoggin county	3,131 47
Aroostook county	—
Cumberland county	1,738 70
Franklin county	511 85
Hancock county	107 00

Town agencies, Kennebec county	$804 32
Knox county, net loss	189 74
Lincoln county	—
Oxford county	824 35
Penobscot county	691 78
Piscataquis county	—
Sagadahoc county	82 10
Somerset county	—
Waldo county	—
Washington county	904 18
York county	—
Total net profits to cities and towns	$8,666 01
Add net profits of State agency	860 09
Aggregate net profits	$9,466 10

PRODUCTION AND CONSUMPTION OF LIQUORS IN THE UNITED STATES.

The following figures relate to the business in the whole country for the year ending June 30, 1896. There are no distilleries or breweries in Maine and consequently no liquors produced, yet, doubtless, the people of the State contribute a share in the consumption of both distilled and malt liquors.

Number of distilleries in operation	6,187
Number of breweries in operation	1,866
Distilled liquor produced, gallons	89,992,555
Fermented liquor produced, gallons	1,111,636,750
Domestic wines produced, gallons	15,980,000
Total product liquors of all kinds, gallons	1,217,609,305
Distilled liquor consumed, proof gallons	71,051,877
Malt liquor consumed, gallons	1,080,626,165
Wines consumed, gallons	18,701,406
Total all kinds consumed, gallons	1,170,379,448

The amount of distilled liquors consumed per inhabitant in the whole country during the year 1840 was 2.52 gallons, of wines .29 gallon, of malt liquors 1.36 gallons. From 1840 to 1896 the consumption of distilled liquors gradually decreased to 1 gallon in the latter year; of wines, with some fluctuations, to .26 gallon, while the consumption of malt liquors increased to 15.16 gallons per inhabitant, for the year 1896.

SYNOPSIS OF THE CONSTITUTION AND LAWS OF MAINE RELATING TO THE MANUFACTURE AND SALE OF INTOXICATING LIQUORS.

CONSTITUTION.

Amendment adopted September 8, 1884; took effect on the first Wednesday in January, 1885. The manufacture of intoxicating liquors, not including cider, and the sale or keeping of same for sale is forever prohibited, except that the sale and keeping for sale of the same for medicinal and mechanical purposes and the arts and the sale and keeping for sale of cider is permitted under such regulations as the legislature may provide.

REVISED STATUTES OF 1883.

Chapter 9 (section 32). Fine of not less than $5 nor more than $20, half to the State and half to the complainant, for selling or giving liquor to an Indian.

Chapter 17 (sections 1, 2, and 4). Places for the illegal sale or keeping of intoxicating liquors; houses, shops, or places where liquors are sold for tippling purposes, and all places of resort where liquors are kept, sold, or given away, drunk, or dispensed in any manner not provided by law, declared to be common nuisances. Fine of not less than $100 nor more than $1,000 for keeping or maintaining such nuisance.

Chapter 27 (section 15, amended by chapter 140, acts of 1887, and chapter 160, acts of 1895). Governor to appoint a commissioner to furnish municipal officers of towns and cities with pure, unadulterated intoxicating liquors to be kept and sold for medicinal, mechanical, and manufacturing purposes only. Salary to be paid such commissioner of $1,500 per annum. He is also entitled to receive from State treasury the expenses of his office

and interest on the average capital actually invested by him in his stock of liquors.

Chapter 27 (sections 19, 21, amended by chapter 140, acts of 1887, 23, 25, and 26). Fine of not less than $10 nor more than $20 on any town agent who fails to keep a record of the amount of liquors purchased by him, kind and quantity of each, price paid and of whom purchased, or a record of the kind and quantity of liquors sold by him, date of sale, price and name of purchaser, and who fails to keep such record open for inspection. Town agents forbidden to sell to minors without a written direction of parent, master, or guardian; to Indians, soldiers, drunkards, intoxicated persons; to any intemperate person of whose habits he has been notified by relations or officers of any city, town, or plantation, or to insane and incompetent persons, spendthrifts and State prison convicts for whom guardians have been appointed by judges of probate. Fine of $20 on town liquor agent selling liquors by himself or employe for tippling purposes as a beverage. Liquors kept by town liquor agents must not be adulterated or fictitious.

Chapter 27 (sections 28 and 29, amended by chapter 140, acts of 1887). Fine of $1,000 for manufacturing or selling any intoxicating liquors, except unadulterated cider which is not sold to be used as a beverage or for tippling purposes.

Chapter 27 (section 30, amended by chapter 366, acts of 1885). The traveling about and carrying for sale or offering for sale or obtaining or offering to obtain orders for the sale or delivery of liquors forbidden, and a fine of not less than $20 nor more than $500 for each offer to take an order, for each order taken, and for each sale so made provided for.

Chapter 27 (section 31, amended by chapter 140, acts of 1887; chapter 132, acts of 1891, and chapter 307, acts of 1893). Fine of not less than $50 nor more than $100 for knowingly bringing into, or transporting from place to place, in the State, with intent to sell same or that the same shall be sold by any person or to aid any person in such sale. Fine of $50 on any employe of any railroad or express company removing liquors from any car at any other place than the usual and established stations, depots, etc., of such company, or aiding in or consenting to such removal. Fine not exceeding $200 on any railroad, steamboat, or express

company knowingly transporting or bringing such liquors into the State.

Chapter 27 (sections 34 and 35, amended by chapter 366, acts of 1885, and chapter 140, acts of 1887). Fine of not less than $50 for first offense and of $200 for each subsequent offense for selling liquors in the State in violation of law. Fine of $100 for a first offense and of $200 for each subsequent offense for being a common seller of intoxicating liquors.

Chapter 27 (section 37, amended by chapter 366, acts of 1885; chapter 140, acts of 1887, and chapter 132, acts of 1891). Any person selling liquors in any building, vessel, or boat, contrary to law, and the same are there drunk, is guilty of keeping a drinking house and tippling shop. Fine of $100 for each offense.

Chapter 27 (sections 38, 39, 40, amended by chapter 140, acts of 1887, and chapter 132, acts of 1891, 41, 42, 43, 44, amended by chapter 253, acts of 1893, 45, amended by chapter 132, acts of 1891, 46, amended by chapter 366, acts of 1885, and 47). Makes it unlawful to deposit or have in possession intoxicating liquors with intent to sell same in violation of law. Provides that such liquors so kept and deposited and the vessels in which they are contained shall be contraband and forfeited to cities, towns, and plantations; that such liquors may be searched for and seized; that if, upon trial, court is of opinion that liquors so seized were kept and intended for unlawful sale, he shall impose a fine of $100 upon the guilty person. All liquors so seized and declared forfeited shall, if found to contain more than 20 per cent. of alcohol, be turned over to the sheriff, who, when he has accumulated five (5) barrels, shall ship the same to some distiller and have the alcohol redistilled therefrom. The money received for such alcohol is to be paid into the county treasury. Fine of $100 upon person pouring out or destroying liquors when search was made if it is proved in court that such liquors were so poured out or destroyed.

Chapter 80 (section 42). Fine of $25 for first offense and of $50 for second offense on any prison keeper suffering any prisoner to have intoxicating liquor, unless prison physician certifies that prisoner's health requires it and prescribes quantity. Fine of not less than $5 nor more than $10, half to town and half to prosecutor, for selling or delivering liquor to any person com-

mitted to jail on mesne process or execution, or to any other person for the use of such prisoner.

Chapter 128 (section 1). Fine not exceeding $1,000 for selling unwholesome drink, knowing it to be such, without informing the buyer, or fraudulently adulterating for the purpose of sale any wine, spirits, or other liquors.

Chapter 125 (section 1). Fine not exceeding $500 for offenses for which no punishment is provided by statute. When fine is imposed defendant may also be sentenced to pay costs of prosecution; and for violations of sections 34, 35, 37, 40, and 45 of chapter 27 he shall be sentenced to pay such costs.

Chapter 136 (section 1). Fines and costs shall be paid into the treasury of the county where the offense is prosecuted, for the use of such county.

ACTS OF 1885.

Chapter 366 (section 8). Fine of $20 and costs for advertising or giving notice of the sale or of the keeping for sale of intoxicating liquor. One-half said fine to be paid to complainant and one-half to town in which said notice is published.

ACTS OF 1889.

Chapter 157. Fine not exceeding $20 for giving, selling, or delivering liquor to a prisoner in any place of confinement, or in the custody of an officer, or for having such liquor in possession in any such place of confinement with intent to convey or deliver same to any person confined therein.

ACTS OF 1891.

Chapter 45. All provisions of chapter 17, chapter 27, and section one (1) of chapter 135, of the Revised Statutes, so far as they relate to intoxicating liquors, apply to such liquors imported in the original package.

ACTS OF 1895.

Chapter 160 (sections 4 and 11). Fines of not less than $100 nor more than $500 on State liquor commissioner for selling any liquors to municipal officers that have not been tested and found to be pure. Said commissioner shall take of municipal officers for the liquors sold to them ten (10) per cent. above the cost thereof and pay the same annually to the State treasurer.

Fine of $100 on any municipal officer buying liquors from any other person than the State liquor commissioner, and on any town or city liquor agent or employe thereof selling or furnishing for sale any liquors which have been decreed to be forfeited or found to be impure, or adulterating or mixing liquors with coloring matter, water, etc., or selling or exposing for sale liquors so adulterated.

FOUNDRIES AND MACHINE SHOPS.

From its earliest settlement, Maine has been a manufacturing State. The great quantity of pine, spruce and other timber found on its hillsides and along its water courses led to the building of lumber mills, and the erection of these led in turn to the construction and equipment of foundries and machine shops for the making of shafting, gears and other mill machinery. Shipbuilding was early introduced into the State of Maine and this branch of industry led to the establishment of shops where the iron work of vessels could be manufactured. The introduction of cotton and woolen mills led to the building of some of the largest machine shops in the State for the purpose of manufacturing cotton and woolen machinery. In these later years there has been a change in the custom of large plants. Formerly their repairs were mostly done at the regular machine shops owned by other parties. Now every paper or pulp mill, every large lumber mill, every woolen or cotton mill and every large plant of whatever description has its own machine shop, with from one to a dozen employes according to its requirements. This fact has had a tendency to reduce the number and importance of general machine shops in the State, still the list of such shops is a large one, and a brief sketch of the work done by them will be found interesting and profitable.

We present the list of foundries and machine shops in the State, with the explanation that a few may not appear, either on account of a failure to report, or being unintentionally overlooked.

ANDROSCOGGIN COUNTY.

AUBURN.

Auburn Foundry Company.
N. M. Neal Foundry Company.
Auburn Stove Foundry Company.
J. M. Cranshaw, machinist.
F. H. Fellows, machinist.
C. E. Marvell, machinist.
E. F. Ranks, machinist.
J. W. Verrill, machinist.

EAST LIVERMORE.

J. A. Record, iron foundry.

LEWISTON.

Charles H. Jumper, brass foundry.
Lewiston Machine Company, foundry and machine shop.
Carman-Thompson Company, machinists.
Edwin F. Field, machinist.
C. F. Nason, machinist.
A. B. King, machinist.
Rand & Harvey, machinists.

MECHANIC FALLS.

J. W. Penney & Sons, brass and iron foundry, machine shop.

LISBON FALLS.

Androscoggin Iron Company, machinists.

AROOSTOOK COUNTY.

CARIBOU.

J. S. Getchell & Son, foundry and machine shop.

FORT FAIRFIELD.

J. B. Grey, machinist and boiler maker.

HOULTON.

Houlton Foundry and Machine Shop.
H. M. Cates, machinist.

PRESQUE ISLE.

E. Banfill, machinist.

CUMBERLAND COUNTY.

BRIDGTON.

Bridgton Machine Company.

BRUNSWICK.

Brunswick Manufacturing Company.
F. H. Purinton, machinist.
A. G. Hall, machinist.
J. Furbish, machinist.

FREEPORT.

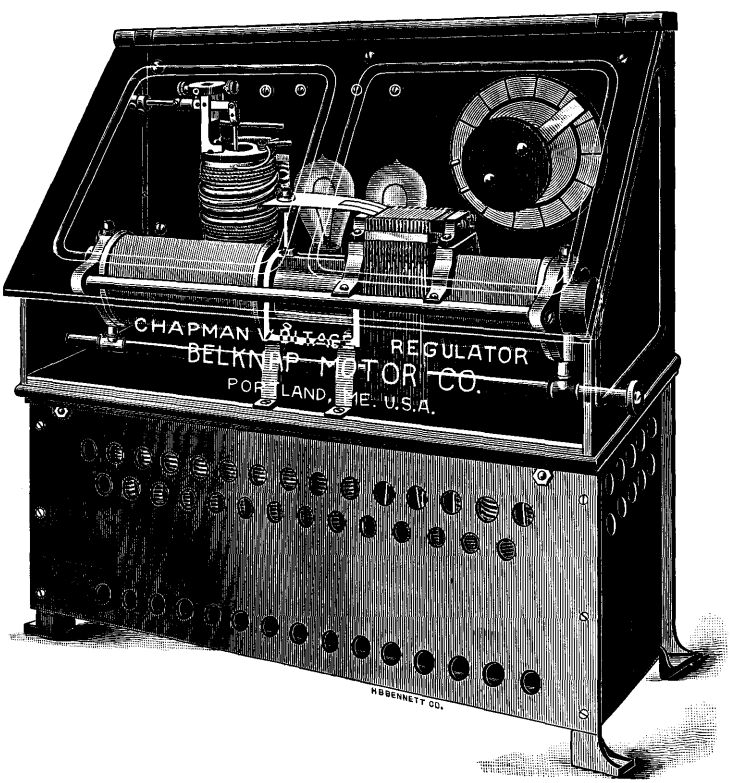
J. P. Merrill, shoe machine knives.

HARRISON.

T. H. Ricker & Sons, machinists.

PORTLAND.

Charles E. Babbitt, brass founder and machinist.
Knight Bros., brass founders and machinists.
Megquier & Jones, brass founders and machinists.
Portland Company, brass and iron founders and machinists.
D. Kelley & Sons, iron founders.
Portland Stove Foundry Company.
C. P. Babcock, machinist.
G. W. Butler & Company, machinists.
H. A. Dunn & Company, machinists.
Jones & Hitchings, machinists.
E. M. Lang & Company, machinists.
J. H. Lidback, machinist.
Mills & Gilmour, machinists.
Orr & Jennings, machinists.
C. M. & H. F. Plummer, machinists.
Chase Manufacturing Company, machinists.
Scanlon Company, machinists.
Southworth Bros., machinists.
H. R. Stickney, machinist.
D. Winslow & Son, machinists.
Belknap Motor Company, machinists.
The Hayes Tool Company, machinists.



CHAPMAN VOLTAGE REGULATOR, MANUFACTURED BY THE BELKNAP MOTOR COMPANY, PORTLAND.

Maine Electric Company, machinists.
The Thomas Laughlin Company, marine goods.
G. M. Stanwood & Company, marine goods.

SOUTH PORTLAND.

John P. Lovell Arms Company, machinists.
Portland Rolling Mills.

WESTBROOK.

Geo. H. Raymond, foundry.
John J. Knowlton, machinist.
Foster & Brown, machinists.
W. V. Knight, machinist.

FRANKLIN COUNTY.

FARMINGTON.

H. I. Spinney, machinist.

KINGFIELD.

Ellis & Norton, cant dogs and axes.

PHILLIPS.

E. Greenwood, machinist.
W. C. Achorn, machinist.
G. B. Carpenter, machinist.

WELD.

A. C. Rollins, machinist.

EAST WILTON.

Clark & Parsons, hay knives and machetes.

HANCOCK COUNTY.

ELLSWORTH.

B. B. Walker, iron founder and machine shop.

ORLAND.

Augustine Mason, iron founder.

KENNEBEC COUNTY.

AUGUSTA.

Frank I. Clark, machinist.
Fifield Brothers, machinists.
Gay & Parsons, machinists.
H. H. Harvey, machinist.

GARDINER.

J. F. Newell & Company, brass foundry.
C. A. Robbins & Son, iron foundry, machine shop.
P. C. Holmes Company, iron foundry, machine shop.
Gardiner Tool Company, machinists.
Harvey Scribner (estate), machinist.

HALLOWELL.

Hallowell Brass and Iron Foundry.
McClench & Company, machinists.
S. F. Davenport, machinist.

OAKLAND.

Emerson & Stevens Manufacturing Co., axes and scythes.
Dunn Edge Tool Company, axes and scythes.
Witherell Scythe Company, axes and scythes.
American Axe and Tool Company, axes and scythes.
Oakland Machine Company, machinists.
G. F. Allen, machinist.

WATERVILLE.

Noyes & Goddard, stove foundry.
Waterville Iron Works, foundry, machinists.
Levi Ronco, machinist.

WAYNE AND NORTH WAYNE.

Maxim Anti-Oxidizing Steel Company.
North Wayne Tool Company.
Harvey & Sons.

KNOX COUNTY.

CAMDEN.

William G. Alden, anchors.
Knowlton Brothers, foundry and machine shop.
C. M. Barstow, machinist.
E. H. Bramhall, machinist.
W. C. Howe, machinist.

ROCKLAND.

Morse, Trussell & McLoon, machinists.
W. C. Robinson, machinist.
The Livingston Manufacturing Company, machinists.
I. G. Torrey & Son, brass founders.

WARREN.

C. J. McCullom, machinist.

WASHINGTON.

W. M. Dow, machinist.

OXFORD COUNTY.

ANDOVER.

Thomas French, machinist.

BROWNFIELD.

Hiram Seavey, machinist.

CANTON.

T. P. Cole, machinist.

MEXICO.

Clark Houston, cant dogs, river driving tools.

NORWAY.

W. E. Austin, machinist.
H. & E. Sanborn, machinists.
J. A. Hunter, machinist.

SOUTH PARIS.

F. C. Merrill, iron foundry.
A. C. Jones, machinist.

WEST PARIS.

Ellingwood & Willis, cant dogs.

RUMFORD.

Philo B. Clark, machinist.

PENOBSCOT COUNTY.

BANGOR.

Geo. T. Allamby, brass foundry.
M. Schwartz' Sons, iron and brass foundry.
Union Iron Works, foundry and machine shop.
Bangor Edge Tool Company, tools.

BREWER.

Rowland Bradbury, machinist.
Hathorn Manufacturing Company, machinists.

CORINNA.

H. L. Burrill, foundry and machine shop.

DEXTER.

Fay & Scott, machinists.

ETNA.

Sumner Damond, axes.

HAMPDEN.

E. A. Robertson, machinist.

OLD TOWN.

W. H. Ward, foundry.
T. M. Chapman & Son, machinists.

ORONO.

E. Mansfield & Co., cant dogs, machinists.

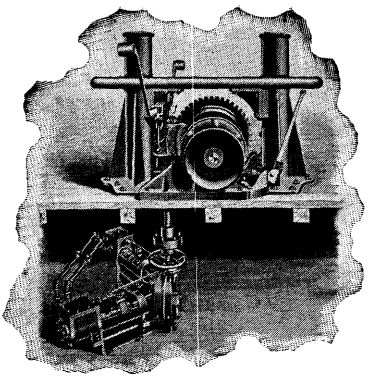
PISCATAQUIS COUNTY.

FOXCROFT.

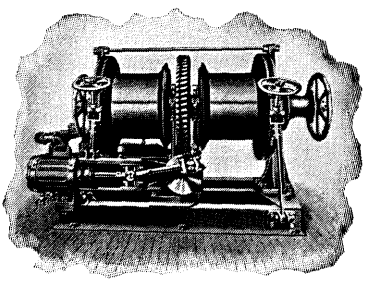
Charles Knox, machinist.

GUILFORD.

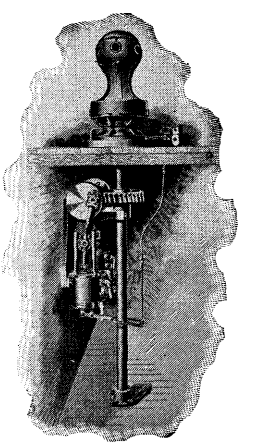
Jos. Hamer, machinist.



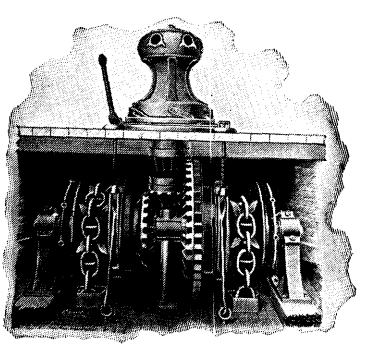
Steam Tow Boat Windlass.



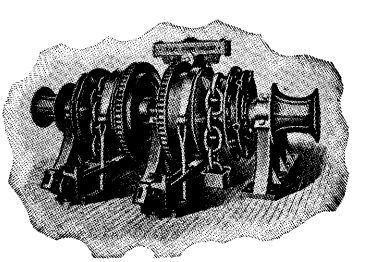
Wire Cable Windlass.



Vertical Steam Windlass.



Capstan Windlass.



Brake Windlass.

WINDLASSES, MANUFACTURED BY THE HYDE WINDLASS COMPANY, BATH, ME.

SAGADAHOC COUNTY.

BATH.

Bath Iron Works, brass and iron foundries.
Hyde Windlass Company, brass and iron foundries.
Torrey Roller Bushing Works, brass and iron foundries.
Watson, Frye & Co., brass foundry.
August Mampel & Son, iron foundry.
G. Moulton, Jr., machinist.

RICHMOND.

J. F. & D. C. Ames, edge tools, ship smiths.

SOMERSET COUNTY.

PITTSFIELD.

Chamberlain & Hersey, machinists.
Delano & Rhoades, machinists.
F. B. Dow, machinist.

SKOWHEGAN.

Island Machine Company, machinists.
Albert E. Blunt, cant dogs.
Harriman, Ring Company, hammers.
C. A. Williams & Company, hatchets.

WALDO COUNTY.

BELFAST.

B. Kelley & Company, axes.
Belfast Foundry and Machine Company.
F. A. Howard & Sons, machinists.
G. T. Reed, machinist.

LIBERTY.

I. F. Allen, foundry and machine shop.

WASHINGTON COUNTY.

CALAIS.

McCullough & Tait, foundry.
George E. Elliott, machinist.
W. E. McAllister, machinist.
W. McDonald & Son, machinists.

DANFORTH.

Lowell & Murdock, machinists.

EASTPORT.

G. M. Huston, machinist.
F. A. Buck, machinist.

MACHIAS.

Sargent, Stone & Company, foundry and machine shop.

YORK COUNTY.

BIDDEFORD.

Biddeford Iron Foundry.
Hardy Machine Company, machinists.
John P. Kelley, machinist.
Saco and Pettee Machine Shop, cotton machinery.

NEWFIELD.

J. W. Emery, foundry.

NORTH BERWICK.

Isaac Varney & Sons, machinists.

SACO.

A. H. Gilman, machinist.

SOUTH BERWICK.

M. A. Libby, machinist.

HOLLIS.

Charles C. Clough, machinist.

KENNEBUNK.

Geo. Varney, iron foundry.
Geo. W. Williams, machinist.
Nathan Hartwell, machinist.

The foregoing list includes many small machine shops where only one or two hands, aside from the proprietor, are employed.

A brief description of the shops or foundries whose employes number five or more, or those that manufacture some important specialty, is given below, also a summary of the number of hands employed in the State, the average daily wages paid, the total sum paid in wages, the approximate total capital invested, and such other facts as are deemed interesting or important.

The total number of foundries and machine shops in the list given above is one hundred and seventy. This does not include the repair shops of the Maine Central and other railroads in the State.

The following brief descriptions are presented in the order of the foregoing list.

The Auburn Foundry Company, Auburn, make castings of all kinds, having no specialty. Fifteen hands are employed fifty-two weeks in the year, and the average daily wages per man are two dollars. E. K. Wilbur is the agent.

The N. M. Neal Foundry Company, Auburn, makes iron castings of all kinds, including all descriptions of mill work. The capital invested is $15,000. Seven hands are employed fifty-two weeks in the year. Average daily wages, about two dollars.

The Auburn Stove Foundry Company, Auburn, have a large and well-equipped plant, close to the line of the Maine Central Railroad. It employs on the average about forty hands, the product being ranges, cooking and parlor stoves. The market for its goods is the whole of Maine and parts of New Hampshire and Vermont. The manager is Geo. W. McFadden.

The plant of the Lewiston Machine Company is located near the Bates street station of the Maine Central Railroad. It is a large and finely equipped plant. It has a capital of $100,000 and employs two hundred hands fifty-two weeks in the year. Its product is cotton machinery and general mill work. The market for its goods is partly in the South. It has both an iron and a brass foundry, and its reputation for fine work is as high as that of any concern of its kind in the country. R. C. Reynolds is the agent for this company.

The Carman-Thomson Company, Lewiston, are plumbers, heaters and machinists. Their manufactory is on Main street

and is a large and important plant. This company does a large business in the way of supplying steam power for electric street railways and electric light plants. It does work thoroughout the New England States, also in New York. About forty men are employed fifty-two weeks in the year.

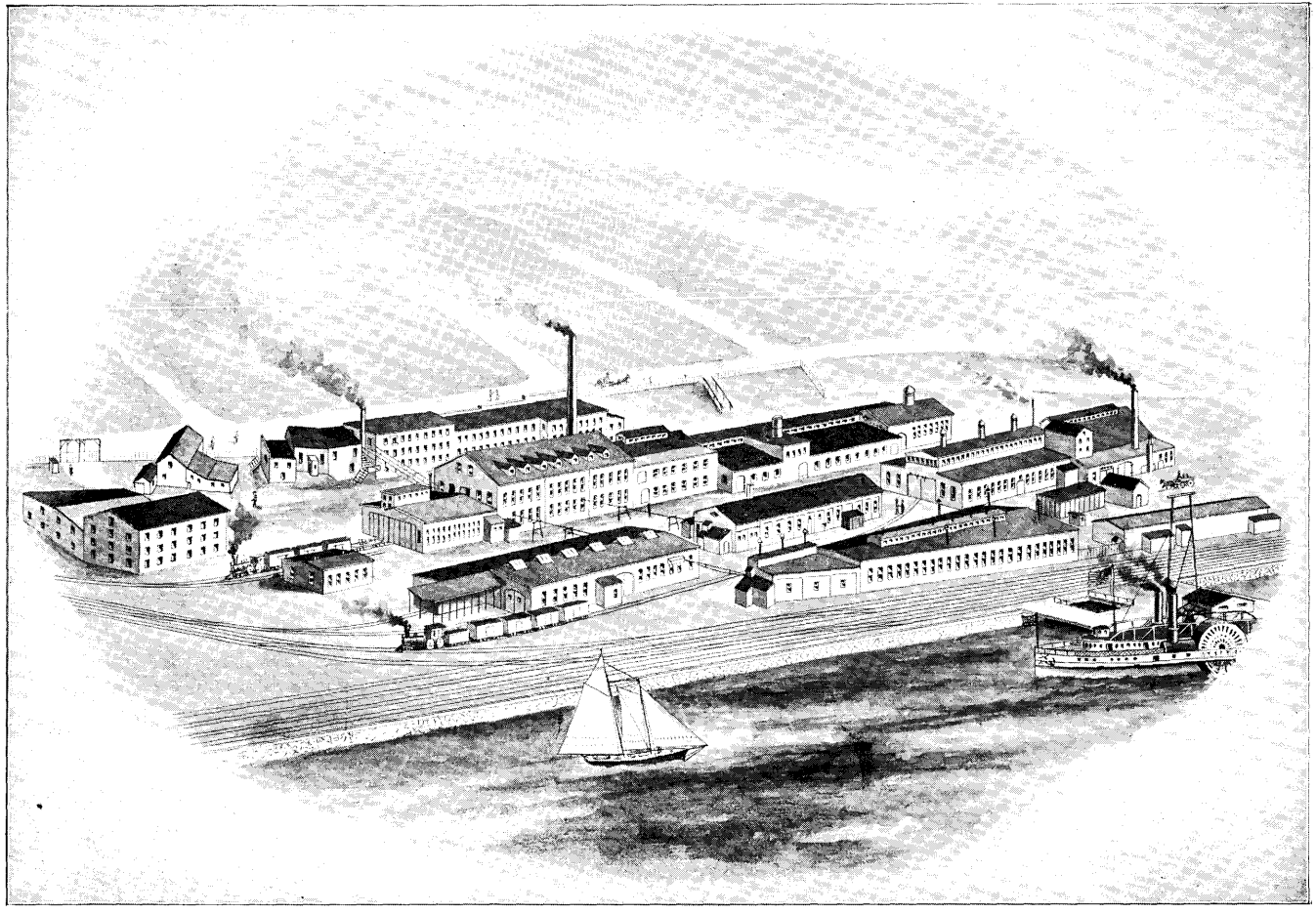
J. W. Penney & Sons, Mechanic Falls, brass and iron founders and machinists. This is a widely known firm. Their output consists of automatic and plain slide valve engines, pulp and paper mill machinery, castings of all descriptions, pulleys, hangers, boxes and all kinds of steam apparatus. They employ twenty men the year round, and their machines are sent into all of the New England States.

J. S. Getchell & Son, Caribou, Aroostook county, have a large and well-equipped plant. It was built in 1877 by H. H. Gordon & Company. The present proprietors bought it in 1890. Six men are usually employed although there is room for ten. The firm does all kinds of mill work, and repairs all kinds of agricultural implements. The foundry is sufficient for all country purposes, and the tools in the machine shop are all up to date.

The first foundry and machine shop in Aroostook county was built at Cary's Mills about two miles from Houlton village, by the late Shepard Cary. J. S. Getchell & Son built a foundry and machine shop in Houlton in 1876. Grieves & Shay became the proprietors in 1887. They sold out to Waldo Brown in 1890. Mr. Brown and Walter Mansur built the plant up to its present dimensions. In 1897 the Houlton Foundry and Machine Company was formed, with George Shay as manager. It is a fine plant, equipped for doing all kinds of mill and general machine work, and employs on the average about twelve hands. The plant has room enough for thirty-five or forty men and in the business revival now in sight it is expected that a larger force will be employed than at present.

The Bridgton Machine Company, Bridgton, Cumberland county, are proprietors of a foundry and machine shop. They manufacture water wheels, shingle machines and other mill machinery. Their market is the State of Maine, principally.

T. H. Ricker & Sons, Harrison, are manufacturers of mill machinery.. They make a sawing machine for sawing out stock for bobbins, dowels, spools, shovels, fork and rake handles, box boards, staves and pickets. They also manufacture circular



THE PORTLAND COMPANY'S WORKS, PORTLAND.

saw mills, planing machines, and, in fact, everything used in long or short lumber mills. This is one of the most enterprising of the smaller machine shops in the State and many of their machines are sent to other states.

Megquier & Jones, brass and iron founders, Portland, have a fine plant on Pearl street. Their capital is $50,000 and they employ twenty men. Their product is miscellaneous brass and iron goods.

Knight Brothers, Portland, brass founders and plumbers, are located on Fore street. They employ seven men and do a general business in brass goods.

The great plant of the Portland Company is one of Maine's most important industries. It is situated on Fore street near the Grand Trunk Railway station. Formerly this company built many locomotives, but in recent years it has turned its attention to digesters and other pulp machinery. It has built some of the largest digesters in use in this country. It is equipped for the building of locomotives, marine and stationary engines, railroad cars, snow plows, dredging machinery, mill gearing, shafting and all kinds of mill work. This plant employs two hundred and fifty men at the present time, but has ample room for double that number. George F. Morse is the agent and manager.

The Portland Foundry and Machine Works, D. T. Kelly & Sons, proprietors, is another important industry. The plant is situated on Kennebec street near the line of the Portland and Rochester Railroad. Daniel T. Kelly started the business nearly forty years ago. The present firm was formed ten years ago. The foundry is very large and roomy. There are two furnaces and the usual daily cast amounts to about 4,500 pounds of iron, or 675 tons annually. The firm does a great deal of casting for the smaller machine shops of Portland and vicinity. There are nineteen men employed in the foundry and six in the machine shop, or twenty-five in all.

The Portland Stove Foundry Company is the largest plant of the kind in Western Maine. The plant is located on Kennebec street near the line of the Portland and Rochester Railroad. Its capital stock is $52,000. The output is stoves, ranges, furnaces and heaters. It employs eighty men and is in operation forty-eight weeks in the year. The goods made by this corporation are sold mainly in New England and the provinces.

Jones & Hitchings are located on Fore street, Portland. They are finely equipped for general machinery and for boiler and engine work. They employ six hands and run fifty-two weeks in the year.

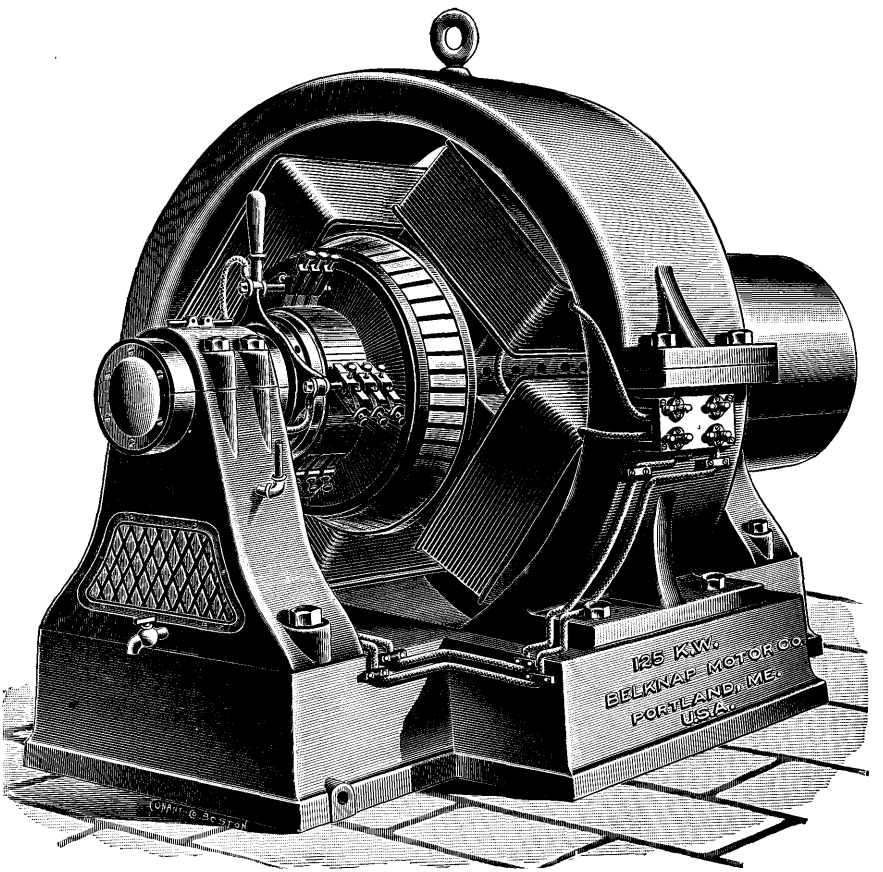
E. M. Lang & Company are located on Kennebec street, Portland, near the Portland and Rochester Railroad. They are manufacturers of solder, canners' dies, soldering irons, soldering tools, canning machinery, etc. They employ four hands the year round.

Mills & Gilmour are located on Commercial street, Portland, and are manufacturers of marine engines and general machinery. They employ six hands the year round.

Orr & Jennings are located on Fore street, Portland, and are manufacturers of steam engines, although they do repairs on general machinery. The force in their shop is usually six all told.

The Belknap Motor Company's plant is situated on Fore street, Portland. The capacity of this plant has been more than doubled since the first organization of the company. This is one of Maine's most widely known and most important industries. At the World's Columbian Exposition in Chicago in 1893, this company made the finest exhibit that went from Maine, and, on account of the excellence of this exhibit, secured orders for motors and electrical goods from all over the West. The company was incorporated in 1890, and Geo. W. Brown was made general manager. The capital invested is $54,900 and the number of hands employed averages forty. The product of the establishment is motors, dynamos, commutator brushes, electrical instruments of all kinds. One of the specialties is Chapman's Voltage Regulator, an invention of Mr. Chapman, the electrician of the Belknap Motor Company. The voltage regulator produces a steady current from an unsteady power and such are its merits that orders are received from all parts of the world. Through all the depression of the last few years the Belknap Motor Company has had all that it could do and has been compelled to enlarge its plant. Its present quarters, although convenient and excellently fitted up, are too small and it is only a question of time when it must again enlarge.

Southworth Brothers are located on Middle street, Portland, and they do electrotyping and general machinery work. They



DYNAMO, MANUFACTURED BY THE BELKNAP MOTOR COMPANY, PORTLAND.

also manufacture rubber stamps. Their capital stock is $55,000 and they employ eighteen hands the year round. They do a large business in electrotyping and make this branch of their business a specialty.

The Maine Electric Company is located on Commercial street and its product is motors, dynamos and electrical goods generally. They are also manufacturers of electric hoists for quarries, lumber yards and docks. They employ about fifteen hands on an average.

The Thomas Laughlin Company, Portland, have two plants, one on Commercial and the other on Fore street. This company manufactures all kinds of marine goods and ship chandlery hardware. This is one of the largest concerns of the kind in the State. It employs about sixty hands the year round and the market for its product is very extensive. Capital invested, $50,000. Incorporated in 1890. First established in 1865. John E. Fisher is treasurer and manager.

G. M. Stanwood & Company, Commercial street, Portland, ship smiths, manufacture chains and anchors and other marine goods. They employ about twelve men on the average.

The Hayes Tool Company, Cross street, Portland, are manufacturers of machinists', plumbers' and boiler makers' tools. They employ about six men and find a ready market for their output.

The John P. Lovell Arms Company of Boston, about three years ago, put the abandoned building in South Portland, which was erected for a plush factory, to a practical use, by establishing a bicycle manufactory in it. Since that time the manufacture of police goods has been added and still further additions are contemplated. The plant now consists of the following buildings: The main building, 222 feet long by 85 feet wide; a wing to this building 150 by 48 feet; a filing room, 100 by 30 feet, two stories in height; a brazing room, 100x30 feet, two stories in height; a boiler and engine room, 60x42 feet, built of brick; a coal shed, 38x15 feet, and a store house, 60 feet by 18. In addition to the above a building 200 feet in length and two stories in height is in process of building. This concern has orders to build 14,000 bicycles for next year's trade. The cost of material used last year was $152,000 and the value of the output was $225,000. The concern now employs 300 hands and will employ more when

the buildings now in process of erection, are completed. The establishment of this great plant in South Portland is a matter of much importance to the city and also to the State of Maine. It promises eventually to develop into an enormous industry, possibly giving employment to twice the present number of hands. L. H. Cobb is the manager.

The Portland Rolling Mills are located in that part of South Portland called Ligonia. This great industry was commenced in 1866. Its site is that of old Camp Berry, the camping ground of several regiments during the War of the Rebellion. The company now owns the old campground and has built upon it quite a village of tenements, which it lets to it employés at a low rate. The company built a church also for its workmen and finds the fuel for it. The company employs a hundred men and of these fully seventy-five are married. Each tenant of the company's houses is given the use of a garden free. The capital stock of the company is $125,000, and the output consists of railroad iron, shafting, blacksmith's supplies, ship supplies, railroad spikes, iron and steel and fish plates. The hands work by the ton usually and they average $2.50 each daily. The officers are: C. R. Milliken, President; J. H. Leavitt, Treasurer; William Beardsworth, Superintendent.

In summarizing the data of Portland's foundries and machine shops, we find that all told they number twenty-seven; that they give employment to about one thousand hands, or more accurately, nine hundred and seventy-four; that the capital invested amounts to more than a million dollars, and that the value of the output is nearly or quite two million dollars; that many of the goods manufactured are sent to all parts of the United States, while but very few of the plants depend on the local market entirely for their orders.

George H. Raymond, Westbrook, is the proprietor of a foundry, where all kinds of castings are made. He employs ten hands the year round.

J. J. Knowlton, Westbrook, is proprietor of a machine shop where all kinds of mill work is done. Heavy machines, such as boring mills for machine shops, are made at this plant. Shafting, gearing, hangers and pulleys are among the output of the shop. Mr. Knowlton does much work for the Sanford plush and worsted mills.

Foster & Brown, Westbrook, are proprietors of a large and well equipped machine shop. They do general machine work, but their specialties are paper mill machinery and water filters. They are the manufacturers of the celebrated Warren Filters, one of which is in use at the Bangor water works. This firm employs twelve hands.

Ellis & Norton, Kingfield, Franklin county, are manufacturers of cant dogs and axes.

At East Wilton, Clark & Parsons have taken the machine shop formerly occupied by the late Hiram Holt of Farmington. Hay knives and machetes are the products of this plant. As is well known, machetes are the long wicked looking knives that the Cuban insurgents were armed with. These knives can be used not only as weapons but also for cutting down shrubs and underbrush, and for many other purposes.

Gay & Parsons, Augusta, Kennebec county, do some general machine work, but their specialty is the manufacturing of screw drivers. They make many kinds and sizes of screw drivers, among others the patent double action screw drivers. The market for these goods is New York, parties in that city taking the whole output. The firm employs twelve men the year round. The industry was commenced in 1879.

H. H. Harvey, Fifield Brothers, and Frank I. Clark, are proprietors of machine shops in Augusta, with an extensive local patronage.

C. A. Robbins' Son, Gardiner, has a large machine shop and iron foundry. Steam boilers and engines and tools for cutting ice are the output, principally, although general machinery repairs are made here. The working force averages about six men.

The estate of Harvey Scribner, Gardiner, consists of a fine plant for the manufacture of saw mills, shingle machines, lath and clapboard machines and all kinds of mill machinery. The capital is $25,000 and the number of employés about eight, fifty-two weeks in the year. This plant was established more than forty years ago, and has furnished a great deal of the mill machinery in use in Maine and the other New England States.

The P. C. Holmes Company, Gardiner, was originally established in 1831 by Philip C. Holmes and Charles A. Robbins, under the firm name of Holmes & Robbins. In 1860 the title was

changed to P. C. Holmes & Company, the members of the new firm being Philip C. Holmes, George M. Holmes and Thomas Wrenn. Mr. Wrenn died in 1866 and was succeeded by Philip H. Holmes. Philip C. Holmes died in 1882 and was succeeded by George H. Holmes, son of George M. Holmes. In 1889 the company was incorporated under the title of the P. C. Holmes Company, with a capital of $300,000. Such in brief is the history of one of Maine's oldest and most widely known foundries and machine shops. The Holmes family seem to be inventive and the public are indebted to them for one of the best water wheels ever constructed, and also much other superior mill machinery. They have both an iron and brass foundry, and the output of their machine shop is all kinds of mill and general machinery. They employ forty men the year round.

The Gardiner Tool Company, H. M. Foster, agent, manufactures ice tools.

George Fullers' Sons, Hallowell, are proprietors of an iron and brass foundry and a machine shop. They manufacture shafting, pulleys and general mill work. They employ about ten men.

S. F. Davenport, Hallowell, manufactures marine engines for boats, yachts, etc.

McClench & Company, Hallowell, are general machinists.

Oakland is the center for the manufacture of edge tools in the State of Maine. A succession of falls on the Messalonskee river supplies ample water power, and the Maine Central and Somerset railroads afford excellent railroad facilities.

The Emerson & Stevens Manufacturing Company, Oakland, have a capital of $64,000, of which $48,000 has been paid in. They manufacture axes and scythes and their market is the New England States, the West and Canada. They employ twenty hands the year round and increase this force to forty, part of the year.

The Dunn Edge Tool Company was established in 1850 and incorporated in 1857. Its capital is $36,000 and the products, scythes and axes. The market for the output is the United States and Canada. The concern employs seventy hands eleven months in the year.

The Witherell Scythe Company, Oakland, as the title of the firm implies, manufacture scythes, the market being the United States and Canada.

The plant of the American Axe & Tool Company at Oakland is a branch of the great syndicate, called the American Axe & Tool Company. At Oakland only scythes are manufactured, 15,000 dozen having been made there in 1897. Scythes of all descriptions are made, not only for cutting grass, but also for cutting underbrush, weeds, etc. The market for the output is the United States and Canada. Sixty hands are employed here for ten months in the year.

The Oakland Machine Company, Oakland, has an iron foundry and machine shop. It manufactures machine tools, seed planters, lifting jacks, etc. The machine tools made by this plant have an excellent reputation, the market for the same being Boston and New York. The capital invested is $50,000 and the number of hands averages twelve the year round.

George F. Allen, Oakland, manufactures agricultural tools, threshing machines and general machinery. He employs eight men, fifty-two weeks in the year. The market for the output is principally the State of Maine.

Noyes & Goddard, Waterville, are proprietors of a stove foundry, located near the station of the Maine Central Railroad. Cooking stoves and ranges are their output. They employ twelve men the year round.

The Waterville Iron Works, Waterville, Webber & Philbrick, proprietors, are located near the line of the Maine Central Railroad, above the falls of the Kennebec river. The plant of this firm was formerly on the Messalonskee river, about a mile from the city. This was burned in 1895, and the present plant was erected during the same year. It is a modern plant in every respect. The machine shop is fifty feet by eighty. It is splendidly equipped with modern tools. The foundry is very light and roomy and is fitted for casting anything up to five tons weight. The firm makes a specialty of certain lines of pulp machinery, manufacturing a great many barkers. Eighteen men are employed the year round. This firm was engaged for a number of years in constructing scientific machines for accurate measurement for the late Prof. Wm. A. Rogers, of Colby University, making machines to the value of $100,000 in all.

The Maxim Anti-Oxidizing Steel Company is located in the town of Wayne, also the North Wayne Tool Company. The output of the latter plant consists principally of hay knives.

William G. Alden, Camden, Knox county, is one of the most extensive manufacturers of anchors in this country. He employs from twenty to twenty-five men the year round. He manufactures anchors of all sizes and his name is known by seafaring men the world over.

Knowlton Brothers, Camden, are proprietors of an iron and brass foundry and a machine shop. They do a general machine work, with marine and quarry work as specialties. They also manufacure blocks and saw mill machinery. In this department they employ thirty hands. Knowlton Brothers are members of the Duplex Rolling Bushing Company, which manufactures duplex roller bushed sheaves. In this department twelve hands are employed.

The company of Morse, Trussell & McLoon, Rockland, was incorporated in 1894. The product of their plant consists of locomotives, marine engines, quarry tools and general machinery. The market is Eastern Maine. They employ thirteen hands the year round.

The Livingston Manufacturing Company, Rockland, makes quarry tools principally. Their market is the New England States.

J. G. Torrey & Son, brass founders, Rockland, is an old concern, having been instituted in 1853 by J. G. Torrey. Its specialties are brass marine hardware, ship fastenings, etc. The market for these goods is very extensive.

W. E. Austin, Norway, Oxford county, is the selling agent in Maine for the goods of the Ames Iron Works of Boston. He has a well-equipped machine shop and does an extensive business in repairs and general machine work.

F. C. Merrill, South Paris, is the proprietor of an iron foundry, and a manufacturer of agricultural implements.

Clark Houston, of Mexico, and Ellingwood & Willis, of West Paris, are manufacturers of cant dogs and river driving tools.

The largest foundry and machine shop in Eastern Maine is the plant of what is now the Union Iron Works at Bangor. This plant represents the combination of the Hinckley & Egery Iron Company and the Bangor Foundry and Machine Company. The union has made many changes and improvements necessary at their extensive plant at the corner of Oak and Washington streets. Under the energetic direction of General Manager

Penney, these alterations have been in progress during the summer and fall and are now approaching completion. The boiler department has been thoroughly repaired and many new tools added. The machine shop has been extended and a new tool room constructed. It is a model department in every particular. The tools are arranged most systematically and the equipment has been increased by a fine lathe from the Putnam Machine Company. In the machine shop there is a complete re-arrangement of tools. There are five planers of varying sizes, the largest having a capacity of 49 inches square by 20 feet long. The blacksmith shop has been moved and the place formerly occupied by it is now a part of the machine shop, and here are located ten lathes which swing from 10 to 120 inches. The numerous patterns from the old plant of the Bangor Foundry & Machine Company have been placed in the third story of the stone building and are now easily accessible. To the north of the stone building a new rack has been built for shafting and upwards of sixty tons of shafting are to be seen there. A large amount of space is devoted to the display of mill machinery, pulleys, engines, hangers, and everything that is in demand for mill equipment. The store and supply department is in the most northerly building of their extensive plant and is a model of its kind. The building is 200 feet long by 45 feet wide, and has been thoroughly repaired. There are about 1,500 pockets and these in many cases are subdivided, making in reality about 2,500 different compartments for the storage of the vast amount of mill supplies to be found here. The most thorough system is used and anything that may be desired can be readily found. A new foundry has been built. This is 50 by 86 feet in size with an ell 60 by 60, and a slated roof. With the completion of the new foundry there will be two furnaces instead of one. There is also a complete brass foundry, where melting is done every day.

With the completion of these extensive improvements the Union Iron Works will have one of the largest and best equipped establishments of its kind in New England. The store and mill supply is without its equal this side of Boston. The capital stock is $150,000, all paid in. The average number of hands is seventy-five the year round. The average daily wages per man is about $2.25.

M. Schwartz' Sons, Bangor, are located on Exchange street. They are manufacturers and dealers in saws for mill use. They employ ten hands and run fifty-two weeks in the year. They also deal in mill supplies of all kinds.

Geo. T. Allamby, Bangor, is a worker in brass, bronze and composition.

The Bangor Edge Tool Company is located on Exchange street, and its output consists of lumbermen's tools. Its capital is $35,000 and it employs from twenty to twenty-five men, fifty-two weeks in the year. Axes and cant dogs are a specialty of this concern.

Wood & Bishop Company, Bangor, was incorporated in 1894. It is one of the oldest concerns in the State, having been started in 1839 by Henry A. Wood. Its capital is $120,000 and it employs eighty men forty-five weeks in the year. Its output consists of stoves, ranges, furnaces and tinware. These goods are known all over New England and the British provinces. The concern has manufactured from 3,000 to 4,000 stoves and ranges in a single year.

The Noyes & Nutter Company, Bangor, are a well known concern. They manufacture furnaces, stoves and ranges. Their capital stock is $50,000 and they employ forty men ten months in the year.

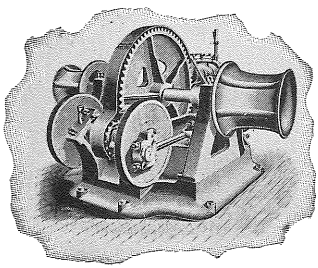
In Brewer are two machine shops, the proprieter of one being Rowland Bradbury, and of the other, The Hathorn Manufacturing Company.

Fay & Scott, Dexter, have acquired a reputation that is almost world wide on account of the excellence of the machine tools, lathes, etc., which they manufacture. Their lathes take first rank for workmanship and efficiency. Their capital is about $60,000 and they employ forty hands the year round. The cost of material is about twenty per cent. of the value of production. The output during the present year will be in the neighborhood of $60,000.

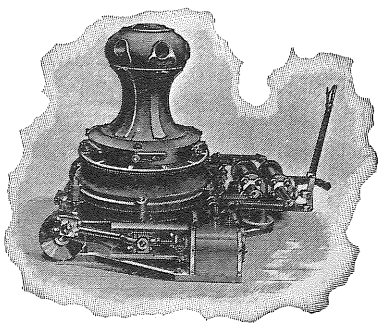
Sumner Damond, Etna, manufactures axes.

W. H. Ward, Old Town, is proprietor of an iron foundry.

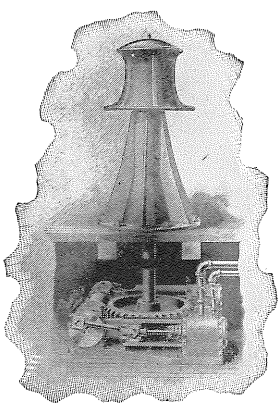
T. M. Chapman & Son, Old Town, have a well equipped machine shop and do a large business for a small concern. The business was started by the late T. M. Chapman and is continued by his sons, who are naturally inventive. They have designed



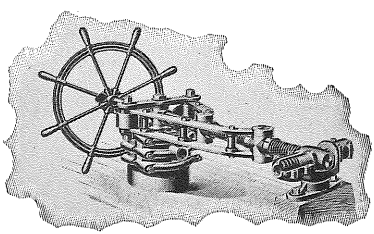
Steam Winch.



Steam Dock Capstan.



Steam Gypsey.



Screw Steerer.

VESSEL APPLIANCES, MANUFACTURED BY THE HYDE WINDLASS COMPANY, BATH, ME.

and patented many labor saving machines. Besides a general machinery business, the Chapmans make a specialty of heading machines, hoe board machines, etc.

E. Mansfield & Company, Orono, make cant dogs, besides doing a general machinery business.

Charles Knox, Foxcroft, Piscataquis county, and Jos. Hamer, Guilford, machinists, do quite an extensive business for small concerns.

The Bath Iron Works, Bath, Sagadahoc county, have been written up in the report of the Commissioner of Labor Statistics in former years, but as the plant is the largest among foundries and machine shops in the State, and as improvements and additions are being constantly made, the chapter on Foundries and Machine Shops would not be complete without a description of the enterprising and well managed corporation that reflects so much credit on the city where it is located, and on the State of Maine.

The Hyde Windlass Company is another Bath corporation of national reputation, and is now for the first time described in the Commissioner's report. We trust these two reports will prove of great interest and value. The Bath Iron Works ranks with the great shipbuilding plants of the Newport News Company, Virginia, the Wm. Cramp & Sons' plant in Philadelphia, and the Union Iron Works of San Francisco, and can compete with any shipbuilding yard in the country for the construction of any size or description of vessel with the exception, perhaps, of first-class battleships.

The Bath Iron Works of to-day are the product of the energy and business sagacity of General Thomas W. Hyde, who, returning from the great Civil War, where he had won honor and renown as a soldier, took charge of a then unknown foundry, and immediately commenced to enlarge the plant, add new machinery, and manufacture all kinds of ship machinery. About seven years ago changes were made in the plant, and facilities for building metal ships appeared. Then came the government contracts for building the gunboats Machias and Castine. Last year the gunboats Vicksburg and Cushing were completed at this yard and were added to the United States navy. The Ammen ram, Katahdin, was built by the Bath Iron Works.

They have built four vessels and a tender for the Light House Board. Three steam yachts, three passenger boats and two passenger steamships have also been built by this company within the past seven years.

During this time vast improvements have been made in the plant till at the present time the Bath Iron Works are thoroughly equipped for building cruisers, monitors, gunboats, passenger and cargo vessels of any size or description, and yachts of any design. The following improvements in the plant have been made during the past season: Additions have been made so that four vessels can be built at the same time. The paint, joiner and carpenter shops have been enlarged. A steel ship house has been erected over the yacht which is now in process of building. A trolley traveller, worked by electricity, carries all material across the yard to the vessels building. A new machine shop, to be built of brick and steel, has been begun and will be pushed to completion as fast as possible. This building will be 310 feet long by 100 feet wide. There will be in it two immense cranes, one a twenty ton crane with a lift of 35 feet, and the other a twenty-five ton crane with a lift of 25 feet. Besides the above a large number of new tools are being installed. The different buildings in the yard are as follows: Office and drawing room; the brass foundry; the smith shop; the joiner shop; the carpenter shop; the paint shop; three storehouses; the rigging loft; the plate shop; the mould loft; the bending floor and angle smith shop; the boiler shop; the pipe shop; the hull machine shop; the copper smith shop; the engine machine shop; the plumbing and tin smith shop; the government office; the power house; the oil house and the rivet house. Many of the above buildings are fire proof and others are of slow burning construction. Two side tracks from the Maine Central Railroad enter the yard, giving unsurpassed railroad facilities. A powerful derrick of the most modern construction stands near the water front, and there seems to be in the yard every labor saving device ever invented. There is a depth of twenty-seven feet at low water in front of the Bath Iron Works, or water enough to float any vessel in the world. Bath is twelve miles from the ocean and could never be reached by a foreign vessel without a marine pilot.

The officers of the Bath Iron Works are as follows: T. W. Hyde, President and General Manager; E. W. Hyde, Vice Presi-

dent and Treasurer; C. R. Hanscom, General Superintendent; J. S. Hyde, in charge Engineering Department; C. E. Hyde, Consulting Engineer.

About 1,000 men are now employed, a very large percentage of whom are natives of Maine, and nearly all the workmen are Americans. The capital invested is $425,000, and the value of the production last year was $950,000. The contracts now on hand aggregate more than $2,000,000, and are liable to be increased by several more contracts in the near future. The amount paid in wages last year was $364,000. What that amount means to Bath and the State anyone can judge.

The Bath Iron Works have the following contracts on hand: Two torpedo boats for the U. S. government, the Dahlgren and the T. M. Craven, each 151 feet long, 16 feet 4½ inches wide, 151 tons displacement. Their speed is to be thirty and one-half knots per hour, the greatest speed ever attempted in this country. They are after the designs of Normand, who holds the record abroad for speed and economy of fuel. These torpedo boats were designed by C. R. Hanscom. They are each to have two torpedo guns and four rapid fire guns. The cost will be 194,000 each. The cargo steamer Winnifred, to be built for Miller, Bull & Knowlton, New York, managing owners. This steamer is 302 feet long, 42 feet wide and 25 feet 9 inches deep. Displacement 5,125 tons, dead weight capacity, 3,800 tons; speed 10 knots; to be built of steel, the first ever built in Bath. Cost $195,000; designed by C. R. Hanscom. A steel yacht, built for Col. O. H. Payne of New York; 302 feet 6 inches long, 35 feet 6 inches beam, 21 feet 1 inch deep; displacement 1900 tons; speed 15 knots; forced draught 17 knots; cost $400,000. This will be the largest yacht ever built in America. When entirely completed it will cost more than half a million dollars. It was designed by C. R. Hanscom. The contract for this yacht was entirely due to the excellence of the yacht, "Eleanor," built at these works three years ago. The next contract is for the building of a practice or training vessel for the Naval Academy at Annapolis, to be built of steel and sheathed with wood and copper, the first ever built in this country of that construction. The length on the water line is 175 feet, extreme width 37 feet; displacement 1,175 tons. This is to be a sailing vessel, and is the first sailing vessel built for the navy for thirty

years. The cost will be $250,000. In addition to the above the Iron Works have contracted to build three torpedo boats and one monitor out of the number authorized at the last session of Congress. They have also repaired the U. S. warship Montauk and have recently contracted to repair another U. S. vessel.

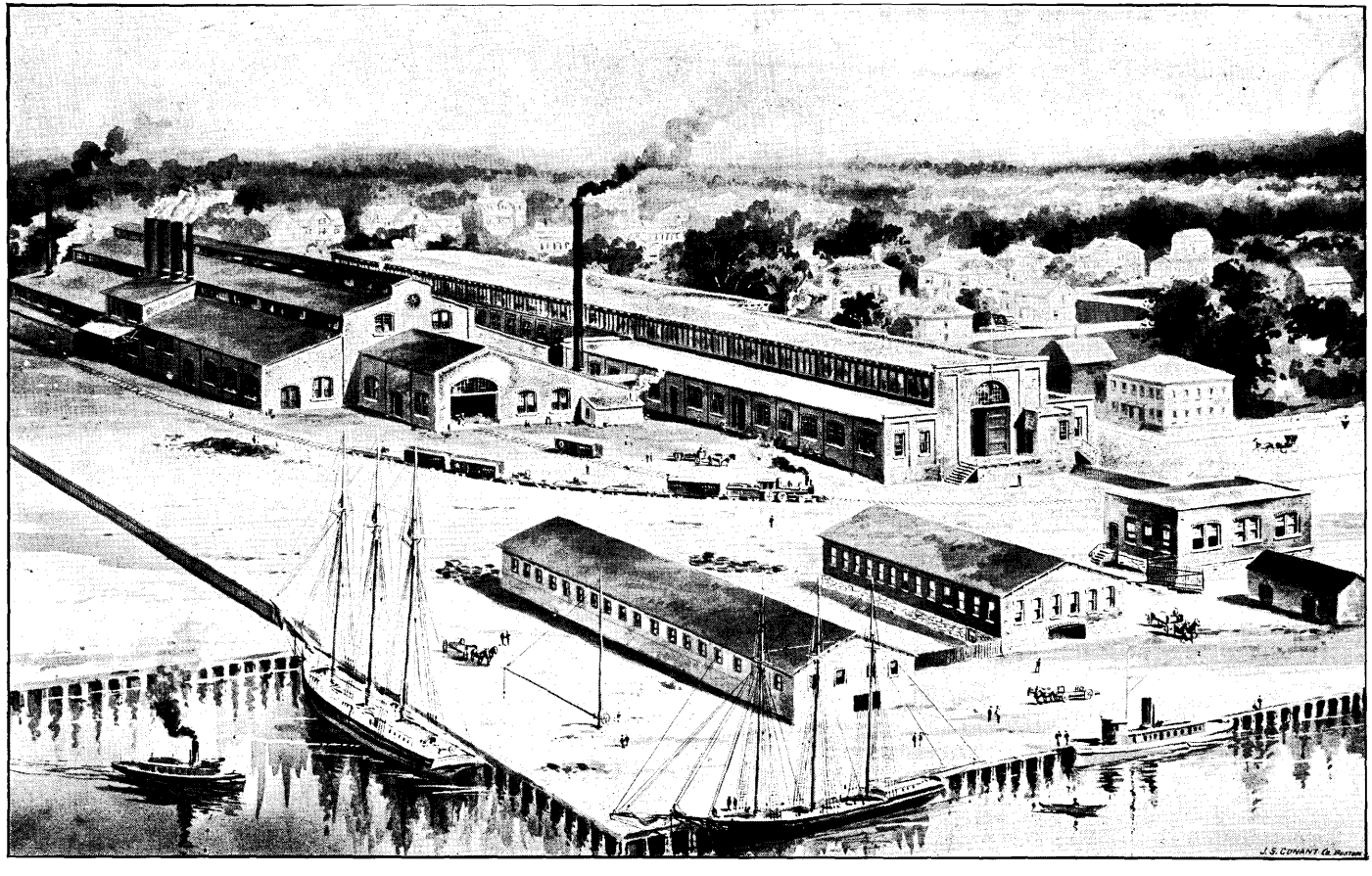
It will be seen by the above list that the Bath Iron Works will be very busy during the year 1899.

The Bath Iron Works management is characterized by intelligence in every department. Gen. Hyde has been a frequent visitor to European yards and has been a careful student of them all. Edward W. Hyde studied shipbuilding methods in European yards. John S. Hyde studied marine engineering at the University of Glasgow. Charles Ridgeley Hanscom, the general superintendent and marine designer, was educated for his profession at the Kittery navy yard and Philadelphia, with a special course at Washington. He was made chief draughtsman of the Naval Advisory Board, and chief designer in the Bureau of Construction and Repairs at Washington. He came to Bath in 1890 and has superintended the building of the whole Bath Iron Works fleet. Charles E. Hyde, the designing and constructing engineer, was educated in the Polytechnic Institute and the Massachusetts Institute of Technology, and has been employed by several large firms including the Cramps. In 1884 he returned to Bath to take charge of the Goss (now Bath) Iron Works. He is now recognized as one of the finest engineers in the country. The other heads of departments are educated men, and are specially trained for the work they superintend.

The foremen are men of ingenuity and experience, while a better class of mechanics cannot be found anywhere in the world.

The State of Maine and the city of Bath cannot too highly appreciate the value of the Bath Iron Works. Besides the vast sums of money it distributes for labor and materials, by the excellence, beauty and swiftness of the yachts and vessels built here, it enables the Pine Tree State to say in shipbuilding as in statesmanship, Dirigo, I lead.

The Hyde Windlass Company was incorporated last year. The original business of the Bath Iron Works was the manufacture of windlasses, castings and other appliances for vessels. This business is now separated from the Iron Works and is



HYDE WINDLASS WORKS, BATH, ME.

carried on by the new corporation. The plant of the Hyde Windlass Company is located about one-eighth of a mile south of the Iron Works. The machine shop is 285 feet long by 80 feet wide; the foundry is 150 feet by 100; the pattern shop is 40 by 50 feet, and the pattern storehouse is 130 by 40 feet. The machine shop is built of steel, brick and slate and is completely fire proof. The plant employs 175 men. The capital invested is $150,000. The value of the production last year was $225,000 and the total amount paid in wages was $110,000. The goods go all over the United States, and some foreign orders are received. The windlasses made here are in general use by the government, the lighthouse service and the largest steamer now building. The "St. Louis" and the "St. Paul" of the American line were supplied with windlasses by this plant. The foundry is the largest and most complete north of Boston and is doing a large business in the Hyde manganese bronze, mainly in propeller wheels.

The officers of the company are: J. S. Hyde, President; E. W. Hyde, Secretary; J. R. Andrews, Manager. The Maine Central Railroad has a side track extending to the plant. Both this plant and that of the Iron Works use electricity as a motive power, supplied by the Bath Gas and Electric Company. This plant furnished the battleship windlasses for the Union Iron Works, San Francisco, for the Cramps at Philadelphia, and for the Newport News Company of Virginia.

It recently shipped twelve capstans to Seattle. It built the windlass and capstan for Howard Gould's yacht, Niagara, built at Wilmington, Delaware. It is building the windlass and capstans for Col. Payne's yacht. It made the machinery for twenty-one barges built in Bath last season. It is making the windlasses for the two Ward line steamers now being built by the Cramps, also the windlasses for the three steamers being built by the International Navigation Company. It is fitting out all the ships in the Merchants' and Miners' Transportation Company with Hyde manganese bronze.

All that has been said of the value and importance of the Bath Iron Works can truthfully and emphatically be said of the Hyde Windlass Company. Maine should be proud of two such industries, and of the soldier citizen who had the enterprise and the ability to establish them in her borders.

The Torrey Roller Bushing Works is another important Bath industry, manufacturing brass and iron hardware. The Torrey bushing has a reputation wherever such goods are used. The market for the product of these works is the United States and Canada. The capital invested is $60,000 and the number of employes is forty-five for fifty-two weeks in the year.

Watson, Frye & Company, Bath, have a brass foundry and do an extensive business in manufacturing certain lines of goods for pulp and paper mills.

August Mampel & Son, Bath, are proprietors of an iron foundry, which in the past has done a large business. Mr. Mampel came to Bath many years ago and has seen the growth of the foundry and machine business of the shipbuilding city, from its humble beginnings to its present enormous dimensions.

J. F. & D. C. Ames, Richmond, are manufacturers of edge tools and marine goods.

Pittsfield has for machinists, Chamberlain & Hersey, Delano & Rhoades, and F. B. Dow.

The Brunswick Manufacturing Company have a fine plant, close to the line of the Maine Central Railroad. This company manufactures dynamos and motors, and all kinds of electrical machinery, arc lights and transformer work being specialties. It also manufactures brass and steel ferrules, being the only plant of the kind in the State. These ferrules are of all sizes, from one-eighth of an inch in diameter to one inch and a half, made for the handle of the tiniest glove hook, or the handle of the largest chisel. These goods are sent to all parts of the United States, also to Canada. Special machinery is required for the manufacture of ferrules and much of that in use at Brunswick is the invention of the skilful and efficient machinists in charge of the plant.

F. H. Purinton, A. G. Hall and J. Furbish are machinists and plumbers in Brunswick, doing mostly a local business.

Skowhegan, like Oakland, is quite a center for the manufacture of edge tools. The principal concerns are: The Nolan Manufacturing Company, which makes scythes, hay knives, grass hooks, corn knives and rag knives; C. A. Williams & Company, who make shingling hatchets; Harriman & Ring Company, which makes a patent claw hammer that pulls a nail without bending it. Albert G. Blunt manufactures cant dogs.

The Island Machine Company was incorporated under its present title, three years ago. It operates a foundry and machine shop and does a jobbing and general machinery business. The product consists principally of saw mill machinery and water wheels. The famous Gould water wheel is built by this concern.

B. Kelley & Company, Belfast, Waldo county, are proprietors of an axe factory which usually runs about ten months in the year. Carpenters' tools are also part of the product. The average number of employes is ten.

The Belfast Machine and Foundry Company manufacture Heges' improved circular saw mill, Hall's stave jointers, Holmes' stave mill, Hall's counterpoise polishing machines for granite, derricks and other granite machinery, Unity Hussey plows, and do general machinery work. The capital is $9,500 and ten hands are employed the year round.

I. F. Allen, Liberty, is proprietor of a foundry and machine shop, his patronage being mostly local.

In Washington county, McCullough & Tait, Calais, are proprietors of a foundry which does an extensive business.

Geo. E. Elliott is proprietor of a well equipped machine shop, the output being general mill machinery.

W. E. McAllister is also a machinist in Calais.

W. McDonald & Son are located in that part of Calais known as Milltown, and have a large and up-to-date machine shop.

In Eastport, G. M. Huston and F. A. Buck are the machine shop proprietors, with a large local patronage.

In Machias, Sargent, Stone & Company are proprietors of a foundry and machine shop and do a large local business.

The Biddeford Iron Foundry, T. J. McDermott, proprietor, does an extensive business in repairs for cotton machinery and in general jobbing. There is a brass foundry connected also. Eight hands are employed the year round.

The Hardy Machine Company, Biddeford, manufacture card grinders for both cotton and woolen cards, also traverse wheel knife grinders, make portable drillers and do general repair work. The capital invested is $69,000 and the number of employes is twelve men the year round.

John P. Kelley, Biddeford, makes springs for cotton machinery and does general jobbing.

The Saco & Pettee Machine Shop, Biddeford, is the largest plant of its kind in Maine with the exception of the Bath Iron Works. This plant was formerly known as the Saco Water Power Machine Company, but in 1897 a combination was made with the Pettee Company of Newton Upper Falls, Mass., and the title changed as above. The combined capital of the new company is $800,000. The number of employes at the present time is 450, and the product is cotton machinery, much of which has gone to equip the cotton mills of the South. This plant means much to the cities of Biddeford and Saco. Wm. V. Threlfall is the manager.

J. W. Emery, Newfield, is the proprietor of an iron foundry.

Isaac Varney & Sons, North Berwick, are proprietors of a machine shop.

A. H. Gilman, Saco, has a well equipped machine shop.

In Kennebunk, Geo. Varney is proprietor of an iron foundry, while Geo. W. Williams and Nathan Hartwell are machinists.

We cannot present as full a summary as we would like for the reason that many proprietors of foundries and machine shops found it almost impossible to answer these two questions on the blanks presented, namely, "Cost of material during the past year?" and "Value of production during the past year?" Many proprietors, also, did not care to answer the two questions quoted above, and in that case they were not pressed. All other questions were answered readily, and the special agent who visited these lines of industry was treated with the utmost courtesy in all cases. We find that the capital invested in foundries and machine shops in the State of Maine, exclusive of the repair shops of the Maine Central and other railroads, and exclusive of the machine shops connected with pulp, paper, cotton, woolen and other mills in the State, amounts to over $3,500,000. Also, that the number of men employed in these foundries and machine shops number about 4,500.

We find that these employes are for the most part Americans, and natives of Maine, and that they are a highly intelligent and moral class of men. We find that the average wages earned by employes in foundres and machine shops throughout the State is a little above $2.00 per day, per man. We find the value of the output of one plant last year to have been $1,000,000, of another plant $225,000, and of still another plant $225,000, and from

these facts we can form some idea of the value of the product of all. We find that fully one-half of the product of the foundries and machine shops is sent out of the State, some of it going to all parts of our country. We find the total amount paid in wages to employes in one year to be $2,700,000. From the above facts, gathered mostly by personal interviews, we can form some idea of the vast importance of our foundries and machine shops in the industrial development of the State.

THE MANUFACTURE OF FURNITURE.

There are but few large manufactories of furniture in the State of Maine, although the number of cabinet makers and of small factories where certain lines of furniture are manufactured, is quite large. Maine has vast forests of valuable timber, but, for the most part, it is better suited for lumber for building purposes than for manufacture into furniture. The spruce timber of Maine is almost inexhaustible, while there are vast belts of hemlock, extending across the State from east to west. The magnificent pine monarchs, that used to tower above the surrounding forest growth, have long been gone, but there are still great areas covered with pine of humbler aspirations. The hardwoods of Maine are almost inexhaustible in quantity, and of superior excellence in quality, valuable for flooring, finish, or furniture. No better elm, birch or maple grows anywhere than in Maine. There are sections where oak and ash are found, and other sections where bass wood abounds. And still with all this wealth of forest growth it must be acknowledged that Maine does not produce the most desirable kinds of wood for the manufacture of furniture. The oak of Maine cannot be favorably compared in quality with the oak of the West or South. There is considerable brown ash in Maine and this is used to a limited extent. Of course, in the manufacture of couches, lounges and other upholstered goods, the frames are generally made of spruce, or other wood that does not require to be finely polished or finished, as it is covered. This class of goods can, therefore, be manufactured as cheaply in Maine as elsewhere.

The elm, birch and maple of Maine are practically limitless in quantity, and, as has been remarked, are of superior quality. These woods are used in the manufacture of chamber sets, desks, chiffoniers, hat racks, school furniture, furniture for lodges, halls, etc., and are becoming more popular every year. The yellow birch of Maine has never been properly appreciated. It

is a beautiful wood and takes an excellent polish. The curly variety is used for wainscoting, counters in elaborately finished stores, panels in doors, and especially for bureaus and dressing cases, and is considered by some as more beautiful than black walnut, mahogany or cherry. It is the ideal wood for school furniture, or for furniture for court rooms and town or city halls.

In presenting a list of furniture manufacturers, cabinet makers and upholsterers in the State of Maine, we would state that the list includes the names of many whose business is purely local. We do not assume that the list is complete, as in many cases no attention is paid to filling out and returning the blanks sent out from the office of the Commissioner of Labor Statistics, and in other cases where the sub-agent attempted personal interviews, some may have been unintentionally overlooked. Most large dealers in furniture have a repair and upholstering department, but dealers are not included in the list, except where they carry on the manufacture of furniture to such an extent that they can be classed as manufacturers. The following list includes the principal furniture manufacturers, also an approximate list of the cabinet workers and upholsterers in the State.

The New England Furniture Company, Deering.
The Maine Furniture Company, Bar Mills, Buxton.
The Fairfield Furniture Company, Fairfield.
The Whittemore Furniture Company, Fairfield.
The Bethel Chair Company, Bethel.
The Paris Manufacturing Company, South Paris.
The G. W. Merrill Furniture Company, Bangor.
The Fairfield Lawn Swing Company, Brunswick.
Wyman & Beedle, South Gardiner.
Waterford Manufacturing Company, Waterford.
Thomas P. Beals Company, Portland.
Hooper, Son & Leighton, Portland.
Warren Brothers, Searsmont.
B. T. Foster & Son, Clinton.
Wm. B. Brazier, Portland.
G. E. Church, Cherryfield.
J. Frank Holt, Gardiner.
J. L. Spear, West Gardiner.
G. O. Waltz, Waldoboro.
W. G. Cushman, Andover.

S. Robertson, Bethel.
H. C. Barker, Bethel.
S. W. Holt, Fryeburg.
J. B. Watson & Sons, Cornish.
L. H. Hanscom, Machias.
E. M. Bucknam, Machias.
Gilman & Merrill, Patten.
Huston Brothers, Patten.
Charles H. Wyman, Dexter.
Jason Denslow, Dexter.
F. O. Day, Brooks.
E. F. Brann, Waterville, cabinet work.
C. C. Dow, Waterville, cabinet work.
C. R. Shorey, Waterville, cabinet work.
G. M. Low, Alfred, cabinet work.
J. Putnam & Son, Dixfield, cabinet work.
O. E. Sanborn, Portland, lodge furniture, refrigerators.
J. S. Merrill, Mechanic Falls, cabinet work.
J. F. Arnold & Son, Foxcroft, cabinet work.
Hubbard & Morecraft, Foxcroft, cabinet work.
F. L. Sawyer, Greenville, cabinet work.
Arthur B. Hatch, Morrill, cabinet work.
W. A. Allen, Portland, cabinet work.
E. Collado, Portland, cabinet work.
Walter Corey Company, Portland, cabinet work.
J. N. Jacobson, Portland, cabinet work.
Theo. Johnson, Portland, cabinet work.
T. O. Trask, Farmington, cabinet work.
Jos. W. Matthews, Farmington, cabinet work.
J. L. Hodgkins, Ellsworth, cabinet work.
A. W. Cushman & Son, Ellsworth, cabinet work.
C. R. Foster, Ellsworth, cabinet work.
W. S. D. Healey, Rockland, cabinet work.
E. A. Knowlton, Rockland, cabinet work.
E. Hussey, Guilford, cabinet work.
R. A. Dunning, Bath, cabinet work.
Chas. A. Fisher, Bath. cabinet work.
John Gillis, Calais, cabinet work.
C. A. Fawsette, Garland, cabinet work.

Bangor Manufacturing Company, Bangor, spring beds.
W. J. Knowlton, Liberty, spring beds.
E. S. Bachelder, Montville, chairs.
J. Bachelder & Sons, Oakland, chairs and settees.
Thomas Vail, Fryeburg, chairs.
Otto Schnuer, Norway, chairs.
Gordon Tibbetts, Old Orchard, spring beds.
Abiel Jones & Son, Biddeford, upholstering.
David Webster, Biddeford, upholstering.
John F. Staples, North Berwick, upholstering.
Fred Groves, Lewiston, upholstering.
P. P. Ham, Lewiston, upholstering.
W. W. Walker, Bridgton, cabinet work.
P. J. Duffy, Portland, upholstering.
Ernest E. Ball, Portland, upholstering.
John A. Cary, Portland, upholstering.
F. J. Foley, Portland, upholstering.
F. V. Hanson, Portland, upholstering.
T. H. McDonnell, Portland, upholstering.
T. W. Scott, Portland, upholstering.
W. H. Winslow & Company, Portland, upholstering.
Clayton E. Plummer, Harrington, upholstering.
R. A. Dunning, Bath, upholstering.
A. G. Longley, Bath, upholstering.
A. J. Percy, Bath, upholstering.
Chas. Wilson, Bath, upholstering.
Wentworth & Oak, Skowhegan, upholstering.
J. C. Collings, Skowhegan, upholstering.
Eben M. Sanborn, Belfast, upholstering.
R. H. Coombs & Son, Belfast, upholstering.
Spencer & Wilson, Belfast, upholstering.
G. C. Lower, Belfast, upholstering.
W. S. Ward, Calais, upholstering.
W. E. Gordon, Brunswick, upholstering.
R. J. Smith, Presque Isle, upholstering.
Geo. M. Morgan, Presque Isle, upholstering.
J. D. Longhran, Waterville, upholstering.
Alfred Dent, Gardiner, upholstering.
F. B. Wood, Hallowell, upholstering.
T. W. Stackpole, Thomaston, upholstering.

H. C. Woods, Old Town, upholstering.
Edward H. Chase, Dover, upholstering.
Lewis Smith, Bridgton, cabinet work.
Jesse Murphy, Bridgton, cabinet work.
O. H. Groves, Augusta, upholstering.
A. A. Soule, Augusta, upholstering.
Chas. Simpson, Winthrop, upholstering.
J. J. Calhoun, Rumford, upholstering.
Levi Long, Richmond, upholstering.
I. L. Spaulding, Richmond, upholstering.

The New England Furniture Company of Deering, was formerly located at Westbrook. In 1897 the present fine plant in Deering was erected. The main building is 210 feet long by fifty feet wide, two stories high with a basement. The engine room is twenty feet square, and the boiler house is twenty by forty feet, one story high and built of stone. The plant is situated near the junction of the Maine Central Railroad with the Portland and Rochester Road, with a spur track connecting with both roads. There is a dry kiln connected with the plant with a capacity of 20,000 feet. It is supplied with a dust apparatus, furnished by the Arlington and Corliss Manufacturing Company of Saginaw, Michigan. It is a fine plant fully equipped with modern, up-to-date machines. The product of this factory consists of ash and oak extension tables, birch, ash and oak chiffoniers, bureaus, commodes, wardrobes, etc. About forty men are employed. R. W. Woodman is the treasurer, and Bert M. Woodman, manager. R. W. Woodman is a veteran in the furniture business, having been engaged in the manufacture of furniture for thirty-five years. He was the originator of the Fairfield Furniture Company, the Maine Furniture Company, and the New England Furniture Company.

The Maine Furniture Company's plant is located at Bar Mills, Buxton, near the Saco river station of the Portland and Rochester Railroad. The main building is 155 by 60 feet, three stories in height. There is a large storehouse near the railroad station. The company also owns a saw mill, 70 by 30 feet, for manufacturing long and short lumber. The saw mill and the factory are both run by water power. The capital invested is $50,000. The product of the plant consists of chamber furniture, made principally of ash, oak, birch and pine. The market is all the

New England States. The number of hands employed is about thirty-five. The plant was established in 1881, and the present proprietors are three brothers, namely: W. A. Shepard, F. E. Shepard and S. B. Shepard.

The Fairfield Furniture Company's plant is located in Fairfield, on the western bank of the Kennebec river. The Skowhegan branch of the Maine Central Railroad runs within one-eighth of a mile of the plant, affording excellent railroad facilities. The product consists of chamber furniture, kitchen tables, center tables, etc. The average number of hands is about thirty, and the factory is run the year round.

The Whittemore Furniture Company's plant is located in Fairfield, close to the line of the Maine Central Railroad. The building was erected in 1895, and is three stories high, with a basement. The product of this plant is upholstered furniture, such as couches, lounges, Morris chairs, parlor and easy chairs, bed couches, etc. The frames for most of these goods are made elsewhere, Wyman & Beedle, South Gardiner, furnishing a large part of them. W. E. Whittemore is the manager, and he keeps abreast of the public demand in regard to new designs in the class of goods manufactured here. No finer goods are made in New England than are turned out at this excellent factory. The market is Maine, New Hampshire and Western Massachusetts. The number of hands employed is twenty-five, but additional space is required, and when secured a larger force will be employed.

The plant of the Bethel Chair Company is located in the town of Bethel, close to the line of the Grand Trunk Railway. This chair manufactory has survived and prospered, while several similar plants in the State have gone out of existence within a few years. The success of this company reflects credit on the business skill displayed by the manager, J. H. Barrows, and the other officials who have ably assisted him. The capital is $12,000, and the value of the product last year was $35,000. The output consists of fancy chairs and rockers, of high grade in quality, design and workmanship. The number of hands employed is forty, for fifty weeks in the year. The market for these goods is the New England States. There were paid out in wages last year, $15,000.

The Paris Manufacturing Company's plant is located at South Paris, on the line of the Grand Trunk Railway. The principal business of this immense plant is the manufacture of children's sleds, sleighs, carts, desks, wagons, wheelbarrows, etc., but the company also manufactures an almost endless variety of articles for older people. In 1896 this company manufactured 25,000 tables, 18,000 chairs, 13,000 desks and 15,000 school desks and chairs. It is the only Company in the State that is manufacturing school furniture to any great extent, and for that reason deserves a place in the list of furniture manufacturers. The different kinds of wood used in this great plant are maple, white and yellow birch, oak, ash, cherry, pine and spruce. These woods are bought, for the most part, from farmers and others in the State. The sum paid in wages in 1896 by this company amounted to $75,000, and the value of the output was $175,000. The plant employs 175 men all the time, and over 200 part of the time. The officers are: President, Geo. A. Wilson; Treasurer, Geo. R. Morton; Secretary, Geo. B. Crockett; General Manager, H. F. Morton.

The Fairfield Lawn Swing Company's plant is located at Brunswick, near the line of the Maine Central Railroad. The factory was built in February, 1898, and is 100 feet long, forty-five feet wide, two stories in height, with a basement. It is equipped with all new machinery run by electric power. The product consists of lawn swings, chairs, settees, clothes reels, clothes dryers, etc. The chairs and settees are, many of them, made expressly for verandas and park use and are, some of them, of rustic form. They have high backs and are very comfortable. The company used last year over 300,000 feet of lumber and manufactured 7,000 lawn swings, besides the other products in like proportion. Twenty-five men are employed at the present time. The market is everywhere in the United States. W. D. Hatch is treasurer, and Samuel Knight, manager, of this fine plant. The capital invested is $25,000.

Wyman & Beedle, South Gardiner, are manufacturers of all styles of lounge and chair frames, bed slats, spring bed stock, crates, reels, etc. Many of their lounge and chair frames go to the Whittemore Furniture Company of Fairfield, while a part of their product goes out of the State. They have an excellent

reputation for good work. They employ about twenty-five hands and their business is increasing.

The Waterford Manufacturing Company, at Waterford, manufacture chairs, bedsteads, etc., their work being similar to that of Wyman & Beedle at South Gardiner. The lumber used by these concerns is nearly, if not all, of native growth, being spruce, pine, birch, maple and other Maine woods.

J. Frank Holt, Gardiner, is a manufacturer of folding beds and all kinds of chamber furniture. These are made of Maine woods mostly, such as brown ash, oak, bass wood and pine. The market for his output is Boston. He employs from eight to ten men the year round. Mr. Holt makes a large number of deer, moose and caribou shields for taxidermists, principally for S. L. Crosby of Bangor, for whom he made 700 shields last year.

E. D. Bailey, of Foxcroft, manufactures office and church furniture to some extent, and has also made quite a business of manufacturing rolltop desks. He uses Maine woods principally.

O. E. Sanborn, Portland, is an extensive manufacturer of store and market refrigerators, also of lodge furniture.

The Thomas P. Beals Company, Portland, are among the most extensive manufacturers of low price furniture in New England. Their output consists of spring beds, chamber sets, chairs, tables, woven wire mattresses, cot beds and all kinds of common furniture. Oak, ash and other hard woods are used and these are obtained as far as possible in Maine. The market for the product is mainly the New England States. The number of men employed is forty, for fifty-one weeks in the year. There were paid out in wages last year about $25,000.

Hooper, Son & Leighton, Portland, are, probably, the most extensive household outfitters in the State. Their principal warehouse is on Congress street, nearly opposite the old Longfellow homestead. It is a five story building with a basement, and it has an immense floor space. Of course their principal business is dealing in furniture and all kinds of household goods, but they are also manufacturers to a greater extent than most dealers. This company made the beautiful chairs with which the senate chamber, at the capitol in Augusta, has just been furnished. These chairs are made of solid mahogany and are upholstered in the best mohair plush. The chairs cost about

$35 each. Some of the best upholstered work in which this firm deals is done by themselves. About fifty men and women are constantly employed by this enterprising house.

The Bangor Manufacturing Company, Exchange street, Bangor, makes a large number of spring beds. A new factory for the manufacture of spring beds has just been erected in Bangor, of which H. L. Day is the proprietor. The factory is 33x40 feet, with attic and basement, giving five good floors for work. As the Bangor Manufacturing Company has all the business it can handle, there is not any doubt as to the success of the new factory.

W. R. Knowlton, Liberty, and Gordon Tibbetts, Old Orchard, manufacture spring beds.

E. S. Batchelder, Montville; Thomas Vail, Fryeburg, and Otto Schnuer, Norway, are chair manufacturers.

The principal cabinet makers in the State are named in the list, and as they work principally from orders and in most cases have only one or two employes, it is not necessary to go into a detailed description of their work.

The same is true of the upholsterers, who are quite a numerous class, but whose work is mostly local and on orders.

The E. T. Burrowes Company, Portland, are manufacturers of wire screens and car curtains. Wire screens cannot properly be denominated furniture, but they are a very necessary part of the furnishing of every modern house, and as the E. T. Burrowes Company has one of the largest factories in this country, we will venture a brief description of it in this connection, although by so doing we break over the lines of a strict classification.

The factories are situated on Free street; they are built of brick and are very fine structures. The reception room for callers and visitors is as elaborately finished and furnished as that of any hotel or public building in the State. The offices on the same floor are also large, well furnished and attractive. The capital invested is $200,000 and the number of hands employed is ninety-five men and seventeen women, making 112 in all. Last year $65,000 was paid out in wages. This is one of the most important of the industries of the city of Portland and of the State. The market for the goods is not confined to the United States but may be said to be wherever flies and other pests abound, and wherever railroad coaches are made.

In presenting a summary of the furniture industry of Maine, we find six extensive, large and important plants for the manufacture of general furniture, one plant for the manufacture of fancy chairs, one for the manufacture of rustic, veranda and park settees and chairs, one for the manufacture of low priced furniture, five for the manufacture of chairs as a specialty, four for the manufacture of spring beds, two for the manufacture of couch, lounge and chair frames, one for the manufacture of school furniture, about twenty small factories where furniture is made, about thirty shops where cabinet work is done, and about forty upholsterers. The number of workmen engaged in manufacturing the different lines of furniture that we have named will number about 700, and there must be fully half a million dollars invested in the industry. The average daily wages of men employed in the various plants is about $1.75, and of women, about $1.25. The employes are mainly Americans and the greater portion of them are natives of Maine. They all seemed to be a highly intelligent class of workers, and although their wages are not high, yet we found that many of them owned homes and seemed to have all the necessities and some of the luxuries of life.

Furniture is as much a necessity in a civilized state of society as houses. It is a commodity that enters into every home, every schoolhouse, church, hall or other public building. The dealers in furniture are a large and an important class in the community. Our furniture stores in Maine will compare well in size, equipment, quantity and quality of goods carried, with those of any other State. Oak seems to be the favorite wood for fine furniture to-day, and oak of the desired quality is not found largely in Maine. Michigan is, perhaps, more largely engaged in the manufacture of furniture than any other state, and the city of Grand Rapids is famous the world over for its great furniture plants. It would seem, however, as though the beautiful elm, birch and maple of this State might be utilized to a greater extent than at present in the manufacture of school, office, hall, lodge, hotel, church and court room furniture. Also for finish in the above named buildings, and in elegant private residences. We have here the water power, the raw material in abundance, plenty of skilled labor, and every requisite except the courage that will place capital in home enterprises and develop home resources.

NATIONAL CONVENTION OF LABOR BUREAUS.

At the last convention of the National Association of Officials of Bureaus of Labor Statistics, held at Detroit, Mich., June 14-16, 1898, Mr. Clark of Pennsylvania, chairman of the committee on elections, made the following report:

"Your committee, while urgently pressed to go to Milwaukee for the 1899 session, not forgetting in fixing upon Detroit for this session, that, in the early future we were to 'Remember the Maine,' unanimously recommend Augusta, Me., for the next, the 15th annual convention." The report of the committee was accepted and adopted, and Commissioner Matthews was elected chairman of the executive committee, whose duty it will be to make the necessary arrangements for the reception and accommodation of the convention. In view of the character and objects of this convention, it is hoped and expected that similar attentions and courtesies will be accorded by Maine, as have been, invariably, extended by other states.

EXTRACTS FROM PROCEEDINGS.

The National Association of Officials of Bureaus of Labor Statistics in the United States, fourteenth annual convention, met at Detroit, Mich., June 14-17, 1898.

The President, Carroll D. Wright, was in the chair, and calling the convention to order, spoke as follows:

Gentlement of the Convention: It is certainly a very great pleasure to see so many States represented at the opening session of our convention. This is our fourteenth annual meeting, and I believe, as I look over the past, that it is perfectly safe to say that these conventions have been of great benefit to the individual States. This is evidenced by the growth of Bureaus of Statistics of Labor.

I know you will pardon me if I am somewhat personal to-night, for I feel in a reminiscent mood. This month cele-

brates my twenty-fifth anniversary in the work of statistics. A quarter of a century cut out of a man's life leaves only a slight margin on each side, for a quarter of a century, consecutively, it has been my great pleasure and an honor to be engaged in the work which attracts our attention.

The Massachusetts Bureau of Labor was the first bureau of the kind, and that was organized in 1869. Then followed Pennsylvania and Ohio and Connecticut and New Jersey, and so on from year to year, until now we have thirty-three bureaus extending over this country, the last State to come into the fold being Virginia, which some three months ago established a bureau and the governor appointed a commissioner. This brings together old Massachusetts and Virginia, the first of our colonies, who are used to fighting together and sometimes to fighting each other, but always, whatever fighting they engage in, they do it earnestly and well. And each year some foreign country finds wisdom in following our example—Germany and England and France and Belgium and some of the other countries, and now New Zealand and Australia and Russia have followed in this line of work, until the amount of information being turned out from the different parts of the world, encircling it indeed with statistical work, enables us to know something of the true condition of the people everywhere. And it is only in the extension of this knowledge that we can find the very best sugegestions for legislation.

I have spoken to you gentlemen too often of the benefits of our work to warrant any repetition, but as we look over the years that are past and look into the years that are to come, I believe we can take courage and feel that however feeble our efforts may have been, they have met with a response from the people at large thoroughly encouraging. With the more than 300 volumes which have been published relative to the conditions in our several States, we are in a condition to know many things that were mere matters of guesswork and estimate before these publications.

These bureaus have everywhere met the approval of the executives of the States. They have given us their encouragement, their aid, their sympathy, and in no State in the Union has that encouragement and sympathy been more hearty than in the State of Michigan, where we meet to-night. We are fortunate

in having with us, who will give us words of welcome, his Excellency, Governor Pingree.

Governor Pingree:

Mr. President and Gentlemen from the different States: I assure you that I feel highly honored in being here with you to-night. When Commissioner Cox told me some months ago that you were to hold a convention here, I told him I thought there ought to be a chance for me and the thinking people of Detroit to learn something from you gentlemen, and I told him I would try to do something to see if we could not entertain you when you were here.

I have never been so busy as I have been in the last two months, and if Commissioner Cox had not called on me last night I should not have known anything about this gathering, great as it is.

I want to say to you that the thinking people of Michigan, yes, and the thinking people of the metropolis of Michigan, are glad to have you meet with us here in Detroit. I know that you have their confidence. I have heard many speak of the work you are doing; in fact you are the only agency we have to fall back upon for statistics in this country; you are the only ones I know anything about who keep track of the advancement or of the suffering in these great commonwealths; and I know, as I say, that you are honored here, that you are welcome here in Detroit.

I only wish I had had a little time to prepare something to say to you to-night—not thinking I could give you any advice, but at the same time I might have suggested some ideas whereby I might have endorsed some of yours. I know how it is with you gentlemen who are fighting along this line—you like sometimes to feel that you are being backed up by the people, and it is very hard work for anyone to do much without the backing of the people. From what expressions I have heard from the bureau here in Michigan I know that you are welcome here, and I know that you have the confidence of the people.

You have a great work before you; there is hardly an end to it as I see it. The more you study and the more you look into things, the more you will realize that there is really no end to the work you are engaged in.

You know that "Time and tide wait for no man," and there is no country where they have more rapid transit than we have in this. We don't stand still. We either advance or go backward. We are living to-day in an age that is uncommon, and as I have said a good many times, it is wrong. I don't believe in war, although we are in it and we have got to fight it out. There is no doubt that we are going to win. I don't think there is anybody who doubts that, even the rulers of Spain; at the same time I know that you gentlemen realize that it is not in keeping with our education in this country. War is murder—that's what it is to make it short; and it is not in keeping with our education—but, as I say, we are at it and we have got to fight it out. I have been engaged for the last two months in fitting our boys out here in Michigan to go out and put it down, and we have succeeded very well, and I find we are only one of many States that have joined in doing what they can to that end.

As I said before I am not prepared to make any remarks that will do you gentlemen any good here to-night; I have not had the time to prepare for it. But we have many pleasant places here that I hope you will visit before you return, and I hope I shall be able to put in a day or two with you gentlemen before you leave. I have received about all the knowledge and information I have on this subject from just such gentlemen as you, and I am in hopes I can spend a day with you on some little trip, either to the flats or down the river, or at some other place, where I can find a chance to learn something from you, for I feel that I can do it.

If there is anything we can do to make your stay here pleasant I hope you will make it manifest, and I assure you that you are welcome here in Dertoit.

The Secretary reported the following States and Territories having Bureaus of Labor Statistics, or kindred offices or departments. For each State or Territory there is given the title of the office, the date of its establishment, the method of publishing its regular reports (annually or biennially), the title of the executive officer in charge, the name of the present incumbent, and his postoffice address:

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. Horne, 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, Lucas Moore, Frankfort, Ky.

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

Ohio Bureau of Labor Statistics—Established May 5, 1877. Annual reports. Commissioner of Labor, John P. Jones, 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, William Stainsby, Trenton, N. J.

Illinois Bureau of Labor Statistics—Established May 29, 1879. Biennial reports. Secretary of the Bureau of Labor Statistics, David Ross, Springfield, Ill.

Indiana Bureau of Statistics—Established March 29, 1879. Biennial reports. Chief of the Bureau of Statistics, John B. Conner, Indianapolis, Ind.

New York Bureau of Labor Statistics—Established May 4, 1883. Annual reports. Commissioner of Labor, John T. McDonough, 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, Joseph L. Cox, 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, J. D. Wade, Baltimore, Md.

Kansas Bureau of Labor Statistics—Established March 5, 1885. Annual reports. Commissioner of Labor, W. L. A. Johnson, 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, S. J. Kent, Lincoln, Neb.

North Carolina Bureau of Labor Statistics—Established February 28, 1887. Annual reports. Commissioner of Labor, James Y. Hamrick, 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, Minn.

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

West Virginia Bureau of Labor—Established February 22, 1889. Annual reports. Commissioner of Labor, I. V. Barton, Wheeling, W. Va.

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

Tennesee Bureau of Labor Statistics and Mines—Established March 23, 1891. Annual reports. Commissioner of Labor, A. D. Hargis, Nashville, Tenn.

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

New Hampshire Bureau of Labor—Established March 30, 1893. Biennial reports. Commissioner of Labor, Julian F. Trask, Concord, N. H.

Washington Bureau of Labor—Established June 11, 1897. Annual reports. Commissioner of Labor, W. P. C. Adams, Olympia, Wash.; and Industrial Virginia Bureau of Labor and Statistics, established March 3, 1898. A. P. Montague, Commissioner of Labor Statistics, Richmond, Va.

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 1886-7, and consist of annual reportsof operations and statistical abstracts, annual reports on strikes and lockouts, annual reports on trades 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.*

MINNESOTA—Mr. Powers: One portion of our statistical work in Minnesota this year has been the continuation or completion of studies begun in preceding years. The statistics of mortgage foreclosures begun in the third report of our department and now brought down to the close of the year 1897. I will briefly state a few of the most important facts brought out by these studies.

In the older half of the State, in which the farmers twenty years ago were largely, if not almost exclusively, engaged in wheat raising, but in which, since 1880, there has been gradually developing a wise system of diversified agriculture, including large dairy and cattle interests, there is shown a most remarkable decrease in mortgage foreclosures. In one group of twenty-three of these oldest settled counties, the number of foreclosures, the amount involved and the acres included, were, in 1896 and 1897, less than one-fourth as great as in 1881 and 1882. This reduction has taken place in connection with an increase of the acres of taxable land, and the average value of land per acre. Thus while in 1880 and 1881 one acre of land was sold each year on an average for every 91.1 acres of taxable land, in 1896 and 1897 there was only one for every 457, or less than one-fifth as many relatively. If account could be taken of the increase in the value of farm land, the decrease in the amount of foreclosures, in dollars and cents, would be shown to be still greater relatively. This decrease has been proceeding almost uninterruptedly from 1881 to the present time. It has kept even pace with the development of a good system of agriculture. Probably no equal farm area in the United States is so free from mortgage foreclosures, or its citizens so generally prosperous as the counties in this group.

But while there has been this wonderful decrease in mortgage foreclosures in these older counties, and in other counties with diversified agriculture, there has been no such gain in the counties still wholly or even mainly devoted to raising wheat. These counties in 1894 and 1895, had a relative amount of foreclosures practically identical with that which existed among them in 1884-'85 and again in 1890 and 1891. These were the years of maximum foreclosures in these weak counties. These years, or periods, have alternated with short periods of fewer foreclosures according to the price of wheat, or the state of the crop. The

contrast here presented shows the value of good methods of farming and of diversified agriculture as can be illustrated in probably no other way, at least statistically.

From the data relating to mortgage foreclosures on city or town lots other lessons may be deduced. In the three city counties, including Minneapolis, St. Paul and Duluth, the maximum of foreclosures was reached in 1894, the year after the panic. Since that time the trend has been to a decrease, showing an improvement in business conditions. In the seventy-eight other counties, the maximum of foreclosures, on this class of property was, in 1892, the year before the panic. The general improvement that had been going on in agriculture in these counties was able to more than balance the results of the panic and hence no trace of the financial depression, through which the country has been passing, can be found in these foreclosures. The figures here shown give the general prosperity of most of our Minnesota small towns and cities all through the present decade.

Another line of investigation which will be completed in the next four weeks is one to which I have called attention in the last two conventions. It is the study of taxation in Minnesota. By this investigation it was sought to gain definite information upon a number of points of wide, general interest. An effort was made to ascertain,so far as was possible, whether the poorer owners of real property were taxed relatively more or less than the richer. An effort was also made to learn whether improved or unimproved real property was taxed the heavier. Incidental to securing information upon these subjects, it was sought to throw all light, that was possible, upon the relative burden of taxation borne by the several counties in the State.

In this investigation were tabulated all the mortgage foreclosures in the State for 1895, and for a number of counties in 1896, and the assessed value of the lands thus sold. The instruments thus tabulated in 1895 were 5,518 in number and included sheriff certificates for nearly eleven million dollars. The *bona fide* sales of real property by warranty deeds for the same years and counties was also ascertained and separately tabulated. In 1895 the instruments included in the tables were 26,881 in number, and included transfers amounting to over fifty million dollars. Including the counties tabulated for 1896 the total number of instruments tabulated was nearly 40,000 and included

amounts aggregating over forty million dollars of sales, either by warranty deed or sheriff certificate.

The record of these sales have been tabulated according to the value of the land sold. The percentage of assessed value to the selling value was also calculated. The following exhibit will present for 1895, for the State as a whole, the results both for mortgage foreclosures and sales by warranty deeds. It gives the amounts of sales and the percentage of the selling value, as expressed in the deeds of sale, and was represented by the assessment placed upon the land by the assessors:

CLASSIFICATION BY AMOUNTS.	PERCENTAGE OF ASSESSED VALUE OF STATED VALUE	
	Mortgage Foreclosures.	Warranty Deeds.
$ 500. and less	137.70	52.33
501. to $1,000	92.17	51.26
1,001. to 2,000	79.83	46.44
2,001. to 3,000	79.46	41.39
3,001. to 5,000	79.85	38.21
5,001. to 10,000	83.18	38.79
Over $10,000	90.39	37.64
Total	86.28	41.55
$2,000 and less	90.64	49.36
Over $2,000	84.32	38.84

The average for all the instruments tabulated was, for the mortgage foreclosures and also for the deeds, a little less than $2,000. The tables show for both class of instruments that the pieces of real property sold for less than this average amount, appear on the face of the records to be assessed much heavier than those worth more than the average. In the case of sales by mortgage foreclosures it exists only in the rural counties. There is but an insignificant variation of this kind in the three large cities.

In the case of the mortgage foreclosures for the rural counties the percentage of assessment is largest with the smaller sales and decline with great regularity to the largest. With the deeds of both rural and city counties the percentage begins large with the smaller amounts and declines until after the average sale is passed when they remain tolerably fixed and stationary. With

the mortgage foreclosures in the city counties the percentage is high for the small amounts, declines to the sum of $1,000, then remains fixed until after the sum of $5,000 is passed, and thereafter rises giving large percentage for the rich and the poor and smaller for the intermediate. Of the land conveyed by deeds, over three-fifths were substantially assessed at a fixed rate, and of the sales by mortgage foreclosures about one-half. These facts point to a wonderful uniformity of assessment for the great body of lands and a special apparent extra assessment for the smaller and less valuable properties. The apparent extra assessment against the very poorest show, by the data of sheriff certificates, is much greater relatively and actually than that indicated by the warranty deeds, although that for the poorer half is greater as indicated by the warranty deeds.

The greater percentage of apparent assessment on pieces of land selling for less than $1,000 by foreclosure proceedings than by warranty deed is unquestionably due partly, if not wholly, to the poorer credit which the poor man is able to secure. Borrowing money he sometimes gives security on his home for a loan that represents only a very small part of the value of the same. Unable to meet his debt, when it falls due, his home is sold by the sheriff for a fraction of what it is worth. He suffers a great loss. The high percentage of assessment for foreclosures under $1,000, shown in the exhibit, in large part, at least, represents this loss and not an unjust assessment. It is the expression of a misfortune for the poor, more than a legal crime perpetrated against them by the assessors and tax gatherers. It is a misfortune that grows out of the circumstances under which the poor man borrows money and finds himself unable to meet his legal obligation.

The special investigation of our agents shows that some at least of the apparent discrimination against the poor shown in the assessment of lands sold by warranty deeds grows out of the allied sources of misfortune to the poor. The poor man buys a lot in the city or town, or some acre property in the country. He pays for it in whole, or in part.. He wishes to realize some ready money by the sale of this land. To do so he must and does sell at a greater sacrifice than his more prosperous neighbor. He may be assessed as justly in the opinion of both the richer or poorer men, but every piece of land sold at a sacrifice appears in

an investigation such as the one made by our Bureau as a tract assessed more heavily than it ought. Some at least of the apparent inequality of taxation shown in the tables is thus caused. It represents a misfortune, compelling the poor man to part with his land at a sacrifice.

These misfortunes do not, however, account for all the apparent injustice in the assessment rolls shown by the percentages of the exhibit here made and shown more extensively in the detailed tables of our report.

There are other wrongs against the poor covered up by these percentages. In many of our larger and smaller cities and towns speculators having land to sell to the poorer people accept, without protest, a heavy assessment of their lands. Such assessment assist them in selling the property at large relative prices. Of the sales of town property under $1,000, a large share, at least one-third, are sales by such speculators to the poor, and not sales by the poor men of their own lands. They show the extra assessment thus accepted to aid in working off the lands at a good price. In this way many a man or woman in moderate circumstances is led to give more for property than it is worth, and this combined with the facts mentioned above, intensifies the loss where the land has to be sold, as so often it is, at a forced sale.

Another factor affecting the percentages of assessment obtained from this investigation is the large relative number of deeds that are placed on record that do not express the true consideration for the transfers. Some are given, to correct the title, for smaller considerations than the value of the land. Other warranty deeds actually close out a mortgage. They but surrender the equity of the mortgagee in his land. All these and other similar classes of instruments aid in swelling the relative and actual number of deeds for a small consideration and an apparent heavy assessment.

Another set of factors act to reduce the apparent assessment of all the classes of property of a higher value. Many deeds are given which represent real estate or other trades. A high nominal consideration is set forth in the instruments.

When account is taken of all these facts there is created a strong probability that much if not the greater share of the apparent higher taxation of the poor shown in the tables of our

report, and those of all similar investigations, do not show a crime against the poor by our assessors, but the combined result of these other social and economical factors. In part these percentages represent fallacies growing out of these fictitious and unreal transfers. They also, in part, represent these wrongs and swindles perpetrated against the poor purchasers of speculative real estate. They also, in part, tell the story of the poor man's misfortunes and his sacrifice and losses when trying to secure ready money to meet the exigencies of his lot.

The value of an investigation into taxation such as this one, based upon tabulated sales of real estate, by deeds and sheriff certificates, has been found to have very great limitations as a measure of the relative burden of taxation upon different communities. It is valuable in measuring the relative assessment in two cities, such as St. Paul and Minneapolis, with economic conditions nearly the same. It is also valuable as between two agricultural communities or any other communities of like conditions. It is not very decisive as between the city and the country.

A most instructive anomaly in statistics is brought out in the investigation of the relative assessment of improved and unimproved real estate. The data for mortgage foreclosures appear to show that in our State the improved property bears a heavier share of taxation than does the unimproved property. This would support the contention of our single tax friend. The data from warranty deeds leads to the very opposite results. At present no satisfactory explanation of this anomaly has presented itself. Of the other statistical investigations that we are carrying on, I will briefly refer to two special studies we have just begun. One is a study of trade unions and other labor organizations. The other is a wage investigation based upon the pay-rolls of some large factories and also of all the railroads of our State.

President Wright.—Gentlemen: I can state very briefly what the Department of Labor at Washington is doing at the present time. I hardly need state it because you are all quite familiar with it.

The chief work is that of the collection of statistics concerning private and public water, gas and electric light plants. I think I

need not hesitate to assert that this is the most difficult investigation we have ever undertaken. You will remember that the original idea was that the work should be done contemporaneously throughout the country by all the Commissioners in connection with our own office, and a brief preliminary schedule was prepared for that purpose. It soon developed, however, that that schedule was entirely inadequate to secure results upon which any valuable conclusions could be based. Furthermore, in studying the phrases used by electricians and by the manufacturers of gas, it was learned that no accurate conclusion could be reached relative to measurements. Electricians and others interested would have considered the investigation somewhat absurd had it been carried out on the original schedule. Learning these things we thought it best at Washington to reorganize the schedule as you all know and it was sent out to you. That involved a vast deal of work and the expenditure of considerable money and the employment of a force with which the State offices were not generally equipped. Being thoroughly interested in carrying out the investigation it seemed expedient to say to the Commissioners that we would carry out the investigation on the basis of the reconstructed schedule, doing all the work, furnishing the men and the means and turning over to each Commissioner separately the results. There are some States able to help us in this matter, so we are co-operating with them. We always send the experts to the Commissioner of the State in which they work for the purpose of co-operating and for the purpose of avoiding complications.

Difficult as this work is I am very glad to be able to report to you to-day that it is proceeding with fair success—with much better success than I expected. We shall secure returns from all the municipal works in the country, and we shall secure facts from a sufficient number of private works to warrant conclusive comparisons of water, electricity and gas under the different methods of control, whether private or municipal.

There is no particular objection on the part of municipal works to make returns, but objections are often made on the part of private concerns to answering the questions. Nevertheless, there are a sufficient number of private concerns patriotic enough and interested enough in securing accurate statistics to make the returns. There is a peculiar feature in this investiga-

tion, and that is, that private concerns are more competent to make returns than municipal ones, and less willing; the municipal ones are more willing and less able to do so, and a very brief examination of the subject will show why. The private concerns manage their affairs on business principles with comprehensive methods of book-keeping and all that, but they are somehow exceedingly fearful that their results will show that their charges are too high for gas or electricity, and hence some legislature will compel them to sell their products at a less rate. Nevertheless, I find, among a great many managers of private concerns, that they will be very glad if any investigation shows that the cost of gas on an average in the different States will be followed by legislation, reducing gas perhaps to sixty cents a thousand, and the reason for this is that they say every time they have reduced the price of gas, they have made money, because the cost of administration is not increased, while the consumption of gas or electricity is increased largely, and hence the returns for the company are much better.

Municipal works find a difficulty in reaching a fairly exact cost of production, because many officers are put on the city or town pay-rolls, as officers of the municipality, while the cost should be properly charged to the cost of producing or furnishing water, gas or electricity. All these difficulties have to be met. We have to use a good deal of diplomacy to secure returns, but I find where many gasworks are owned by a syndicate, or one gentleman is president of a dozen, fifteen or twenty works, in different parts of the country, which have been purchased for the purpose of investment, they are willing, on a proper representation, to consolidate their reports and give them to the department in this way, and by pledging the department to the elimination of names, using merely the facts—and of course that is all we want—we are able to get them. It is not a question of competition with us or with you. We are considering the larger question which goes to effect the cost, but it does not matter if we do not consider all of them, because the basis of comparison will be ample. It is necessary we should secure the leading facts regarding the municipal works in this country, in order that both the advocates and opponents of municipal control may know the extent to which municipal control has been carried in this country. This is the line of the

work of the department for the present year, and I want you to know it will take some time to complete it, but as fast as it is completed each State will be furnished with the facts for their individual use, and when the whole thing is completed, a summary of the United States.

The department has carried out what it has been incidentally working upon for three or four years, the computation of wages and time employed for the commercial countries of the world. This will be a work of nearly 3,000 pages, and is nearing completion. We expect to print in a few weeks a report upon the liquor traffic. This report is a brief one and will be out soon, as I have said. It comprehends three or four distinct features. First the production of liquors of all kinds, in securing the facts for which we have had the co-operation of the Internal Revenue Bureau; the consumption of liquors; the revenue from the traffic, whether received by municipalities, counties, states, or by the federal government; whether from fines or sales, or in whatever way. We also report what corporations are doing everywhere towards the regulation of the liquor habit, or control of it in great works, or in railroads. This, of course, is sociology, but it has an economic bearing.

This comprehends the general work of the department, except the bi-monthly bulletin work, of which you know one-half at least is the result of original investigation, taking up those questions which everybody wants to know about at once. It is a very convenient vehicle for the publication of facts, and in it, as you have already noticed, we have been able to adopt a method which is hardly possible in the great annual reports of the department, or even in the large special reports, and that is, bringing our facts very largely into the text statements, as the Commissioner of Michigan mentioned last night. That is to say, while these reports as published in the bimonthly bulletin are facts from original sources, they are usually stated in a way to popularize them; to make them more readily understood, which makes them more valuable, and the responses from this class of work have been so encouraging that Congress is constantly increasing the issue of the bulletin. It gives to the political economist information on questions he is discussing, to the social economist, to the reformer, and to the labor organizations the information they want. All through the country unions have been securing for

the year past these bulletins for their reading rooms, and they find they are straightforward statements of facts, and this, I believe, is a very valuable feature of statistical work. The difficulty is to introduce it in the annual reports. Just so far as these Bureaus can popularize their work and bring it to every man, so that scientist or laymen can understand it, we are adding to the educational work of the Bureaus, and these bulletins which some of the individual States are publishing, are very advantageous in this respect. They are valuable in bringing constantly before the public the work of our offices. The annual report, or as in some States, the biennial report, comes at such wide periods that a person sometimes forgets there was any ever before that, while if we publish a quarterly or a bimonthly bulletin, we are sending something of value to the public all the time; hence we have found that the publication of the bulletin has been one of the best things the government has authorized. As you know, the Department of Agriculture, the Treasury Department, the Bureau of Education and now the Bureau of Foreign Commerce of the State Department, are issuing bulletins periodically, and occasionally advance sheets of reports of consuls and representatives of the government in foreign countries are sent out. The cost is not increased, but the public interest is greatly enhanced, and wherever you can do that, I think it is very advantageous, even though the bulletins are afterwards bound and made a volume by themselves.

NEW YORK.—Mr. McDonough: Mr. President, in May, 1897, the New York Bureau commenced its investigation of the private and municipal ownership of electric light, gas, and water supply plants, conducting the enquiry on lines suggested in a schedule prepared by the President of this convention. Notwithstanding the popular impression that business companies would refuse to answer the Bureau's questions, for fear that the results might affect the permanency or value of their franchises, the material contained in the compilation, which was submitted in our annual report to the Legislature, at the beginning of this year, was readily forthcoming, and enabled us to give to the public a mass of valuable data. Reports were received from ninety-seven electrical companies, twenty-six combined electric light and gas, two combined electric light and water, sixty-one

gas, and ninety-six water companies. In addition to the foregoing, returns were obtained from four electric light, five combined electric light and water, and seventy-one water supply plants—all owned and operated by municipalities. With reference to the proprietorship and operation of water works, the inquiry develops that with few exceptions the plants in cities are under municipal management, and are successful, while in the majority of villages reporting, the water supply is controlled by private corporations. Electricity for light and power is supplied in most instances by incorporated companies. In two third-class cities, Dunkirk and Watervliet, the electrical plants are owned by the municipalities, and have been operated successfully. In seven villages, also, these plants are public properties. All the gas plants in the State are managed by private ownership.

The work of the Bureau, in 1896, was given up, to a great extent, to the procuring of returns, from about four thousand of the largest manufacturing establishments in the State, showing not only the volume of business done in each of the five years from 1891 to 1895, inclusive, but also the wages paid in the various industries during that period, so that a comparison could be made, showing an increase or decrease, as the case might be, each year.

These returns, however, whilst they showed the rate of wages paid per day in the different trades, did not accurately show the total amount received per year, because no account was kept of idleness.

For instance, if the returns showed that a stone-cutter received, in New York City, $4.00 per day, one would be justified in reaching the conclusion that stone-cutters were doing well in that city. But if it should turn out that the mechanic was out of work, say one-quarter of time, then his income would be cut down accordingly, and his wage would not average more than $3.00 per day.

In order, therefore, to ascertain not only the rate of wages paid to the members of the various trades, but also the days of employment, the Bureau, in 1897, sent out to all industrial organizations, both general and individual forms, requesting information for each calendar quarter, regarding the number of days of employment and the wage earnings of all members, together

with the total membership and the number unemployed. Our printed report will contain the details by industries and occupations in the various localities. From the following epitomized statement some idea may be formed as to the results attained:

On March 31, 927 organizations reported a total membership of 142,570. At the close of the succeeding quarter, June 30, 975 unions had a membership of 151,206; on September 30, 1,009 organizations reported 168,454 members; and at the close of December, 1,025 unions returned a membership of 173,728. While the increase in the figures for the number of organizations and membership, in the last three-quarters of the year, is partly due to the greater completeness of the returns to the Bureau, a comparison of the same unions, from quarter to quarter, shows an actual increase in the number of organized workers in the State.

Relative to the unemployed, it was reported that the last day of each quarter, viz.: on March 31, 1897, 43,664 members were idle, while 27,378 were out of work on June 30, 23,230 on September 30, and 39,349 on December 31. Comparing these figures with the total membership on those dates, 30.6 per cent. of the members were out of work on March 31; 18.1 per cent. on June 30; 13.8 per cent. on September 30, and 22.6 per cent. on December 31. The returns also show that of those idle during each entire quarter, 35,381 were idle during the whole of the three months, 17,887 during the second quarter, 10,893 for the quarter ending September 30, and 10,135 in the quarter closing with December. Again comparing with the total number of members, 24.8 per cent. of them were idle the whole of the first quarter, 11.8 per cent. for the second, 6.5 per cent. for the third, and 5.8 per cent. for the fourth.

Reports as to the number of days of employment show that during the first quarter the average number of days worked by each member was, for men, 58; for women, 63. In the second quarter, it was 69 for men, and 57 for women. For the third quarter, it was 67 for men, and 66 for women; while during the last quarter, it was 65 for men and 56 for women. The average earnings per member in the first three months were $155.06 for men, and $85.63 for women; second quarter, $159.12 for men, and $81.39 for women; third quarter, $174.40 for men, and $91.80 for women; fourth quarter, $174.47 for men, and $73.71 for women.

We are continuing the collection of these statistical details from the industrial organizations this year, and have already received returns for the first quarter from 1,100 unions.

The Bureau devoted considerable time, in 1897, to investigating certain branches of the agricultural interests of the State, and a large part of the report for that year, now in the hands of the State printer, is devoted to that subject, including wages paid day help and those hired by the month on farms for summer and winter work, with and without board; the prices of staple products during 1894, 1895 and 1896, the income of farms, etc., etc.

The tables relating to wages show that, with board and lodging, farm hands are paid in summer an average of $18.08 per month, and in winter $13.87 per month, and, without board and lodging, an average of $23.20 per month in summer, and $14.95 in winter. The reports received show a large depreciation in farm values and increased indebtedness, as compared with former years, notwithstanding the fact that the State of New York has in ten years appropriated in aid of the agricultural interests an enormous sum of money, viz., $3,309,503.00.

The Labor Laws of New York State contain a provision prohibiting the employment of aliens on public works, whether such work be performed by the municipal authorities or by contractors. Owing to the vast amount of this kind of work performed annually, contractors and aliens have sought to defeat this provision of the law, the former because they are enabled to procure alien workmen at lower rates of wages, and the latter in order that they may obtain employment.

The Bureau has, during this year, been investigating the violations of this law, and our next report will contain the results of this investigation.

The immigration question is also undergoing general consideration. According to the figures furnished by the United States Immigration Service, the number of alien steerage passengers landed at all ports of this country during the six years from July 1, 1891, to June 30, 1897, was 2,137,659, and New York State was the destination of no less than 819,387 of these immigrants. The astonishing fact that 38.3 per cent. of the aliens who have arrived in the United States in the period named, have made the Empire State their abiding place, has naturally

led to the inquiry as to what extent this influx of newcomers has affected the conditions of citizen workers. The New York Bureau, therefore, decided to look into the matter, and we have inserted in the schedule sent to industrial organizations, three questions bearing upon the subject, the first being, "Has your trade been affected by immigration during the past six years?" The second, "If so, how many of your members have been displaced by immigrants?" And the third, "Have wages in your trade been reduced by reason of competition of immigrants, and, if so, to what extent?" In addition to this method of obtaining the facts, our special agents are interviewing men and women prominently identified with the movement for the advancement of the interests of labor, with a view to eliciting their observations and experiences in this particular field of research. Enough has already been gleaned in regard to the subject to warrant the declaration that immigration has materially depressed the labor market, by cheapening the cost of production, lowering wages and driving citizens out of certain employments, in which they were heretofore employed at good wages. These facts have caused many wageworkers in New York to favor a more restricted immigration law.

The State maintains a Free Employment Bureau in New York City, under the control of the Commissioner of the Bureau of Labor Statistics, but managed by a superintendent and two clerks.

In the year 1897, seven thousand, three hundred and fifteen persons made application for work, viz.: 3,996 men and 3,319 women, and employment was obtained for twenty per cent. of these, whereas in 1896 only five per cent. of the applicants for work found situations.

It is proposed, in the report for 1898, to make an investigation of systems of pensions and insurance for firemen, policemen and school teachers. Such are in operation in several of the larger cities of the State, and the new charter of Greater New York City contains quite elaborate provisions in relation thereto.

These systems, in some instances at least, amount to compulsory insurance for municipal employes, which suggests the larger subject of compulsory insurance for workingmen in general. That subject, as is well known, was most comprehensively

and ably investigated by the United States Labor Bureau, in a report published in 1893. But as five years have lapsed since that report, it is proposed to include in the New York report for 1898 some account of the progress made since 1893 in the establishment of systems of compulsory insurance in the various countries having such, with notice of proposals therefor in others, and especially materials showing the results of German and Austrian experience up to date. It is not the hope to present anything new or original, as to the general theory of the subject, but it is believed that a supplement to the United States report for 1893, bringing materials for Germany down to date, will be valuable, especially as the last five years contain the older experience of the system, and new returns for Germany may be had for ten years under the sickness and accident laws, and six years under the old age and invalidity law. The material for Austria will moreover be practically new to labor reports.

Finally, it is proposed to raise the question of the possibility of compulsory insurance under American, and more especially New York State conditions. It would be out of the Commissioner's province to offer conclusions, or make recommendations, upon such a question, and nothing more is contemplated than to bring up the question, and point out the various practical problems involved, with the view of putting the matter before the people of the State and, if possible, excite some interest in the subject, which is prominent at present in European discussion and legislative proposals.

The appropriation for the Bureau, including salaries of Commissioner, Deputy and Chief Clerk, for the year ending September 30, 1898, amounted to $25,500.00, and for the year ending September 30, 1899, $26,500.00. In addition to this sum, $5,000 per year is appropriated for conducting the Free Employment Bureau in New York City.

Paper read by Gen. J. W. Latta, Secretary of Interior Affairs, of Pennsylvania.

STATISTICS AS THEY INFLUENCE ECONOMICS AND HELP SOCIOLOGY.

"The Moderator of the Presbyterian Church of Scotland has lately said with force that 'the scientific method has created a greater regard for truth than ever before existed in the world. The extraordinary exactness of method in the physical world has reacted beneficially upon the moral world, and has led to an intolerance of every form of falsehood. The scientific method is carried into theological studies, and men under its influence refuse to accept conventional or traditional evidence, and insist upon subjecting even the most sacred things to the most rigid investigation. Veracity is the passion of life.' "

The forceful expressions of the Scotch clergyman have application to the Bible of Inspiration as contrasted with the Bible as touched by science and expounded by scholarship. The deductions of the learned cleric are equally potent in their application to things secular. The age is utilitarian. Principle is to no purpose unless its solution is for utility. The problems of physics are approaching exactitude. Prevention rather than remedy is the aim of therapeutics, while the knife of the surgeon is as sure as the spectroscope of the astronomer. The art of war has now become the science of destruction; the romance of the fight is out of it; the song of the camp, the poetry of the charge, the rhythm of battle must give way before the first practical application of modern gunnery to the sportsmanlike accuracy of the small arm and to the wholesale destruction of all before it when the high explosive reaches the distant destination aimed for.

Invention has supplied the new appliances. The plaything of the eighteenth century is the energy of the nineteenth; for the kite and the key we have the switchboard and the dynamo; for Franklin's outdoor laboratory, Edison's indoor workshop.

Can we distribute wealth? Can we satisfy desire? Can we find happiness for the individual, the State and the Nation, with exactitude at all akin to these physical acquisitions?

Political economy as a separate branch of knowledge is yet in leash. Though grave and reverend seignors may have mastered

its assuring truths, in science it is still an undergraduate. It confidently awaits a fellowship. Though the patronymic of its founder is as ancient as the hills, Kepler and Galileo had been dead a hundred years, and it was a century after Newton had solved the problem of the falling apple, when Adam Smith, from the wealth of his intelligence, offered to the world his rich contribution on the "Wealth of the Nation."

Knowledge had emanated only from the cloister and closet. Its expounders had never sought touch with cosmopolitanism. They were untraveled men. Thought was elucidated through Monkish research and college inquiry; indeed, learning was a mystery and science with the few. The Church, the law and the university fellowship were the sole avenues for scholastic attainments. The scholar was in no way akin with the world. Froissart, if he may be so classed, the perapatetic news gatherer of his time, was the only much traveled man then and for a long time afterwards. The pilgrim sought spiritual recompense only. He made his journeys to the distant East with no worldly purpose; while the road the soldier followed was marked always with the horrors, sometimes with the honors of war. Greed, gold and glory alone animated the rover of the sea.

Adam Smith had been absorbed in the philosophies of David Hume and the physiocracy of Francois Quesnay. He had himself been a man of the school and the closet. Recognizing the need of a world's acquaintanceship, if Hume and Quesnay were to be enlarged to a practicability, he accepted the proffer of a Scottish nobleman and traveled the Continent with him as his scholarly adviser. That the science he afterwards so successfully evolved now credits him with its fatherhood, well establishes the wisdom of his conclusion.

Great battles won through the dogged perseverance of the combatants rather than the skill of the commander have been, not inaptly styled, "A soldiers' fight." So a scholar's economics mastered to a better perfection by a closer touch with the humanities might with equal aptitude be fitly styled a "People's science." Equipped with a common-place, every-day experience, the economist is better fitted to be the skilled expounder. This essential is now supplied by intelligent and reliable statistics. On both Hemispheres, in all nations of progressive civilization, the supply is furnished with calendar-like regularity. The column, the

calculation, the data, the report are as a new source, a new method more suitable for deduction, more convenient for analysis. The statistician has found for the economist a stable abiding place, and the philosopher's closet may again claim its own.

The historical school of political economy is of comparative recent date. Of German origin, "it discards the abstract method, studies economic conditions in every period and country, emphasizes a continuous and inevitable development and regards the more stable elements of economics as variable." To this school, late reviewers have assigned the earlier philosophies of Adam Smith. Disassociated from its true historical, economic purpose, the "Wealth of Nations" bears, incidentally, a significant historic stamp. Nor has this significance been altogether overlooked by its critics. As if the production, preservation and distribution of wealth, the means and methods of living well for the State, the family and individual were more than ever essential for the endurance and stability of self-government, co-incident with the birth of the American Republic was the first practical application of the philosophy of economics to the needs of society. The same year that Adam Smith's publisher in London fixed imprint to his title page of "The Inquiry into the Nature and Causes of the Wealth of Nations," the Congress of the American colonies at Philadelphia, fixing its imprint of 1776 to the Declaration of Independence, created a new nation, a first-born, to first test the efficacy of this new economic regime. If this new nation were to supply proofs to ascertain the genuineness of these newly expounded economics as illustration to assure their efficacious purpose, the test has borne rich frutition. The newborn nation, in the preservation and distribution of wealth, soon out-distanced all its fellows and has proved itself to be more expeditiously prolific in production than any of an older growth. That all production is through effort, though all effort is not production, is a conceded proposition. It is scarcely borne out, however, by our national experiences, for here, at least, effort, thrift, enterprise and production have seemed to be terms equally interchangeable and synonymous with both conditions and philosophy.

There were ominous conclusions of failure, there were dismal predictions of disaster. The savants of the eighteenth century times drew a gloomy picture of this new world enterprise.

Mr. John Fisk, in his "Virginia and Her Neighbors," in his felicitous way, and with his usual accurate research, supplies some newly acquired information.

The Abbe Raynal, in 1770, published a work entitled "Philosophical and Political History of the Establishments and Commerce of the Europeans in the Two Indies," in ten volumes. It is from the pen of Diedorot and numerous other contributors. "In an indescribably airy and superficial manner the narrative flits over vast fields of intercourse of Europeans with outlying parts of the earth discovered since the days of Columbus and Gama," and its concluding paragraph impressively closes the last volume with "What is all this worth?" The confident answer is nothing, worse than nothing; the world would have been better off if America had never been discovered and the ocean route to Asia remained unknown.

But the Abbe is still not content. Seventeen years roll by, the Declaration of Independence has been sustained by successful revolution, the Treaty of Paris has recognized the United States as an independent nation, and the problem of self-government has declared itself susceptible of solution in the adoption of the Constitution, when in 1787, at the instigation of Raynal, and induced by the approach of the tercentenary of the New World discovery, the Academy of Lyons offered a prize of fifty louis for competitive essays on the question "Whether the discovery of America had been a blessing or a curse to mankind." The essay, it was suggested, "should discuss the most practicable methods of increasing the benefits and diminishing the ills that flowed and continued to flow from that memorable event." There was liberal response, but the prize seems never to have been awarded. One contributor only, the Marquis of Chastellux, sustains with prophetic vision the beneficial outcome of American independence and the world's newly acquired possessions. He had held high rank in the French army and had been with Rochambeau at the siege of Yorktown. As contrasted with the contentions of his fellow essayists, here is again a convincing proof that travel and observation are invaluable aids to scientific research and philosophic deduction; that the conclusions of the man who sees and thinks are more dependable than the conclusions of the man who thinks without the opportunity of sight; that economic questions have a broader enlightment when the student

can submit his proposition to the test of observation. "Experience in the moral sciences corresponds with experiment in the physical sciences." It was chiefly upon economic grounds that the Marquis maintained that the discovery had been a blessing and not a curse. Another of the nobility, also a contributor, confronts the Marquis with the charge that the independence of the United States had cost France "two thousand millions francs and was hastening Europe to a revolutionary outbreak which had better be postponed or averted." This was the consensus of opinion of all the rest. Adopting Rousseau's droll notions of the savage, the one who probably most exhaustively discussed the question, lamented the slaughter of the innocent and high-minded red men. "Clearly," he continues, "Columbus had come with a sword, not with an olive branch, and had opened a new chapter in the long Iliad of human woes." "Against such undeniable influence, what benefits could be alleged, except the extension of commerce? and that means merely the multiplication of human want, which is not in itself a thing to be desired." One unqualified benefit, however, all the writers freely concede—"the introduction of quinine into Europe, and its use in averting fevers." "This item," continues Fisk, "is the one cheery note in the mournful chorus of disparagement."

The essayist seeks to silver his cloudy lamentations by allusion "to the narrow fringe of English speaking colonies along the Atlantic coast of North America, who had lately established their independence," and indulges the hope "that the enterprise may put a new phase upon things and ultimately show that, after all, the discovery of the New World will be a blessing to mankind."

Political economy has never been attuned to the best of harmonies. Its schools have been punctured by groups, its groups tinctured by individualisms. It is but two decades since that Oxford, in categorical answer to its own interrogation whether political economy was a science or no science, answered that it was "No science." Later writers as stoutly maintained the affirmative, while others with no disposition to disturb the science as a fixture in the moral class, demand for it additional recognition within the scope of both physics and mathematics. One author, commenting on another, says: "This man is insufficient in generalization, the very substance of the science; he develops his matter on a scheme furnished by others rather

than on one devised by himself." Its definitions, it is charged, do not explicitly distinguish its words of import from all other things. Wealth, held by some to be the very superstructure of the science (contended to be by others as not essential to its maintenance), is defined by no two writers alike, and is declared by some as a word not susceptible of technical definition. History is criticised as only of use for induction and illustration, and the advocate of this school is cautioned that if he desires to extend his science, a good deal more furniture is requisite. He will find his furniture modern in design, durable in workmanship, if he seriously invokes the aid of the statistician, intelligently employs the service of statistics.

The tendency of the times is towards a more convincing accuracy. The historian no longer contents his reader only in a felicity of expression or a captivating style. If the reader be charmed with accuracy of diction, he is restless under inaccuracy of fact. As sweet a moulded classic as ever had Anglo-Saxon deliverance has of late suffered just a tinge of impairment, because its famous author was compelled to correct his text. Though the charm of elegance must ever make Macaulay the great captain of brilliant English speech, yet the touch of the riper scholarship of a later generation would have forced him to a closer accuracy. Hume once rode the "Plumed Knight" in the field of standard history; rivals of a better equipment have unhorsed him. Troy, Nineveh, Babylon, the buried cities of the Nile have disclosed their hidden secrets. Proofs strong as Holy Writ need no confirmation, yet written archaeology confirms that very Holy Writ itself. Traditional archaeology personifies a Homer. Monumental archaeology re-rears the prehistoric temples of the sun. The tomes of ancient lore unfold the lost treasures of antiquity, the scant contributions of mediaeval times enlarge under closer research, while the prolific redundancy of these modern days needs scaling for the truth. The world knows sufficient to satisfy a superficiality. It expects from its teachers a higher training and more thorough elucidation. The pews are closing in on the pulpit, the wider dissemination of advanced thought presses more pertinent inquiry. Learning is no longer a mysticism and there is nothing terrestrial that is past finding out. Induction, the bundle of particulars, that may generalize whatever in its line of operations may reasonably be refer-

red to it, must give way to deduction from a long array of uncontested facts. The help that statistical information has been to economics must ultimately be its sole dependent as the science reaches out to higher exactitude.

A recent writer of accredited standing declares, "But it is none the less of the utmost consequence to this science that all its results work themselves into a definite shape—into figures that cannot lie—and stand out like landmarks against the sky. It is not as in ethics and metaphysics that tendencies and potencies only are ascertained, but everything drifts at once into measureable facts, and may be hardened into statistics. The science certainly does not arise out of statistics and is not strictly dependent on them, though it uses them and rejoices in them as a help."

Statistics are the cash assets of the economist. Insolvency is a likely attendant on trade, if business assets be not readily solvable into cash. If there be stranded propositions in economics, it is in consequence of the insufficiency of statistical data to sustain them. Political economy is trade on paper, not with paper. Its staples are value, production, wealth, distribution. Whatever practical problems the scientific consideration of these staples present, they are so susceptible of statistical solution that bankruptcy need have no terrors for the economist.

But what of stagnation? What was once the unique chapter of Dr. Smith's philosophy, and the one most universally read, is his "Division of Labor." Who shall write its antithesis on the "Absorption of Labor" and the "Centralization of Capital?" The interdependence of capital and labor has heretofore had most satisfactory philosophic adjustment. The historical economist accepts conditions and, as has been said, "regards the more stable elements of political economy as variable." The end of the economist, the aim of the sociologist is the betterment of mankind.

The vacant store, the idle tenement, in our great business centers startle intelligent observation with their significant frequency. The depopulated village, its crumbling walls, its flattened industry, its tall chimneys—smokeless for well nigh a decade, are equally potent for forceful thought. When shall the statistician be summoned to array these depletions in his enumeration for the economist's scientific deduction? When shall the

application of economic principles warrant a scientific solution? The answer now is that concentration lessens expenses, assures continuous employment and better wages, is satisfied from its more extended field of operation with smaller profits, all of which is to the advantage of the consumer in the lower prices at which the product is disposed of. Is this but superficial inquiry or sound philosophic analysis? Where are the wage-earners lost in the squeeze? What of the incomes shrunken or gone? Will there always be consumers to consume? Will an urban population, deprived of its opportunities, distribute itself to the hills and the valleys, the meadows and the fields? If so inclined, is it fitted for the change? Is it not a fact that the trend is all the other way? If there be one employment more than another to which the man must grow up, it is that of a farmer. A graft thus far has fostered only parasitic growth.

You remember what the Scotch clergyman said, "that the extraordinary exactness of method in the physical world had reacted beneficially upon the moral world." So it is in the economic world, and there, as in the moral world, there is intolerance against every form of falsehood. Are these problems solvable? Does their solution belong to science? Are we to grope in the gloom of the *laissez faire?*

There was a quiver not long since in the concession to the fruitfulness of the axiom that "Experience is the best teacher." History was resolutely assailed. Its usefulness in the schools was likely to be seriously impaired. The eminence of the men to whom the academies had entrusted its keeping has restored its prestige. Not content with an association upon equal terms, science had sought to dominate the field heretofore accorded history as exclusively its own. Statistics, where the scope of its purpose included its application, has played no indifferent part towards this restoration. A "help" in economics, sociology itself, statistics are a buttress to history. They are premises for the statesman, sustain the logic of finance, and picture the gloom of war in their sullen array of the battle's dead. They halt the incautious, accord a better safety to investors, and invite the adventurous to a personal encounter with newer opportunities.

Colonization is older than emigration. The colonists were first settlers, they moved in communities, under national auspices, for conquest, for settlement, for commerce, for gain, to escape

oppression, or for conscience's sake. Those who fled from a wrong or sought asylum for their conscience sometimes threw off their home allegiance by revolution and then colonization became expatriation. Emigration, on the contrary, is a movement of individuals seeking social and economic betterment. History is the only contribution from the colonist, the emigrant's story is materially assisted by statistics. The early adventurers stepped out into the great unknown and made their history, statistics directed the course of emigration, and substantially aided the emigrant in his choice.

Colonization began with the Phoenicians. The ancient cities of Tyre and Sidon supported the first colonial venture. A seafaring and commercial people, their colonies were founded to expand their commerce and increase their gains. The tribute demanded by the parent state was the more willingly rendered, because the colonists were permitted to govern themselves. Yet Carthage, greatest of all Phoenicia's possessions, restless and discontented, threw off her obligations and was soon herself the mother of colonies.

A higher motive actuated the Grecians. The weaker cities had succumbed to the sword of the stronger. The burdens the conquerors imposed were intolerable, the oppressions unbearable. To escape the rigors of conquest and the tyranny of oppression, these conquered communities sought relief in colonization, studded the shores of more friendly seas with thriving populous towns, and stoutly and successfully maintained their independence.

Roman colonization was founded upon a like principle with the Phoenician. It was for commerce, for gain, for glory. Her conquered provinces were as well her colonies as her outposts of defence. Unless the invasion of Continental Europe by the barbarian hordes that overran it can be characterized as colonization, with the fall of the Roman Empire colonization ceased until the acceptance of the invitation from the New World's acquisitions again introduced it as the beginning of the splendid civilization of these modern days.

There was neither experience, history nor statistics to guide the colonization of the ancients. Indeed, both sociologist and satistician concede that it is impossible to disentangle the natural and artificial causes that agglomerate a people. Density is influ-

enced by stable government, energy and enterprise, continuous peace, richness of soil, climatic advantages, mineral resources, commercial opportunities. Statistics "can but confirm the observations of history."

Population, however, naturally seeks the best physical environment. A broken coast line, where good harbors are frequent, the plains, the valleys, the hillside, the river bottoms whence come the more responsive answer to successful tillage, are locations sought for by emigrant and colonist alike. An unbroken sea coast discourages settlement, the mountains forbid, the plains invite it.

But mountain barriers do not halt, tempestuous seas disturb, nor barren coasts repel men eager for wealth, making way for liberty, or fleeing from the wrath of persecution. Dangers do not impede, nor do risks deter, whether the end sought be high and noble, or the purpose to accomplish be sordid and selfish. Spain's treasure-freighted galleons traversed every storm-tossed ocean until with the five thousand million dollars she had gathered and employed in "maintaining the gibbet for political reformers and the stake for heretics," she "sullenly retired buffeted and browbeaten from the Netherlands." Human retribution has followed her once vast Colonial Empire; with disastrous frequency her dominancy over her almost every province has disappeared, until now she has lost even her tentative grasp upon her much abused "Gem of the Antilles" and her weakened touch on her distant possessions in the far-off Philippines has disappeared forever.

"Civilization," it has been said, "is an acquisition or conquest over nature, obtained with struggle and held by perpetual vigilance." This struggle was the higher and nobler aim of the Anglo-Saxon as contrasted with the sordid and selfish ends of the Spaniard. It was begun with the flight from the creeds, intolerance, and symbols of the conformist that made clear the way for liberty. It was ultimately to end in statistical confirmation of the fact that the broken and indented coast line of New England, the Boweries of Manhattan, the fertility of the Jerseys, the hillsides and valleys of Pennsylvania, the fair fields of Maryland, Peninsular Virginia, the low lands and mesas of the Carolinas were to hold, by eternal vigilance, that same civilization conquered over nature alike by the racial potencies of Puritan

and cavalier, Dutchman and Quaker, Scotch-Irishman and Huguenot. It was early invocation to Throne and Parliament to remember Elizabeth's concessions in the patents of Raleigh and Gilbert that English colonies planted in America "should have all the privileges of free denizens and persons native of England in such ample manner as if they were born and personally resident in our said realm of England," and that any law to the contrary should be of no effect. It was this unheeded invocation manifested in the refusal of the demands of "Patrick Henry and Samuel Adams" for like concession that started the Revolutionary army on its march to open the way for independence, to smooth the road to unity, to plant upon topmost reach of our splendid American civilization the starry banner of the free.

LABOR LAWS OF MAINE.

LABOR LAWS OF MAINE.

ACT ESTABLISHING THE BUREAU OF INDUSTRIAL AND LABOR STATISTICS, AS AMENDED.

Section 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 commissioners, 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.

Section 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 a 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 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 advice 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 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.

Section 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, AS AMENDED BY CHAPTER 55, PUBLIC LAWS OF 1895.

Section 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 per-

sons, 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, 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, by any employe to whom wages is then due.

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.

Section 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 con-

dition 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.

STATE OF MAINE.

OFFICE OF INSPECTOR OF FACTORIES,
WORKSHOPS, MINES AND QUARRIES,
BIDDEFORD, December 1, 1898.

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 second annual report.

Very respectfully,

CHARLES E. ATWOOD,
Inspector.

REPORT.

The department of factory and workshop inspection has come to be recognized as an essential factor in the industrial legal machinery of many of the great states East and West. The title "Inspector of Factories, Workshops, Mines and Quarries," elongated as it is, gives but an indefinite idea of the extent and nature of the duties and responsibilities which attach to the office of inspector in this State. Within our borders there are over 5,000 industries, great and small, with employes varying in number from 3 to 1,700, more than 75,000 wage earners in the aggregate. Scattered as they are over our 30,000 square miles of territory, for any one official to visit and carefully inspect each one of these hives of busy labor during his term of office, however economically he might use his time and the limited amount allowed him for expenses, would be a physical as well as a financial impossibility. With so much work to be accomplished, the problem, "What to do first," has been answered the past year in two leading propositions: First, to investigate and settle all well-grounded complaints; second, to visit all mills and workshops in the State where female or child help were employed. This the inspector has endeavored conscientiously to perform, while other departments of the work have been cared for as fully as the limited time and means at hand would allow.

TEN HOUR LAW.

Are the wage earners of Maine satisfied with the ten hour law? Theoretically, they are not. Practically, they are. There will never come a time, probably, when the average toiler for wages will not hail with loud acclaim a reduction of hours at labor. But when he realizes that it would undoubtedly have to be accompanied

by a corresponding reduction of wages, he refrains from any very urgent effort to disturb the existing equilibrium of things. The lesson taught by the January strikes, costly as it was, went a long way toward bringing employer and employe to the same level of understanding on the wage question, as to the ability of the former and the claims of the latter. It was a case not of "I would," but of "I must" cut down or shut down. Uncertain markets and competition North and South touched a real climax in the scale of manufacturers, and the employe, when he finally saw it to be real, ceased contention and accepted the situation, hard as it appeared, as the best thing possible then in sight. While theoretically the employe does not waive his claim to ten hours' pay for eight hours' work, practically, for the time being, he favors the existing order of things, with an eye to windward for that "good time coming," when labor wars shall cease, and when the twenty-four cycle shall be divided by three, eight hours for labor, eight hours for sleep, and eight hours for recreation, with a wage-scale equal to its triple requirements and responsibilities.

FORTNIGHTLY PAYMENTS.

The legal requirement, that laborers in Maine industries shall be paid as often as once in every two weeks, is undoubtedly one of the most beneficial labor laws on the statute books of our State. Under its provisions the wage-earner is enabled, as never before, to declare his independence of the butcher, the baker and candlestick-maker, by discarding the pass book and trading for cash. He is also relieved of the worry which long distance and irregular pay days always bring. The employer can make easy semi-monthly settlements with his help without the old-time strain imposed upon him of being compelled to provide large sums to meet his bi-monthly or quarterly pay days. Beneficial and acceptable as the fortnightly payment law is found to be, in the main, there are some exceptions, as the burden of the complaints filed in the office of the inspector, plainly show. These complaints, by a large majority, come from employes on account of the alleged neglect of payment under this same semi-monthly payment law. A few of our large Maine industries, notably slate quarries and tanneries, have apparently suffered under the pressure of being compelled to pay their employes every two weeks.

It is claimed by their managers that the nature of their business is such that it is impossible to get returns from their sale of goods with sufficient promptness to enable them to pay their help fortnightly without causing financial distress all around. There is some force in this plea, but competition, lack of a ready market, and in some cases ignorance of the law, are also factors in the case. Several slate quarries have shut down during the past year, and two or three tanneries are also temporarily closed.

All complaints received have been promptly acted upon and settled, as a rule, to the satisfaction of all parties. One complaint for non-payment of wages, which was investigated, revealed the rather remarkable fact that the owner of the plant did not know that we had such a thing as a fortnightly payment law in this State until a copy of the act was placed in his hands. Seeing was believing, and in his case, action speedily followed; the men were paid and the trouble ceased. It is fair to add that the aforesaid owner and manager of a Maine industry resided in another state, and had apparently given little attention to the study of our standard down-east literature.

SAFETY DEVICES.

The theory of factory inspection involves the enforcement of penalties incurred by violation of the labor laws, which means more or less ill-will on the part of the employers and the employes. In view of this fact, it has been my aim, while allowing no laxity on the legal side, to so stimulate the moral sense of manufacturing communities, by advice and recommendation, as to soften the asperities of the law, and accomplish better results along the various lines of work undertaken. For instance, we have no state law for providing safety devices for the protection of mill operatives against accidents, yet, by the moral force of recommendation, manufacturers have seen their own interests, as well as the welfare of their employes, and marked improvement has been made in the adoption of safety devices for dangerous machinery in some of the larger manufactories of the State. Comparatively few accidents from dangerous machinery have come to my knowledge the past year.

SANITARY CONDITIONS.

What is the general sanitary condition of factories and workshops as compared with previous years? As to sanitary conditions, a steady growth of improvement on various lines is apparent. As to the larger cotton and woolen structures, and the great paper and pulp mills, the sanitation is nearer the perfect line, as a rule, than can be found in almost any other class of buildings in the State. Excellent sewerage, abundant water supply, gravel or cinder driveways, brick foot walks and neatly trimmed lawns are the rule, out of doors, and it goes without saying that indoors, like excellent conditions obtain. Accumulations of waste material or refuse of any kind are not allowed to mar the general condition of cleanliness.

These conditions, of course, apply, in the main, to the larger corporations of the State. Several of the smaller industries are lacking in some of the essential features of good sanitary conditions, but nearly all are yearly maintaining a better standard of health conditions, indoors and out. The freedom from epidemic diseases in our various industrial centers is evidence of thoughtful care on the part of those in authority. My careful attention, the coming year, will be especially directed to those mills and workshops which are below the danger line, in regard to sanitation, and will not cease until all are above reproach in this important regard.

FIRE ESCAPES AND DOORS OF EGRESS.

Are the legal requirements as to fire escapes observed? They are quite generally, especially in the larger manufacturing establishments. Coupled with the provisions for fire escapes, it should be mentioned that back of such provision lies the all important one made for prevention of fires. The fact that destructive fires in the extra hazardous mills and workshops of Maine are of very rare occurrence, is evidence that our manufacturers are keenly alive to the importance of fire prevention. The operatives in all the larger and many of the smaller cotton and woolen mills of Maine are organized fire departments within themselves, and the facilities there possessed for flooding a particular room, or an entire mill with water, and absolutely to drown out a fire is simply marvelous. As a matter of fact it has scarcely been found

necessary to use fire escapes on the mills of Maine within the recollection of the oldest mill operative. However, the means of escape are none the less in evidence on that account.

The law providing for fire escapes from buildings, as amended in 1891, requires that "Every public house where guests are lodged, and every building in which any trade, manufacture or business is carried on requiring workmen above the first story, and all rooms used for public assembly or amusement, and all tenement houses, three stories in height, where only one stairway or means of egress from the upper stories out of the building is provided, and all tenement houses of four or more stories in height, intended to be occupied by families, boarders or lodgers, above the third story, shall at all time be provided with suitable and sufficient fire escapes, 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 law in relation to doors of egress, provides that "Every building intended temporarily or permanently for public use, and every school house or school room, shall have all inner doors, intended for egress open outwards. The outer doors of all such buildings shall be kept open when the same are used by the public, unless they open outward."

The trouble is that outside the jurisdiction of the inspector of factories these wholesome statutes are virtually dead letters. Almost without exception the great seaside hotels and boarding houses which line our Maine coast with from fifty to 500 guests each, and the hundreds of public halls in city and town are destitute of proper means of escape in case of fire, while not a few of them are so constructed as to prevent such escape by inward swinging doors of egress. Legally this neglect is no business of the factory inspector; morally it is or should be the business of every citizen, careful for the public good, to see to it that a radical reform in this matter of fire escapes is speedily begun. The law is plain and strong, and should be judiciously enforced. The duty of such enforcement now devolves upon municipal officers or fire engineers, or nobody in particular. It could, perhaps, be more satisfactorily enforced under the direction of the factory inspector than in any other way, were he given authority and financial means. This matter has been given the go-by too long, and the coming legislature could not do a better thing in

the interest of our immense and rapidly growing summer resort business, than to assure the thousands who come to our State yearly for rest, that their lives, at least, shall be reasonably protected against a possible visitation of the hotel fire-fiend. The losses by fire to the property owners of Maine now exceed the startling total of over $2,000,000 yearly. That a large loss of life has not accompanied this annual property loss is almost a miracle. Sooner or later the flames are sure to reach the inner temple of human life, if no effort is made to escape or stay them. The burning of one of our sea-side hotels of a summer's night, might easily mean a hundred burned and blackened corpses for the morgue. We cannot afford to make such a record; better to lock the stable door before the horse is stolen.

CHILD LABOR.

Child labor in mills and workshops is easily the question uppermost which confronts the inspector of factories in Maine. A significant fact strongly developed during the past year, as shown by statistics accompanying this report, is the marked increase of child labor in the cotton mills. The prolonged strikes, early in the year, are responsible, no doubt, for this in part. Many adult operatives, tired of waiting for the strike to end, went elsewhere, leaving places that somebody must fill when work was resumed. In very many cases the children of resident operatives filled the vacancies thus occasioned, succeeding both adult male and female help. Added to this is the strong tendency toward the displacement of male help by female adult and child help in cotton mills, as well as in nearly all other industrial pursuits.

In our larger manufacturing centers, notably Lewiston, Biddeford and Saco, the adult male and female operatives are largely foreign born, or of foreign parentage. As a rule, these operatives are fathers and mothers of more or less numerous families of children, varying in age from five to eighteen years. There are many kinds of mill work that children can do, and for which the mill authorities offer wages so low that no adult can be expected to accept the positions. Parents with large families and small incomes, see their opportunities, while they feel their necessities for means to feed and clothe those dependent upon

them. While some of the parents admit the importance of schooling and moral training, they usually end by pleading what they deem to be the higher law of self-preservation, and everything else gives way before the demand for bread and a place to live in. The money consideration wins. The children turn their backs upon the school house and answer the call of the mill bell. Here is a condition and not a theory. What shall be done by the State, if anything? The causes which have conspired to produce this condition lie mainly with the parents and the mill authorities, and they are entirely natural and legitimate causes. By what right, you ask, does the State step between these parties and forbid any child labor under a certain age, and all child labor of any age, except on certain conditions? How can the state justify its denial to law-abiding people, of the God-ordained privilege of earning their bread by the sweat of their brows, or by the moisture of brows dependent upon them for sustenance? The State benignly answers: We too, plead the law of self preservation, a preservation without which life for you, the employer, and for you, the employed, would not be worth living. The State pleads the higher divine right of your children, and all children, to grow to maturity intelligently and morally trained men and women, not ignorant and bestial monstrosities; fitted to govern, not merely to be governed; to build up and adorn cheerful homes, not cheerless hovels; to make the world better for their having lived in it.

Plainly there are two sides to the child labor question, each more or less well fortified with argument. To the ignorant or avaricious parent, the mandate of the State seems rank injustice. To the State, the readiness of the parent to wreck his child on the breakers of ignorance and vicious living, is a positive menace of danger to the permanency of good government. So far the parent is wrong and the State is right. But when the commonwealth provides that "no child under twelve years of age shall be employed in any manufacturing or mechanical establishment in this State," and that no child under fifteen years of age shall be so employed unless he has attended school sixteen weeks during the year next preceding, and virtually stops there, it has left its duty half done. True, we have a law for the compulsory education of children. Section 1 provides that "Every person having under his control a child between the ages of eight and

fifteen years shall annually cause such child to attend, for at least sixteen weeks, some public school; and for every neglect of such duty the person offending shall forfeit a sum not exceeding twenty-five dollars to the treasurer of the city or town for the use of the public schools." True, we have a law for the election of school committees and truant officers, defining their duties as to the enforcement of the compulsory school law. Section 2 of the compulsory school law reads: "Cities and towns shall annually elect one or more persons to be designated truant officers, who shall inquire into all cases of neglect of duty prescribed in section one, and ascertain the reasons therefor, and shall promptly report the same to the superintending school committee, and such truant officers, or any one of them, shall, when so directed by the school committee or superintendent in writing, prosecute, in the name of the city or town, any person liable to the penalty provided in said section; and said officers shall have power, and it shall be their duty, when notified by any teacher that any pupil is irregular in attendance, to arrest and take such pupil to school when found truant; and further it shall be the duty of such officers to enforce the provisions of sections 114 to 116 inclusive of chapter 11 of the revised statutes, * * * truant officers neglecting to prosecute when directed as required by law, shall forfeit not less than ten nor more than fifty dollars to the use of the public schools in the city or town." "What is the matter then, is not the system perfect?" asks one. Look in the streets and by-ways of our manufacturing cities any day in the week for your answer. From reliable data it appears that there are sixty thousand children of school age in Maine who did not attend school last year, and there must be at least twenty thousand of these who are between the ages of five and seventeen years. How many of these thousands will hereafter become pests to society as paupers, tramps or criminals, because parental greed has filched from them their birthright to a practical education, or because parental indifference has, with equal wickedness, failed in duty toward them. Does not the State owe it to them and to itself, while it provides such an education for all, to provide effectually also that all, so far as capacity will allow, shall receive the full benefit thereof? The State's constraint is upon the taxpayer to contribute to the support of the schools. With equal force the parent and guardian should be constrained to

put the children into schools and keep them there until their intended results are reached. To make it more conclusive, compare the swarms of unschooled children between the ages of five and fifteen years with the record of the average truant officer, A law against truant officers, as well as against truants, would seem to be in order. Or what would be more to the purpose, a hearty co-operation of the educational authorities, in all the larger towns of the State, with the labor and industrial departments, for a strict enforcement of the compulsory education act. The stereotyped clamor against allowing children under age to work in the mills has been faithfully met so far as the law bids me go. But what will the profit be if these same children turned out of the mills are allowed to waste their school years in the by-ways and back alleys of the city or town? Indeed, are not both parent and child deeply wronged thereby? The child labor problem is not solved when the children are removed from the mills. Let the preachers and teachers, together with all good citizens interested in this important work, lend a vigorous hand of assistance to the factory inspector, by encouraging the school committeemen, and let them in turn require the truant officers and through them the parents, to send all children honestly under the age limit, to the city and town schools, and keep them there thirty weeks in each and every year.

One difficulty which amounts almost to an insurmountable barrier has confronted me in my efforts to enforce the child labor restriction to its full limit. It lies primarily with the parents and guardians of the children. Take a case: Section 6, of the law to regulate the employment of children, provides that no child under fifteen years of age shall be employed in any manufacturing or mechanical establishment in this state, unless it is shown by competent testimony that he has attended and continues to attend school at least sixteen weeks in each year. Section 8 of the same law provides that "every owner, superintendent or overseer of any such manufacturing or mechanical establishment shall require and keep on file certificates of the age and place of birth of every child under sixteen years of age employed therein, as long as such child is 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. The inspector of factories, or

either of his assistants, may demand the names of the children under sixteen years employed in such establishment, and may require that the certificates of age and school attendance 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."

The inspector enters the factory, and after counting up the juvenile help in one room, several of which appear to be under age, he asks the overseer for his certificates; they are promptly shown, with the result that these sworn vouchers represent that every child in the room is of proper age and has complied with all the legal requirements. What the inspector finds in one room he finds in all rooms and all mills. This has been my uniform experience the past year. No evidence, prima facie, has appeared that a single child was being illegally employed.

While, as a rule, it has been found that mill agents and overseers are disposed, apparently, to respect the law in good faith, when parents present their offspring with duly accredited credentials, they are hired without much discrimination, the officials claiming that the certificates being in due form they cannot "go behind the returns." Notwithstanding these facts, the inspector has felt warranted, in several instances where appearances indicated that incorrect certificates of age had been filed, in ignoring the papers and sending such children out of the mills. Right here is seen the need of a more stringent system of certification. When parents, through cupidity or anxiety to secure places for their children, do not hesitate to falsify their records, it clearly becomes the duty of the State to take prompt measures to check a practice so misleading and vicious. The law, as at present framed, is capable of being more effectively used to protect illegal child labor in the mills than it is to prevent it. If the factory inspector of the future is to worthily magnify his office in this regard he must be given a child labor law which cannot be so easily manipulated by interested parties. Perhaps I cannot more intelligibly present my views touching the present child labor law than by the following amendment to "An act to regulate the hours of labor and the employment of women and children," which amendment I propose and respectfully recommend.

That section 8 of said act be so amended as to require every child under sixteen years of age, employed in any manufacturing

or mechanical establishment, to file with the owner, superintendent or overseer thereof, an employment ticket and a certified copy of the city, town or parish records of his birth or baptism; said certificate to be countersigned by a member of the school committee showing the amount of such child's school attendance during the year preceding such employment. In this matter of certification the child's age is the vital question. Under the present law the adjustment of this important detail lies wholly between the parent and the mill officer, mutually interested parties. If the parent strains a point and says his child is thirteen when he is but eleven, or sixteen when he is but fourteen, the State has no remedy, unless indeed it can succeed in finding a record of the child's birth, when it may prosecute the parent. The birth record is the true test. Every parent knows where his child was born, and the cases are few in which a record thereof is not to be found in city, town or parish. Require the parent to produce a copy of that record when he brings his child to the mill, and you at once have a law that will execute itself in a manner to silence cavillers. Without it, illegally employed child labor will continue, as in the past, to snap its fingers in the face of the factory inspector and the child labor law. If cases occur where no record of the child's birth can be found, an affidavit of two disinterested persons, acquainted with the parties might be accepted.

TENEMENT HOUSES.

While the State has issued its decrees of requirements and restrictions in a code of well considered legal enactments concerning mill operatives and the places where they labor, it is strangely silent about the places wherein they live. It may not be the province of the commonwealth to regulate the domestic affairs of the people, but it has come to be recognized as a necessity almost, throughout the crowded manufacturing centers of this country and Europe, that the housing of the working classes should be made subject to government control. The concentration of population in factory towns is a marked feature of modern life, and the evils incident to the ordinary tenement house block, erected simply "to rent," are well known. Mill operatives or the greater portion of them, must of necessity have

their homes contiguous to the mills themselves. These home structures and their surroundings, within corporation limits, are what the mill owners choose to make them; outside, they are often what the grasping private landlord deems for his interest to allow.

In our larger manufacturing centers, tenements or "boarding house blocks" are provided by the mill owners for the housing of from one-fourth to one-half of their help; the balance, if not able to own homes, are turned over to the tender mercies of outside tenement house owners. Those whose business it is to visit these latter living places of the thousands who toil in the mill and workshops testify as to their general unfitness, to use no harsher term.

Through our labor laws we strive to educate and lift up to good citizenship the children of the operatives, all unmindful of the fact that the child will eventually become, morally and physically, the kind of man that his home life and surroundings shall make him. To me it appears plain that if we could have an evenly balanced system of labor enactments, one which should produce thoroughly wholesome and beneficial results, such additional legislation is needed as would extend the principles embodied in our statutes respecting boards of health; that mill owners, and especially tenement house landlords, be made responsible for the sanitary condition of their property occupied by mill operatives, under severe penalties, to be enforced by the factory inspector.

In 1895, the legislature of New York passed a law giving authority to the board of health in the city of New York, to condemn and remove tenement houses which are found defective on sanitary grounds, or for reasons which make adjacent buildings unfit for human habitation. The provisions of the law are as follows: "Whenever in the opinion of the board of health department of the city of New York, any building or any part thereof in the city of New York, an order to vacate which has been made by said board, is, by reason of age, defects in drainage, plumbing, infection with contagious disease, or ventilation, or because of the existence of a nuisance on the premises, which is likely to cause sickness among its occupants or among the occupants of other property in the city of New York, or because it stops ventilation in other buildings, or otherwise makes or

conduces to make other buildings adjacent to the same unfit for human habitation, or dangerous or injurious to health; or because it prevents proper measures from being carried into effect for remedying any nuisance injurious to health or other sanitary evils in respect of such other buildings; so unfit for human habitation that the evils in or caused by said building cannot be remedied by repairs or in any other way except by the destruction of said building, or of a portion of the same, said board of health may condemn the same and order it removed." If the owner of said building, or any person interested therein disputes the necessity of the destruction of said building, the board of health must go before the court and prove one or more of the following propositions:

1. That the rental of the building was enhanced by reason of the same being used for illegal purposes, or being so overcrowded as to be dangerous or injurious to the health of the inmates, or

2. That the building is in a state of defective sanitation or is not in reasonably good repair, or

3. That the building is unfit, and not reasonably capable of being made fit for human habitation.

SCHEDULE OF THE COTTON AND WORSTED MANUFACTORIES OF THE STATE.

Showing the comparative number of children employed in 1897 and 1898.

Name of Corporation.	Location.	Children Employed.					
		1897.			1898.		
		Under 16 years.	Between 15 and 16 years.	Under 15 years.	Under 16 years.	Between 15 and 16 years.	Under 15 years.
Androscoggin Mills	Lewiston	35	21	14	25	23	2
Avon Manufacturing Company.	Lewiston	-	-	-	-	-	-
Bates Manufacturing Company.	Lewiston	75	39	36	25	23	2
Continental Mills	Lewiston	53	35	18	7	7	-
Hill Manufacturing Company	Lewiston	32	25	7	10	9	1
Barker Mill	Auburn	9	6	3	14	9	5
Cabot Manufacturing Company	Brunswick	88	57	31	56	35	21
Lockwood Company	Waterville	91	39	52	153	105	48
Edwards Manufacturing Co.	Augusta	10	8	2	99	81	18
Farwell Mills	Lisbon	27	16	11	31	20	11
Laconia Company	Biddeford	36	20	16	102	60	42
Pepperell Manufacturing Co.	Biddeford	41	30	11	127	81	46
Springvale Cotton Mills	Springvale	8	6	2	8	6	2
York Manufacturing Company.	Saco	56	29	27	42	38	4
Goodall Worsted Company	Sanford	69	47	22	89	57	32
Total		630	378	252	788	554	234

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