

MAINE STATE LEGISLATURE

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Public Documents of Maine:

BEING THE

ANNUAL REPORTS

OF THE VARIOUS

Public Officers and Institutions

FOR THE YEAR

❧ 1887 ❧

VOLUME I.

AUGUSTA:

BURLEIGH & FLYNT, PRINTERS TO THE STATE.

1888.

STATISTICS
OF THE
Industries of Maine

FOR THE YEAR

— 1886 —

FOURTH REPORT.

Compiled, in accordance with the provisions of a Resolve of the Legislature,
Approved February 24, 1873,

BY

THE SECRETARY OF STATE.

AUGUSTA:
SPRAGUE & SON, PRINTERS TO THE STATE.
1886.

STATE OF MAINE.

OFFICE OF SECRETARY OF STATE, }
AUGUSTA, December, 1886. }

*To His Excellency, Frederick Robie, Governor, and the Honorable
Executive Council:*

GENTLEMEN: I have the honor to present herewith the fourth annual report, compiled under authority of a resolve of the Legislature, approved February 24, 1873.

Very respectfully,

Your obedient servant,

ORAMANDAL SMITH,

Secretary of State.

INTRODUCTION.

The past year in Maine has not been an altogether prosperous one for the State. In the spring general business started well but the succeeding labor troubles in different parts of the country were felt by several of the industries of Maine, and the depression thus caused was further augmented by labor troubles in different localities within our own boundaries. The lumber business was quite seriously affected along the Kennebec River on account of the loss of contracts for building materials in Boston, New York and elsewhere, occasioned by the labor difficulties in those localities, and the year has seen a considerably less amount of money distributed by lumber manufacturers than was expected would be the case in the early spring. What is true along the Kennebec is also true on the Penobscot, although to a less degree. In that section there have been no local labor troubles, and the low state of the lumber business has been the result of influences outside the State. The lumber business has suffered a decided change in one respect during the past five years, and there seems to be little prospect of any remedy. The manufacture of shooks for the West India trade has almost entirely ceased because of the importation of sugar in bags. Last winter an attempt was made by the people of this State to induce Congress to take such action as would restore this business, but the movement failed to accomplish any good results.

The granite business of the State has also been seriously affected by the labor troubles in other States. As a very large proportion of the money annually distributed in the State by the several granite companies has come from the quarrying and working of granite for building purposes, so any influence that tends to decrease building operations in the large cities of the country also affects the business of the granite companies, as well as the lumber manufacturers, of this State. It is estimated that an average of at least a million dol-

lars per year has been distributed in Maine during the past decade by granite companies engaged on work for private and public buildings in different parts of the country. During the past year the absence of contracts has prevented the distribution of only about one-half the above amount. Several large contracts for granite paving have been secured by different companies in the State, and several quarries have therefore had a very prosperous year on that kind of work. This is a business that has been annually increasing for several years.

The shoe manufacturing business has suffered a good deal during the past two years from labor troubles. In six different localities strikes have occurred, and at Richmond the business of Messrs. Morgan & Dore has amounted to comparatively little during this period, as the result of the demands made upon the firm by its employes. Business which would have been done in Maine has gone to New Hampshire and elsewhere, where it could be accomplished under more favorable conditions than in this State. At Skowhegan a prolonged struggle was maintained between Messrs. Keene Bros. and the Lasters' Union and the Knights of Labor. The troubles that occurred elsewhere were more promptly adjusted, so that the localities have not materially suffered. The troubles that have occurred in this business have generally had their origin outside the State. Maine employes have been used as a lever to keep up wages in Lynn and elsewhere, where the same quality of living is generally more expensive than in Maine towns. The result of this condition of things has no doubt been of benefit to Massachusetts cities but injurious to this State. The injury to Maine interests has been of a two-fold character: first, it has been the diminution of work and a less distribution of money which would have been paid out for labor; and second, has been the change of sentiment on the part of shoe manufacturers as to the desirability of Maine as a locality for shoe manufacturing. For several years there has been a disposition among shoe manufacturers of other States to remove their business from the cities to country towns, where it was believed circumstances would be more favorable to uninterrupted work. As a result of this movement shoe factories have been established in several towns in this State, but in consequence of the labor troubles of the past year several manufacturers who had been friendly to Maine have located elsewhere, and it has been estimated that in this way alone Maine

interests have been damaged to the extent of at least a million dollars the past year.

The shipbuilding industry is in a very depressed condition. Few of the numerous shipyards scattered the length of our sea coast have done any work for a number of years, and the prospect is not encouraging for the future. The British iron "tramp" has caused a great reduction in freight rates, and vessel property has ceased to be very remunerative. The only thing that will improve the shipbuilding interests is an increase in the value of sailing vessels as an investment, a result that can only be reached by an improvement in freight rates following an improvement in the general business of the country. At Bath and Rockland the shipbuilding industry has been somewhat injured this year by the action of the Knights of Labor in their endeavor to secure increased wages. The troubles have, however, been settled for the present, although another spring may see another attempt at Bath by the Knights of Labor to secure what they consider proper recompense for a day's labor.

The experience of the past year with this labor organization and its methods will doubtless cause whatever troubles of this character that may hereafter occur to be settled with little delay, and it is hoped with no serious interruption of any business interest. The strikes that have occurred the past year have not all been successful in securing desired results. It has not always been the case that the demands, to enforce which the strikes have been instituted, have been made at proper times. In some cases the condition of business has not warranted the payment of the increased wages demanded. In the shipbuilding, lumber and granite business and also in the business of shoe manufacturing, the firms have to be guided by their contracts in yielding to the demands made upon them by their employes. If contracts have been taken with the expectation that there will be no change in wages, to make an advance will oftentimes deprive employers of any profit, if not cause them to lose money on their contracts. In such cases any attempt at dictation on the part of employes must naturally result in an inharmonious state of things, which the choice of a more opportune time for making a demand would have prevented. Elsewhere will be found brief accounts of the more important labor troubles that have occurred in the State the past year.

The ten-hour movement has made considerable progress throughout the State during the year. No cotton manufactories have yet

made any change in the length of a day's work, but a large number of woolen manufacturers have done so, and from present appearances there will hardly be a woolen mill in the State a year from now that will require more than ten hours for a day's work. This reduction of the hours of labor has not been followed by any reduction in the wages paid employes, so that the advantage gained by the movement has been in favor of the laboring class. In some cases, possibly, where employes work by the piece, a little less money may be earned than previously, as it is quite impracticable to speed up the machinery of the woolen mills so as to accomplish any more than the same proportion of work to the length of a day's labor that has heretofore prevailed. The laboring people are, however, gainers in the extra opportunity that has thus been given them for rest and personal improvement. Maine, with its few large cities and the scattered locations of its manufacturing business, is better adapted for the adoption of a short day's work without injury to the laboring people than is the case in some States. The point to be gained, in reducing a day's labor from eleven to ten or eight hours, is two-fold: first, the limitation of production to the demands of the markets, thereby ensuring more continuous work than sometimes prevails; and second, securing to labor a better opportunity for rest that there may be more progress made in personal improvement. The tendency of the past quarter of a century has been toward a reduction in the length of a day's work, and the present condition of things is the result of little if any legislation. It has thus far seemed to be a question that has settled itself, and an amicable adjustment of such matters is better for the State than if accomplished by compulsory legislation.

That manufacturers are becoming more awake to the needs of their employes is evidenced by the action of the York Manufacturing Company of Saco and the Sanford Mills of Sanford in establishing and supporting private schools for the education of the children employed in their mills. The laws of the State provide that children shall not be employed in manufacturing establishments without they have attended school a certain number of weeks during the year. The law is difficult of enforcement and too often manufacturers are innocent violators of its provisions. The method adopted by these two corporations will enable them to retain their regular employes, and yet compel them to observe the law to their own personal advantage and the general good of the State.

The business depression of a few years ago that so generally prevailed throughout the country and resulted in reduced wages in nearly every occupation, has yielded somewhat, and reports from nearly all the leading industries of this State have indicated an increase of wages the past year of about ten per cent. This increase has generally been made voluntarily by manufacturers. Business, however, still continues to be done on a very close margin, and appearances indicate that this condition will probably prevail for the coming year at least. The improvement that has been taking place in the general business of this State has not been confined to already established enterprises, but has appeared in the establishment of a considerable number of new enterprises heretofore unknown in their several localities. Many of these are of small capacity, but they still have a beneficial influence upon the locality where located and will be influential in inaugurating other manufacturing enterprises. Among these industries which might well be mentioned is the manufacture, in the town of Turner, of rattan furniture, which is already assuming considerable proportions; the manufacture from wood pulp of indurated ware, such as water pails, wash tubs and other articles of household necessity, in the town of Gorham; the manufacture of children's sleds in the towns of Paris and Fairfield; the manufacture of shaker chairs in the town of Paris; the manufacture from wood pulp of indestructible coverings for perishable articles, in Portland; the erection of woolen mills and saw mills in different localities, and a number of other industries that might well be mentioned. In Freeport a large shoe factory has been erected and other business enterprises are expected to follow in its wake; at Lisbon Falls a large pulp mill is being erected; in Sangerville a new ten-set woolen mill is being erected and another has been erected and started in operation at Madison. The towns of Dexter, Monson, Abbot, Foxcroft, North Anson, Cornish, Yarmouth, Bridgton, Newport, Lisbon and Calais have been advertising inducements for the location of shoe manufactories or other industries in their midst, and so general has become this sentiment that it is probable there is no town in the State which would not lend its aid in one way or another to any manufacturer who should decide to locate within their limits and establish an industry that would give employment to any considerable number of hands. The aid already extended to a number of establishments has taken either the form of financial aid by the people of the town, the erection of the required buildings and their lease at a nominal

rental, or the exemption of property from taxation for a term of years. In this way the towns of Norway, Skowhegan, Farmington, Richmond, the village of Mechanic Falls, and other localities have had their general business considerably increased, their population added to, the taxable value of their real estate enhanced, and in other ways have found the policy adopted has been of general benefit to the town.

There is one business that has a good future before it if properly taken hold of, and that is the manufacture of hard-wood lumber. At the present time comparatively little is done in this direction, but there are immense quantities of hard wood standing in the forests of the State awaiting manufacture into furniture, floorings and other articles for which its adaptability is becoming better recognized each year. At the present time much hard-wood furniture is brought into the State which could be just as well manufactured in our midst, and a market thus be made not only for Maine lumber but also for Maine labor.

There are almost numberless water powers in the State, heretofore unimproved or at least only partially so, which are awaiting development. Steam power is, however, being used more each year for manufacturing purposes, and the number of steam saw mills in the State has been rapidly increased within a few years. The use of steam enables manufacturers to erect mills more convenient to the location of the lumber to be manufactured, and in many cases where railroad facilities are near at hand, the use of steam has proved more economical and advantageous than water power. Steam is also being introduced into woolen mills and other kinds of business that have heretofore depended upon their water powers, that no loss of time may be suffered because of low water at any season of the year. As a general thing the additional expense is but little, as the mills being already heated by steam have nearly the requisite boiler capacity for their operation by steam power.

In the chapter devoted to agriculture an attempt has been made to show the present condition of the agricultural interests of the State, and the changes that have been occurring during a series of years which are of special interest to the rural population of the State, that it may be seen whether or not Maine is holding its own in the sisterhood of States. The result of this investigation, and the comparisons therein made, it is believed, will give the majority of

the people of the State some new ideas of the condition of the agricultural interests of Maine in comparison with other States.

The chapter devoted to the railroad interests of the State presents in a condensed form a history of the growth of the railroad system, added to which is a sketch of the summer resorts of the State, and the best information to be obtained regarding the value to Maine of the summer travel which is annually increasing in this direction.

The chapter devoted to manufacturing is an investigation of the present manufacturing interests of the State so far as it has been found possible to pursue the same during the past year.

Other information regarding the general interests of the State will also be found at the close of the report, and in the appendix will be found abstracts of the labor legislation of the other States in the Union.

In the preparation of this report it has been found necessary to work under several disadvantages. The appropriation made by the last Legislature was inadequate to the proper investigation of matters pertaining to the immediate interests of the State; and, again, the present resolve under which the work is performed is insufficient to secure any but voluntary information. During the past few years the number of States having a commissioner whose duty it is to annually investigate the conditions of business and labor and publish the result of such investigations as a State document has been rapidly increasing. It is in this way only that the direct needs and condition of the State can be ascertained. A comprehensive statute, similar to the one under which the Massachusetts Bureau of Statistics compiles its reports, is needed to do good work in this direction. At the present time parties applied to for information can furnish the same or not, as they feel inclined, and work done under these conditions cannot be exhaustive, and to a certain extent cannot correctly reflect the true condition of the departments of labor which have been investigated. Maine is a growing State, and a carefully compiled statistical report, either annually or biennially, would undoubtedly have a healthy influence upon the interests of the State. At the present time the only proof we have that the number of manufacturing establishments is larger than ten years ago is the census reports of the United States. Several States take a periodical census of their own, that other conditions may be ascertained than those in which the general government is interested. A careful examination of this matter will show that Maine is behind very many of her sister

States in this respect, and the Secretary of State would suggest that, if it is desirable to continue the publication of reports of this character, such changes be made in the present resolve as will enable the best results to be obtained. The resolve is as follows :

RESOLVED, That under the direction of the secretary of state, there be annually collected, arranged and printed, in condensed form, statistical details, relating to all departments of labor in the state, especially in its relation to manufacturing, mining, commercial and industrial interests, together with the valuation and appropriations for various purposes, of the several towns and cities of the state. It shall be the duty of the person employed in the compilation of said statistics, to secure, by circulars to, and correspondence with assessors and other persons, as complete a compilation as practicable, of the industrial progress of the state; it shall be the duty of assessors of the several towns, to furnish the statistics called for, as completely and promptly as practicable. To meet the expenses of said compilation, the governor is hereby authorized to draw his warrant upon the treasury for an amount not exceeding one thousand dollars, from any moneys not otherwise appropriated. Approved February 24, 1873.

AGRICULTURE.

CONDITION AND PROGRESS OF THE AGRICULTURAL INTERESTS OF THE STATE.

The census of 1880 shows that there are in the State of Maine 29,895 square miles of land surface, or 19,132,800 acres. Of this number of acres only 6,552,578, or about one-third, are embraced in the farms of the State, and of this amount only 3,484,908 are classified as improved land. Each decade shows an increased acreage embraced in the farms as well as an increased number of farms, the increase of the former from 1860 to 1880 having been 824,907 acres, and the latter 8,611. This increase of the number of farms was about one-eighth of the total number returned in 1880. The large amount of unimproved land in the State is not the result of sterility, but may be accounted for in various ways, prominent among which has been the lack of interest taken by the State in making its abundant resources known, and in holding out inducements to settlers and manufacturers. Several years ago the State sold all of its public lands, so that it has none to grant for homesteads, but yet there are large tracts of desirable land in Aroostook County and in the eastern and northern portions of the State which are ready for sale, for farms and homes, at prices which would give purchasers advantages over other and, in many respects, less-favored localities.

Aroostook County, extending across the northern portion of the State, and with an area considerably larger than the State of Massachusetts, contains as good farming land as can be found in the eastern States. Its climate, though somewhat rigorous, is uniform for long periods, and exceedingly salubrious. The growing season is somewhat shorter than at more southern points in Maine, but the

rapidity of growth, when once begun, is something unparalleled in New England. Crops mature rapidly, and the land never fails to yield abundant returns for the care bestowed upon it. Snow generally falls before the ground is frozen and remains till spring opens, a warm blanket covering the ground, with no alternations of freezing and thawing. The soil, being porous, rapidly absorbs the superfluous moisture in the spring time, and as soon as the snow is gone the land is ready to receive the crops. This peculiarity of the climate enables cattle to obtain good pasturage till snow falls, and in the spring the stock again find good sweet herbage awaiting them about as soon as the snow disappears. In this respect Aroostook County possesses advantages over nearly all the agricultural sections of New England. In addition to the agricultural, dairying and lumber manufacturing interests of the county, the manufacture of potato starch is a great industry, and at present confined almost exclusively to that section of the State. The first starch factory was erected in 1875, but there are now thirty-two in the county, consuming, annually, 1,750,000 bushels of potatoes, and producing 7,400 tons of starch. The average capacity of the factories is about 75,000 bushels of potatoes, but one of the factories in 1884 converted 100,000 bushels into 500 tons of starch.

The counties of Franklin, Somerset, Piscataquis, Hancock and Washington are thinly settled, but within the next twenty years will become developed and occupied to an extent now little dreamed of. Several lines of railroad are under construction and contemplated through these counties, which will render them more accessible, and will prove valuable auxiliaries in promoting their settlement and in developing their manufacturing facilities. The strong desire that has been manifested during the past year or two, by towns in different parts of the State, to increase the number of manufacturing establishments in their midst, will result in proportionally as great benefit to the farming community as to those living in the immediate neighborhood of the manufacturing enterprises. Build up a village and you build up an improved market for farm products, and thereby increase the demand for farming land. For this reason the farmers of the State would do well to themselves encourage the establishment of manufacturing enterprises, and not leave the entire work to be done by the people residing in the village or city where any enterprise would naturally be located.

The increase in the number of farms that has been going on in the State during the past thirty years, with their acreage and cash value, will be found in the following table :

Decades.	Number of Farms.	Acres of Improved Land.	Acres of Unimproved Land.	Cash Value of Farms.	Cash Value of Farming Implements.
1850 .....	.....	2,039,596	2,515,797	\$54,861,748	\$2,284,557
1860	55,698	2,704,133	3,023,538	78,688,525	3,298,327
1870	59,804	2,917,793	2,920,265	102,961,951	4,809,113
1880	64,309	3,484,908	3,067,670	102,357,615	4,948,048

From the above table it appears that from 1860 to 1880 the number of farms in the State increased 8,611. The increase in the number of acres of improved land in farms from 1850 to 1880 was 1,445,312, and of unimproved land 551,873 acres. The cash value of the farms also increased \$47,495,867, and the increase in the value of farming implements and machinery amounted to \$2,663,491. These figures are conclusive proof that there has been a great improvement in the condition of the farming population, an improvement found in the possession of larger and better farms, and a more general ownership and use of machinery calculated to lighten the labor of the farmer and to enable him to do his work in a more economical manner. An examination of the above table does not, however, show so great an increase in the cash value of the farms in the State during the last decade as between 1860 and 1870, although the increase in the number of farms was greater, as well as in the number of acres of improved land. This was owing in part, probably, to the general unsettling of values that prevailed during the last decade in all kinds of business, and which will undoubtedly result in the establishment of a more equitable valuation before another census shall be taken.

While the improvement indicated above has been going on in Maine it is also interesting to note what has been going on around us. As many different elements necessarily enter into any comparison that may be made between States, a fair comparison of the changes that have taken place in Maine can hardly be made with any other than the New England States, where the interests of all classes of people are more nearly identical. In examining the growth of each of these States we find that while the number of farms in Maine increased 8,611 between 1860 and 1880, the increase

in New Hampshire for the same period was 1,680 ; Vermont, 3,966 ; Massachusetts, 2,805 ; Rhode Island, 810 ; Connecticut, 5,418. The acreage embraced in the farms increased in only two of the States, as follows : In Maine, 824,907 ; Vermont, 608,174. In New Hampshire the total number of acres embraced in the farms of the State showed a decrease between 1860 and 1880 of 23,452 acres. In Rhode Island there was a decrease of 6,411 acres, and in Connecticut a decrease of 47,723 acres. The acreage of unimproved land in Maine decreased six per cent between 1860 and 1880.

Table showing the Number of Farms and Total Acreage of the New England States for the Years 1860 and 1880.

States.	Number of Farms.		Total Acreage.	
	1860.	1880.	1860.	1880.
Maine.....	55,698	64,309	5,727,671	6,552,578
New Hampshire.....	30,501	32,181	3,744,625	3,721,173
Vermont.....	31,556	35,522	4,274,414	4,882,588
Massachusetts.....	35,601	38,406	3,338,724	3,359,079
Rhode Island.....	5,406	6,216	521,224	514,813
Connecticut.....	25,180	30,598	2,504,264	2,456,541

The increased number of farms shown above from 1860 to 1880 indicates a greater proportional increase of the agricultural population than one would at first thought credit to Maine. It shows that while the total increase of population during the same period was 20,657, over one-half (11,000) of the increase were farmers and agricultural laborers.

The decrease in acreage that appears to have taken place in New Hampshire, Rhode Island and Connecticut occurred between 1860 and 1870, during which period there was also a considerable decrease in the number of acres embraced in the farms of Massachusetts. The census of 1880 shows the decrease in the last-named State to have been overcome and a slight gain made over 1860. It is quite possible that a portion of the changes indicated are the result of the methods employed by the census takers to obtain the acreage in the several States, but granting that, it is still difficult to see why so great a decrease should have appeared in some of the States when a steady increase was obtained in other and adjoining States. The increase in acreage in Maine and Vermont appears to have been quite equal during the two decades from 1860 to 1880. The increase in average farm values does not appear to have followed the increase

or decrease of acreage, for we find that the greatest increase in the average value of the farms between 1860 and 1880 was in Rhode Island, the increase amounting to about one-eighth of the average values of the farms of the State in 1880. The increase in Massachusetts and Connecticut was also very much larger than in the other three States, as will appear from the following comparison :

States.	1860.	1880.	Increase
Maine	\$1413	\$1591	\$178
New Hampshire.....	2285	2356	71
Vermont	3052	3078	26
Massachusetts	3462	3807	345
Rhode Island	3616	4164	548
Connecticut	3567	3956	389

The most reasonable way of accounting for this large increase in the value of the farms in Massachusetts, Rhode Island and Connecticut, compared with Maine, is by the development of the markets for agricultural products, due in great measure to the development of manufacturing enterprises. Of the total number of people engaged in all occupations in those States about one-half are engaged in manufacturing and mechanical pursuits. The wealth of a State depends upon its general development, and each industry prospers just in proportion to the public demand for its products. In Maine the population of the State is to the number of persons engaged in agricultural pursuits as 8 to 1. In New Hampshire the proportion is nearly the same, but in Vermont it is only about 6 to 1. In Massachusetts it rises to 27, in Rhode Island to 26, and in Connecticut to 14. The increased value of the farms in the three southern New England States can thus be easily understood when one considers the greater opportunities that exist for marketing their products. Any policy that can thus be pursued by the State for its general development cannot but result in a benefit to the agricultural community.

VALUE OF FARMS.

Maine is an agricultural State, though possessing ample opportunities for manufacturing development. The total land surface is 19,132,800 acres, an amount nearly equal that of all the rest of New England. The total acreage in farms is considerably larger than the

total land surface of either of the other States embraced in this group, although the average number of acres per farm is not quite so large as in New Hampshire or Vermont. The average number of acres per farm is 102, valued at \$15.60 per acre. The following table will show the size of the farms, with their values compared by counties.

Counties.	Total Number of Farms.	Average Size in Acres.	Average Value.	Average Value per Acre.	Total Value of Farms and Improvements.
Androscoggin.....	2981	82	\$2053	\$25 06	\$6,119,332
Aroostook.....	5802	125	888	7 10	5,151,151
Cumberland.....	5415	74	2159	29 28	11,691,327
Franklin.....	2529	146	1584	10 85	4,006,791
Hancock.....	4078	85	1141	13 42	4,653,572
Kennebec.....	5431	88	2034	23 11	11,049,219
Knox.....	2457	66	1586	24 03	3,896,276
Lincoln.....	3213	73	1379	18 89	4,430,985
Oxford.....	4689	135	1500	11 11	7,035,327
Penobscot.....	7256	101	1453	14 39	10,543,092
Piscataquis.....	2114	156	1320	8 46	2,789,845
Sagadahoc.....	1336	87	2134	24 53	2,851,180
Somerset.....	4664	128	1578	12 33	7,358,992
Waldo.....	4277	90	1475	16 39	6,308,675
Washington.....	3062	121	1067	8 80	3,267,767
York.....	5005	86	2238	26 02	11,201,084
Totals.....	6439	102	1591	15 60	102,357,615

While the average value of farms in Maine per acre is \$15.60, in New Hampshire it is \$20.31; Vermont, \$22.41; Massachusetts, \$43.72; Rhode Island, \$50.27; Connecticut, \$49.34. The average number of acres embraced in the farms in each of the States is, in Maine, 102; New Hampshire, 116; Vermont, 137; Massachusetts, 87; Rhode Island, 83; Connecticut, 80.

There are two important elements that make a farm valuable: first, its location near a good home market, and second, its adaptability to produce what is most in demand. The average value of the farms in Aroostook County is lower than those of the other counties for two reasons: first, with the exception of lumber and starch manufacturing the county is almost a purely agricultural one; and second, many of the farms are comparatively recently settled, and their owners have not yet covered them with the improvements to be found in the older settled counties. The large crops produced in that county will each year cause an increase in the value of the farms, on account of the improvements that naturally accompany

such prosperity, although their average value will probably remain low for many years on account of the large number of new farms that will be taken up by settlers during each decade. The land is well adapted to general crops, but as yet little has been done with orchard products. The large crops that can be raised there in a great measure offset the distance of the county from any large business center, so that the farmers, although compelled to sell their products at a comparatively low figure, make more money in proportion to the amount of land cultivated than do the farmers of other counties. The amount of lumber manufactured is about an average of that manufactured in the other counties. The value of its orchard and lumber products, with the number of tons of hay produced, as compared with the other counties in the State, may be seen by the following table :

Counties.	Lumber Products.	Orchard Products.	Tons of Hay.	
			Total Product.	Avg'e per Acre.
Androscoggin	\$127,521	\$95,188	50,574	.798
Aroostook	104,275	7,227	80,316	1.051
Cumberland	186,459	115,312	83,430	.787
Franklin	117,468	51,095	67,544	.855
Hancock	146,529	22,863	43,483	.883
Kennebec	177,936	186,827	108,734	.829
Knox	72,063	31,030	35,521	.913
Lincoln	91,985	26,692	44,178	.880
Oxford	236,447	102,370	83,143	.818
Penobscot	185,377	95,108	136,446	.927
Piscataquis	75,592	23,171	43,809	.916
Sagadahoc	46,512	23,938	25,161	.802
Somerset	171,901	75,674	105,381	.844
Waldo	142,154	88,902	86,881	.881
Washington	87,583	7,390	40,473	.992
York	240,980	159,239	72,704	.780

AS COMPARED WITH NEW ENGLAND.

States.	Lumber Products.	Orchard Products.	Total Product.	Avg'e per Acre.
Maine	2,210,842	1,112,026	1,107,788	.865
New Hampshire	2,046,888	972,291	588,170	.724
Vermont	1,947,755	640,942	1,052,183	1.036
Massachusetts	1,918,626	1,005,303	684,679	1.071
Rhode Island	259,263	58,751	82,646	.803
Connecticut	1,497,217	456,246	564,079	1.039

FOREST AND ORCHARD PRODUCTS.

The increase in value of forest products in Maine from 1870 to 1880 was \$679,101 ; of orchard products, \$237,457 ; and of hay, 54,373 tons. The increase occurred in the different counties as follows :

Counties.	Lumber Products.	Orchard Products.	Tons of Hay.
Androscoggin.....	\$44,873	\$45,167	*213
Aroostook.....	78,425	1,135	32,264
Cumberland.....	68,959	24,982	*5,031
Franklin.....	51,888	*25,913	*3,667
Hancock.....	69,545	12,246	10,830
Kennebec.....	36,247	64,311	4,419
Knox.....	26,179	10,429	7,507
Lincoln.....	9,291	9,269	*7
Oxford.....	156,534	1,288	*7,536
Penobscot.....	60,057	4,982	20,123
Piscataquis.....	*48,798	*3,478	2,622
Sagadahoc.....	7,792	5,457	101
Somerset.....	*25,161	*2,469	8,100
Waldo.....	3,249	33,453	5,464
Washington.....	62,323	3,861	10,353
York.....	68,698	44,737	5,928

* Decrease.

The increase of orchard products in Maine was less from 1870 to 1880 than during the preceding decade, when it amounted to \$372,-802, making the total increase from 1860 to 1880 \$610,259. The increase in the amount of hay cut in Maine for the same period was 131,985 tons, nearly two-thirds of which occurred between 1860 and 1870.

CHANGES SINCE 1850.

The grain crops have shown a great fluctuation in each decade, wheat being the only one that shows any increase over the amount returned by the census as raised in 1870. On account of the fluctuations in these several crops it may be of interest to note the changes that have occurred in these and the other products of the State since 1850:

	1850.	1860.	1870.	1880.
Wheat..... (bushels)	296,259	233,876	278,793	665,714
Rye..... "	102,916	123,287	34,115	26,398
Barley..... "	151,731	802,108	658,816	242,185
Buckwheat..... "	104,523	239,519	466,635	382,701
Oats..... "	2,181,037	2,988,939	2,351,354	2,265,575
Indian corn..... "	1,750,056	1,546,071	1,089,888	960,633
Peas and beans.. "	205,541	246,915	264,502	236,726
Potatoes..... "	3,436,040	6,376,052	7,771,463	7,999,625
Flax seed..... "	580	419	227	88
Clover seed..... "	9,097	48,849	5,255	5,950
Grass seed..... "	9,214	6,306	3,859	2,387
Hay..... (Tons)	755,889	975,803	1,053,415	1,107,788
Hops..... (pounds)	40,120	102,987	296,850	48,214
Flax..... "	17,081	2,997	5,435	1,191
Wool..... "	1,364,034	1,495,060	1,774,168	2,776,407
Maple sugar..... "	93,542	306,742	160,805	153,334
Beeswax and honey "	189,618	323,454	160,893	203,269

	1850.	1860.	1870.	1880.
Butter.....(pounds)	9,243,811	11,687,781	11,636,482	14,103,966
Cheese.....“	2,434,454	1,799,862	1,152,590	1,167,730
Orchard products (value)	\$342,865	\$501,767	\$874,560	\$1,112,026
Produce market gardens “	122,387	194,006	266,397	144,892
Live stock.....(value)	9,705,726	15,437,533	23,357,129	16,499,376
Animals slaughtered “	1,646,773	2,780,179	4,939,071	
Milch cows.....(number)	133,556	147,314	139,259	150,945
Working oxen...“	83,893	79,792	60,530	43,049
Other cattle.....“	125,890	149,827	143,272	140,527
Horses.....“	41,721	60,637	71,514	87,848
Sheep.....“	451,577	452,472	434,666	565,918
Swine.....“	54,598	54,783	45,760	74,369

From this comparative table it appears that the sowing of rye has almost ceased, only a small amount being raised in any other county than Aroostook, while in some counties none has been returned. Barley, oats and Indian corn have decreased since 1860, while wheat has shown a steady increase during the past twenty years, the amount returned for the last census year being nearly three times that of 1860. The wheat product is well distributed among the several counties of the State, only the counties of Aroostook and Penobscot showing any great increase of acreage over the others. The largest yields per acre were reported from Hancock, Knox and Washington counties. In this respect of average yield per acre there appears to be a wide variance in the different grain crops in the several counties, a variance that must be due to a number of causes other than locality. The number of bushels of potatoes and tons of hay have each shown a steady increase from 1850. Many other interesting results may also be noticed in the preceding comparative table of the products of the State, and while the attention is directed to the respective increases and decreases of the more common products, food for thought and inquiries for causes may be found in a careful study of the average yield per acre of the grain and potato crops, by counties, as follows

Counties.	Wheat.		Oats.		Buckwheat.		Barley.		Rye.		Corn.		Potatoes.	
	Bushels.	Average per Acre.	Bushels.	Average per Acre.	Bushels.	Average per Acre.	Bushels.	Average per Acre.	Bushels.	Average per Acre.	Bushels.	Average per Acre.	Bushels.	Average per Acre.
Androscoggin	14,795	13.84	99,523	30.51	2,074	13.64	9,057	22.15	1,152	9.76	79,778	33.11	245,696	93.53
Aroostook	13,236	16.68	628,435	31.17	296,793	19.77	15,777	20.46	10,894	15.65	382	12.06	2,248,591	160.51
Cumberland	20,531	14.07	87,940	29.13	809	9.99	17,624	20.55	1,512	8.74	93,619	32.66	381,410	85.65
Franklin	38,704	14.45	133,549	28.72	3,382	18.28	7,33	21.56	556	11.35	51,754	29.26	219,784	113.23
Hancock	32,718	18.40	29,893	26.86	392	17.01	6,737	19.93	.....	.....	5,468	23.07	286,376	108.02
Kennebec	47,006	14.26	186,547	30.29	2,708	14.72	39,389	22.99	1,586	11.33	121,394	33.13	281,161	85.03
Knox	23,396	18.37	14,328	28.40	456	22.80	5,348	22.01	542	12.60	17,457	33.31	126,706	87.99
Lincoln	13,075	15.61	35,126	28.74	157	14.27	22,147	21.58	515	13.92	32,359	37.88	149,541	73.84
Oxford	48,306	13.52	152,924	28.55	14,832	16.41	2,392	21.17	3,935	8.92	149,572	30.53	538,191	114.34
Penobscot	107,351	15.10	320,174	26.44	28,394	17.13	29,367	22.60	2,583	21.22	71,137	28.96	1,104,329	111.69
Piscataquis	29,186	14.10	98,544	24.66	4,821	16.51	9,515	24.71	.....	.....	30,402	26.90	325,599	123.10
Sagadahoc	6,964	14.80	19,936	29.32	81	11.57	9.96	22.48	161	11.50	15,962	32.31	78,330	78.25
Somerset	46,846	13.52	273,438	28.85	13,469	16.92	33.99	23.01	1,226	10.48	92,545	28.01	580,259	101.11
Waldo	51,394	14.73	104,263	26.28	2,623	14.82	9,340	20.57	895	11.33	45,496	28.57	448,550	94.97
Washington	28,736	17.60	46,091	29.48	10,941	18.64	6,827	20.02	.....	.....	675	22.50	506,616	155.49
York	15,470	13.33	24,864	23.99	769	15.69	17,382	19.38	841	10.92	152,633	33.59	378,453	82.13

AS COMPARED WITH NEW ENGLAND.

States.	Bushels.	Average per Acre.	Bushels.	Average per Acre.	Bushels.	Average per Acre.	Bushels.	Average per Acre.	Bushels.	Average per Acre.	Bushels.	Average per Acre.	Bushels.	Average per Acre.
Maine	665,714	15.19	2,265,575	28.76	382,701	14.04	242,185	21.87	26,398	12.26	960,633	30.99	7,999,625	113.99
New Hampshire	169,316	15.05	1,017,620	51.47	94,090	20.75	77,877	22.50	34,638	10.76	1,350,248	36.88	3,358,828	116.71
Vermont	337,257	16.26	3,742,282	37.59	356,618	20.21	267,625	25.36	71,733	11.35	2,014,271	36.28	4,438,172	115.27
Massachusetts	15,768	16.37	645,159	31.23	67,117	11.93	.....	.....	.....	.....	.....	.....	.....	.....
Rhode Island	240	14.12	159,339	28.58	1,254	11.94	17,783	24.87	12,997	10.23	372,967	31.36	606,793	104.69
Connecticut	38,742	13.08	1,009,706	27.52	137,563	12.25	12,286	21.37	370,733	12.44	1,880,421	33.70	2,584,262	92.99

YIELD PER ACRE.

While congratulating the State on the excellent showing made in the preceding table, as compared with the other New England States, it will still be noticed that the average yield per acre is not always as high as in the other States. For this reason it can hardly be said that the greatest economy exists in our agricultural methods. The producing capacity of the grain fields is not maintained by high cultivation that as much as possible may be obtained from a moderate number of acres. The low price for which additional acres may be obtained by almost every farmer is probably the reason for this, and as this is a condition of things that will undoubtedly prevail for many years, until the State becomes much more densely settled than now, we may expect the average yield per acre of the various crops to retain about their present relative position with the other New England States. From year to year there are generally but slight changes in the amount of any one crop, and it is only by a comparison of decades that permanent changes are noted. Since 1880 the only perceptible increase has been in the oat, wheat and potato crops. Rye and buckwheat appear to show a continual decrease, and the hay crop has hardly held its own. These changes must apparently be attributed to some other cause than values per acre, for these do not appear to have maintained a relative position with the amount of the several crops, as will appear below :

Table showing the Amount and Value of Farm Crops for a series of years.

Products.	Bushels.	Acres.	Value.	Average Value per Acre.
Corn.				
1880.....	1,108,020	31,300	\$853,175	\$27 26
1881.....	1,064,000	31,300	968,240	30 94
1882.....	904,400	30,987	832,048	26 86
1883.....	1,062,800	30,367	871,496	28 70
1884.....	1,062,000	30,610	796,500	26 02

Products.	Bushels.	Acres.	Value.	Average Value per Acre.
Wheat.				
1880	531,204	44,267	\$780,870	\$17 64
1881	617,000	43,700	962,520	22 00
1882	512,100	43,700	716,940	16 38
1883	614,300	43,263	860,020	19 88
1884	629,000	41,965	786,250	18 74
Rye.				
1880	39,382	2,574	37,807	14 69
1881	39,000	2,600	41,730	16 05
1882	29,250	2,470	32,175	12 98
1883	30,712	2,458	29,176	11 87
1884	32,000	2,409	28,800	11 96
Oats.				
1880	2,012,825	80,513	966,156	12 00
1881	2,369,000	82,100	1,231,880	15 03
1882	1,776,700	82,921	977,185	11 77
1883	2,665,000	84,579	1,199,250	14 17
1884	2,428,000	83,733	1,044,040	12 47
Barley.				
1880	238,779	11,106	188,635	16 98
1881	244,000	11,100	207,400	18 70
1882	195,200	10,767	165,920	15 38
1883	249,856	10,875	199,885	18 40
1884	265,000	12,180	193,450	15 88
Buckwheat.				
1880	480,000	19,200	240,000	12 50
1881	420,000	20,200	260,400	12 90
1882	432,600	21,412	259,560	12 12
1883	346,080	20,770	190,344	9 18
1884	360,000	21,185	198,000	9 35
Potatoes.				
1880	5,154,190	48,170	2,474,011	51 36
1881	3,342,248	64,274	2,573,531	40 04
1882	6,684,496	66,845	5,013,372	75 00
1883	8,219,296	70,856	3,945,262	55 68
1884	5,842,000	60,228	2,687,320	44 62
Hay.				
1880	*1,297,296	1,284,451	16,436,740	12 80
1881	*941,620	1,094,907	11,393,602	10 41
1882	*1,054,614	1,083,958	13,393,598	12 32
1883	*1,214,033	1,083,958	12,747,347	11 76
1884	*1,029,760	1,083,958	12,614,560	11 64

* Tons.

Tables showing the Average Yield per Acre, and the Price per Bushel, of Farm Products.

Years.	Corn.		Wheat.		Rye.		Oats.	
	Bushels.	Price per Bushel.	Bushels.	Price per Bushel.	Bushels.	Price per Bushel.	Bushels.	Price per Bushel.
1880.....	35.4	\$0 77	12.0	\$1 47	15.3	\$0 96	25.0	\$0 48
1881.....	34.0	0 91	14.1	1 56	15.0	1 07	28.9	0 52
1882.....	29.2	0 92	11.7	1 40	11.8	1 10	21.4	0 55
1883.....	35.0	0 82	14.2	1 40	12.5	0 95	31.5	0 45
1884.....	34.7	0 75	15.0	1 25	13.3	0 90	29.0	0 43

Years.	Barley.		Buckwheat.		Potatoes.		Hay.	
	Bushels.	Price per Bushel.	Bushels.	Price per Bushel.	Bushels.	Price per Bushel.	Tons.	Price per Ton.
1880.....	21.5	\$0 79	25.0	\$0 50	107	\$0 48	1.01	\$12 67
1881.....	22.0	0 85	20.8	0 62	52	0 77	.86	12 10
1882.....	18.1	0 85	20.2	0 60	100	0 75	.97	12 70
1883.....	23.0	0 80	16.7	0 55	116	0 48	1.12	10 50
1884.....	21.8	0 73	17.0	0 55	97	0 46	.95	12 25

According to the tenth census, the average cash value of farm products per acre is higher in Maine than in any other State east of the Pacific slope. For the entire country the average cash values are as follows: Corn, \$9.19; wheat, \$8.38; rye, \$6.34; oats, \$7.58; barley, \$11.41; buckwheat, \$7.45; potatoes, \$34.00; hay, \$10.27. In a number of the Western States which have been extensively advertised as offering the greatest inducements to immigrants, prices are only about one-third as high as in Maine, necessitating the raising of three times as large crops to obtain the same amount of money. With the exception of hay the average per acre is higher in Maine than in the Western States, and in the following table for 1884, as prepared by the United States Department of Agriculture, the same will also be found to be the case in regard to values:

States and Territories.	Corn.		Wheat.		Rye.		Oats.	
	Bushels.	Price per Bushel.	Bushels.	Price per Bushel.	Bushels.	Price per Bushel.	Bushels.	Price per Bushel.
Maine	34.7	\$0 75	15.0	\$1 25	13.3	\$0 90	29.0	\$0 43
New Hampshire ..	33.2	76	14.7	1 20	9.1	88	32.5	45
Vermont	33.2	65	16.8	1 05	13.8	71	35.0	40
Massachusetts ..	34.0	72	17.8	1 12	15.5	81	30.4	45
Rhode Island ..	30.4	78	.....	.....	11.5	75	27.4	47
Connecticut	31.0	65	16.4	1 00	12.0	72	29.6	42
New York	30.1	60	16.5	85	11.1	63	30.0	35
New Jersey	32.0	54	13.0	90	9.9	67	21.1	37
Pennsylvania	31.0	52	13.6	86	10.1	64	27.9	35
Delaware	18.5	43	10.6	85	8.2	65	23.4	35
Maryland	21 8	48	12.8	83	11.0	65	18.0	35
Virginia	15.2	56	8.0	80	6.3	67	10.3	42
North Carolina ..	12.5	60	6.1	89	5.6	80	7.5	46
South Carolina ..	9.2	68	6.1	1 05	3.9	1 00	9.0	50
Georgia	10.8	70	6.4	1 05	5.4	1 20	8.9	57
Florida	9.5	80	.....	.....	.....	.....	9.4	60
Alabama	13.0	61	6.0	1 00	5.4	1 25	12.4	55
Mississippi	13.5	62	5.0	1 00	6.0	1 20	8.8	57
Louisiana	12.7	67	.....	.....	6.3	1 20	11.5	58
Texas	16.1	62	10.0	87	10.6	68	22.0	42
Arkansas	18.5	54	7.6	93	6.7	05	15.5	45
Tennessee	20.3	45	7.0	75	5.8	1 70	13.5	42
West Virginia ..	20.0	56	10.5	80	8.5	75	17.0	39
Kentucky	22.1	43	10.6	74	8.8	60	18.4	35
Ohio	30.0	41	15.3	75	8.9	56	28.0	29
Michigan	28.0	40	16.5	74	10.2	57	33.4	29
Indiana	29 0	34	12.5	67	10.0	54	30.0	27
Illinois	30.0	31	11.6	63	16.2	47	32.8	23
Wisconsin	24.6	34	14.0	60	14.1	45	33.5	24
Minnesota	33.5	33	15.0	50	14.8	39	35.2	20
Iowa	34.5	23	12.0	55	11.6	38	36.7	20
Missouri	33.0	26	11.8	62	11.7	50	26.7	25
Kansas	36.9	22	16.5	45	17.2	35	35.0	22
Nebraska	37.7	18	14.5	42	16.3	32	33.7	19
California	30.0	60	13.2	72	10.3	68	27.0	38
Oregon	27.8	62	18.0	48	16.4	65	28.0	30
Nevada	25.3	68	18.9	1.00	.....	.....	31.9	58
Colorado	28.1	65	20.0	56	17.6	60	35.0	40
Arizona	21.1	67	13.4	75	.....	.....	.....	.....
Dakota	30.0	30	14.5	46	20.3	37	37 5	23
Idaho	19.8	75	18.9	72	13.0	40	30.0	43
Montana	25.3	75	18.0	70	.....	.....	33.5	35
New Mexico	20.1	68	13.6	90	.....	.....	20.0	42
Utah	21.7	70	18.0	82	10.5	60	24.9	35
Washington	32.7	75	12.6	60	16.8	65	34.9	35
Wyoming .....	.....	.....	16.0	73	.....	.....	30.0	40
Average	25.8	35 7	13.0	64.5	12.2	51 9	27.4	28

States and Territories.	Barley.		Buckwheat.		Potatoes.		Hay.	
	Bushels.	Price per Bushel.	Bushels.	Price per Bushel.	Bushels.	Price per Bushel.	Tons.	Price per Ton.
Maine.....	21.8	\$0 73	17.0	\$0 55	97	\$0 46	.95	\$12 25
New Hampshire...	20.3	76	16.4	60	95	46	.95	13 00
Vermont.....	23.1	67	16.9	65	98	38	1.00	12 00
Massachusetts	23.1	85	16.1	80	93	65	.90	17 50
Rhode Island.....	24.3	86	7.9	80	99	70	1.00	17 30
Connecticut.....	22.2	75	12.1	70	81	60	.80	17 00
New York.....	22.5	66	13.8	56	94	39	1.10	12 50
New Jersey.....	15.7	68	12.7	65	86	55	1.20	14 75
Pennsylvania.....	21.4	66	12.4	58	85	39	1.20	12 00
Delaware.....	.....	.....	16.0	55	57	56	1.00	14 00
Maryland.....	27.8	70	12.6	70	70	50	1.10	12 95
Virginia.....	14.6	70	12.4	70	60	55	1.30	12 00
North Carolina.....	11.2	95	8.8	70	63	55	1.30	10 60
South Carolina.....	14.9	1 00	.....	.....	60	80	1.30	12 70
Georgia.....	13.2	1 05	.....	.....	67	1 04	1.30	13 30
Florida.....	.....	.....	.....	.....	90	1.10	1.30	19 00
Alabama.....	10.8	1.10	.....	.....	70	1.00	1.20	13.40
Mississippi.....	.....	.....	.....	.....	72	87	1.30	12 35
Louisiana.....	.....	.....	.....	.....	78	84	1.30	11 00
Texas.....	15.8	70	.....	.....	65	95	1.20	10 25
Arkansas.....	.....	.....	.....	.....	72	65	1.30	12 75
Tennessee.....	14.9	72	6.2	68	62	50	1.20	12 00
West Virginia.....	19.4	75	8.6	72	72	52	1.10	10 00
Kentucky.....	22.3	60	9.8	70	73	40	1.30	9 75
Ohio.....	26.7	61	8.5	70	75	42	1.30	10 00
Michigan.....	21.6	57	13.2	60	90	25	1.40	9 75
Indiana.....	21.6	57	9.3	67	76	35	1.40	7 30
Illinois.....	23.5	51	9.6	67	79	34	1.40	6 24
Wisconsin.....	23.2	47	8.9	51	90	26	1.30	6 20
Minnesota.....	24.2	35	10.7	55	91	27	1.40	4 43
Iowa.....	22.3	35	10.5	57	91	28	1.40	4 20
Missouri.....	21.6	60	11.6	60	85	33	1.30	6 30
Kansas.....	25.7	33	11.7	63	87	45	1.30	4 23
Nebraska.....	21.0	33	11.3	55	91	29	1.30	3 48
California.....	23.6	52	23.0	60	95	60	1.50	10 31
Oregon.....	35.9	47	16.0	60	110	30	1.50	10 00
Nevada.....	28.1	80	.....	.....	80	70	1.30	8 30
Colorado.....	29.5	57	.....	.....	90	60	1.30	12 00
Arizona.....	19.4	55	.....	.....	55	75	1.20	13 50
Dakota.....	26.8	37	10.9	63	95	32	1.40	3 70
Idaho.....	28.9	60	.....	.....	105	55	1.20	13 00
Montana.....	34.6	60	.....	.....	105	56	1.00	13 00
New Mexico.....	19.5	70	.....	.....	69	80	1.30	13 50
Utah.....	23.5	45	.....	.....	100	33	1.40	6 50
Washington.....	26.4	45	.....	.....	120	30	1.50	9 35
Wyoming.....	.....	.....	.....	.....	95	60	1.30	12 50
Average.....	23.5	48 7	12.6	58 9	85.8	39 6	1.26	8 17

DAIRY PRODUCTS.

The dairy products of the State have shown a very large increase since 1860 and the same thing will undoubtedly continue. Only Vermont of the other New England States showed any increase of these products, and the percentage of increase in that State was 2.16 less than for Maine during the same period. In New Hampshire, Massachusetts, Rhode Island and Connecticut these products are decreasing, thereby leaving the market to be supplied by Maine, Vermont and New York, which have thus far derived a good deal of advantage from the situation. The increase spoken of above refers to the amount of dairy products credited to the farmers of the State and has no reference to associated dairying. The position occupied by the factory systems of the several States in 1880 can readily be seen from the following comparison :

	Number of Factories.	Pounds of Milk used during the year.	Pounds of butter made.	Pounds of Cheese made.	Total Value of Materials.	Total Value of Products.
Maine.....	41	7,637,901	6,000	777,365	\$47,692	\$75,592
New Hampshire	2	2,539,868	99,068	.....	20,683	27,887
Vermont.....	85	48,440,401	5,000	4,575,341	283,135	391,056
Massachusetts.....	22	16,671,069	52,150	1,093,943	83,259	128,034
Connecticut.....	16	10,621,660	5,800	201,820	30,441	47,889

The average product of the factories in Maine, according to the above statement, was \$1843.70, which was considerably less than either of the other States, indicating a smaller average capacity for each of the factories.

The first cheese factory in Maine was started in Strong in 1870, the party placed in charge of its operation having previously been sent to factories out of the State to obtain the necessary information and experience to properly manage the business. During the next five years a number of factories were started in different parts of the State, few of which are now operated. One of the principal mistakes that attended the early days of cheese making by the factory system was the erection of a factory larger than the needs of the locality in which it was situated. In many instances it was expected that the new method of disposing of milk would encourage the farmers to increase their number of cows, but as the factories were operated but about a third of the year it was found to be difficult to profitably dispose of the

surplus milk during the other months, and those who were depended on to support the cheese factories soon lost their interest and as a result the factories soon became unprofitable and their operation was discontinued. During the past few years the number of factories in the State has been rapidly decreasing, and it begins to look as if the industry would soon become extinct, and associated butter making possibly be substituted for cheese making, notwithstanding the fact that the products of the cheese factories of this State have generally sold higher the past year than those of factories outside of New England. Nearly all the cheese manufactured in the State the past year has brought at least ten cents a pound, while in New York it has sold for seven cents or less. An average cow will furnish enough milk for the manufacture of 400 pounds of cheese per year, or 150 pounds of butter, but the manufacture of butter by the associated system is believed to be more profitable, all things considered, than the manufacture of cheese. It enables the farmer to have the skimmed milk for feeding purposes, and as the factories are operated throughout the year it also enables him to have a steady market for the product of his cows, thus insuring a steady income from a business that fluctuates but little throughout the year. By the system of having the cream gathered by the factory the farmer has no further care regarding his milk than to see that he has the proper conditions for obtaining all the cream possible, and for preserving the same until called for. Associated butter making will in time greatly change the practice of sending the hay to a market for whatever price can be obtained, a practice that good farmers believe to be injurious to agricultural prosperity. More profit can be obtained from the hay field by feeding the crop at home.

The first butter factory in the State was established by A. P. Bennett of Linneus, in 1878. It was a private factory, but proved to its proprietor that there was money in the business. The first associated butter factory was established in Wales, in June, 1882, and has been run successfully to the present time. The next year factories were established in New Gloucester and Winthrop, and at the present time there are eleven factories in the State, all doing well and proving an encouragement to other localities to establish similar enterprises. At Monroe the old cheese factory has been transformed into a butter factory this season, and a new factory has been established in West Paris. The capital invested in these establishments varies from \$1000 to \$10,000. A good factory with capacity for the cream from 250 to 300 cows can be erected for about \$1500.

The cost of making butter at these factories is from three to four cents a pound. Experiments have shown that an average of 108 cubic inches of cream are required to make a pound of butter, though the amount of cream will vary from 74 to 136 cubic inches, according to its quality. Average milk will yield 23 per cent of cream, and enough cream to produce a pound of butter may be obtained from an average of 17.10 pounds of milk.

Returns from the cheese factories of the State have been hard to obtain, but the following table will show what was done during the year ending July 1, 1886, by a few of the factories. From the best information to be obtained a considerably less number of factories have been operated than last year :

Cheese Factories.	Year Established.	Capital Invested.	Pounds of Milk used during the year.	Pounds Cheese made	Amount Received for Manufactured Product.	Number Hands Employed.	Annual Expenses of Factory.	Months Operated during year.
North Newburgh.....	1875	\$2200	.....	.....	\$2704 00	1	\$675 04	3½
Milo.....	1874	1800	72,837	.....	.....	1	173 00	3
East Sangerville.....	1873	3040	219,659	19,688	1968 80	2	336 90	4
Wayne.....	1882	2000	170,755	19,287	1928 70	1	300 00	3
North Livermore.....	1875	1500	167,369	16,369	1636 90	1	267 00	3½
West Minot.....	1873	1977	.....	.....	.....	1	325 00	3
North Turner.....	1874	2900	.....	70,000	7000 00	2	875 00	5½
Buckfield and Turner.....	1875	1210	60,831	6,859	113 54	1	104 46	2½

The above factories are generally operated on the coöperative plan. There are other factories in the State which are known to have been operated, but their managers have declined to furnish the desired information to enable any report to be made of their operation. The following table will show what the butter factories of the State did during the year ending July 1, 1886 :

Butter Factories.	Year Established.	Capital Invested.	Amount Paid for Cream.	Amount Received for Product.	Number Hands Employed.	Annual Expenses, factory.	Months Operated during year.
Gorham factory.....							
Machias factory.....							
Poland factory.....	1885	\$1000	\$11,953 70	\$15,010 78	3	\$3057 08	12
Sabattus factory.....	1882	2000	4,850 00	6,300 00	2	1500 00	10
Skowhegan factory.....	1884	2800	8,170 82	11,344 82	4	3021 57	12
St. Albans factory.....	1884	10000	24,500 00	30,550 00	8	4400 00	12
Turner factory.....							
New Gloucester factory.....	1883	2500	17,287 50	21,312 14	6	4024 64	12
Winthrop factory.....	1883	3000	13,500 00	.....	4	.....	12
Monroe factory.....	1886	2000	.....	.....	4	.....
West Paris factory.....	1886	1600	.....	.....	

Other factories will probably be started during the coming year in Freeport, Readfield and possibly elsewhere.

WAGES OF FARM LABORERS IN MAINE.

At the close of the civil war, owing to the large number of men who had been drawn from the farms of the State to assist in the nation's defense, wages averaged higher than they have any year since. The return from the war of a large number of these men naturally had the effect to reduce the rate of wages by reason of the increased number of laborers. There was also a material decline in the value of farm products to which labor yielded more slowly. This decline of wages continued till 1879, when the extreme effect of the monetary revulsion which began in 1873 was reached. During these years many laborers who had previously been engaged in other industries turned their attention to agriculture, and thus aided the decline of wages. Wages are usually slow to yield to any business revulsion, and when at a low figure are slow to feel the effect of prosperous times. For this reason it is hardly customary for farm wages to accompany business prosperity or depression; they usually follow the other at a little later period. Neighborhoods nearest great manufacturing centers are the soonest to feel the effects of business changes. From 1879 to 1882 farm wages increased very rapidly, and generally recovered the position held in 1875. The following table will show the fluctuation of wages in Maine since 1866.

Periods.	1885		1882.		1879.		1875.		1869.		1866.	
	Without Board.	With Board.	Without Board.	With Board.	Without Board.	With Board.	Without Board.	With Board.	Without Board.	With Board.	Without Board.	With Board.
Per month, by y'r.	\$ 23 09	\$ 16 00	\$ 24 75	\$ 16 15	\$ 18 25	\$ 11 08	\$ 25 40	\$ 15 94	\$ 26 25	\$ 16 50	\$ 27 00	\$ 17 44
Per day, in harvest	1 58	1 19	1 52	1 22	1 42	1 09	1 99	1 49	2 17	1 65	2 02	1 56
Per d.—transient	1 19	0 88	1 18	0 91	0 97	0 72	1 46	1 05	1 48	1 05	1 49	1 13

By "transient" labor is meant labor employed at other than harvest time, which usually commands lower rates.

FARM ANIMALS.

The number and value of farm animals show a general gain year after year. The changes are the result of the crops and the conditions of the markets. In 1880 the number of sheep, oxen and other cattle was the largest of any subsequent year, and it was also the year of the largest hay crop. The number of milch cows was also larger than for the two subsequent years, during which years the number of oxen and other cattle showed a large decrease. With the exception of 1884 the number of horses has shown a steady increase during the past six years with a general increase in values. The number of sheep appears to have suffered a general decline since 1880, both in numbers and values, owing in a large measure to the low market for wool. A good revival in general business would undoubtedly cause an increase in value of sheep and a renewed interest in the improvement of their breed. The value of all farm animals is above the average in the whole country, the general average being as follows: Horses, \$71.27; mules, \$79.60; milch cows, \$27.40; oxen and other cattle, \$21.17; sheep, \$1.91; hogs, \$4.25. Of the New England States, horses, milch cows and oxen are valued higher in Maine than in New Hampshire and Vermont. In Massachusetts, Rhode Island and Connecticut values rule higher than in Maine. The following comparative table will show the changes that have occurred in the number and value of farm animals in this State for the past six years:

Years.	Number.	Average Price.	Value.
Horses.			
1880—December	81,700	\$65 79	\$5,375,043
1882—January	88,726	63 74	5,655,395
1883 "	89,613	72 26	6,475,435
1884 "	88,509	82 31	7,285,176
1885 "	89,394	89 19	7,973,051
1886 "	90,288	88 30	7,972,453
Mules.			
1880—December			
1882—January	301	90 25	27,165
1883 "	301	85 65	25,781
1884 "	304	81 44	24,758
1885 "	304	86 43	26,275
1886 "			

Years.	Number.	Average Price.	Value.
Milch Cows.			
1880—December	157,388	\$23 21	\$3,652,975
1882—January	151,599	25 75	3,903,674
1883 “	152,054	32 08	4,877,892
1884 “	162,095	34 50	5,592,266
1885 “	163,716	32 00	5,238,912
1886 “	165,353	30 10	4,977,125
Oxen and other Cattle.			
1880—December	199,626	22 86	4,563,450
1882—January	181,740	25 35	4,607,109
1883 “	179,923	31 62	5,689,165
1884 “	188,919	32 03	6,051,076
1885 “	187,030	31 19	5,833,466
1886 “	187,030	29 89	5,590,174
Sheep.			
1880—December	632,078	3 21	2,028,970
1882—January	577,236	3 20	1,847,155
1883 “	577,236	3 19	1,841,383
1884 “	577,236	2 82	1,627,806
1885 “	548,374	2 34	1,283,195
1886 “	537,407	2 15	1,156,771
Hogs.			
1880—December	57,600	8 81	507,456
1882—January	73,625	11 37	837,116
1883 “	71,416	11 87	847,708
1884 “	71,416	9 64	688,450
1885 “	71,416	8 79	627,747
1886 “	70,702	8 78	620,760

AGRICULTURAL STATE AID.

Since 1832 the State has annually granted aid for the promotion of the agricultural interests. In that year an act passed the Legislature granting to each agricultural or horticultural society a sum of money not exceeding one hundred dollars to each, for the encouragement of agriculture, and provided that the Secretary of State should submit to the committee on agriculture of the Legislature, an official statement of the doings of such societies “who may publish extracts therefrom, and such essays relative to the subject as they may think adapted to the advancement of agriculture and horticulture.” In 1845 the Legislature passed an act providing that the funds given to the several societies might be spent for the “employment of a person or persons to make agricultural surveys in their particular section of the State, and to give lectures or addresses to farmers on subjects pertaining to their business, and to disseminate information by publishing books, pamphlets and papers devoted to such information.” Under this provision several of the old societies, notably the

York County Agricultural Society, issued its transactions and essays in a separate volume or pamphlet for several years.

The first act creating a board of agriculture was approved April 23, 1852, which provided for a board made up of one member from each agricultural society. In 1855 the State Agricultural Society was organized and the law required that the returns of the local agricultural societies should be made through the Secretary of the State Agricultural Society. But before these returns had all been sent in another change was made in the law whereby the duty of preparing these returns for the public devolved upon the Secretary of the Board of Agriculture, whose yearly duties commenced with the third Wednesday of January of each year. By the law of 1852, the Board consisted of one member from each agricultural society in the State, and the Governor and Secretary of State were *ex-officio* members of the Board. There were then twenty-three local societies in the State, and it was found that the body was much too large for effective work. Consequently a change in the law was made and but one member to each county was allowed, and where more than one society existed in a county, the societies were to select one member, in convention, who should serve for a term of three years, and then the representation should go to the other societies in the county, in turn, for the same term, and so on in rotation. This is practically the law now in force, and it gives five or six new members to the Board each year. In 1857, the year that this new feature of the law went into force, there were but twelve counties in the State. At the meeting of the Board in that year, in addition to these twelve legal members, there were eight gentlemen present representing other societies, who were called "honorary members"—not being legally entitled to seats, but "invited to assist in the deliberations and labors" of the Board. From that date to the present, there have been minor changes in the law establishing the Board. Formerly the Board held one session annually of two weeks each, at the State House, in Augusta. This plan was continued till the year 1869, when a change was made in the law providing for two sessions annually of three days each, one of which was to be held at Augusta and one at the State College, or such other place in the State as was deemed advisable. By this law, for the purpose, as stated, of introducing the scientific element into the working force of the Board, five "members at large," appointed by the Governor, were provided for. In 1872, branch or county meetings of the Board were held in differ-

ent localities—the first beginnings in Maine of the plan of farmers' institutes, which by a change in the law approved March 18, 1880, became a part of the legal machinery of the Board now in force.

Since 1852 there have been five secretaries of the Board of Agriculture, as follows: Ezekiel Holmes, from 1852 to 1856; S. L. Goodale, from 1857 to 1872; S. L. Boardman, from 1873 to 1877; S. L. Goodale, from 1878 to 1879; and Z. A. Gilbert, the present Secretary. The reports on the agriculture of the State which have been issued by the secretaries of the Board make thirty-four good volumes and constitute a treasury of information on the State's agriculture that can nowhere else be found.

Under the statute providing for State aid for agricultural societies, about five thousand dollars is annually distributed. This year the amount reaches \$5,745. The amount of money received by the several societies varies from year to year, and although the aggregate amount is larger this year than last, several of the societies do not receive so much as in 1885, as will appear from the following tabular statement. This, however, is no fault of the statute:

PAID TO AGRICULTURAL SOCIETIES.

	1885.	1886.
Maine State Pomological Society.....	\$500 00	\$500 00
Androscoggin.....	400 00	400 00
Aroostook.....	94 00	54 00
Aroostook, North.....	151 00	293 00
Aroostook, Madawaska.....	67 00	53 00
Cumberland County.....	.....	400 00
Franklin County.....	114 00	117 00
Franklin, North.....	60 00	51 00
Franklin Central.....	8 00	14 00
Knox County.....	169 00	161 00
Knox, North.....	152 00	168 00
Kennebec County.....	309 00	166 00
Kennebec, North.....	91 00	234 00
Lincoln County.....	248 00	248 00
Oxford County.....	228 00	230 00
Oxford, West.....	55 00	96 00
Penobscot County.....	71 00	27 00
Penobscot and Aroostook.....	100 00	100 00
Penobscot, West.....	189 00	276 00
Penobscot, North.....	62 00	35 00
Penobscot Central.....	50 00	34 00
Piscataquis, East.....	16 00	20 00
Piscataquis Central.....	133 00	113 00
Piscataquis, West.....	.....	16 00
Sagadahoc.....	263 00	263 00
Somerset, East.....	115 00	63 00
Somerset Central.....	208 00	260 00
Somerset, West.....	.....	.....
Waldo County.....	130 00	131 00
Waldo and Penobscot.....	130 00	130 00

	1885.	1886.
Waldo, North.....	\$ 92 00	\$92 00
Washington County	181 00	137 00
Washington Central.....		127 00
Washington, West.....	219 00	136 00
York County.....	147 00	258 00
York, Buxton and Hollis.....	110 00	71 00
York, Acton and Shapleigh.....	40 00	71 00
York, Ossipee Valley Association.....	200 00	200 00
	5,102 00	5,745 00

In addition to the above, the Legislature of 1885 passed a special act granting the annual sum of \$500 each, to the Maine State Agricultural Society and the Eastern Maine State Fair, for the promotion of the dairying interests of the State.

In 1863 the Legislature, in accordance with an act of Congress of the preceding year, established the State College of Agriculture and Mechanic Arts for the instruction of students in the science of agriculture and other industrial pursuits. The first class graduated from the institution in 1872. The Legislature of 1885 established the Maine Fertilizer Control and Agricultural Experiment Station in connection with the Agricultural College, and work in this department of agricultural science was begun as soon thereafter as the proper arrangements could be perfected. The reports of the Station are published with the annual reports of the Secretary of the State Board of Agriculture. As the object of the Station is to solve questions of agricultural economics there can be no doubt of the benefit the farmers of the State will derive from this action of the Legislature.

AROOSTOOK COUNTY.

Several references have already been made to the advantages of Aroostook County as a farming region, but it will not be out of place to speak of the county more in detail. Aroostook County is to the State of Maine what the great unsettled West has been to New England and the Middle States. It is a place where excellent homes can be obtained at a very low price, and where prosperity can be secured by the farmer without enduring so many privations as very many emigrants to the western frontier have suffered. The county extends across the entire northern portion of the State, for 114 miles, and includes 6,800 square miles, of which only a comparatively small proportion has yet been settled. It is watered by the St. John River and its tributaries, the chief of which are the

Aroostook, the Madawaska and the Meduxnekeag. The general direction of all the rivers is eastward toward the St. John, the water-shed extending westward to the height of land between that river and the Penobscot and its tributaries. The surface of the country is more or less undulating, the easterly ranges of townships being less hilly and more free from stone than is usual in the State at large. The absence of boulders is quite noticeable, and in some townships in the eastern ranges it is difficult to find enough stone for cellars and wells. The soil consists mainly of a deep, rich, hazel loam, and is usually underlaid with a substratum of limestone, frequently with slate, at a depth varying from two to six feet. The origin of the soil is from the decomposition of limestone and slate. In many places vegetable mold is found ten feet below the surface. There is more or less of *intervale* bordering the streams, and a still larger extent of such as is doubtless of alluvial origin, but more elevated than that which in older sections of the land is denominated *intervale* land. The predominating soil is what is commonly termed a "strong, hard-wood soil," and is good for all crops. In the valleys between the ridges or swells of land are large extents of lowland, originally covered chiefly with cedar, which make the best grass and grain lands of the county. The soil is deep, consisting of ten or twelve inches of vegetable matter, resting on loam or clay, and beneath this is a porous subsoil.

The expense of clearing land does not average above ten dollars per acre. The climate of the county is very healthy, the region about Fort Kent being probably as healthy as any portion of the country. The growing season is somewhat shorter than in the central and southern portions of the State, but the rapidity with which crops will grow when once begun is unparalleled in New England. The county is exempt from injurious drouths. The amount and value of the crops per acre will be found in preceding tabular statements.

The population of the county has rapidly increased during the past thirty years, when it is considered how little has been done to promote its settlement. The increase of wealth has also been proportionally rapid, as will be seen by the following tabular statement:

	Population.	Value of Estates.
1830	3,399	
1840	9,413	
1850	12,529	

	Population.	Value of Estates.
1860.....	22,479	\$1,105,796
1870.....	29,609	4,995,685
1880.....	41,700	7,564,932

There have been surveyed one hundred and seven townships, each six miles square, but only fifty of these have been settled so as to receive names. Many of the townships are owned by non-residents, some single individuals holding upwards of a hundred thousand acres. The staple products of the county are potatoes and other root crops, grass, the cereal grains, more especially wheat, oats, barley and buckwheat, and hops. It is the best potato county in New England, and more potato starch is manufactured in Aroostook County than in all the rest of New England. The choice English grasses thrive in Aroostook County, and it is therefore one of the best stock-producing sections this side of the far West. The county is already noted for its fine horses, sheep, cattle, and dairy products.

In 1882, seven farmers residing in the adjoining towns of Fort Fairfield, Caribou, Presque Isle and Easton reported the following as their farming operations for that year: in grass, 505 acres; acres in cultivation, 260; products of hay, 550 tons; potatoes, 14,848 bushels; wheat, 652 bushels; oats, 4,656 bushels; buckwheat, 1,275 bushels; rye, 200 bushels. The home value of these crops was \$14,685 and the cost of hired help \$2,390. This left for the farmers \$12,295, or \$1,756.43 to each one.

These products are by no means exceptional cases, and are borne out by the aggregate products of the county from year to year. Thus a comparison of the shipments over the two branches of the New Brunswick Railway, connecting northeastern Aroostook with the rest of New England will show the large crops raised and the large gains that have been made during the three years ending July 31, as follows:

HOULTON BRANCH.

	Bushels Potatoes.	Casks Starch	Tons Hay.	Shingles.
1883.....	138,400	2760	3076	41,490,000
1886.....	179,718	3260	2958	55,949,000

PRESQUE ISLE BRANCH.

1883.....	62,250	5052	329	28,000,000
1886.....	35,080	6494	1487	26,526,000

These figures have been selected not as showing the entire exports, but as indicating the productive character of the county and the amount of manufacturing being done in two distinct directions. The number of bushels of potatoes required for a ton of starch is about 500, and when credit is thus given for the large number consumed in that industry it will be found that the potato product of the county is enormous. The average production of hay per acre throughout the county is about one and a half tons; wheat, $16\frac{1}{2}$ bushels; oats, 31 1-5 bushels; buckwheat, $19\frac{3}{4}$ bushels; barley, $20\frac{1}{2}$ bushels; rye, 15 2-3 bushels; corn, 12 bushels, and potatoes, 161 bushels. It is not an uncommon thing, however, to obtain 300 bushels of potatoes per acre. These figures of average production are larger than those reported from several of the Western States to which immigration is invited because of the fertility of the soil and the ease with which crops can be raised. The yield of wheat per acre in Aroostook County is only equalled in the States of New York, Michigan, Kansas, Nevada, Colorado, Oregon, Idaho, Montana and Utah. In the last four States the average is a couple bushels per acre greater than in Aroostook County. The yield of the other crops bears about the same relation to the Western States as wheat, so that it will be seen that the farmers of Aroostook can produce as much per acre as the farmers in any of the Western States. In other respects the farmers of Aroostook County have a great advantage over their western brethren. They are nearer a market and can, therefore, obtain better prices for their products. Thus, while the average price of wheat in this State last year was \$1.25 per bushel, it was only 85 cents in New York, 74 cents in Michigan, 45 cents in Kansas, \$1 in Nevada, 56 cents in Colorado, 48 cents in Oregon, 72 cents in Idaho, 70 cents in Montana and 82 cents in Utah. At these prices it appears that the cultivation of a less number of acres in Aroostook County will produce the same results as a greater number will in the average western State.

EDUCATIONAL MATTERS.

The common schools and higher institutions of learning were fostered by the State of Massachusetts before Maine became a separate State, and, in granting eastern lands to settlers, reservations were made for the support of schools. A sixty-fourth part was set apart for Harvard College and a like amount for the common schools. Two of our colleges and a large number of our academies were chartered by the Commonwealth of Massachusetts and were endowed either with money or lands to enable them to go into operation. After the separation from Massachusetts, the liberal policy with reference to schools, academies and colleges adopted by the parent State was continued by Maine, and a large per cent of the public lands have been devoted to the cause of popular education.

A school code was adopted by the Legislature sitting in Portland in January, 1821, which embraced the following provisions:

The first provided for the minimum sum which a town must raise for the support of schools.

The second for the manner of apportioning the school money among the several school districts in town.

The third provided for a more complete organization of the several school districts in the town; defined the mode of formation, the method of choosing district agents; defined the powers of the district in raising money, building and locating school-houses, and the methods of procedure in assessing, collecting and disbursing moneys.

The fourth provided for the election of school committees by towns, an important change from the Massachusetts code.

The fifth defined the qualification of teachers and determined their fitness.

The sixth provided penalties for neglect of its provisions, and defined the manner of appeal from the action of the district to the town, by parties aggrieved.

This code has been revised and amended many times, as defects were pointed out in its practical operation. In 1846 a State board of education was established, which marked a new and important era in the progress of school work in Maine. Another important step was taken in 1854, when an act was passed creating the office of Superintendent of Schools. The present school code, though it is not claimed that perfection has yet been reached, is the result of nearly seventy years of experience, held in check by the conservatism of our ever cautious legislators. Our school laws are probably better than those of any other State, and not only are ample means provided for the education of children and youth, but careful provision is made for their expenditure in a manner best calculated to accomplish that end. A good, practical education is placed within the reach of all, and those who wish for higher attainments easily find the means of gratifying their desires.

In the year 1828 the Legislature set apart twenty-eight townships as the basis of a school fund. Six years later the Land Agent was authorized to sell a number of these townships and pay over the proceeds into the State treasury for the benefit of schools. Prior to 1849 the amount realized from these sales was \$110,000. Six per cent interest on this sum was annually distributed among the cities and towns in the State. A bank tax was subsequently added to the fund, and a tax of forty cents on each inhabitant, so that the whole amount available for school purposes in 1849 was \$289,961.51. In 1864 the Land Agent was authorized to sell the timber on ten townships of land and place the proceeds to the credit of the school fund. In 1866 the Legislature enacted that the residuary interest of the State in all public lands remaining unsold and not devoted to other purposes should be applied to the school fund. In 1867 the amount expended for schools in the State was \$936,131. In 1872 a school mill tax was provided for, and the same year a law was passed imposing a tax of one-half per cent on deposits in savings banks, to be paid into the State treasury and distributed among the cities, towns and plantations, for school purposes. Under these various provisions the amount of State school funds has steadily increased. In 1873 it amounted to \$229,272 and in 1883 to \$338,618. In 1886 it amounted to \$342,491.

The town system of schools, where districts have been abolished and the schools are managed either by a school committee or supervisor, prevails in about one-sixth of the schools in the State, and

this system is steadily growing in popular favor. Where this system has been once tried few towns show a desire to go back to the old method.

Besides the common school system which now embraces both graded and high schools, we have three schools, located in different parts of the State, for training teachers. These normal schools are conducted at the expense of the State, and have had a marked effect upon our common schools in elevating their character and promoting their usefulness. These schools are located at Castine, Farmington and Gorham. There is also a training school among the French settlers in northern Aroostook and located in Madawaska. There are located in various parts of the State, academies, seminaries and colleges, all of which have received more or less aid from the State. Many of the academies make a specialty of fitting students for college, and some of them are under the management of college faculties and are intended as feeders for such colleges.

Bowdoin College, located in Brunswick, was chartered in 1794 and is therefore our oldest college institution. It was endowed by Massachusetts, subsequently by Maine, and has received liberal bequests and donations from private individuals. It has always taken high rank, and among its graduates have been many who have distinguished themselves in law, theology, science and literature. This institution is non-sectarian, though managed largely by the Congregationalists.

Waterville Seminary was established in 1813, under the auspices of the Baptist denomination, and was chartered as a college in 1821. In 1867 it was liberally endowed by Gardner Colby of Boston, and the Legislature changed its corporate name from Waterville College to Colby University. It is situated in Waterville, one of the most attractive places in the State. Its finances have been further increased by the more recent liberal endowments of the late Hon. Abner Coburn.

The Maine Wesleyan Seminary was founded in 1824, and has since been chartered as a college. It is located at Kent's Hill, in the town of Readfield, and is under the management of the Methodists, though in its course of instruction it is non-sectarian. Its success has been marked from the first, and it now takes rank among our best literary institutions.

Westbrook Seminary and Female College is located in the town of Deering, a short distance from Portland. It is under the

auspices of the Universalist denomination of the State and was endowed by the State, and also by the late Samuel F. Hersey of Bangor, and others. In its management it is non-sectarian. Several courses of study can be pursued here at the option of the student.

Bates College is located in the city of Lewiston and is among the more recent of our chartered literary institutions. It took its name from a Boston gentleman by whom it was endowed and who was prominently connected with the manufacturing interests of Lewiston, but who has since deceased. This college is well equipped and is taking a good stand among the colleges of the State. It is conducted more especially under the auspices of the Free Baptist denomination, which has another school in Pittsfield known as the **Maine Central Institute**.

Bucksport Seminary, under the auspices of the East Maine Conference of the Methodist Episcopal Church, is the seminary at Bucksport. It is now under excellent management and has a steadily increasing popularity.

The State College of Agriculture and the Mechanic Arts is located at Orono. It was established by act of Congress July 2, 1862, and accepted by the Maine Legislature March 25, 1863. The funds for its establishment were realized from the sale of land scrip donated by the General Government. The sum so realized was found inadequate, and the State has made liberal donations to aid in the erection of buildings. It was started as a free school, but, on account of limited means, a small tuition fee is now charged. It is growing in interest and importance and is faithfully carrying out the design of Congress in establishing it.

There are business colleges in the chief cities of the State, conducted by competent persons, where a good business education can be obtained.

A school for medical instruction, under the management of the leading physicians of Portland, is located in Portland, and the **Maine Medical School** is connected with Bowdoin College at Brunswick.

There is a theological seminary at Bangor under the direction of the Congregationalists.

The academies chartered by the General Court of Massachusetts before Maine became a separate State, each of which was endowed with money or land, are as follows: Bath, 1805; Bath Female Academy, 1808; Berwick, 1791; Belfast, 1808; Bridgton, 1808; Bloomfield, 1807; Bluehill, 1803; Cony Female (Augusta), 1818;

China, 1818; Farmington, 1807; Fryeburg, 1792; Gorham, 1803; Hallowell, 1791; Hampden, 1803; Hebron, 1804; Limerick, 1808; Lincoln (Newcastle), 1801; Monmouth, 1803; North Yarmouth, 1811; Portland, 1794; Thornton (Saco), 1811; Warren, 1808; Washington (Machias), 1792; Wiscasset, 1808; Young Ladies' (Bangor), 1818.

The Maine Legislature had chartered the following academies prior to 1850: Alfred, 1829; Anson, 1823; Augusta (High School), 1835; Gould's (Bethel), 1836; Brunswick, 1823; Brunswick High School, 1835; Calais, 1836; Charleston, 1837; Cherryfield, 1829; Clinton, 1839; Dearborn (Buxton), 1828; Eastport, 1832; Exeter (High School), 1838; Falmouth, 1834; Foxcroft, 1823; Freedom, 1836; Howland, 1835; Houlton, 1837; Lewiston Falls, 1834; Litchfield, 1844; Livingston (Richmond), 1836; Norridgewock, 1836; Norway Liberal Institute, 1847; Oxford Female (Paris), 1827; Oxford Normal Institute, 1847; Pittston (High School), 1838; Sanford, 1834; St. Albans, 1832; Titcomb (Belgrade), 1834; Union (Kennebunk), 1834; Vassalboro', 1835; Waldoboro', 1836.

Quite a number of the above academies did not organize under their charters, and a still larger number have since been discontinued. Several have changed to high schools under the general school laws. Houlton and Hebron academies are conducted under the direction of the Baptist denomination and are feeders to Colby University. The Coburn, formerly the Waterville Classical Institute, is also a preparatory school for the same institution, and is one of the best academies in the State. The Hallowell Classical Institute, formerly Hallowell Academy, is a feeder to Bowdoin College and is under the direction of the Congregationalists. The following list embraces the institutions of learning now in the State, above the grade of high school: Bridgton, *North Bridgton*; Houlton, *Houlton*; Presque Isle, *Presque Isle*; Wilton, *Wilton*; Greeley Institute, *Cumberland Center*; Little Blue School, *Farmington*; Hallowell Classical, *Hallowell*; China, *China*; Litchfield, *Litchfield Corner*; Monmouth, *Monmouth*; St. Joseph's, *Whitefield*; Gould's, *Bethel*; Fryeburg, *Fryeburg*; Hebron, *Hebron*; Hampden, *Hampden*; Lee Normal, *Lee*; Mattanawcook, *Lincoln*; Foxcroft, *Foxcroft*; Monson, *Monson*; Anson, *North Anson*; Washington, *East Machias*; Limington, *Limington*; Parsonsfield, *North Parsonsfield*; Berwick, *South Berwick*; Maine Central Institute, *Pittsfield*; Norridgewock English and Classical Institute, *Norridgewock*; Coburn, *Waterville*; Oak

Grove Seminary, *Vassalboro'*; St. Catharine's Hall (Episcopal), *Augusta*.

Besides the above, there are numerous high schools located in different parts of the State where two terms a year (spring and fall) are taught. Our educational interests are now under excellent management, and in a highly prosperous condition. There is now no necessity for any one to go out of the State in order to obtain a first-class education. Colby University, Bates College, the State College and the Maine Wesleyan Seminary now admit females on an equality with males, and all the honors of these colleges are open to competition by both sexes.

RAILROADS.

In railroad building, Maine was a pioneer and has the credit of having put in operation the second steam railroad in New England. The first railroad in the United States was built at Quincy, Massachusetts, from the granite quarries to the Neponset River, and it was run by horse power. Probably the first charter granted to any railroad in the country was in 1826, to the Mohawk and Hudson Railroad from Albany to Schenectady, although the construction of the road was not begun until 1830. In 1827 a charter was granted to the Baltimore and Ohio Railroad and work was begun upon the road the following year. In 1832 most of the important railroad lines in Massachusetts and New Jersey were begun, and in 1835 the Boston and Lowell road was completed and its operation begun between Boston and Lowell. This was the first road operated in New England. The second railroad put in operation was in Maine, between Bangor and Oldtown. In 1832 two charters for railroads were granted in this State, one the Calais Railway Company under which a railroad to be operated by horses was built from Calais to Milltown, a distance of two miles; the other to the Old Town Railway Company, consisting of Ira Wadleigh, Charles Ramsdell, Isaac Damons, Ford Whitman, Amos M. Roberts, Ebenezer French and others, for the construction of a railroad from Bangor to Oldtown. This company graded a portion of the road-bed and built piers for bridges, but in 1835 sold out its franchise to the Bangor and Piscataquis Canal and Railroad Company, which had procured a charter in 1833 for a canal and railroad from Bangor to the slate quarries in Piscataquis County, and which was a rival of the other road between Bangor and Oldtown. In 1836 the Bangor and Piscataquis Canal and Railroad Company completed its road from Bangor to Oldtown and the first train was run between those places on Thanksgiving Day. The track was laid with wooden rails, with an iron strap rail three-fourths

of an inch thick on top. In time heavier iron rails were used. The first two engines were of English manufacture. In 1849 the name of the road was changed to the Bangor, Old Town and Milford Railroad, under which title it was operated till 1870, when the road was discontinued, a route along the lower lands bordering the Penobscot River having been found more advantageous as a link in the European and North American Railway system. In 1837 the Portland, Saco and Portsmouth Railroad was chartered and in 1842 the road was completed from Portland to Portsmouth and became a part of a through railroad line from Portland to Boston. In 1853 railroad connection was obtained between Portland and Montreal via the Atlantic and St. Lawrence Railroad. In 1852 Portland was connected with Augusta and three years later the railroad system was extended eastward as far as Bangor. From that point the railroad system was extended slowly, and it was not till 1871 that the eastern boundary of the State was reached and connection obtained with St. John, N. B. The years in which the railroad system of the State has been constructed will be found in the following table :

Years.	Miles.	Years.	Miles.	Years.	Miles.
1835	2.00	1856	17.15	1874	37.16
1836	13.00	1857	21.60	1875	15.05
1842	57.63	1859	4.20	1876	12.00
1848	21.65	1861	31.00	1877	8.00
1849	92.00	1865	17.00	1879	20.86
1850	11.00	1867	27.50	1882	7.13
1851	12.00	1868	40.71	1883	20.00
1852	100.35	1869	74.29	1884	40.00
1853	66.08	1870	67.32	1885	15.00
1854	1.25	1871	178.15		
1855	76.60	1873	43.00		

THE RAILROAD DEVELOPMENT.

The following are brief sketches of the construction of the several roads now forming the railroad system of Maine :

The Androscoggin Railroad was incorporated in 1848 to run from some point on the Androscoggin and Kennebec Railroad to North Jay. The following year the charter was amended, making Farmington the northern terminus. The construction of the road was first begun at Leeds Junction, and passenger trains began running to Farmington in July, 1859. In 1860 the Legislature authorized the extension of the road from Leeds to some point on the Kennebec River, or to a connection with the Kennebec and Portland Railroad, under which act the road was extended to Brunswick, with a branch

to Lewiston. Under the general law of 1852 the Androscoggin Railroad was authorized to issue its bonds and secure them by a mortgage of its road from Farmington to Leeds Junction. In consequence of a breach of the mortgage which provided that the new portion of the road should not be subject to the mortgage of the old portion, the mortgage was foreclosed and the old portion became the absolute property of the mortgagees May 11, 1865. They formed a new corporation entitled "The Leeds and Farmington Railroad Company," which at once took possession of the road from Farmington to Leeds Junction. June 1, 1867, the Leeds and Farmington Railroad Company leased its road to the Androscoggin Railroad Company for fifty years, and June 29, 1871, the Androscoggin Railroad Company leased its road to the Maine Central Railroad Company for nine hundred and ninety-nine years, the Leeds and Farmington Railroad Company, the same day, confirming the assignment of its lease and extending it to include the same period for which the Androscoggin Railroad had been leased.

The Androscoggin and Kennebec Railroad was incorporated March 28, 1845, to construct a road from Waterville to Danville to connect with the Atlantic and St. Lawrence Railroad. The road was opened from Danville to Auburn in 1848 and to Waterville in December of the following year. In 1856 an act was passed by the Legislature authorizing the consolidation of the Androscoggin and Kennebec and Penobscot and Kennebec, but from a desire to have the consolidating act amended no union was effected between the two roads till September 9, 1862. October 28, 1862, the new corporation organized under the name of the Maine Central Railroad Company.

The Atlantic and St. Lawrence Railroad was incorporated June 30, 1847, to construct a railroad from Portland to the boundary of the State, at such place as would best connect with a railroad to be constructed from that boundary to Montreal. The entire length of road constructed by this company under its charters from the Legislatures of Maine, New Hampshire and Vermont, is from Portland to Island Pond, Vermont. The road was opened from Portland to Yarmouth in 1848; to Paris in 1850, and to Island Pond in 1853. The same year connection was established with Montreal. In 1846 the Legislature granted to the Atlantic and St. Lawrence Railroad Company the right to take and hold such lands lying along the water front at Portland as should be necessary for the purposes of landings, wharves and other objects connected with the uses and business of the road at

its Atlantic termination. Under this act the company has purchased and fitted up as good terminal facilities for a line of trans-Atlantic steamers as can be found on the Atlantic coast. By an act passed by the Legislature in March, 1853, the Atlantic and St. Lawrence Railroad Company was authorized to lease its road for a term of years, and August 5, 1853, the road was leased to the Grand Trunk Railway of Canada for nine hundred and ninety-nine years.

The Aroostook River Railroad, an extension of the New Brunswick Railway from the eastern boundary of the State to the village of Caribou, in Aroostook County, was incorporated by the Legislature in 1873. Work upon the road was begun in 1875 and the following year it was completed from the State boundary to Caribou. In 1876 the Legislature authorized the extension of the road from Caribou to Fort Kent, but no advantage has ever been taken of the act. In 1879 the Legislature passed an act incorporating the Presque Isle and Maysville Railroad Company with the right to construct a railroad from Caribou to Presque Isle, and under this charter the Aroostook River road was extended to Presque Isle in 1882. The railroad from the State boundary to Presque Isle is operated by the New Brunswick Railway Company, to which company it was leased in 1882.

The Bangor, Oldtown and Milford Railroad was the first railroad constructed in the State. The road was first chartered in 1832 as the Oldtown Railway, but, owing to some difficulties under the charter, but little work was done and the franchise was transferred to the Bangor and Piscataquis Canal and Railroad Company, which received an act of incorporation from the Legislature in 1833, and was authorized to construct a railroad from Bangor to Williamsburg. The road was built from Bangor to Oldtown via Upper Stillwater, and was opened to business in 1836. In 1849 the name of the road was changed to Bangor, Oldtown and Milford Railroad, and the right was given it to extend its road across the river at Oldtown to Milford. Before the extension was completed, in 1854, the franchise passed into the hands of Gen. Samuel Veazie, who completed the bridge to Milford and looked forward to an extension of the road up the Penobscot River. The road continued to be operated by Mr. Veazie till 1869, when it was purchased by the European and North American Railway to escape

competition, and its operation discontinued, thus ending an enterprise which cost in its construction more than \$500,000.

The Bridgton and Saco River Railroad (narrow gauge) was incorporated in 1881, for the construction of a railroad from Hiram, on the Portland and Ogdensburg Railroad, to Bridgton. Work upon the road was begun in 1882, and the road was opened the following year.

The Boston and Maine Railroad was built from Salmon Falls, N. H., to South Berwick, a distance of two and one-half miles, under a charter granted to the Maine, New Hampshire and Massachusetts Railroad Corporation in 1836, but which was amended in 1841, and finally by an act of the Legislature of 1843 became a part of the Boston and Maine Railroad. In 1871 a new charter was granted to the Boston and Maine Railroad by the Legislature, under which the road was authorized to be extended from Berwick to Portland by a different route than was contemplated in the charter first granted to the Maine, New Hampshire and Massachusetts Company. The extension of the Boston and Maine Railroad was completed to Portland in 1873, and formed a second through line of railroad between Portland and Boston.

The Bangor and Piscataquis Railroad Company was incorporated by the Legislature of 1861, to construct a railroad from a point between Bangor and Oldtown to Moosehead Lake. The charter was subsequently amended by the Legislature, and the road completed to Dover in 1869. April 1, 1873, the road was leased to the European and North American Railway Company for the period of nine hundred and ninety-nine years, but the lease was terminated December 1, 1876, and since that time the road has been operated by the original company. In 1877 the road was extended from Dover to Blanchard, and in 1884 the foot of Moosehead Lake was reached, and the original scheme under which the first charter was granted was completed. When the International (Lake Megantic) Railroad is completed from Lake Megantic across the northern portion of the State the Bangor and Piscataquis will form a link in a through route from Bangor to the Western States.

The Bangor and Katahdin Iron Works Railroad was first authorized to be constructed from Milo to the Katahdin Iron Works under the charter of the Bangor and Piscataquis Railroad Company, but the charter was not used, and in August, 1881, the present company was incorporated and the construction of the road begun. The road was opened its entire length in 1882.

The Bucksport and Bangor Railroad Company was chartered in 1870 under the name of the Penobscot and Union River Railroad Company, for the construction of a railroad from Bangor, through Bucksport, to Ellsworth. In 1873 the Legislature authorized the name of the company to be changed to the Bucksport and Bangor Railroad Company. The road was opened from Bangor to Bucksport in 1874, and September 10th of that year it was leased to the European and North American Railway Company for a term of five years, under a business contract. At the expiration of the lease the road passed into the hands of the original company, and was leased in 1879 to Mr. L. L. Lincoln, a former superintendent of the Maine Central Railroad. February 22, 1882, the bond-holders of the Bucksport and Bangor Railroad Company reorganized under the title of the Eastern Maine Railroad Company, and during the following year the road was leased to the Maine Central Railroad Company for a term of years.

The Rumford Falls and Buckfield Railroad Company was first chartered under the name of the Buckfield Branch Railroad Company, in 1847, for the construction of a connecting railroad with the Grand Trunk (Atlantic and St. Lawrence) from Mechanic Falls to Buckfield. The road was opened in 1850, but, having been mortgaged to F. O. J. Smith of Portland, it was afterwards sold to him absolutely. In 1855 the road was extended to Canton Point. In 1857 legislative authority was given to change the name of the road from Buckfield Branch to the Portland and Oxford Central Railroad Company. Under the management of Mr. Smith the road-bed and rolling stock fell into such neglect that the Legislature of 1873 passed an act declaring the charter of the road forfeited by reason of alleged abuses of the rights and privileges and duties thereby conferred and enjoined, and on account of public necessity and convenience, but the act was suspended till the following January to give the management an opportunity to make the necessary repairs to the road-bed and rolling stock. In November, 1873, an injunction was issued by the court enjoining from running any trains over the road, and during the following year the road was apparently abandoned. In 1878 the road passed into the hands of a new company, its name changed to the Rumford Falls and Buckfield Railroad, and after thorough repairs the running of trains was resumed and the road has since been very satisfactorily operated by the new management.

The Belfast and Moosehead Lake Railroad was incorporated in 1867 for the construction of a railroad from Belfast to Moosehead Lake via Newport, but a contract for lease when done was entered into with the Maine Central Railroad Company, and its route was deflected westward to connect with the Maine Central at Burnham instead of Newport. The road was opened from Belfast to Burnham in 1870, but on account of a difference that arose as to the manner of its construction, between the two companies, it did not fully pass under the control of the Maine Central till May 10, 1871, when a lease was executed for a period of fifty years.

The Dexter and Newport Railroad was chartered in 1865, for the construction of a railroad from Dexter to Newport, to connect with the Penobscot and Kennebec (Maine Central) Railroad. The road was opened in 1868, and since the 24th of February, 1869, it has been operated by the Maine Central Railroad Company, under a lease for thirty years.

The European and North American Railway was incorporated in 1850, for the construction of a railroad from Bangor to the eastern boundary of the State, so as best to connect with a railroad to be constructed from St. John, N. B., to the eastern boundary. The company, in 1863, acquired the title to the road-bed, rights of way and other property of the Penobscot Railroad Company between Bangor and Milford and went on to complete the line on the route already selected by the Penobscot Company. and in 1868 trains were running from Bangor to Oldtown on substantially the present line of the road. The same year the charter was granted, Messrs. John A. Poor, Josiah S. Little, James B. Cahoon, John M. Woods, Charles Q. Clapp, F. O. J. Smith and Luther Jewett petitioned the Legislature to cause to be surveyed the most practicable route from Bangor to the eastern boundary of the State, and to take such action as would tend to favor the construction of a railroad from Bangor to some good harbor on the east shore of Nova Scotia or Cape Breton. In accordance with this petition a resolve was passed by the Legislature authorizing the Governor to cause such a preliminary survey to be made and appropriating five thousand dollars to defray the expenses of the same. The survey was made from the Penobscot to the St. Croix River, by A. C. Morton, Esq., and assurances were received that a trunk line railroad from Halifax would meet the European and North American road when completed to the St. Croix River. As the building of this road partook of an almost international character, Congress

was asked to extend its aid through a land grant, and by awarding to it the carriage of the European mails, but all efforts to secure such aid proved unavailing. In 1853 the Legislature granted the European and North American Railway the right to purchase or lease any portion of any other railroad between Bangor and the eastern boundary of the State, and in accordance with this act the Oldtown and Lincoln Railroad, from Oldtown to Lincoln, which had previously been absorbed by the Bangor, Oldtown and Milford Railroad Company, was taken by the European and North American, and in 1871 a special act of the Legislature was passed making valid the transfer of the Bangor, Oldtown and Milford Railroad to this company. In 1864 the Legislature passed an act providing that, to aid in the construction of a railroad from Bangor to the St. John River, the proceeds of the sale of timber on ten townships of the public lands of the State, the townships to be designated by the Governor, State Treasurer and Land Agent, should be paid into the State treasury for the use of the European and North American Railway Company, and all moneys, securities or lands received on account of the claims of Maine upon the United States Government which accrued prior to 1860 were also to be paid into the State treasury for the benefit of the railroad company. The result of this legislation was the payment by the State to the railway company of \$824,956.16, which accrued in the following manner: Received of Massachusetts in 1868, on old claims, \$32,687.50; received of the United States in 1868, 1870 and 1871, \$792,268.66.

In 1861 the Legislature granted about 1,000,000 acres of the public lands in Penobscot and Aroostook counties for the construction of a railroad from Mattawamkeag to Houlton, and thence on to the eastern boundary of the State, which grant was afterwards changed to the European and North American Railway Company. By such aid the through line to Vanceboro was completed and opened October 17, 1871, at which time there were present, among other prominent persons, President Grant, Lord Lingard, the Governor General of Canada, the Governor of Maine and many other distinguished personages. During the same year the European and North American Railway of New Brunswick was completed to the same point and the road was made continuous from Bangor to St. John. October 19, 1872, the two companies were consolidated, but financial difficulties forcing the New Brunswick division into the hands of a trustee, it was sold under foreclosure and subsequently reorganized

as the St. John and Maine Railway. The Maine division was also surrendered to the trustees of the land grant mortgage, by whom it was operated till it was perpetually leased to the Maine Central Railroad Company in 1882.

The European and North American Railway Company at one time contemplated the construction of a short line to Upper Canada, and it was in furtherance of this scheme that the Bangor and Piscataquis Railroad was leased in 1873. The construction of the International Railroad across the northern part of the State from Lake Megantic, at the present time, is really the completion of the scheme of the European and North American Railway Company.

The Franklin and Megantic Railroad was incorporated in 1884, for the construction of a railroad from Strong to Kingfield. The construction of the road was begun in 1884, and trains began running over it the following winter. Its gauge is two feet.

The Great Falls and Conway Railroad was first chartered in 1841 as the Great Falls and South Berwick Branch Railroad Company, for the construction of a railroad from an intersection with the Portland, Saco and Portsmouth Railroad, in South Berwick, to Berwick, near the line of the State of New Hampshire. The road was subsequently purchased by the Portsmouth, Great Falls and Conway Railroad Company, organized under the laws of New Hampshire, and an act was passed by the Legislature of this State in 1866 to enable that corporation to operate the road subject to the railroad laws of this State. Subsequently the Eastern Railroad, having leased the Portland, Saco and Portsmouth Railroad, also assumed control of this road, and when the Eastern Railroad was leased to the Boston and Maine Railroad Company, in 1884, its operation was also assumed by that company.

The Green Mountain Railway was incorporated in 1883, for the construction of a railroad from the shore of Eagle Lake to the summit of Green Mountain, on Mt. Desert Island. The road was opened the same year. Its method of construction is the same as the railroad up Mt. Washington, and it is operated only during the period of summer travel. It is one of the attractions of Bar Harbor.

The Houlton Branch Railroad was chartered by the Legislature in 1867, for the construction of a railroad from Houlton to some point on the east line of the State. The road was opened in 1870, and as it

was really built by the New Brunswick Railway Company, with whose road it forms a branch, it is operated by that company.

The Knox and Lincoln Railroad was first chartered as the Penobscot and Kennebec Railroad Company, for the construction of a railroad from a point opposite the city of Bath, on the Kennebec River, to some point at or near tide water in the town of East Thomaston. In 1849 the name of the company was changed to the Penobscot, Lincoln and Kennebec Railroad Company, and in 1864 it was again changed to the Knox and Lincoln Railroad Company. The construction of the road was begun in 1869, and November 6, 1871, it was opened for the running of trains. Connection with the Maine Central Railroad is obtained by a ferry across the Kennebec River at Bath, which is operated as a part of the Knox and Lincoln Railroad under an act passed by the Legislature in 1870.

The Lewiston and Auburn Railroad was incorporated in 1872, for the construction of a railroad from Lewiston to a connecting point with the Atlantic and St. Lawrence (Grand Trunk) Railroad in Auburn. The road was opened from Lewiston to Lewiston Junction in 1874, and on March 10th of that year it was leased to the Grand Trunk Railway for ninety-nine years.

The Monson Railroad from Abbot, on the Bangor and Piscataquis Railroad, to Monson Village, was incorporated in 1882. Work was begun the following year and the road was opened during 1883. The road was built by the parties interested in the Monson slate quarries. Its gauge is two feet.

The Norway Branch of the Atlantic and St. Lawrence (Grand Trunk) Railway was incorporated in 1879. Work upon its construction was at once begun and the road was completed the same year. The road was at once leased to the Grand Trunk Railway Company, by which it is now operated.

The Old Orchard Beach Railroad was incorporated in 1876, for the construction of a railroad from Old Orchard, on the Boston and Maine Railroad, to the mouth of the Saco River. Work upon the road was begun in 1880 and the road was completed the same year. The road is built along the Old Orchard beach and affords a fine view of ocean scenery, projecting headlands and islands. It is operated only during the summer season of pleasure travel.

The Penobscot and Kennebec Railroad was chartered in 1845, for the construction of a railroad from Waterville to Bangor. The construction of the road was begun in 1853, and it was completed, its

entire length, in 1855. September 9, 1862, the road was consolidated with the Androscoggin and Kennebec Railroad, and the new corporation was organized October 28, 1862, as the Maine Central Railroad Company. November 13, 1871, the consolidated road was extended from Danville Junction to Cumberland Junction.

The Portland and Kennebec Railroad was first chartered in 1836, as the Kennebec and Portland Railroad Company, for the construction of a railroad from Portland to Augusta. The road was opened from Yarmouth, where connection was had with the Atlantic and St. Lawrence (Grand Trunk) to Bath, in 1849; from Yarmouth to Portland, in 1851, and Augusta was reached in 1852. On account of a breach of the general law of 1852 authorizing railroad companies to issue bonds and secure them by a mortgage of their railroad, proceedings were begun in 1859 to foreclose the mortgage issued in 1852 by the railroad company, and May 18, 1862, the title became absolute in the mortgagees. A new corporation was thereupon organized May 20, 1862, by the mortgagees, under the name of the Portland and Kennebec Railroad Company. May 12, 1870, the Portland and Kennebec Railroad was leased to the Maine Central Railroad Company for nine hundred and ninety-nine years.

The Portland and Ogdensburg Railroad was chartered in 1867, for the construction of a railroad from Portland to the boundary line between Maine and New Hampshire, for the purpose of forming a connection with a railroad from Vermont. The construction of the road was begun in 1869, and it was opened to Conway, N. H., in 1871. Four years later the road was opened to Lunenburg, N. H., and with its connections then became one of the trunk lines to the West. In 1884 the road passed into the hands of a receiver. In 1886 the mortgage given to secure the payment of the bonds issued in 1871 was foreclosed, and June 8th of this year the corporation was reorganized as the Portland and Ogdensburg Railway Company.

The Portland and Rochester Railroad was first chartered as the York and Cumberland Railroad Company, in 1846, for the construction of a railroad from Portland to some point in Berwick or South Berwick to a connection with the Boston and Maine Railroad. The construction of the road was begun in 1850, and it was opened to Gorham the same year, and to Saco River in 1851. Subsequently the road was placed in the hands of a receiver, and in 1865 the name of the road was changed to the Portland and Rochester, when the company was reorganized under its present corporate title. July

31, 1871, the road was completed to Rochester, N. H., where connection is had with the Worcester and Nashua Railroad, recently leased to the Boston and Maine Railroad Company.

The Portland, Saco and Portsmouth Railroad was chartered in 1837, for the construction of a railroad from Portland to Portsmouth, N. H., to connect with a railroad to be constructed from that city to Boston. The road was leased to the Eastern and Boston and Maine railroads under a working contract, though keeping up a separate organization till 1871, when it was leased to the Eastern Railroad for nine hundred and ninety-nine years. By the lease of the Eastern to the Boston and Maine Railroad, in 1884, the Portland, Saco and Portsmouth Railroad came under the management of the latter road.

The Sandy River Railroad was incorporated in 1879, for the construction of a railroad from Farmington to Phillips. The road was constructed the same year and opened to business. Its gauge is two feet, and was the first narrow gauge road built in the State.

The Shore Line Railroad was chartered in 1881, for the construction of a railroad from Calais to Ellsworth and Bangor. Work upon the section from Hancock to Brewer Junction, where connection was had with the Bucksport and Bangor Railroad to Bangor, was begun in 1883, and in June, 1884, the road was opened and through trains running from Bangor to Bar Harbor Ferry. The road was built under a lease to the Maine Central Railroad, and is operated as a part of that company's system.

The Somerset Railroad was chartered in 1860, for the construction of a railroad from West Waterville (Oakland) to Carratunk Falls. The construction of the road was begun in 1873 and it was opened to North Anson, its present terminus, in 1875, although trains began running between Waterville and Norridgewock the previous year. When built the road was understood to be under contract with the Maine Central, but this has never been consummated, and it has always been operated by the Somerset Railroad Company.

The Somerset and Kennebec Railroad was chartered in 1848, for the construction of a railroad from Carratunk Falls to Waterville, with the right to connect with the Kennebec and Portland Railroad in Augusta. The construction of the road was begun in 1853, and it was opened from Augusta to Skowhegan in 1856. January 1, 1864, the road was leased to the Portland and Kennebec Railroad Company, and June 1, 1870, the lease was extended for the term of

nine hundred and ninety-nine years, and when the Portland and Kennebec Railroad was leased to the Maine Central Railroad Company it carried with it the leased Somerset and Kennebec road.

The St. Croix and Penobscot Railroad was first chartered as the Calais Railway Company in 1832, and a horse railroad built from Calais to Milltown. In 1849 the name was changed to the Calais and Baring Railway Company, and the road was extended to Baring. In 1854 the Lewy's Island Railroad was chartered, for the construction of a railroad from Baring to a point on Lewy's Lake, in Princeton, and the road was completed in 1856. The road was mortgaged to the city of Calais and the bond-holders took it in 1862 and operated it till 1870, when they conveyed their interest to the St. Croix and Penobscot Railroad Company, to which the name of the Calais and Baring Railroad was also changed. This railroad is entirely separate from the rest of the railroad system of the State, having no connections at any point along its line.

The Whitneyville and Machiasport Railroad was chartered in 1842 as the Franklin Railroad Company, and was constructed the same year. It has always been used for the transportation of lumber between Whitneyville and Machiasport.

The above account of the construction of the several railroads fails to give a correct idea of the number of railroad companies now operating in the State. On account of the consolidation of roads there are at present only nineteen companies doing business in Maine. The Maine Central, the great trunk line of the State, is the result of a process of consolidation that has been going on since 1862. At the present time it is composed of the following original companies: Portland and Kennebec, from Portland to Augusta; Somerset and Kennebec, from Augusta to Skowhegan; Penobscot and Kennebec, from Waterville to Bangor; Androscoggin and Kennebec, from Cumberland Junction to Waterville; Androscoggin, from Farmington to Brunswick, with a branch to Lewiston; European and North American, from Bangor to Vanceboro; Belfast and Moosehead Lake, from Belfast to Burnham; Dexter and Newport, from Dexter to Newport; Bucksport and Bangor, from Bucksport to Bangor; Maine Shore Line, from Bangor to Mt. Desert Ferry. The consolidation of these roads has been of general advantage to those sections of the State through which the several roads run, for it has placed their management in the hands of a strong company, thus enabling the roads to be maintained in better condition and better rates to be offered for both passenger and

freight traffic than could otherwise have been the case. With the opening of the Shore Line, or Bar Harbor branch, as it is now called, the Maine Central placed a commodious passenger steamer on Frenchman's Bay to ply between Mt. Desert Ferry and Bar Harbor, and, the present season, has built a new and larger steamer for that route, which is run as a portion of the Maine Central Railroad system, under legislative authority granted in 1885. The Portland, Bangor, Mt. Desert and Machias line of steamers have also been purchased by the Maine Central Railroad Company, which now operates the line under the old name and as a separate company. This was the first line of steamers to make regular landings at Bar Harbor, and with what the Maine Central Railroad is now doing to develop travel to that popular summer resort, the change of proprietorship is calculated to prevent any ruinous competition in the Bar Harbor travel, which was the object sought in the purchase of the line. The opening of the Bar Harbor branch is undoubtedly destined to do much for the island of Mt. Desert, for it has stimulated travel, and with the facilities now afforded for reaching the island it is no longer necessary for persons disinclined to ocean travel to go elsewhere for a summer vacation. The past year has witnessed a large number of transfers of real estate and the erection of a large number of new summer residences, a result undoubtedly very largely due to the increased attractions of the locality by reason of the facility with which it may be reached. Trains from Boston are run through to Bar Harbor in ten hours and ten minutes, a distance of 293 miles. The travel this season has been larger than ever, and, considering the rapid growth of the place as a summer resort, it is safe to say that it is now almost in its infancy, and each year's travel will more severely tax the resources of the Maine Central than any past year has done.

GROWTH OF BUSINESS

The growth of the business done by the railroads of the State is probably little realized by the general public, nor can it be until one carefully investigates the subject. The following table will show this increase only in part, because it has been found impossible to obtain complete returns from the several railroad companies. There are several reasons for this, among the most prominent of which is the consolidated method of keeping the accounts of the several roads operated under one management. The table will, however, show approximately the growth during the past five years :

RAILROADS.	1880.			1885.			1880.		1885.		Increase of Revenue from 1880 to 1885.
	Revenue from Passengers.	Revenue from Freight.	Total Revenue.	Revenue from Passengers.	Revenue from Freight.	Total Revenue.	Number of Passengers Carried.	Tons of Freight Carried.	Number of Passengers Carried.	Tons of Freight Carried.	
Aroostook River (3)	\$ 2,410 00	\$ 5,640 00	\$ 8,050 00	\$	\$ 27,072 00	\$ 44,105 00	.....	.....	.....	.....	\$ 36,055 00
Atlantic & St. Lawrence...	208,365 16	720,330 51	958,033 72	228,952 79	711,956 04	973,362 63	205,101	679,862	251,685	746,324	15,328 91
Bangor & Piscataquis	25,184 26	52,129 68	85,949 17	47,925 11	82,060 58	138,005 35	30,843	35,159	48,796	53,796	52,056 18
Bangor & Kat'din Iron W'ks	.....	.....	.....	4,977 50	10,188 43	17,014 24	.....	.....	11,349	13,314	17,014 24
Boston & Maine	1,416,167 42	930,014 93	2,505,752 23	3,544,301 88	2,435,401 16	6,511,559 82	4,829,028	810,122	7,054,309	958,332	4,005,807 59
Bridgton & Saco River .....	.....	.....	.....	8,332 54	9,329 38	18,644 95	.....	.....	11,999	9,537	18,644 95
Eastern Maine (1)	13,030 42	4,047 12	18,700 54	.....	.....	.....	30,613	4,951	.....	.....	.....
European & No. American(1)	131,595 76	248,341 64	410,234 67	.....	.....	.....	154,502	191,428	.....	.....	.....
Franklin & Megantic .....	.....	.....	.....	1,328 04	2,240 73	4,078 63	.....	.....	2,539	2,216	4,078 63
Green Mountain .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Houlton Branch (3)	943 00	4,828 00	5,921 00	.....	3,626 00	5,903 00	.....	.....	.....	.....	*18 00
Knox & Lincoln	66,702 75	44,332 68	123,112 55	76,935 73	51,586 54	138,738 82	68,379	64,133	90,363	41,171	15,626 27
Lewiston & Auburn Branch	11,004 00	14,876 00	25,820 00	10,829 61	17,163 35	30,073 04	69,953	40,839	64,154	51,643	4,253 04
Maine Central	707,767 35	857,925 33	1,668,198 53	1,190,073 78	1,502,452 25	2,847,607 59	685,694	434,470	1,198,250	888,850	1,179,409 06
Monson .....	.....	.....	.....	1,910 60	8,538 54	10,874 00	.....	.....	3,893	7,440	10,874 00
Orchard Beach .....	.....	.....	.....	4,224 50	.....	4,249 50	.....	.....	49,744	.....	4,249 50
Portland & Ogdensburg	109,153 56	170,008 89	292,659 38	135,029 86	361,992 93	494,165 27	94,005	161,300	153,780	263,530	202,505 89
Portland & Rochester	50,496 55	102,588 39	162,685 82	61,321 13	107,679 20	181,900 44	115,683	105,817	176,829	110,856	19,214 62
Portl'nd, Saco & Ports'm'th(2)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ports'm'th, G. Falls & Con'y(2)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rumford Falls & Buckfield	9,867 14	15,188 30	29,946 04	14,398 54	29,666 86	46,757 26	14,003	14,893	21,881	31,574	16,808 22
Sandy River	7,575 42	4,987 67	12,563 19	9,481 04	12,047 13	23,240 30	7,780	1,894	15,516	8,593	10,677 11
Somerset	6,335 26	12,310 87	20,792 71	10,124 69	18,477 36	30,860 02	9,341	8,327	12,609	14,354	10,067 31
St. Croix & Penobscot	3,740 46	32,738 49	37,911 72	3,831 04	33,732 40	38,849 21	14,704	.....	16,379	.....	937 49

(1) Figures for 1885 included in Returns of Maine Central Railroad.

(2) Operated as a part of the present Boston and Maine Railroad System.

(3) Operated as a part of the New Brunswick Railway.

* Decrease.

NEW RAILROADS.

This chapter would not be complete if no attention should be given to the new railroads chartered, and ultimately to be constructed. Every one will concede that a railroad properly constructed and operated is a benefit to the locality through which it passes, in the increased facilities it affords for developing manufacturing industries, utilizing the numberless water powers of the State, bringing new farming regions into more convenient distances from the markets, and stimulating all the people along the line of the road to renewed industry because of the better connection to be enjoyed with the more densely settled portions of the State. The opening of a railroad at once places a new value upon all the property along its line because of its increased accessibility. For reasons thus patent to every one, farmers should be as willing to assist in their construction as other people. In some countries it is the settled policy of the State to grant a certain amount of aid to every railroad constructed. This policy has not obtained in our State and many of our people entertain grave doubts as to its utility. There are regions in the northern part of Maine which can only be developed by the construction of railroads; otherwise northern Maine will remain, as at present, a wilderness. The construction by the Canadian Government of the International Railroad from Lake Megantic, near the northwestern boundary of the State, through the Maine wilderness to a connection with the Bangor and Piscataquis and Maine Central railroads, that the Canadian Pacific Railroad may obtain a good winter terminus in one of the harbors of the Maritime Provinces, will open to settlers a vast tract of country that would otherwise have remained a wilderness for many years. From the fertile character of the soil in Aroostook County it is safe to affirm that the best farming land in the State is in the northern part of the State, and any movement that shall lead to the development of this natural wealth should receive a generous welcome. Several railroads already constructed look to a northern development for their prosperity, viz: the Farmington branch of the Maine Central, with the Sandy River and Franklin and Megantic narrow gauge railroads, the Somerset Railroad, the Skowhegan branch of the Maine Central, the Dexter branch of the Maine Central, and the Bangor and Piscataquis Railroad. By a Legislative

enactment the last-named road is assured of a connection with the International Railroad without further expense for construction, when that road shall be extended as far east as Moosehead Lake. Another railroad has recently been constructed, from Pittsfield to Hartland, with an expectation of a further extension to a connection with the Monson narrow gauge railroad, which must also depend upon the prosperity of northern Maine for its revenues. A company has already been organized for the construction of a short line from the Maine Central Railroad into Aroostook County, and an attempt has been made this summer to revive the proposed Wiscasset and Quebec Railroad, from Wiscasset harbor to a connection with the International Railroad near Moose River Bridge in northern Maine, by which the Somerset Railroad would become an integral part of a long line of road, and acquire the prosperity it has waited for since its construction. The people of Bridgewater, in northeastern Aroostook, are looking for the construction of a short line of railroad from Florenceville, N. B., to that town, and have already voted support for the same, and expect a provincial subsidy will be secured in aid of that portion of the road lying in New Brunswick. In short, during the past few years there has been an awakening of a railroad sentiment throughout the State, which, with the increased disposition to promote the manufacturing interests of the State, must eventually result in substantial benefits. A liberal policy on the part of the people, looking to future rather than immediate results, will put in motion many enterprises now under contemplation and result in a general benefit to the entire State.

MANUFACTURING.

DEVELOPMENT AND PRESENT CONDITION OF THE MANUFACTURE OF COTTON AND WOOLEN GOODS, BOOTS AND SHOES, AND THE CONDITION OF THE LUMBER BUSINESS.

No authentic data can be obtained to show the progress of early manufacturing in Maine. The census of 1810 gave some incomplete tables of manufacturing, from which it appears that during that year there were manufactured in this State, 811,912 yards of cotton cloth and 453,410 yards of woollen cloth. There were then in operation 75 carding machines, carding 450,255 pounds of wool per annum, and 59 fulling mills, dressing 357,386 yards of cloth per annum. The other miscellaneous manufactures enumerated were as follows :

Hats	No.,	60,123	Boots and shoes	Value,	\$135,281
Furnaces and forges.....	No.,	2	Saddlery.....	Value,	\$24,678
Trip hammers.....	No.,	14	Tanneries	No.,	200
Naileries.....	No.,	6	Skins dressed.....	No.,	55,153
Nails.....	Lbs.,	1,265,594	Leather	Value,	\$231,174
Augers.....	Value,	\$2,000	Flax seed oil.....	Value,	\$3,000
Soap.....	Value,	\$31,650	Spirits distilled.....	Gallons,	160,300
Carriages made	Value,	\$9,000	Rope-walks.....	No.,	11
Paper.....	Value,	\$16,500	Cordage	Value,	\$234,600

As compared with the total manufactures of the balance of the country, in proportion to population, Maine exceeded its proportion in the number of yards of cloth manufactured. The establishments for the manufacture of cotton and woollen cloth appear to have been larger than the average for the entire country, which appears to prove that at that time such manufactures were more profitably conducted than in the other States. The production of woollen cloth was undoubtedly stimulated by the favorable character of the State

for sheep raising, an industry which has always been recognized by the farmers of Maine. In some manufactures of iron Maine also supplied itself, and the same was true of the different manufactures of wood.

By an examination of succeeding census reports, for want of other data to be found among the State records, it appears that in 1850 the number of manufacturing establishments in Maine had increased to 3,974, yielding an annual production valued at \$24,661,057. From 1850 to 1870 the number of manufacturing establishments rapidly increased in number and in the amount of capital employed and the value of their annual production. From 1870 to 1880 there appears to have been a decrease in the number of establishments, although there was an increase of over \$10,000,000 in the amount of capital employed. The value of the products also failed to keep pace with the value of the materials consumed. To more clearly show the changes that occurred during these several decades the following comparative statement has been prepared :

	1850.	1860.	1870.	1880.
Establishments.....	3,974	3,810	5,550	4,481
Hands employed.....	28,020	34,619	49,180	52,954
Capital invested.....	\$14,699,152	\$22,044,020	\$39,796,190	\$49,988,171
Wages paid.....	7,485,588	8,368,691	14,282,205	13,623,318
Materials used.....	13,553,144	21,553,066	49,379,757	51,120,708
Value of products.....	24,661,057	38,193,254	79,497,521	79,829,793
Power used—steam.....			9,465 h. p.	20,759 h. p.
Power used—water.....			70,108 h. p.	79,717 h. p.

Over half of the total amount of capital invested in the State at the present time is invested in the manufacture of cotton and woolen goods, boots, shoes and lumber. Of the present cotton manufacturing companies in the State the Cabot Company of Brunswick may almost be said to have had its origin in 1812, when the Maine Cotton and Woolen Factory Company was incorporated, which in 1820 had 1248 spindles in operation, manufacturing 100,000 yards of cotton cloth annually. The mill was subsequently destroyed, but in 1834 the Brunswick Company renewed the business that is continued at the present time by the Cabot Manufacturing Company. In 1831 the York Manufacturing Company of Saco, and the Portsmouth Company of South Berwick were started, and in 1844 the Hallowell Cotton Manufacturing Company was organized. In 1845 the Laconia Company of Biddeford began operations and was followed by the Pepperell Manufacturing Company in 1850. In 1846 the Lincoln

Mill was built at Lewiston, and during the following ten years the city of Lewiston had its foundation laid as the chief cotton manufacturing city in Maine. The splendid water power afforded by the falls of the Androscoggin River was utilized by the construction of canals for the diversion of the river's current from its proper channel that it might be used as the motive power for the splendid cotton mills that have since been erected in quick succession upon their banks. In 1850 the Lewiston and Bates corporations began manufacturing operations, and in 1854 the Hill Manufacturing Company erected its first mill. In 1858 the Continental (Porter) was erected and began operations, to be followed in 1861 by the starting of the Androscoggin Mills. Since the above dates several new mills have been erected by the above-named corporations, and in 1883 the Avon Manufacturing Company erected its mill for the manufacture of duck and fancy quilts. In 1846 cotton manufacturing was also begun in Augusta, and is continued at the present time by the Edwards Manufacturing Company. In 1858 the Westbrook Manufacturing Company began operations at Saccarappa; in 1871 the Barker Mill at Auburn; in 1874 the Lockwood Company at Waterville; in 1875 the Farwell Mills at Lisbon; in 1877 the Sanford Mills at Sanford, and in 1881 the Southard Manufacturing Company at Richmond. The capital of the several cotton mills in the State at the present time is as follows:

Androscoggin Mills, Lewiston.....	\$1,000,000
Avon Manufacturing Company, Lewiston	100,000
Barker Mill, Auburn.	340,000
Bates Manufacturing Company, Lewiston.	1,000,000
Cabot Manufacturing Company, Brunswick.	600,000
Continental Mills, Lewiston	1,500,000
Edwards Manufacturing Company, Augusta.	500,000
Farwell Mills, Lisbon	500,000
Franklin Company, Lewiston	1,000,000
Hallowell Cotton Manufacturing Company, Hallowell... .	300,000
Hill Manufacturing Company, Lewiston...	1,000,000
Laconia Company, Biddeford.	1,000,000
Lewiston Mills, Lewiston	300,000
Lockwood Company, Waterville	1,800,000
Pepperell Manufacturing Company, Biddeford.	1,200,000
Portsmouth Company, South Berwick	137,000

Southard Manufacturing Company, Richmond	125,000
Westbrook Manufacturing Company, Westbrook	400,000
York Manufacturing Company, Saco	900,000
Total	<u>\$13,702,000</u>

The Lincoln Mill at Lewiston has not been operated for about three years, and the Lewiston Mills have been idle for several months. Some of the other corporations have had a number of thousand idle spindles for a portion of the past two years on account of the small demand for cotton goods. The mill at Hallowell has also stood idle a considerable portion of the time during the past two years. With these exceptions the cotton mills of the State have been operated with great regularity, producing as good goods as any mills in the country. The Pepperell Company of Biddeford has for several years had a good foreign market for their product, and has therefore enjoyed prosperity at times when other mills have found it almost if not quite unprofitable to continue operations. Some of the other mills of the State have made foreign shipments of their goods, but do not have a steady foreign trade.

WOOLEN MANUFACTURING.

Since 1850 the number of woolen mills in this State has about trebled, but, although the increase in number has thus been comparatively slow, the increase in the amount of capital invested and the value of their annual product has been very great, as will be seen by the following comparative statement :

	1850.	1860.	1870	1880.
Establishments	36	26	107	93
Hands employed	624	1,027	3,042	3,095
Capital invested	\$467,600	\$932,400	\$4,167,745	\$3,876,028
Wages paid		263,216	1,047,151	1,044,606
Value of materials used	495,940	1,003,366	3,958,759	4,294,042
Value of products	753,300	1,717,007	6,398,881	6,686,073
Power used—steam			140 h. p.	404 h. p.
Power used—water			4,453 h. p.	3,406 h. p.

The principal portion of the increase in woolen manufacturing occurred previous to 1870. From 1870 to 1880 the industry only about held its own. Since 1880, however, there have been several new mills erected at different places, and from present appearances the next census will show a handsome increase in not only the number

of mills but in their capacity. The largest mills in the State have thirteen sets of machinery, and the smallest three sets, the value of the sets varying from \$5,000 to \$13,000 according to the location of the mills and the character of the buildings. Woolen manufacturers during the past few years have felt the depression of business far less than the cotton industry, and where a mill has been manufacturing a special class of goods it has maintained a steady prosperity, and it has been no uncommon thing for it to work its employes extra hours to fill its orders. The woolen mills of the State are very generally located in the villages, on small streams affording a steady power, and in this respect are valuable adjuncts in the development of the State. The comparatively small amount of power required for the operation of a woolen mill enables its proprietors to choose such secluded locations, and the result is undoubtedly a steadier and more generally intelligent class of employes than is often to be obtained in manufacturing cities. Such locations for manufacturing operations usually enable a manufacturer to conduct his business in a more economical manner than would otherwise be the case, and small capitalists find the woolen business a profitable enterprise to engage in, independent of any corporate organization. Of the companies doing business in the State at the present time the following will show the year they began operations, and the amount of capital invested:

	Year.	Capital.
Brown Manufacturing Company, Dover	1884	\$100,000
Cascade Woolen Company, Oakland	1882	125,000
Georges River Mills, Warren.....	1878	60,000
Harper Manufacturing Company, Welchville	1877	50,000
Home Manufacturing Company, Lewiston	1881	60,000
Johnson Woolen Company, Wayne.....	1878	40,000
Knox Woolen Company, Camden	1872	75,000
Madison Woolen Company, Madison	1881	100,000
Moosehead Mills, East Wilton.....	.....	50,000
Newichawanick Company, South Berwick	1854	175,000
North Berwick Company, North Berwick.....	1837	80,000
Pondicherry Company, Bridgton	1873	100,000
Readfield Woolen Manufacturing Company, Readfield	1878	24,000
Robinson Manufacturing Company, Oxford.....	1862	100,000
Vassalboro' Woolen Mills, North Vassalboro'.....	1863	432,000
Winthrop Mills Company, Winthrop.....	1866	150,000
Worumbo Manufacturing Company, Lisbon Falls.....	1864	500,000

The dates above given do not in many instances indicate the beginning of the manufacturing enterprise at present conducted by the companies, as a number of them have been re-organized, since their mills were built, and the dates given refer to the beginning of operations by the new companies. Unlike cotton manufacturing, a considerable proportion of the material used in the woolen mills is of native growth, and a woolen mill is thus of greater comparative benefit to the State than a cotton mill.

BOOT AND SHOE MANUFACTURING.

Statistics regarding the manufacture of boots and shoes are not so easily obtained as regarding the cotton and woolen industries. But from statistics for 1870 and 1880 there appears to have been a consolidation of establishments, and a large increase in the amount of capital invested and the value of the annual products, as will appear from the following comparative statement:

	1870.	1880.
Establishments	85	52
Hands employed	2,105	3,919
Capital invested	\$677,300	\$1,369,000
Wages paid	771,066	1,335,168
Value of products.....	3,155,221	5,823,541

The present business of shoe manufacturing in Maine has been of slow yet steady growth. The largest center of the business is at Auburn, where it affords employment to a larger number of employes than all the other manufacturing enterprises combined. During the past five years, however, the tendency of the manufacturers has been to change their places of business from the city to the country village, and a number of towns in the State have been benefited thereby. Shoe manufacturing, like woolen manufacturing, can be just as well conducted in a small village as in a city. The number of hands employed is comparatively small, and in a village everything tends to encourage a steady class of workmen, who, on account of locality, can be obtained at smaller wages than in the city, and yet the employes be enabled to save as much money proportionally as their city co-laborers. The competition among shoe manufacturers has caused the business to be done on a very close margin, and as orders for goods have to be taken several months before

deliveries are made, or the articles manufactured, the business is peculiarly liable to suffer from any disturbance of the market or agitation regarding wages. Manufacturers who have removed to country towns have done so usually to escape the results of such labor agitations as have prevailed in the cities during the past few years. The aim sought has not always been obtained, as agitators have followed the establishment of new factories and there is hardly a shoe manufacturing town in Maine which has not suffered during the past year from the effects of the disturbance that has been created regarding wages in the shoe factories of the State. The promoters of this state of affairs have generally been non-residents who have had personal ends to gain, but who have been so plausible in their statements as to conceal the real object of their efforts, and have made it appear that their efforts were entirely disinterested and calculated for the benefit of the laboring people of this State. The comparative benefits of an agitated and a settled condition of affairs can be seen by looking at the prosperity of the cities of Lynn and Haverhill, in the neighboring State of Massachusetts. For a number of years the business of Lynn has been torn asunder by labor agitations, which have resulted in driving a number of large shoe manufacturers from that city and State, to locations in Maine and New Hampshire, thus doing great injury not only to the laboring people of Lynn, but also to all classes of business which had grown up in that city in consequence of its having become a large shoe manufacturing center. On the other hand, the city of Haverhill has been free from labor agitations, and one shoe factory after another has been erected till to-day more shoes are manufactured within its limits than in the city of Lynn. The laboring people are largely responsible for this, and in these two examples the laboring people of this State can distinguish the result upon their own localities of whatever action they may be urged to take at any time. Two years ago the movement of shoe manufacturing was from Massachusetts to Maine, and the towns of this State were making advantageous offers to manufacturers to locate in their midst. On account of labor agitations this current of affairs has been largely changed, and New Hampshire has profited thereby. During the past few years Maine has secured new shoe factories in Richmond, Mechanic Falls, Norway, Skowhegan, Gardiner and Kennebunk, and new factories are now being erected in Freeport and Calais. From all appearances the next census will show a larger gain in shoe manufacturing during the

present decade than during any previous ten years in the history of the State.

LUMBER MANUFACTURING.

The census for 1880 made a poor showing for the lumber manufacturing interest of Maine. The figures published by the compilers show that the saw mill interests were in about the same condition as in 1860, as will appear from the following comparative statement:

	1860.	1870.	1880.
Establishments	926	1,099	848
Hands employed	4,969	8,506	6,663
Capital invested	\$4,401,482	\$6,614,875	\$6,339,396
Wages paid	1,453,739	2,449,132	1,161,142
Value of materials	4,504,368	6,872,723	4,951,957
Value of products	7,167,760	11,395,747	7,933,868
Power used—steam		3,213 h. p.	7,484 h. p.
Power used—water		38,898 h. p.	35,127 h. p.

More capital was invested in the business, and more hands were employed than in 1860, but in no respect do the figures show an increase over 1870. The decrease in the number of establishments, so far as can be learned, is the result of the suspension of operations of small concerns located at points where logs had become no longer available, and the business had become unprofitable on account of the irregular supply of work furnished. The tendency of late years has been to build larger mills than formerly, and with improved machinery to work more rapidly than heretofore. Such changes are in the line of economy, as they enable a manufacturer to reduce his comparative expenditures, and to thus be better prepared to take advantage of the market, no matter what its condition may be.

The amount of lumber manufactured in Maine the past year is considerably smaller than for the previous year. This condition of things is largely the result of the labor agitation that prevailed throughout the country last spring when builders and contractors and others found themselves unable to carry out operations previously contemplated. So seriously did those labor agitations affect the lumber business of Maine that very many contracts with parties in Boston, New York and Philadelphia were cancelled, and new ones could not be obtained till quite late in the spring. After wages became adjusted, in accordance with the new order of things, building

operations revived, and the New York market has been very good throughout the season. In Boston and Philadelphia there has been less activity. On account of local labor troubles, some of the lumber manufacturers upon the Kennebec River did not start up their mills till late in the season, and a large amount of logs were left "up river" to be driven down another season. When the mills closed for the season the supply of logs in the booms was practically exhausted. On the Penobscot River the number of logs driven down during the year and manufactured has been somewhat less than last year. There were no local labor troubles to interrupt operations in the spring, and the work of the year has only been affected by the market for manufactured lumber. The amount of logs driven down the river for the year 1886 is estimated at 150,527,590, and for 1885 at 152,748,230. Considerably less second-growth pine was cut last year than for the previous two years, and it is believed that the amount of second-growth pine will be smaller for a number of years than heretofore, on account of the devastation created in the forests of this State by the "cyclone" in the autumn of 1883, when a very large amount of second-growth pine yielded to the force of the winds. On the other waters of the State the information obtained at this office is that there has also been a smaller amount of lumber manufactured than last year. For the coming year there is a better feeling and lumber operators are making arrangements to send full crews into the woods this winter and cut as large, if not a larger amount of logs than last year, and if there are no disturbances to discourage building operations, the coming season will be a good one for Maine manufacturers.

The quantity and value of lumber, the produce of the State of Maine, upon the St. John and St. Croix rivers and their tributaries, owned by American citizens, and manufactured in the Province of New Brunswick, and admitted free of duty into the United States, during the year ending June 30, under the provisions of the treaty of Washington in 1842, was as follows :

Articles.	1885.		1886.	
	Quantities.	Value.	Quantities.	Value.
Boards, clapboards, deals, joists, plank and scantling, &c....feet	85,530,000	\$884,302	250,779,000	\$1,062,328
Laths, palings, pickets, &c	76,553,000	126,512	98,341,000	160,803
Shingles.....	34,620,000	69,803	36,059,000	72,935
Box shooks.....	.....	5,253	.....	4,267
Other shooks, staves and headings.....	.....	2,124	.....	5,841
Telegraph and other poles.....	.....	524	.....	212
Logs, masts, spars, &c.....	.....	88,800	.....	18,318
Timber, sawn and hewn, cubic feet	33	76	5,859	4,401
Other products.....	.....	498	.....	.....
Totals.....	.....	1,117,892	.....	1,329,105

SEVERAL MANUFACTURING INTERESTS.

The manufacturing interests of Maine have abundant opportunity for expansion. A large number of the most valuable water powers of the State are as yet undeveloped, but are each year becoming more accessible as the railroad system of the State is improved. For many years an illiberal policy prevailed in some sections of the State toward the introduction of manufacturing industries, but this spirit has now become generally eliminated, and it is expected that the close of the present decade will show a large gain in the number of manufacturing establishments, with a corresponding increase in the amount of capital invested and in the value of the production. Between 1860 and 1880 the number of manufacturing establishments in the State increased from 3,810 to 4,481; the amount of capital invested, from \$22,044,020 to \$49,988,171; the number of hands employed, from 34,619 to 52,954—including 3,746 children under 16 years of age; the amount of wages paid, from \$8,368,691 to \$13,623,318; the value of materials consumed, from \$21,553,066 to \$51,120,708; and the value of the product, from \$38,193,254 to \$79,829,793.

The total amount of power used by the manufacturing establishments of the State in 1880 was 100,476 horse power, 79,717 of water power and 20,759 of steam power. These figures show an increase since 1870 of 26.27 per cent in the aggregate power used. Maine's manufacturing rank with the other States is seventeenth in the number of establishments, sixteenth in the amount of capital invested, and fifteenth in the value of production.

The largest amount of capital invested in any single industry is in the manufacture of cotton goods—\$15,292,078 ; the next largest is in the manufacture of lumber—\$6,339,396 ; next comes the manufacture of woolen goods—\$3,876,028 ; tanned leather, \$2,459,700 ; paper, \$1,995,000 ; foundery and machine shop products, \$1,793,720 ; boots and shoes (including custom work and repairing), \$1,485,400 ; mixed textiles, \$1,290,380 ; flouring and grist-mill products, \$993,500 ; lime, \$942,150 ; canned fruits and vegetables, \$926,535 ; ship-building, \$811,750 ; printing and publishing, \$747,600 ; agricultural implements, \$726,300 ; oil cloth, \$695,000 ; dyeing and finishing textiles, \$593,500. As showing the manufacturing counties of the State, the following tables will prove interesting :

INDUSTRIES.	Number of Establishments.	Capital.	Average Number of Hands Employed.			Total Amount Paid in Wages During the Year.	Value of Materials.	Value of Products.
			Males above 16 Years.	Females above 15 Years.	Children and Youths.			
ANDROSCOGGIN COUNTY.								
Belting and hose, leather.....	2	\$ 11,000	11	.....	.....	\$ 6,620	\$ 32,600	\$ 42,304
Boots and shoes.....	18	495,500	1169	435	26	586,800	1,809,334	2,667,651
Boxes, wooden, packing.....	2	18,000	26	6	.....	10,880	13,000	29,600
Bread and bakery products.....	5	27,200	29	3	.....	13,600	30,700	62,200
Brick and tile.....	7	21,350	48	.....	.....	10,250	6,950	22,800
Carriages and wagons.....	4	14,500	41	.....	.....	16,500	11,700	50,500
Clothing, men's.....	2	26,000	51	303	.....	35,700	6,000	63,100
Confectionery.....	2	4,600	4	.....	.....	1,800	5,400	20,000
Cotton goods (see also mixed textiles).....	8	8,350,000	1666	3155	627	1,486,375	3,624,078	6,356,523
Dyeing and finishing textiles.....	2	590,000	587	43	41	164,849	317,957	1,100,000
Flouring and grist-mill products.....	20	90,400	37	.....	.....	9,859	476,935	537,589
Foundry and machine shop products.....	5	116,170	174	1	1	60,419	111,641	212,225
Fruits and vegetables, canned and preserved.....	1	35,000	100	15	10	12,500	22,500	50,000
Furniture.....	4	28,000	33	.....	.....	12,200	20,500	46,500
Leather, curried.....	3	6,400	10	.....	.....	3,825	74,925	99,050
Leather, tanned.....	4	13,600	16	.....	1	5,175	62,900	89,250
Lumber, planed.....	2	33,000	18	.....	.....	8,634	18,751	41,593
Lumber, sawed.....	33	372,300	188	.....	1	39,532	291,435	428,050
Mixed textiles (see also cotton goods; woolen goods).....	2	120,000	87	58	5	55,600	176,625	278,021
Paper.....	2	540,000	122	67	.....	66,700	303,000	403,000
Printing and publishing.....	2	44,000	24	13	.....	21,336	17,314	51,359
Saddlery and harness.....	6	13,300	14	.....	.....	5,700	12,920	22,124
Shirts.....	2	10,000	4	30	.....	10,300	16,000	27,000
Tin-ware, copper-ware and sheet iron ware.....	4	23,400	17	.....	.....	8,065	15,300	29,800
Tobacco, cigars and cigarettes.....	5	17,300	30	2	.....	9,880	8,550	29,875
Woolen goods (see also mixed textiles).....	10	859,750	341	230	30	294,248	1,118,633	1,756,425

AROOSTOOK COUNTY.

Dyestuffs and extracts.....	1	75,000	14	.....	6,000	13,000	67,500
Flouring and grist-mill products.....	22	76,300	34	.....	9,430	284,139	320,494
Leather, tanned.....	2	20,250	38	.....	12,078	141,285	223,520
Lumber, sawed.....	62	347,580	467	.....	3	92,986	215,260
Starch.....	19	281,200	240	.....	21,835	324,311	423,425
Tin-ware, copper-ware and sheet iron ware.....	8	18,900	11	.....	3,311	16,345	26,600

CUMBERLAND COUNTY.

Agricultural implements.....	2	18,000	12	.....	3,600	16,000	25,500
Babbit metal and solder.....	1	5,000	5	.....	2,191	44,000	47,000
Bookbinding and blank book making.....	5	42,700	37	.....	24	22,500	88,500
Roots and shoes.....	12	186,000	358	.....	192	5	174,370
Boxes, fancy and paper.....	2	21,000	76	.....	207	15	42,400
Boxes, wooden, packing.....	3	33,400	31	.....	.....	.....	6,900
Bread and other bakery products.....	10	67,900	73	.....	3	4	35,030
Brick and tile.....	10	116,200	102	.....	.....	5	30,925
Brooms and brushes.....	3	45,000	86	.....	2	13	26,000
Carriages and wagons.....	7	69,500	88	.....	.....	.....	49,550
Clothing, men's.....	6	146,800	27	.....	84	.....	38,996
Coffee and spices, roasted and ground.....	5	30,500	19	.....	9	.....	16,065
Coffins, burial cases and undertakers' goods.....	6	12,500	11	.....	1	.....	7,895
Confectionery.....	9	49,500	38	.....	36	.....	13,950
Cooperage.....	32	80,710	201	.....	.....	.....	48,528
Cotton goods (see also mixed textiles).....	5	1,181,000	274	.....	563	118	215,046
Drugs and chemicals.....	3	83,000	27	.....	2	.....	9,600
Fertilizers.....	3	140,000	48	.....	.....	.....	12,000
Flouring and grist-mill products.....	26	175,700	64	.....	.....	.....	19,565
Food preparations.....	1	.....	150	.....	100	50	8,000
Foundry and machine shop products.....	14	589,000	448	.....	.....	7	205,367
Fruits and vegetables, canned and preserved.....	8	811,700	1831	.....	1107	721	158,300
Furniture.....	12	88,800	129	.....	7	6	55,300
Gunpowder.....	1	150,000	50	.....	.....	.....	35,000
Hats and caps.....	3	18,500	11	.....	13	.....	8,850
Iron and steel.....	1	100,000	190	.....	.....	10	51,544
Iron forgings.....	1	30,000	18	.....	.....	.....	6,575
Leather board (see also paper).....	1	20,000	45	.....	.....	.....	17,500
Leather, curried.....	4	75,000	45	.....	10	2	20,784
Leather, dressed skins.....	1	10,000	9	.....	.....	.....	6,000

INDUSTRIES.	Number of Establishments.	Capital.	Average Number of Hands Employed.			Total Amount Paid in Wages During the Year.	Value of Materials.	Value of Products.
			Males above 16 Years.	Females above 15 Years.	Children and Youths.			
Leather goods	1	\$ 2,000	5			\$ 2,500	\$ 25,000	\$ 30,000
Leather, tanned	6	210,000	138		3	55,253	500,857	610,500
Lumber, planed	4	85,000	47		12	27,180	236,600	291,056
Lumber, sawed	61	264,220	342			69,001	210,939	364,667
Marble and stone work	12	20,400	69			22,300	17,287	51,200
Matches	1	64,000	57	35		35,412	251,918	298,573
Mixed textiles (see also cotton g'ds; silk, silk g'ds; woolen g'ds)	2	135,000	50	53	17	37,000	96,671	167,800
Paints (see also varnish)	1	16,000	6			3,480	59,638	70,532
Paper (see also leather board; wood pulp)	1	1,000,000	432	139		152,657	540,000	1,012,000
Plated and britannia ware	3	63,500	44	2		18,000	14,500	39,300
Printing and publishing	15	155,900	162	28	4	107,184	80,278	227,189
Saddlery and harness	13	15,200	34		1	13,910	29,500	61,130
Ship-building	40	164,600	368			178,538	393,225	603,110
Silk and silk goods (see also mixed textiles)	1	30,000	9	46	5	10,190	61,395	81,585
Slaughtering and meat packing, not including retail butchering establishments	4	183,000	77			32,500	940,300	1,028,300
Soap and candles	2	21,200	9			2,660	29,562	50,700
Steam fittings and heating apparatus (see also foundry and machine shop products)	3	4,000	13			3,900	12,500	22,000
Sugar and molasses, beet	1	50,000	150			20,000	75,000	111,000
Sugar and molasses, refined	2	460,000	90			34,457	1,416,414	1,499,512
Tin-ware, copper-ware and sheet iron ware	13	71,500	56			25,775	55,700	123,700
Tobacco, cigars and cigarettes	5	7,900	22	7	1	9,062	14,800	29,600
Trunks and valises	2	8,000	12			6,200	15,000	33,000
Varnish (see also paints)	1	20,000	5			3,000	42,000	55,000
Wood pulp	4	380,000	176	6		63,865	151,595	267,490
Wooden ware	2	21,000	43			12,700	28,000	56,000
Woolen goods (see also mixed textiles; wool hats)	5	256,000	118	83	24	63,245	207,415	345,490
Wool hats (see also woolen goods)	1	40,000	53	20	22	31,596	80,825	151,730

FRANKLIN COUNTY.									
Agricultural implements.....	4	47,500	27	1	2	15,790	26,785	59,520	
Boots and shoes.....	2	18,000	40	8		10,500	17,800	35,700	
Flouring and grist-mill products.....	10	24,700	7			1,425	66,745	73,398	
Fruits and vegetables, canned and preserved.....	4	35,535	86	86	46	21,650	39,305	81,600	
Leather, curried.....	2	11,000	7			2,750	38,750	50,200	
Leather, dressed skins.....	1	6,000	9			2,700	36,000	48,000	
Leather, tanned.....	2	15,000	7			2,950	30,200	38,000	
Lumber, sawed.....	41	111,200	160		4	18,394	61,436	112,649	
Woolen goods.....	4	175,000	28	29	1	15,835	112,417	154,663	
HANCOCK COUNTY.									
Brick and tile.....	10	28,800	70			13,353	7,230	26,675	
Cordage and twine.....	1	15,000	13	2		2,300	25,000	54,000	
Dyestuffs and extracts.....	1	40,000	4			385	10,600	32,400	
Flouring and grist-mill products.....	13	17,300	15			4,252	125,117	138,607	
Fruits and vegetables, canned and preserved.....	1	15,000	20	25	15	10,000	36,700	53,000	
Gloves and mittens.....	1	500		316	200	13,000	24,000	39,000	
Leather, tanned.....	6	111,500	52			19,200	341,540	486,764	
Lumber, sawed.....	56	495,525	492		18	92,082	209,050	420,624	
Ship-building.....	104	62,850	138			57,850	106,079	175,699	
KENNEBEC COUNTY.									
Agricultural implements.....	13	627,700	368		1	144,385	269,835	531,525	
Boots and shoes.....	5	32,500	64	5		14,792	65,128	90,930	
Clothing, men's.....	7	29,650	15	72		15,515	39,746	67,000	
Cotton goods (see also mixed textiles).....	5	1,695,000	407	572	162	266,919	570,973	1,161,760	
Flouring and grist-mill products.....	26	105,300	35			10,085	368,501	418,402	
Foundry and machine shop products.....	14	151,500	114			49,425	70,925	148,500	
Furniture.....	6	29,000	51			23,300	22,500	58,700	
Handles, wooden.....	3	16,000	20		2	8,500	24,000	49,500	
Leather, tanned.....	13	49,800	51			14,847	180,082	243,158	
Lumber, sawed.....	48	476,720	483		2	100,060	490,872	786,001	
Marble and stone work.....	10	18,300	27			10,360	10,175	36,150	
Mixed textiles (see also cotton goods; woolen goods).....	1	150,000	40	35	8	24,000	113,138	245,000	
Oilcloth, floor.....	3	580,000	234	1		97,000	335,075	470,000	
Paper.....	4	245,000	109	59		61,310	243,659	381,726	
Printing and publishing.....	8	421,000	112	141	1	113,615	828,900	1,181,500	

INDUSTRIES.	Number of Establishments.	Capital.	Average Number of Hands Employed.			Total Amount Paid in Wages During the Year.	Value of Materials.	Value of Products.
			Males above 16 Years.	Females above 15 Years.	Children and Youths.			
Saddlery and harness.	12	\$15,040	29	.....	.....	\$ 9,875	\$43,330	\$ 68,900
Sash, doors and blinds (see also wood, turned and carved) ...	8	96,800	86	.....	.....	34,750	82,825	152,500
Shirts.	2	43,000	7	55	.....	16,000	41,000	59,000
Soap and candles.	4	6,380	14	.....	.....	3,001	17,635	22,475
Springs, steel, car and carriage	1	25,000	34	1	.....	11,238	3,528	49,722
Tin-ware, copper-ware and sheet-iron ware	11	19,300	26	.....	.....	8,501	14,750	28,695
Wire.	1	3,000	18	.....	.....	7,200	15,000	24,000
Wood, turned and carved (see also sash, doors and blinds)....	3	31,000	32	.....	.....	11,855	32,000	54,500
Woolen goods (see also mixed textiles).....	4	618,000	282	124	33	146,880	603,630	981,175
KNOX COUNTY.								
Boots and shoes	1	30,000	106	2	2	48,006	173,945	232,119
Carriages and wagons.....	3	75,800	31	.....	.....	10,000	47,500	75,000
Clothing, men's.....	5	14,500	15	45	.....	14,304	22,100	50,137
Cooperage	10	12,769	28	.....	.....	7,220	9,725	24,600
Flouring and grist-mill products.....	12	67,700	21	.....	.....	6,250	201,843	219,338
Foundry and machine shop products.....	5	80,750	49	.....	.....	20,285	22,100	57,400
Iron forgings.....	1	15,000	20	.....	.....	8,000	10,000	35,000
Limc	25	937,650	294	.....	.....	82,324	390,609	589,195
Lumber, sawed	21	26,400	64	.....	.....	9,916	18,875	44,419
Marble and stone work	4	11,100	37	.....	.....	13,909	5,300	26,000
Saddlery and harness.....	4	29,800	6	.....	.....	2,872	26,400	34,000
Ship-building.....	33	131,800	283	.....	.....	124,304	309,995	445,959
Woolen goods.....	2	95,000	80	57	1	37,814	149,692	238,318
LINCOLN COUNTY.								
Brick and tile	25	18,050	95	.....	.....	12,780	10,814	31,063
Flouring and grist-mill products.....	11	36,800	13	.....	.....	3,375	83,535	88,728
Lumber, sawed.....	36	187,200	215	.....	4	34,850	216,350	317,400
Ship-building	14	30,950	76	.....	.....	35,339	74,182	111,999

OXFORD COUNTY.								
Boots and shoes.....	2	39,000	150	100	.....	112,000	370,779	504,179
Carriages and sleds, children's.....	1	35,000	45	.....	.....	15,886	14,000	35,307
Flouring and grist-mill products.....	19	57,400	23	.....	.....	5,599	135,060	151,791
Handles, wooden.....	4	32,450	26	.....	.....	6,300	15,700	35,250
Leather, curried.....	3	112,000	45	.....	.....	15,500	334,515	367,750
Leather, tanned.....	6	121,300	53	.....	.....	18,175	344,665	395,868
Lumber, sawed.....	84	365,830	449	.....	17	78,547	227,075	444,245
Mixed textiles (see also woolen goods).....	2	350,000	72	93	90	65,000	220,900	296,000
Woolen goods (see also mixed textiles).....	7	358,000	98	92	36	66,838	241,825	331,644
PENOBSCOT COUNTY.								
Boots and shoes.....	4	57,000	155	23	2	58,300	223,200	302,800
Bread and other bakery products.....	7	33,200	29	2	.....	11,932	51,150	76,500
Brick and tile.....	11	51,450	124	.....	10	15,990	14,436	47,400
Brooms and brushes.....	2	10,000	22	.....	1	6,000	17,000	27,500
Carriages and wagons.....	7	31,600	39	.....	.....	18,650	27,700	57,000
Clothing, men's.....	11	114,800	40	253	.....	57,420	187,300	291,700
Coffins, burial cases and undertakers' goods.....	5	15,500	14	1	.....	7,500	8,700	20,500
Cooperage.....	20	30,650	66	.....	.....	20,260	31,200	69,000
Flouring and grist-mill products.....	26	93,600	40	.....	.....	12,082	407,500	446,593
Foundry and machine shop products.....	10	270,000	178	.....	.....	81,557	91,955	232,259
Furniture.....	8	61,150	51	1	.....	20,195	54,965	93,700
Leather, curried.....	4	163,800	110	.....	.....	40,950	806,826	919,000
Leather, tanned.....	11	803,200	298	.....	.....	111,459	1,872,133	2,325,800
Lumber, planed (see also sash, doors and blinds).....	5	82,500	62	.....	1	21,800	43,800	74,600
Lumber, sawed.....	106	1,479,800	1297	.....	110	271,068	1,651,608	2,290,284
Marble and stone work.....	9	19,200	32	.....	.....	13,440	15,550	45,700
Mixed textiles (see also woolen goods).....	2	32,500	18	14	2	12,200	48,542	63,300
Paper.....	2	25,000	21	16	.....	8,000	27,000	42,600
Printing and publishing.....	11	76,000	65	22	9	30,860	26,925	76,050
Saddlery and harness.....	20	14,175	31	.....	.....	9,477	27,368	49,217
Sash, doors and blinds (see also lumber, planed).....	4	27,300	17	.....	.....	7,250	24,100	44,000
Saws.....	2	25,500	13	.....	.....	4,500	10,075	25,650
Ship-building.....	16	23,100	47	.....	.....	16,624	41,754	62,217
Slaughtering and meat packing, not including retail butchering establishments.....	1	2,500	3	.....	.....	800	38,505	40,387

INDUSTRIES.	Number of Establishments.	Capital.	Average Number of Hands Employed.			Total Amount Paid in Wages During the Year.	Value of Materials.	Value of Products.
			Males above 16 Years.	Females above 15 Years.	Children and Youths.			
Soap and candles.....	4	\$ 25,750	21	1	.....	\$ 6,465	\$ 22,150	\$ 35,500
Tin-ware, copper-ware, and sheet-iron ware.....	13	48,800	44	.....	.....	17,575	41,300	78,200
Woolen goods (see also mixed textiles).....	11	109,700	45	24	3	22,660	127,974	181,755
PISCATAQUIS COUNTY.								
Clothing, men's.....	3	16,500	5	46	.....	6,500	20,000	29,500
Flouring and grist-mill products.....	12	31,400	14	.....	.....	3,190	87,150	98,022
Iron and steel.....	1	150,000	300	.....	.....	44,950	23,569	60,375
Leather, tanned.....	2	30,000	8	.....	.....	2,600	25,900	33,000
Lumber, sawed.....	36	124,600	216	.....	1	32,536	67,148	155,191
Mixed textiles (see also woolen goods).....	3	170,000	68	93	4	52,850	257,424	366,846
Musical instruments, organs and materials.....	1	20,000	26	.....	.....	9,000	10,000	40,000
Wood, turned and carved.....	1	20,000	20	.....	10	10,000	10,000	25,000
Woolen goods (see also mixed textiles).....	7	351,000	140	149	5	91,150	540,124	765,846
SAGADAHOC COUNTY.								
Brass castings.....	2	65,000	16	.....	.....	9,000	30,000	56,000
Clothing, men's.....	2	7,000	4	19	.....	7,500	19,000	32,000
Coffee and spices, roasted and ground.....	1	2,500	1	.....	.....	416	19,000	21,000
Cordage and twine.....	1	65,000	25	.....	.....	8,000	45,000	75,000
Flouring and grist-mill products.....	3	29,000	9	.....	.....	5,027	79,626	87,923
Koolin and ground earths.....	2	29,100	19	.....	.....	8,750	3,050	54,600
Lumber, sawed.....	27	241,000	164	.....	.....	30,638	188,744	275,598
Paper.....	1	150,000	50	25	.....	29,000	177,200	259,995
Printing and publishing.....	2	8,500	17	.....	.....	10,300	15,300	31,000
Ship-building.....	22	265,300	784	.....	.....	327,505	695,548	1,076,928
Slaughtering and meat packing, not including retail butchering establishments.....	1	9,000	3	.....	.....	1,000	20,800	25,000

SOMERSET COUNTY.								
Clothing, men's.....	15	18,300	48	146	15	32,162	19,100	69,344
Cutlery and edge tools.....	4	34,000	35	.....	.....	14,070	13,398	35,494
Flouring and grist-mill products.....	20	68,000	27	.....	.....	7,751	213,252	244,652
Fruits and vegetables, canned and preserved.....	1	20,000	300	200	300	12,000	25,000	44,000
Furniture.....	5	37,000	34	.....	.....	12,500	30,000	55,000
Handles, wooden.....	4	16,000	25	.....	3	6,142	17,050	31,885
Leather, curried.....	5	19,000	10	.....	.....	3,020	39,210	56,800
Leather, tanned.....	8	74,750	36	.....	.....	9,375	79,720	107,400
Lumber, planed (see also sash, doors and blinds).....	3	11,300	11	.....	.....	5,600	15,650	23,850
Lumber sawed.....	62	432,525	415	.....	3	69,187	236,646	407,326
Oilcloth, floor.....	1	115,000	55	1	.....	27,500	200,000	243,000
Paper.....	1	20,000	9	5	.....	5,024	55,000	65,500
Saddlery and harness.....	18	24,400	21	2	.....	8,295	25,580	42,455
Sash, doors and blinds (see also lumber, planed).....	5	30,350	23	.....	.....	7,950	14,050	29,350
Woolen goods.....	8	339,198	179	102	48	74,875	390,526	690,023
WALDO COUNTY.								
Boots and shoes.....	1	40,000	75	25	.....	40,000	81,672	137,852
Carriages and wagons.....	3	18,000	15	.....	.....	7,025	10,800	21,900
Clothing, men's.....	4	9,000	7	132	.....	18,000	30,700	54,500
Cooperage.....	12	9,600	25	.....	.....	4,866	8,255	20,000
Flouring and grist-mill products.....	13	29,550	14	.....	.....	2,555	105,645	120,026
Leather, tanned.....	5	75,000	26	.....	2	8,450	237,780	310,000
Lumber, sawed.....	42	74,630	134	.....	3	14,648	45,319	95,115
Sash, doors and blinds (see also wood, turned and carved).....	3	60,000	45	.....	.....	20,000	41,475	79,600
Ship-building.....	6	26,800	29	.....	.....	13,150	17,754	33,655
Wood, turned and carved (see also sash, doors and blinds).....	2	30,500	27	.....	.....	9,300	14,075	28,200
WASHINGTON COUNTY.								
Boxes, wooden, packing.....	1	20,000	30	.....	20	11,200	20,000	45,000
Clothing, men's.....	9	28,925	18	103	.....	21,700	28,800	58,350
Fertilizers.....	1	30,000	50	.....	.....	15,000	20,000	40,000
Flouring and grist-mill products.....	10	30,100	10	.....	.....	2,013	96,521	106,660
Foundry and machine shop products.....	5	28,500	25	.....	.....	8,550	19,100	45,000
Iron and steel.....	1	200,000	193	.....	7	45,000	115,700	200,205
Leather, curried.....	3	100,600	25	.....	.....	9,380	581,130	633,616
Leather, tanned.....	7	831,100	607	.....	.....	186,180	1,598,765	2,068,421
Lumber, sawed.....	51	614,150	716	.....	16	110,864	328,419	576,660

INDUSTRIES.	Number of Establishments.	Capital.	Average Number of Hands Employed.			Total Amount Paid in Wages During the Year.	Value of Materials.	Value of Products.
			Males above 16 Years.	Females above 15 Years.	Children and Youths.			
Marble and stone work.....	4	\$31,300	33	.....	1	\$12,660	\$ 4,450	\$ 22,500
Ship-building	92	55,350	124	.....	.....	46,904	85,603	141,868
Tin-ware, copper-ware and sheet-iron ware	12	24,100	16	.....	.....	5,340	9,950	23,850
Wood, turned and carved	1	20,000	6	.....	.....	4,000	20,000	30,000
YORK COUNTY.								
Agricultural implements.....	3	16,000	12	.....	4	4,500	9,605	24,600
Blacking	1	8,000	4	13	.....	5,000	10,000	36,000
Boots and shoes	7	471,000	517	390	70	290,400	631,048	1,074,560
Carriages and wagons.....	8	22,200	48	.....	.....	17,900	28,150	58,200
Clothing, men's.....	2	15,000	8	22	.....	5,500	15,000	26,000
Cooperage	10	20,034	27	.....	.....	5,865	22,038	31,867
Cotton goods (see also mixed textiles).....	6	4,066,078	1511	2186	513	968,300	2,473,881	4,642,201
Felt goods (see also woolen goods)	1	100,000	41	11	2	14,326	67,538	120,000
Flouring and grist-mill products.....	18	60,280	23	.....	.....	7,424	186,082	222,698
Foundry and machine shop products.....	11	521,100	605	3	.....	235,700	446,341	833,116
Leather board	2	82,000	63	10	.....	31,500	55,000	145,000
Leather, curried	1	10,000	2	.....	.....	1,065	19,220	24,960
Leather, tanned.....	4	89,000	44	.....	.....	16,460	105,825	145,920
Lumber, sawed.....	82	695,716	678	.....	1	96,833	492,781	768,332
Mixed textiles (see also cotton goods; woolen goods).....	3	332,880	152	105	67	110,945	324,947	492,970
Saddlery and harness.....	7	5,400	15	.....	.....	4,125	10,650	20,300
Sash, doors and blinds.....	2	15,000	15	.....	.....	8,600	12,000	25,000
Ship-building	32	50,600	116	.....	.....	37,545	210,517	256,411
Tin-ware, copper-ware and sheet-iron ware	5	6,700	18	.....	1	7,800	10,500	28,000
Tobacco, cigars and cigarettes.....	6	16,800	34	10	2	15,772	20,737	58,111
Woolen goods (see also felt goods; mixed textiles).....	11	676,880	374	206	89	226,450	750,572	1,173,734

Table showing the Number of Establishments in the several counties of the State in 1880, with the Amount of Capital Invested, the Value of the Materials Consumed and the Value of the Annual Production.

Counties.	Establishments.	Capital.	Value Materials.	Value Products.
Androscoggin	253	\$12,009,562	\$8,714,373	\$14,789,963
Aroostook	270	941,460	1,100,175	1,744,952
Cumberland	569	8,542,710	11,266,063	16,540,198
Franklin	207	622,434	536,657	892,937
Hancock	279	898,285	955,222	1,584,236
Kennebec	356	5,764,547	4,691,294	7,737,822
Knox	197	1,662,584	1,491,812	2,274,359
Lincoln	126	297,575	413,466	614,214
Oxford	260	1,695,030	2,016,713	2,850,063
Penobscot	574	4,024,680	6,243,326	8,692,667
Piscataquis	136	1,000,795	1,092,666	1,710,479
Sagadahoc	96	931,350	1,337,059	2,089,966
Somerset	307	1,464,973	1,529,249	2,491,302
Waldo	196	496,388	684,157	1,107,574
Washington	319	2,212,235	3,028,474	4,224,206
York	336	7,423,563	6,020,002	10,485,755
Totals	4481	49,982,171	51,120,708	79,829,793

Tables showing the Number of Employes and Wages paid them in several industries in this State.

AGRICULTURAL IMPLEMENTS (PITCHFORKS).

Occupations.	Number.		Daily Wages.	
	Male.	Female.	Male.	Female.
Foreman	1	.....	\$2 75	
Foremen	2	.....	2 25	
Grinders	12	.....	1 75	
Hammerman	1	.....	1 50	
Heel Turner	1	.....	2 25	
Laborers	7	.....	1 25	
Painters	3	.....	1 50	
Platers	3	.....	2 00	
Polishers	6	.....	1 75	
Repair hand	1	.....	1 75	
Temperers	2	.....	3 00	
Welders	4	.....	2 00	
Welders' helpers	3	.....	1 13	

COTTON GOODS (SHEETING).

Occupations.	Number.		Daily Wages.	
	Male.	Female.	Male.	Female.
Apprentices, machinists.....	6	.....	\$1 25	
Back boys.....	b 24	.....	1 33	
Baler.....	1	.....	1 33	
Baler.....	1	.....	90	
Band boys.....	b 2	.....	40	
Beamers.....	2	.....	90	
Bell men.....	2	.....	1 50	
Blacksmith.....	1	.....	1 75	
Bobbin boys.....	a 4	.....	90	
Bobbin boys.....	b 2	.....	45	
Card grinders.....	4	.....	1 50	
Card grinders.....	4	.....	1 25	
Card strippers.....	a 12	.....	80	
Carpenters.....	5	.....	2 00	
Carpenter.....	1	.....	1 75	
Casting man.....	1	.....	1 15	
Color mixer.....	1	.....	1 50	
Doffers.....	a 10	a 14	50	\$ 55
Doffers.....	.....	a 28	.....	42
Doubler boys.....	a 2	.....	70	
Drawers.....	.....	15	.....	85
Drawers.....	.....	a 3	.....	65
Drawers.....	.....	a 8	.....	60
Drawers in.....	.....	3	.....	1 32
Drawers in.....	.....	3	.....	90
Dyer.....	1	.....	1 80	
Elevator tenders.....	4	.....	1 00	
Finishers.....	2	.....	1 10	
Finishers.....	a 2	.....	90	
Folder.....	1	.....	1 10	
Fly-frame tenders.....	.....	34	.....	1 00
Gas maker.....	1	.....	1 50	
Harness repairer.....	1	2	2 50	80
Inspectors.....	.....	11	.....	75
Laborers.....	10	.....	1 40	
Machinists.....	11	.....	1 75	
Mason.....	1	.....	1 75	
Oilers.....	4	.....	1 37	
Oilers.....	5	.....	1 00	
Oilers.....	a 4	.....	80	
Oilers.....	a 2	.....	60	
Oponers.....	2	.....	90	
Packer.....	1	.....	1 00	
Painters.....	2	.....	1 60	
Pattern maker.....	1	.....	1 75	
Pickers.....	a 15	.....	85	
Piper.....	1	.....	1 75	
Railway hands.....	.....	a 2	.....	70
Reeler.....	a 1	.....	72	
Rovers.....	a 8	11	65	1 20
Rovers.....	a 2	.....	45	
Scrubbers.....	.....	6	.....	50
Scrubbers.....	.....	5	.....	40
Second hand.....	1	.....	2 25	
Second hands.....	8	.....	1 75	
Second hands.....	3	.....	1 60	

a, youth. b, children.

Occupations.	Number.		Daily Wages.	
	Male.	Female.	Male.	Female.
Second hands.....	4		\$1 33	
Section hands.....	11		1 75	
Section hands.....	16		1 50	
Section hands.....	11		1 00	
Sewing machine operators.....		6		\$1 00
Shafting man.....	1		1 10	
Sizer.....	a 1		85	
Slashers.....	4		1 40	
Slubbers.....		12		1 00
Spare hand.....	1		1 25	
Spare hand.....	1		90	
Spare hands.....	a 2		65	
Spare hands.....	b 2		40	
Speeders.....		9		98
Spinners, mule.....	23		1 44	
Spinners, other.....		25		75
Spinners, other.....		a 72		50
Spoolers.....		54		70
Spool carrier.....	a 1		42	
Stamper.....	1		1 10	
Sweepers.....	a 12		40	
Teamsters.....	2		1 50	
Trimmers.....	a 4		80	
Twisters.....	a 5		85	
Undesignated.....	2		1 75	
Undesignated.....	1		1 15	
Undesignated.....	1		90	
Undesignated.....	a 4		55	
Undesignated.....	a 10		50	
Warpers.....	5	6	99	99
Waste hand.....	1		1 25	
Waste hand.....	1		90	
Waste hands.....	a 2	a 1	50	50
Watchmen.....	5		1 35	
Weavers.....	34	50	1 16	1 11
Weavers.....	60	60	1 06	1 06
Weavers.....	45	32	1 00	1 00
Winders.....	2		72	

COTTON GOODS (SHEETING, SHIRTING, ETC.).

Back boys.....	a 44		40	
Blacksmiths.....	2		1 79	
Blacksmith's helper.....	1		1 20	
Bobbin boy.....	a 1		42	
Brush boys.....	a 3		87	
Carpenter.....	1		2 25	
Carpenters.....	7		1 68	
Card clothiers.....	3		91	
Card grinders.....	12		1 33	
Card strippers.....	20		85	
Cleaners.....	b 10		30	
Cloth-room hands.....	2		1 00	
Cloth-room hands.....	2		95	
Doffers.....	a 2		72	
Doffers.....	a 2		63	
Doffers.....	a 2		46	
Doffers.....	b 36		40	
Doublers.....	a 2	b 4	80	40

a, youth. b, children.

Occupations.	Number.		Daily Wages.	
	Male.	Female.	Male.	Female.
Drawers	4	36	\$ 92	\$ 90
Elevator tenders	4	.....	1 05	.....
Filling hands	a 3	.....	80	.....
Firemen	2	.....	1 15	.....
Foremen	2	.....	2 75	.....
Harness repairers	5	.....	1 00	.....
Inspector .....	.....	1	.....	1 00
Inspectors .....	.....	32	.....	68
Laborer	2	.....	1 55	.....
Laborers	22	.....	1 05	.....
Lappers	a 2	.....	75	.....
Machinist	1	.....	2 25	.....
Machinists	9	.....	1 87	.....
Machinists' apprentices	2	.....	90	.....
Oilers	15	.....	90	.....
Oilers	b 6	.....	30	.....
Overseers	5	.....	4 50	.....
Overseers	5	.....	3 00	.....
Painters	3	.....	1 77	.....
Pickers	2	.....	1 25	.....
Pickers	11	.....	85	.....
Pickers in .....	.....	5	.....	65
Piper	1	.....	1 58	.....
Pressmen	3	.....	1 08	.....
Rovers	a 2	.....	80	.....
Rovers	a 5	.....	50	.....
Rovers	b 12	.....	35	.....
Scrubbers	3	4	70	85
Scrubber	a 1	.....	55	.....
Second hand	1	.....	2 16	.....
Second hand	2	.....	1 90	.....
Second hand	1	.....	1 37	.....
Section hands	24	.....	1 60	.....
Section hands	11	.....	1 33	.....
Slashers	5	.....	1 50	.....
Slashers' helpers	a 2	.....	75	.....
Slubbers and speeders	13	.....	1 00	.....
Spinners, mule	28	.....	1 50	.....
Spinners, other .....	.....	31	.....	85
Spinners, other .....	.....	a 98	.....	50
Spinners, other .....	.....	14	.....	63
Spoolers .....	.....	44	.....	70
Stampers	3	.....	1 08	.....
Sweeper	b 1	a 6	66	46
Sweepers	b 8	.....	25	.....
Teamsters	2	.....	1 12	.....
Undesignated	2	.....	75	.....
Undesignated	b 1	.....	40	.....
Warpers .....	.....	10	.....	87
Watchmen	4	.....	1 25	.....
Weavers	117	225	99	99
Weigher	1	.....	1 37	.....
Winders	a 3	.....	58	.....

a, youth. b, children.

COTTON GOODS (GINGHAM).

Occupations.	Number.		Daily Wages.	
	Male.	Female.	Male.	Female.
Back boys.....	a 11	.....	\$ 35	
Balers.....	b 9	.....	67	
Band boy.....	b 1	.....	60	
Beamers.....	17	.....	2 24	
Beamers.....	3	5	1 48	\$1 48
Belt maker.....	1	.....	2 50	
Blacksmith.....	1	.....	2 18	
Blacksmith's helper.....	1	.....	1 10	
Bobbin boys.....	b 7	.....	62	
Bobbin boys.....	b 3	.....	90	
Bolt cutter.....	1	.....	1 28	
Card clothier.....	1	.....	1 58	
Card fixer.....	1	.....	1 09	
Card fixer.....	b 1	.....	80	
Card grinders.....	8	.....	1 37	
Card strippers.....	b 15	.....	80	
Calenderer.....	1	.....	1 19	
Carpenters.....	7	.....	1 80	
Cleaners.....	a 10	.....	45	
Cleaners.....	a 11	.....	33	
Cloth-room hand.....		1		83
Cloth-room hand.....		1		95
Cloth-room hands.....		2		75
Doffer.....	b 1	.....	80	
Doffers.....	b 3	.....	73	
Doffer.....	b 1	b 29	54	45
Doffers.....	a 9	a 2	39	36
Doubler boys.....	b 4	.....	62	
Drawers.....	b 3	b 8	42	55
Dressers.....	7	.....	91	
Dyers.....	25	.....	1 30	
Dyers.....	11	.....	90	
Elevator tender.....	1	.....	1 05	
Filling hand.....	1	.....	1 53	
Filling hands.....	2	.....	95	
Filling hands.....	b 10	.....	70	
Finisher.....	1	.....	1 66	
Fireman.....	2	.....	1 61	
Folders.....	2	.....	1 58	
Gas maker.....	1	.....	1 36	
Gate tender.....	1	.....	75	
Harness repairer.....		1		73
Inspectors.....		10		90
Laborers.....	2	.....	1 58	
Laborers.....	13	.....	1 35	
Laborers.....	13	.....	1 05	
Laborers.....	59	.....	90	
Machinist.....	1	.....	2 03	
Mason.....	1	.....	1 13	
Oiler.....	1	.....	1 05	
Oilers.....	7	.....	95	
Oiler.....	b 1	.....	64	
Overseer.....	1	.....	6 44	
Overseer.....	1	.....	4 75	
Overseers.....	4	.....	3 15	
Overseer.....	1	.....	2 75	

a, youth. b, children.

Occupations.	Number.		Daily Wages.	
	Male.	Female.	Male.	Female.
Overseer.....	1	.....	\$2 37	
Overseer.....	1	.....	2 00	
Painter.....	1	.....	2 03	
Painter.....	1	.....	1 58	
Pattern maker.....	1	.....	2 03	
Picker.....	1	.....	1 58	
Picker.....	1	.....	1 19	
Pickers.....	12	.....	80	
Piper.....	1	.....	2 03	
Piper's helper.....	1	.....	1 80	
Presser.....	1	.....	1 58	
Quillers.....	b 23	.....	67	
Railway hands.....	b 2	.....	64	
Railway hands.....	b 2	.....	52	
Reelers.....	5	.....	2 21	
Rovers.....	b 4	.....	48	
Scrubbers.....	b 3	b 15	44	\$ 44
Second hand.....	1	.....	2 75	
Second hands.....	2	57	2 10	95
Second hands.....	13	.....	1 92	
Second hands.....	3	.....	1 45	
Section hands.....	17	.....	1 80	
Section hands.....	10	.....	1 63	
Sewing machine operator.....	1	.....	1 19	
Shearer.....	1	.....	1 58	
Slasher.....	1	.....	1 58	
Slashers.....	3	.....	1 40	
Slasher's helper.....	1	.....	85	
Slubbers.....	.....	2	.....	97
Slubbers.....	.....	2	.....	87
Slubbers.....	.....	3	.....	80
Slubbers.....	b 2	.....	45	
Spare hand.....	1	2	1 16	1 16
Spare hands.....	b 21	.....	80	
Spare hand.....	b 1	.....	53	
Spare hands.....	a 3	.....	37	
Spinners, mule.....	7	.....	1 60	
Spinner, mule.....	1	.....	1 50	
Spinners, other.....	b 8	16	73	73
Spoolers.....	.....	9	.....	84
Spoolers.....	.....	25	.....	71
Sweeper.....	b 1	.....	60	
Sweepers.....	a 23	.....	30	
Teamsters.....	4	.....	1 18	
Ticketeer.....	1	.....	2 50	
Ticketers.....	b 2	1	81	99
Tool maker.....	1	.....	1 80	
Twisters.....	2	.....	1 50	
Twister.....	.....	1	.....	1 70
Twister.....	1	1	1 25	1 42
Warper.....	1	.....	1 08	
Warpers.....	8	.....	1 13	
Waste hand.....	1	.....	1 12	
Waste hand.....	.....	b 1	.....	44
Watchmen.....	6	.....	1 36	
Weavers.....	385	73	1 18	1 38
Weavers.....	90	25	1 11	1 20
Weavers.....	.....	103	.....	1 17
Winders.....	52	.....	1 15	
Yarn sorter.....	1	.....	95	

a, youth. b, children.

LUMBER (SAWED LUMBER).

Occupations.	Number.		Daily Wages.	
	Male.	Female.	Male.	Female.
Laborers.....	30	.....	\$1 50	
Loggers.....	5	.....	2 00	
Log pilers.....	10	.....	1 75	
Mill men.....	12	.....	1 75	
Mill men.....	13	.....	2 00	
Rafters.....	15	.....	2 00	
Saw filers.....	3	.....	2 50	
Sawyers.....	2	.....	3 00	
Sawyers.....	5	.....	2 00	

MACHINES AND MACHINERY (STATIONARY ENGINES).

Apprentices.....	a	5	.....	85
Blacksmiths.....		2	.....	2 25
Blacksmith's helper.....		1	.....	1 33
Engineer.....		1	.....	1 75
Furnace man.....		1	.....	2 00
Machinists.....		10	.....	2 50
Machinists' helpers.....		2	.....	1 33
Moulders.....		13	.....	2 50
Moulders.....		5	.....	2 00
Moulders' helpers.....		8	.....	1 33
Mounters.....		6	.....	1 40
Pattern maker.....		1	.....	2 25
Undesignated.....		1	.....	85
Wood workers.....		2	.....	2 25

MUSICAL INSTRUMENTS AND MATERIALS (ORGANS).

Action maker.....		1	.....	1 50
Action maker.....		1	.....	1 00
Bench-room hands.....		11	.....	1 62
Box-room hand.....		1	.....	1 50
Box-room hand.....		1	.....	1 10
Engineer.....		1	.....	1 50
Finishers.....		8	.....	1 12
Fly finisher.....		1	.....	1 50
Fly finisher.....		1	.....	1 25
Foreman.....		1	.....	2 00
Machinists.....		8	.....	1 62
Teamster.....		1	.....	1 62
Tuner.....		1	.....	3 00
Turner.....		1	.....	2 50
Turner's helper.....		1	.....	1 50
Watchman.....		1	.....	1 35

PAPER (PRINTING PAPER).

Engineers.....		8	.....	2 00
Finishers.....		4	.....	2 00
Foremen.....		10	.....	1 35
Foreman.....		1	.....	4 00
Laborers.....		20	.....	1 25
Machine tenders.....		8	.....	2 40
Machine tenders' helpers.....		8	.....	1 40
Rag cutters.....			25	.....
Rag-room hands.....	a	11	.....	70
Warehouse men.....		6	.....	1 75

a, children.

PAPER (WRAPPING PAPER).

Occupations.	Number.		Daily Wages.	
	Male.	Female.	Male.	Female.
Beaters.....	2	.....	\$1 90	
Beaters.....	4	.....	1 50	
Bleacher.....	1	.....	1 75	
Bleachers.....	3	.....	1 50	
Cutters.....	.....	6	.....	\$ 75
Engineer.....	1	.....	2 50	
Finisher.....	1	.....	2 00	
Finisher.....	1	.....	1 50	
Finisher.....	.....	1	.....	1 00
Fireman.....	1	.....	1 75	
Machinist.....	1	.....	2 50	
Machine tenders.....	2	.....	2 50	
Machine tenders.....	2	.....	1 50	
Machine tender.....	1	.....	1 25	
Teamsters.....	3	.....	1 50	
Wheelwright.....	1	.....	2 50	
Wheelwright.....	1	.....	1 75	
Yard hands.....	3	.....	1 50	

STARCH.

Driers.....	20	.....	2 25
Foremen.....	7	.....	3 50
Laborers.....	80	.....	1 50

STONE (GRANITE MONUMENTS).

Architect.....	1	.....	3 25
Blacksmiths.....	5	.....	2 25
Blacksmiths.....	6	.....	1 75
Engineer.....	1	.....	1 75
Foreman.....	1	.....	3 50
Foremen.....	3	.....	3 00
Laborers.....	12	.....	1 65
Polishers.....	2	.....	1 75
Quarrymen.....	70	.....	1 60
Stonecutters.....	25	.....	3 75
Stonecutters.....	50	.....	2 50
Stonecutters.....	13	.....	1 75
Teamsters.....	4	.....	1 73
Teamster.....	1	.....	1 00

VESSELS (SAILING VESSELS).

Blacksmiths.....	6	.....	1 75
Carpenters, ship.....	4	.....	1 75
Fasteners.....	20	.....	1 62
Foremen.....	4	.....	2 00
Joiners.....	15	.....	1 75
Painters.....	3	.....	1 50
Spar makers.....	4	.....	1 75

VESSELS (SAILING VESSELS).

Blacksmiths.....	10	.....	2 50
Blacksmith's helper.....	1	.....	1 25
Caulkers.....	50	.....	1 75
Carpenters, ship.....	90	.....	1 62
Fasteners.....	20	.....	1 62

Occupations.	Number.		Daily Wages.	
	Male.	Female.	Male.	Female.
Foreman	1	.....	\$4 50	
Foreman.....	1	.....	4 00	
Foreman	1	.....	3 25	
Foreman, assistant.....	1	.....	2 50	
Joiners.....	35	.....	1 62	
Mill hand.....	1	.....	2 00	
Mill hands.....	9	.....	1 37	
Painters.....	8	.....	1 87	

VESSELS (SAILING VESSELS).

Draughtsman	1	.....	1 50
Engineer	1	.....	1 50
Foundry men.....	5	.....	2 00
Laborer.....	1	.....	1 50
Machinists.....	6	.....	2 00
Pattern makers.....	2	.....	2 25
Teamster	1	.....	1 50

WOOLEN GOODS (CASSIMERE).

Carders.....	.....	2	.....	\$ 75
Engineer	1	.....	1 50	
Finisher	1	.....	1 50	
Foreman	1	.....	3 00	
Picker.....	.....	1	.....	50
Spinner.....	1	.....	1 00	
Washer and scourer	1	.....	1 50	
Weavers .....	.....	2	.....	75

WOOLEN GOODS (CLOTH).

Carders .....	.....	3	.....	67
Designer	1	.....	3 00	
Dresser	1	.....	1 60	

WOOLEN GOODS (CLOTH).

Machinist.....	1	.....	2 00	
Overseers.....	2	.....	2 75	
Overseer	1	.....	2 50	
Overseer	1	.....	2 25	
Picker	1	.....	80	
Second hands	3	.....	1 45	
Second hands	4	.....	1 15	
Spinners	3	.....	1 00	
Undesignated .....	.....	4	.....	75
Weavers .....	.....	13	.....	1 30
Wool sorter	1	.....	1 75	

WOOLEN GOODS (WOMEN'S DRESS GOODS).

Brush boy	1	.....	80	
Carders	a 8	.....	60	
Dyers	2	.....	1 25	
Drier	1	.....	1 10	
Fireman.....	1	.....	1 50	
Fuller	1	.....	1 50	
Fuller's helper.....	1	.....	1 25	
Giggers.....	2	.....	1 10	
Inspectors	2	6	80	75

a, youth.

Occupations.	Number.		Daily Wages.	
	Male.	Female.	Male.	Female.
Loom fixers	2	.....	\$1 75	
Overseers	3	.....	3 00	
Overseers	3	.....	2 25	
Picker	1	.....	1 50	
Presser	1	.....	1 35	
Scourers	3	.....	1 20	
Second hand	1	.....	1 75	
Second hands	3	.....	1 50	
Sewing machine operators .....	.....	2	.....	\$80
Shearers	2	.....	1 25	
Spare hand	1	.....	1 25	
Spinners, mule	8	.....	1 60	
Strippers	2	.....	1 25	
Twister	1	.....	80	
Watchman	1	.....	1 25	
Weavers	50	.....	1 40	
Wool sorters	2	.....	1 75	

WOOLEN GOODS (FLANNEL).

Carders	a	6	.....	85
Carpenter		1	.....	2 00
Drawers		2	.....	1 00
Dyer		1	.....	2 00
Dyer		1	.....	1 25
Fuller		1	.....	1 50
Laborers		30	.....	1 20
Loom fixer		1	.....	1 60
Machinist		1	.....	2 00
Overseer		1	.....	3 00
Overseer		1	.....	2 75
Overseer		1	.....	2 50
Overseer		1	.....	2 25
Picker		1	.....	1 33
Second hand		1	.....	2 00
Second hand		1	.....	1 75
Spinners, mule		13	.....	1 50
Spoolers		5	.....	1 00
Teamster		1	.....	1 25
Warpers		2	.....	2 00
Weavers		35	.....	1 15
Wool sorters		6	.....	1 50

a, youth.

THE GRANITE BUSINESS.

The granite business in Maine has assumed large proportions, and the products of the quarries are widely distributed over the country. The two largest operators are the Bodwell Granite Company of Rockland and the Hallowell Granite Company of Hallowell. Other granite companies in the State do a large amount of work, among which are the Hurricane Granite Company of Rockland, Clark's Island Granite Company of St. George, C. J. Hall of Belfast, North Jay Granite Company of North Jay, Mt. Waldo Granite Works of Frankfort, Yarmouth Granite Company of Yarmouth, James Andrews & Sons of Biddeford, the Collins Granite Company of Blue Hill, and a large number of other companies and individual firms. From the best estimates to be obtained not less than 3000 men are annually employed in quarrying and dressing the products of the granite quarries of this State, to whom is paid an annual sum aggregating \$1,500,000. From the granite quarries of this State has been taken the material for the Court House and Post Office at Baltimore, the State, War and Navy Department and the Treasury Building at Washington, the Custom House at Cincinnati, the Post Office and Custom House at Pittsburg, Pa., the Town Hall at Peabody, Mass., the buildings for the Board of Trade at Chicago, and for the Standard Oil Company at New York, the Post Offices at New York and Philadelphia, the City Hall at Buffalo, N. Y., the Post Office at Hartford, Conn., the County and City Building, and the Home Insurance Building at Chicago, the polished granite for the State House at Indianapolis, Ind., the New York and Brooklyn Bridge and also for a large number of business blocks in the different cities of the country. The granite of the State is generally well adapted for statuary and monumental work, and, because of the different colors that may be quarried, almost anything in the character of monumental work can be executed. At Hallowell the granite is so white that it has become celebrated for

its color ; at Jonesboro' the granite is of a light gray color ; at Jonesport and on the Island of Mt. Desert red granite is found, and at St. George, Addison, and Columbia Falls, black granite is found. A large part of the black granite used for the rustic fence about the capitol at Washington was furnished from Columbia and St. George. Among the noted monuments which have been constructed from Maine granite are the Pilgrim monument at Plymouth, Mass., the Yorktown monument, the General Wood monument at Troy, N. Y., the Soldier's monument on Boston Common, the Stephen A. Douglass monument at Chicago, the Odd Fellows monument at Boston, the mausoleum and monument for Dr. Gibson at Jamestown, Pa., the Smith monument at Philadelphia, and numerous other large individual monuments in the great cities of the United States. The cutting of paving blocks forms no small part of the work done among the quarries of this State, and it is estimated that from fifty to one hundred million paving blocks are annually cut and shipped from Maine. These blocks are shipped as far west as Minnesota, Ohio, Indiana and Wisconsin, and from the location of some of the quarries, and favorable opportunities for shipping their products, it has often been found possible to compete with quarries within seventy-five miles of the places to which shipments are made, on even such coarse work as paving blocks and granite for other stone work and for sewer purposes.

LABOR TROUBLES.

During the year there has been a number of strikes among the laboring men of the State, but with one exception they have been soon adjusted. The exception mentioned was at Lewiston, and resulted in the closing of the Bates Mill, employing 1850 hands, for a period of seven weeks. The Knights of Labor had nothing to do with originating the strike, but became involved in the matter during the adjustment of the difficulty. The strike occurred February 4, and was caused by one of the loom fixers, Mr. Dalton, becoming aggrieved because the agent of the mill had put a man at work upon his section to assist in keeping up the work. Mr. Dalton left the mill and the other members of the Loom Fixers' Union also stopping work, the mill was closed by the agent. The Knights of Labor took hold of the matter and endeavored to effect a settlement favorable to that organization, but the agent, Mr. H. L. Pratt, was instructed by Mr. J. Edwards of Boston, treasurer of the corporation, to "resist to an end any and all propositions which have as a condition Mr. Dalton's return." Subsequently a committee of the Knights of Labor recommended to the loom fixers that they return to work without Mr. Dalton, but the advice was unheeded and the mill continued to remain idle. On March 6th the District Executive Board of the Knights of Labor ordered all members of that organization who were locked out to stay out, and all who were working were ordered to stop work till further notice. Aid was also offered those who wished to leave the city and had not the means to do so. This order followed an attempt on the part of the District Executive Committee to have Mr. Pratt submit to them for "arbitration and approval" a new price list he had prepared since the mill was closed and which was an advance over the previous scale of wages paid the employes by the corporation. There was no disposition by Mr. Pratt to prevent any one from acquiring information regarding the new rate of wages, as he offered

to give such information to any employe who would call personally for the same. On March 10th the Executive Committee addressed a letter to Treasurer Edwards at Boston, asking that the matter be settled by reference to three outside parties, but no other notice was taken of the request than to refer the committee to Mr. Pratt, and on March 19th that gentleman was waited upon by the committee. In reply he handed them a letter in which he spoke as follows :

“I have no objection in stating to you now that a general advance of 10 per cent has been made in our price lists, the total increase on the pay roll being fully 12½ per cent. The prices as made will continue in force till the conditions of business warrant a change, at which time a full two-weeks’ notice of any change will be given. When we resume operations we shall hire at the new prices as arranged all that apply for work, not discriminating against any that went out when these mills ceased operations, February 4 last, with the single exception of Mr. Dalton, as stated in my previous communication. Nor shall we discriminate against any member of the Knights of Labor, as stated in my letter of March 4, nor allow such discrimination to be made by others in the employ of this company. I wish it understood that all of our old employes, as stated, who ceased work February 4 will be given their old places and old looms back again, if they apply for the same within a reasonable time after the mills resume operations. Regarding those men that left their work March 6 last, I have to say that those vacancies thus caused having been filled, and my word of honor being pledged to the men that stood by us in the emergency and protected our property that they should retain their positions if they desired to do so, it will readily be seen that I cannot break faith with those men now so employed; but should any vacancies exist in the future or should there be any other vacancies about the mills that those men who left us March 6 should apply for, I will favorably consider such applications.”

March 20th the Executive Committee notified Mr. Pratt that they would order the employes back to work, which was done and the mills were again started up the following week. During the seven weeks the mills stood idle \$100,000 was lost to the employes, which they would otherwise have received in wages, and nothing was gained by either of the organizations of Knights of Labor or Loom Fixers’ Union.

In February, 1886, a strike was entered into by the Knights of Labor at Rockland, employed as lime burners, to secure an advance of wages, and all the lime kilns of Rockland and Camden had their fires put out for a period of several weeks, till an agreement was entered into between the owners of the kilns and the Knights of Labor. Several meetings were held for that purpose. The Camden

manufacturers were the first to sign the agreement, and soon after the Rockland manufacturers succumbed to the situation. The following is the Rockland agreement:

First,—That all men employed on or about the kilns, wharves and sheds shall receive \$2 per day, excepting rock breakers, who shall receive \$11 per week (of seven days' work).

Second,—That on all kilns producing less than 950 casks per week three men shall be employed below, and on all kilns producing that quantity or more, four men shall be employed below.

Third,—That all men engaged in quarrying rock shall receive \$2.25 per day, and men who handle powder in said quarries shall receive \$2.50 per day.

Fourth,—That all teams engaged in hauling rock shall receive one cent per cask advance over prices paid in 1885.

Fifth,—That all coopers shall be paid for making casks with two machine heads seven cents per cask.

Sixth,—That all men employed in the manufacture and production of lime shall be paid for their labor weekly and in cash; provided, that receipts bills for goods or cash procured of employers by employes during the current week shall be considered as cash for the purposes of this agreement.

Seventh,—That all employes shall be reinstated in their old places, and, in hiring new help, Knights of Labor and men working under the control of the Order shall have the preference.

Eighth,—Any employe may be discharged for incompetency, such cases to be decided upon by the Agent of kiln and the Local Executive Board.

Ninth,—That the said District Executive Board will not countenance any demand or advance made by the local assemblies here in any of the departments of labor connected with the lime industry, but agree that the foregoing stipulations and agreements shall be binding upon both parties to this agreement until February 1, 1887.

The agreement signed by the lime manufacturers of Camden is about the same as the above except wages are a little more favorable to the manufacturers.

The Rockland agreement was a modification of one previously submitted, and reduced the wages for rock breakers called for at that time from \$12 to \$11 per week, and provided that three men should be employed below on kilns producing 950 casks per week instead of on kilns producing 900 casks, and that rock haulers should receive an advance of one cent per cask. The kilns in the county remained idle about four weeks and entailed an aggregate loss of wages for the employes upon the kilns alone of \$135,000 during that time. The owners of the kilns found themselves obliged to

yield to the demands made upon them in order that they might retain their markets for lime, as markets once lost are very difficult to be regained. Although it was supposed that by signing the above agreement all labor troubles connected with the manufacture of lime would be settled for one year, dissatisfaction again arose on the part of the Knights of Labor, and June 10th an endeavor was made by the members of that organization to stop work upon the kilns of Francis Cobb & Co. and Almon Bird, because they used lime rock dug and hauled by men who were not members of the Knights of Labor organization. Failing to accomplish the result aimed at by this action, an attempt was made to secure a national boycott upon their product of lime, but so far as can be learned neither firm has suffered any injury because of such action.

The labor troubles of Rockland were not wholly confined to the manufacture of lime, but an attempt was made to secure a general increase in wages in other employments, and compel employers to give the preference to members of the Knights of Labor organization. The results aimed at were not generally secured.

On May 1st the weavers in the employ of the Dexter Woolen Mills entered upon a strike that resulted in a rearrangement of their wages. The hands remained idle about one day. The original cause of the strike goes back to April, 1885, when, owing to a growing carelessness in the matter of weaving, the company felt obliged to fix a penalty for poor work, and therefore made a discount of ten per cent from the regular price. At the same time a premium was offered of twenty-five cents each for all perfect pieces of goods, which in effect gave the old prices for perfect work. This arrangement did not prove satisfactory to the weavers, and they made a demand that the discount should be removed, which not being complied with, the hands left their work. At a conference between the Superintendent and the workmen the former offered to restore six-tenths of the ten per cent discount and at the same time withdraw the twenty-five cents premium. This arrangement was accepted, though the difference, if any, was in favor of the mill.

In June, 1885, a strike of cutters and lasters belonging to the Knights of Labor occurred in the shoe factory of the Keene Bros. at Skowhegan, and continued a source of disturbance till the latter part of July of this year. The strike originated in an attempt by the firm to prevent the factory from getting into the control of labor unions, by discharging several of the employes. Non-union men

were employed in the place of those discharged, and the factory continued to run, although there was a decreased amount of work performed. Finally, in order to bring the firm to terms, the Knights of Labor caused a boycott to be placed upon the goods of the firm, which resulted in the firm signing an agreement to discharge the cutters and lasters in their employ, and to reinstate the members of the Knights of Labor who had been discharged. No discharges were, however, made by the firm, because of the trouble experienced in their negotiations with the labor organizations in Lynn, where their other factory is located, in securing the adoption of a scale of wages. In July, 1886, the firm agreed to leave the matter to the General Executive Board of Knights of Labor for settlement, and to abide by their decision. In due time a decision was rendered adverse to the firm, as follows :

PHILADELPHIA, Pa., July 20, 1886.

To whom it may concern :

In pursuance of an agreement entered into by Keene Brothers, Richard Nagle, District Master Workman of Assembly 77, O. C. Phillips, District Master Workman of Assembly 86, and C. H. Leach and Edward S. Daley of the Lynn Protective Union, to leave the settlement of the difficulties existing between laborers and Keene Brothers to the General Executive Board of the Knights of Labor and abide by their decision, therefore, after carefully considering the evidence submitted by all parties to the controversy, and, being desirous of restoring peace, harmony, and justice to all concerned, we respectfully render the following decision :

That, inasmuch as a certain agreement made on April 6, 1886, between Keene Brothers and officers of District Assembly 86 evidently has not been lived up to, it is null, and void. It is also evident to our minds, upon examination of the evidence taken, that the discharge of the thirty-nine lasters resulted from the fact that the impression prevailed in the town of Skowhegan that it was not desirable to retain Knights of Labor in the Keene Brothers' employ in the Skowhegan factory. Their discharge was in direct violation of the rights guaranteed to American citizens. To restore to these discharged men their rights, of which they have been deprived, we order their immediate reinstatement in their former places, and the suspension, for the space of three months, of all who have been employed as cutters and lasters in the Skowhegan factory of the Keene Brothers. And we also order that the discharged men in Lynn, Mass., be allowed to resume their former places without prejudice. We further decide that none of the men so restored in either the Skowhegan or Lynn factories shall be discharged to make room for those suspended in accordance with this decision. Nothing, however, in this decision shall prevent the suspended men from being employed after the term of the suspension has expired, provided the firm of Keene Brothers require additional help

at that time. The firm is at liberty to employ cutters in the Skowhegan factory, providing the cutters of their Lynn factory have the preference.

By order of the General Executive Board.

FREDERICK TURNER, Secretary.

In accordance with this decision, on July 20th, seventy cutters and lasters were discharged from the factory, and Knights of Labor employed in their places. It would be very difficult to estimate the amount of money lost to employes in the Skowhegan factory during the trouble, because the firm was having a somewhat similar trouble in their factory at Lynn. There is, however, no doubt but that a good many more thousands of dollars would have been paid out in Skowhegan for labor had there been no trouble, or had the matter been promptly adjusted by the parties immediately interested. When in full operation about 400 men should be employed, with a monthly pay-roll aggregating \$12,000. Since July very little work has been done in the factory, yet in spite of the circumstances a new demand for an increase of wages was made on the firm about the first of last November. The estimated loss of wages that would have been paid to employes in Skowhegan if the operation of the factory had not been disturbed is \$30,000.

In March, 1886, some of the spinners employed in the Cabot Mill at Brunswick struck for an increase of wages. The strike lasted only about two days and did not cause any suspension of work in other departments of the mill. The trouble ended by the employes returning to work without securing the desired increase.

May 25, 1886, the Lasters' Union demanded an increase of wages in the shoe factory of the Messrs. Cummings at South Berwick, which was refused and the factory shut down, thus turning about 300 hands out of employment. June 7th the firm yielded to the lasters' demands and started up their factory. The loss of wages during this suspension was about \$3000.

June 30, 1886, the employes of Joshua Holland, manufacturer of bed blankets, at Limerick, struck and went out of the mill without making any demand upon the firm. Most of the hands belonged to the Knights of Labor. They remained out about four weeks, when the mill was started with about half a crew. The leaders of the movement have not been taken back into the mill. The firm has never cut down the wages paid to their employes, and they have remained the same for ten years, being about fifteen per cent in advance of what is paid by several other firms for the same class of work.

In April, 1886, J. F. Parkhurst & Son of Bangor had several men in their employ strike for a ten per cent advance of wages. The men belonged to the Knights of Labor, and when the firm hired new men in their places a local boycott was placed upon the goods manufactured by the firm. No attention was paid to the matter by Messrs. Parkhurst & Son, and the business of the firm has not suffered on account of the trouble. The business followed by the firm is the manufacture of trunks and bags.

In April, 1886, a strike occurred among the men and boys employed in the picker and card rooms of the Edwards Manufacturing Co., Augusta, for an advance of wages. The mills went on running as usual, the strikers' places being filled with new men. In July the mule spinners employed in the same mills also struck for an advance of wages. The proposition was made the men to work by the piece, receiving as high wages as are paid elsewhere, and the matter was thus satisfactorily adjusted, so that the men lost only two days' time.

In April, 1886, several of the mule spinners in the Continental Mill, Lewiston, refused to work one morning because they were asked to start their mules a few minutes before six o'clock, so as to prevent the speed from running down when all the machinery in the mill was started. The mules were run by other hands in the room during the day, and new spinners employed to fill the places made vacant by those who went out.

In May, 1886, a strike occurred in the Georges River Mills, Warren, by which the mill stood idle for about a couple of months. The origin of the difficulty was the failure of the Local Assembly of Knights of Labor to agree with the Superintendent upon matters pertaining to a reduction in working hours and an increase of pay of the operatives. At the time the strike occurred Superintendent Walker was preparing for a trip to Scotland, which was subsequently made, the overseers having the following order, dated May 10th, left with them for starting the mill during his absence :

OFFICE GEORGES RIVER MILLS, }
May 10, 1886. }

To the Overseers :—In consequence of my leaving home on a vacation I have thought it best to give or leave with you my instructions and conditions on which work may be resumed—namely :

When a sufficient number of help can be obtained to enable you to start up not less than one-half of the machinery in each department of the mill at one time, you will do so, and the mill must be run as it always has before, without any dictation on the part of those employed, or others.

Should any or all of the late help see fit to return, use them kindly; treat them as well as you know how; make no distinction as to what "Order" any man or woman may belong to.

The mill shall now be run on the ten-hour system, stopping at noon on Saturdays. All help in the mill shall be paid the same for 10 hours as for 11 hours. To the weavers' price-list shall be added 10 per cent. As to the two-weekly system of payments, this shall be adopted on my return home. On the ten-hour system no time is allowed to wash up; all help who may desire to do so can do so after the hours of labor.

I hope you will act in harmony together, one with another. I wish that things might have been different at this time, as it would have been more pleasant to leave home, had all of the mill been running full blast, as usual. Still, this pause may do good to all concerned. I hope it may. With the kindest regards to you all, I remain, Yours most truly,

THOS. WALKER, Supt.

July 7th arrangements were made for starting up the mill, and that portion of the help returned who were not instrumental in causing the strike. The mill was, however, kept running and additional help secured, till the mill was fully equipped in all its departments. The total loss to employes was about \$3,500.

May 1, 1886, the shoe factory of Rice & Hutchins at Warren shut down, pending a settlement of the demand by the Lasters' Union for an advance of wages, and the demand of the Knights of Labor for a readjustment of wages. The former demand was settled by arbitration, and the latter by a readjustment of prices. The result was a small advance over former prices. June 1st the factory was again started. The loss of wages on account of the trouble was about \$3,500.

In June, 1886, the employes of the Davis Shoe Company at Kennebunk made a demand upon the firm for an increase of wages, and after consultation a price list was adopted without disagreement or loss of time.

In August, 1885, the lasters employed by B. F. Spinney & Co., shoe manufacturers, of Norway, asked an increase of wages, which was granted, although it compelled the firm to pay more for the same class of work than any other firm in Maine. Subsequently the Knights of Labor tried to get control of the factory in Norway as well as the factory operated by the same firm in Lynn. No concessions were, however, made to the organization by the firm, nor was there any disposition to discriminate against the members of that order. During the contest between the firm and the Knights of Labor organization the firm found that it would be for its advantage to remove its

business from Lynn to Norway, and the same was done as soon as a new factory could be erected. The Knights of Labor secured a national boycott against the products of the firm, but no ill effects have been felt as a consequence of that action. In their endeavor to manage their business independent of the demands of any labor organization the people of the town of Norway heartily co-operated with the firm, and it is undoubtedly largely due to their action that the town, instead of being injured by the demands made upon the firm of B. F. Spinney & Co., was benefited by the removal of the firm's entire business to Norway.

In May, 1886, the Knights of Labor employed by the Somerset Fibre Company at Fairfield demanded of the firm an increase of wages, but instead of securing this the men were at once discharged, with most of the other hands belonging to the organization. All the Knights of Labor employed by the Kennebec Fibre Company at Benton were also discharged at the same time. New men were secured to fill the places made vacant by this action, and neither company has suffered from its action.

In March, 1886, the Knights of Labor at Bath made a demand upon the New England Ship-Building Company of that city for an advanced schedule of wages, which was granted by the company because of the necessity to finish the vessels then under contract in their yard. On September 4th, following, the company found it impossible to longer pay the rate of wages demanded of them, and announced a cut-down of wages of ship carpenters of twenty-five cents per day, to go into effect the following Monday. The matter was referred to the Executive Board of the Knights of Labor, who, failing to promptly adjust matters with the firm, ordered all members of that organization to cease work, both in the ship-yard and in the iron works, till a settlement was effected, and as a result no further work was performed till Tuesday, October 5th, when the Knights accepted a proposition made by the company to pay first-class mechanics in the ship-yard \$1.75 per day and the second-class workmen \$1.50 per day till January 1, 1887, and from that date till March 1st both classes to receive \$1.50 per day. On this basis work was again resumed. The loss in wages to the employes of the company because of the trouble was about \$7,000.

In May, 1886, the employes of the Richards Paper Company at Gardiner demanded an increase of wages, and the mill was shut down for a period of six weeks, when operations were again resumed at the old rate of wages. The employes of the mill lost in wages

during the idle period about \$27,000, and a considerable additional amount has been lost in consequence of the delay that has been occasioned in completing some improvements for increasing the capacity of the mill.

About the first of April the employes of H. W. Jewett & Co., lumber manufacturers at Gardiner, demanded an increase of wages, which was conceded by the firm. Subsequently a demand was made for the same pay for ten hours' work as they had received for eleven hours in 1885. This matter was finally settled by both the firm and the Executive Committee of the Knights of Labor signing an agreement to the effect that the men should be paid the wages demanded for ten hours' work, provided the other mills upon the Kennebec River also worked ten hours per day and paid the same proportional prices. The total loss to the employes in wages during the time the mill stood idle pending a settlement of the matter was \$2,353. The Knights of Labor endeavored to secure a readjustment of wages in the other lumber mills at Gardiner and Hallowell, but failed, and the mills were operated the same number of hours and with the same rate of wages as were paid in 1885. While the matter remained unsettled the employes of the mills lost about \$15,000 in wages which they would otherwise have received. In June Messrs. Jewett & Co. took advantage of the section of their agreement with the Knights of Labor which stipulated that if the other lumber manufacturers did not conform to the same terms imposed upon them they should receive back from their employes one-eleventh of the wages paid for the ten hours' work per day. The employes then found that the Executive Committee of the Knights of Labor had in reality reduced their wages, and as the firm continued to work only ten hours per day during the season the men have received only ten-elevenths as much wages as they would have received had there been no attempt to force the firm to pay increased wages for only ten hours' work.

During the past year there have been three strikes in the shoe factory of Kimball Brothers of Gardiner, one of which was caused by the Lasters' Union and the others by the Knights of Labor. The amount of time lost was but a few days, yet the loss to the employes was about \$1,500.

In 1885 trouble occurred in the shoe factory of Wm. F. Morgan & Co. at Richmond, regarding the price to be paid for lasting boots, which was settled in February, 1886, by arbitration between the firm and the Knights of Labor, with a scale of prices to run until July,

1886. Under this scale, however, the firm found itself unable to compete with other manufacturers and only a small amount of work was performed at Richmond, the balance of the firm's business being done in its factories outside the State. Since last July work has been increased until the factory was being worked to about its full capacity. The estimated loss to employes in Richmond, in wages, for the period the firm found itself unable to operate, is \$31,400.

In addition to the above there have been a number of minor strikes which have had little effect upon the several localities in which they occurred. Among these were the following: Strike of the men employed by Thomas Shanahan, laying pipes for the Portland Water Company, for an increase of wages; of Quinn & Co., boiler makers, of Portland, for an increase of wages; of the cigar makers of Thomas Carey of Portland; of the cigar makers of Fenderson & Cole of Biddeford; of the Italian laborers employed on the Calais Water Works; of the workmen employed by H. H. Harvey of Augusta; of the granite workers employed by C. J. Hall of Belfast; of the laborers employed upon the Limerock Railroad at Rockport. The stevedores and coal heavers of Bath also had trouble over a readjustment of the wages paid for their work in the spring of 1886, and for some weeks their action seriously interfered with the business of that port. The matter was finally settled by both sides making concessions.

The aggregate losses suffered by the laboring people of this State during the past year, on account of strikes, are not far from \$250,000.

MAINE'S FUTURE PROSPERITY.

The comparative figures that have been presented in previous pages indicate a general progress in manufacturing development. This progress has not, however, been so rapid as it should have been considering the facilities afforded for manufacturing purposes. The State has abundant latent wealth in the matter of water powers, but needs the development of transportation facilities, so that raw products can be brought to manufacturing localities at such reasonable rates that capitalists will find it for their advantage to invest their money in the erection of factories within the borders of this State. Encouragement in this direction cannot come too early. The South and West are rapidly developing their manufacturing facilities, and with the advantage of having raw materials near at hand they will soon be enabled to provide their markets with the very class of manufactures that New England and Maine have been noted for. The East has, however, the advantage of experience, and with proper direction that advantage can be maintained by the development of those industries requiring the highest skill. There is no reason why the best of broadcloths, and the finest tools, and other products requiring the most intelligent skill, should not be manufactured here. If the opportunity of encouraging such industries as our skilled labor is fitted for is neglected till such a class of products can be produced cheaper and with the requisite abundance in other sections of the country, then Maine will be compelled to stand still and be content with the coarser kinds of manufacturing and a slow development that will fail to encourage the rising generations to remain at home, and perpetuate and improve upon the industrial development of their fathers. The disposition that has been manifested during the past two or three years to invite manufacturers to locate in Maine towns is a gratifying indication of an awakening of the present population

The population of the State is increasing very slowly, as will be noticed by the following comparison between 1870 and 1880 :

Counties.	Native.		Foreign.	
	1880.	1870.	1880.	1870.
Androscoggin.....	36,807	32,236	8,235	3,630
Aroostook.....	32,319	22,002	9,381	7,607
Cumberland.....	75,723	72,192	10,636	9,839
Franklin.....	17,855	18,511	325	296
Hancock.....	37,191	35,547	938	948
Kennebec.....	49,560	50,914	3,498	2,289
Knox.....	31,474	29,745	1,389	1,078
Lincoln.....	24,326	24,973	495	624
Oxford.....	32,029	32,920	598	568
Penobscot.....	64,467	68,183	6,009	6,967
Piscataquis.....	14,246	13,942	626	461
Sagadahoc.....	18,212	17,968	1,060	835
Somerset.....	31,059	33,245	1,274	1,366
Washington.....	37,626	36,118	6,858	7,225
Waldo.....	31,834	33,887	629	635
York.....	55,325	55,661	6,932	4,513
Totals.....	590,053	578,034	58,883	48,881

From this statement it appears that in several counties there was really a falling off in the population, and nearly all the increase reported for the entire State occurred in Aroostook County—the county most remote from the markets of New England. This county has been rendered accessible by the construction of the European and North American section of the Maine Central Railroad and the New Brunswick Railway, and this accessibility has stimulated the above increase in population. The construction of the International Railroad across northern Maine will render another large section of the State accessible to settlers. Considering the slow development now going on in the State, it becomes quite a pertinent question whether everything is being done to promote the prosperity of the State that it is possible to do. A large proportion of the capital invested in cotton and woolen manufacturing in Maine has come from outside the State, attracted hither by reason of advantageous opportunities for manufacturing. Other industries will also be promoted as fast as it can be proved that Maine offers better attractions than other States, and it is towards the furnishing of such proof that the public spirit of the State should be directed. The improvements that have been made in machinery during the past decade enable small manufactories to be located on water powers that years ago would have been totally inadequate for the purposes required. For this reason small water powers are becoming of increased value. Steam is, however, be-

coming each year a greater factor for manufacturing purposes, and an advantageous location is usually considered an offset to the increased expense of its use. In inviting manufacturers to come to Maine care should be exercised in the terms offered for a change of location. Because they are manufacturers should not be a sufficient reason for erecting a factory at large expense and then leasing it to a firm for a merely nominal rental, with no guarantee that the factory will be operated. There are at the present time in this State a number of instances of such business contracts, and the proprietors of the factories would be unable to break their lease or to compel the lessee to operate the factory should it be decided that work could be done more advantageously elsewhere. Both parties to such a lease should be willing to make liberal terms and such conditions should be imposed as will make the erection and lease of a factory of guaranteed advantage to the town as well as to the lessee into whose hands the property is placed.

CO-OPERATION AND PROFIT SHARING.

Previous to this year there has been no systematic attempt by any company or manufacturing corporation in Maine, so far as can be learned, to divide profits with employes. Experiments have been made in other States, but they have frequently proved unsatisfactory and have been abandoned after a few years' trial. Last year the Massachusetts Bureau of Statistics investigated this subject, and, though a large number of successful co-operative establishments were found to exist in other countries, but one instance was cited of a successful co-operative concern in New England, and that was the Arlington Co-Operative Association, at Lawrence, Mass. "This association," says Mr. Wright, "is limited to employes of the Arlington Mills. Officers are elected annually, consisting of a secretary, treasurer and ten directors, one of whom is chosen president by the Board, and regular quarterly meetings are held. Special meetings may be called by the president with the consent of a majority of the directors, and must be called upon the written request of ten members. Auditors are chosen annually by the stockholders by ballot. The manager of the store is selected by the directors and is at present a thoroughly competent person, trained in the principles of distributive co-operation in England. Three members of the board of directors constitute an advisory committee whose duty it is to consult with the manager as to purchases of stock, and to approve all bills before the same are paid by the treasurer. The latter officer is placed under bonds. The manager is held responsible for the correct accounting of stock in trade, makes a daily report of sales and accounts to the treasurer, and takes account of stock quarterly. He gives such bonds as the directors require for the faithful performance of his duties. Members may hold from one to two hundred shares of stock, the par value of which is five dollars. Members on joining pay an initiation

fee of fifty cents, all sums so received being carried to the sinking fund, to which fund is also carried not less than ten per cent of profits annually. Under the rules the sinking fund is to be allowed to accumulate until it shall amount to thirty per cent in excess of the capital stock. Amounts carried to the sinking fund, and other sums in excess of the business needs of the association, are placed on deposit in the savings bank until sufficient in the aggregate to purchase five shares of Arlington Mills stock, when the deposit, at the discretion of the directors, may be withdrawn and invested in such stock under such provisions as the treasurer of the corporation and the State law may require. This provision as to investments, taken together with the fact that members must be employes of the Arlington corporation, introduces indirectly a productive element. The cash system is enforced. Sales are made at the average retail market prices. Each stockholder has one vote in business meetings. After providing for the sinking fund, interest on capital stock at the rate of five per cent annually, and the payment of taxes, profits are divided quarterly in proportion to the purchases of the recipients, non-members sharing at half the rate allowed to members. After one dollar has been paid in on stock subscribed for, the subscriber is entitled to a full dividend. Dividends and interest declared on stock may remain on deposit. Interest on money paid in for shares commences on the first of each month. No interest is paid on shares withdrawn before the end of the quarter. When the undrawn dividends and interest placed to the credit of any person amount to the par value of one share, interest is declared on the accumulation in the same manner as provided for money paid in for shares, provided that such accumulation, together with the original shares invested, shall not exceed the par value of two hundred shares.

The Association was incorporated July 8, 1884. Business was begun September 15, 1884, and the first fiscal year was closed October 1, 1885. The average capital for the year, \$3,320, was turned over more than eleven times, and thus realized a return of nearly 74 per cent in less than thirteen months. The gross profit amounted to 16.02 per cent on sales; salaries and expenses 10.07 per cent on sales; net profit 5.95 per cent on sales; the profits divided represented an average on checks returned of 6.24 per cent for full dividend and 3.12 per cent for half dividend; the sinking fund represented more than 14 per cent of net profits besides initiation fees; the interest was 5 per cent on capital, and the total return on capital

was 73.68 per cent. At the close of the first year's business the share capital represented 664 shares; merchandise in stock, including dry goods and fuel, amounted to \$2,554.27; fixtures, \$767.28; cash in bank, \$1,249.26."

In Maine, co-operative establishments have generally been connected with some organization such as the Patrons of Husbandry, under whose auspices several stores have been established, and have had a fair measure of success. Events have, however, proved that it is not necessary for success that a co-operative store should be connected with any organization. The Arlington has proved a very successful venture at Lawrence, Mass., and another very successful establishment is in operation at Lisbon Falls, in this State. As the latter association differs a little from the system under which the Arlington Co-Operative Association is conducted it will be interesting to others contemplating such business enterprises to note the methods under which a successful business has been built up in a small manufacturing village in our midst. Considering the success that has followed these enterprises, the one located in a large city, and the other in a small manufacturing village, there appears to be no reasonable doubt but that the systems adopted are applicable to any locality, and afford an opportunity for people of small means to profitably invest such amounts of money as may be necessary for the conduct of such business enterprises.

The Lisbon Falls Co-Operative Association, in March, 1885, began the operation of a grocery store. The principal object of the Association, as stated in its by-laws, is "to place within the power of the working classes the means to control their own labor, thereby removing the cause of that antagonism between capital and labor which so often proves injurious to our industrial interests." The grocery store which has been opened is intended as a basis or foundation for the future operations of this industrial system. At the close of every four months an account of stock on hand is taken, and after paying the legal interest for the use of capital, the wages of labor and current expenses, what surplus profits remain are equitably apportioned between the capital invested. All purchases and sales of merchandise are for cash, credit only being given to members for thirty days. The capital of the Association is divided into shares of five dollars each, of which no member is allowed to hold more than twenty at one time, and no share is allowed to be sold or transferred without consent of the Board of Directors. Shares may be with-

drawn at their par value, on demand, or, if the Board of Directors shall require, after thirty days' notice has been given; provided that no share shall be withdrawn at the expense or to the detriment of the remaining share-holders. Each member receives out of the surplus receipts of the Association, after providing for the expenses thereof, six per cent per annum, which is declared at the semi-annual general meetings of the Association, and interest is computed from the first of each month. The net profits of all the business carried on by the Association are divided semi-annually amongst all members of the Association in proportion to the amount of their purchases for that quarter. At the meetings of the Association each member has but one vote, without regard to the number of shares held. Every person appointed to any office touching the receipt, management or expenditures of money for the purposes of the Association has to give such security as the Board of Directors may prescribe. The officers of the Association consist of a president, secretary, treasurer, and board of three directors, chosen annually, by ballot. No person is eligible as a director who has not been a member of the Association six months. Two auditors are also elected for one year, one at the first and one at the third quarterly meeting in each year, and they are ineligible for re-election until one quarterly meeting has elapsed.

The Association was organized February 16, 1885, and incorporated March 21, 1885. When operations were begun there were but twenty-six stockholders and about \$600 capital, but at the present time there are about a hundred stockholders, and the capital and goods have increased to \$9000. The first semi-annual dividend declared to stockholders was ten per cent; second six months, twelve per cent, and six per cent on the capital stock. A small amount was also set aside as a sinking fund to meet any losses that may occur to the Association.

PROFIT SHARING.

Profit sharing has been quite extensively tried in the conduct of manufacturing operations. The term profit sharing may be applied to any arrangement whereby employes are given a share of the profits of a business in addition to their regular wages, or it may be used where a division of profits takes the place of wages. The system has not always proved a benefit in the management of business, and various other expedients have been resorted to by manufacturers to

encourage their employes to faithful work and the economical handling of whatever materials may be entrusted to their care. As attempts have been made this year to introduce the system of profit sharing into business in this State, it will be of interest to consider a few examples of what has been done in other States.

IN NEW YORK, A. S. Cameron & Co., manufacturers of steam pumping machinery, began to divide profits with their employes and continued the practice till 1877. During this period wages were not reduced, but instead were several times increased, although the bonus was four and one-half per cent. This co-operative system was ended by the death of Mr. Cameron. At the close of 1869 Brewster & Co., carriage builders, of New York, also formed an industrial partnership with their employes, which was continued till 1872, when it came to an end by the workmen joining in an eight-hour strike. Ten per cent of the firm's gross profits was divided among the employes in proportion to wages, each employe receiving a share unless he voluntarily left the establishment before the close of the fiscal year. If a discharged employe had earned wages amounting to \$100 he was also entitled to a share of the dividend.

IN RHODE ISLAND, the Peace Dale Manufacturing Company of Peace Dale began an extensive plan of profit sharing in 1878. The goods manufactured are shawls, worsted coatings, cassimeres and other woolen fabrics. The capital stock is \$200,000 and about 450 persons are employed, two-thirds of whom are foreigners. Two-fifths of the whole number are women. In 1879 no dividend was declared. In 1880 five per cent was divided and the same amount in the following year. In 1882 and 1883 dividends of three per cent were declared, but in 1884, 1885 and 1886 there were no dividends.

The wages paid have been as nearly as possible the average rate paid for similar work elsewhere. The system of profit sharing is described by the company in a circular issued in 1878 as follows: "The Peace Dale Manufacturing Company proposes, in each year in which there are surplus profits, to divide a sum among all its employes, which sum shall depend upon the results of the year's business. This sum can not under ordinary circumstances be very large. Before anything can be set apart for it, wages must be paid, interest must be paid, and profit on capital must be paid. Then an amount must be set aside to make good the wear and tear of buildings, to replace worn-out machinery, and to strengthen the reserve funds, that the Company may be able to pass through a year, or a series of years of

depression. The importance of this last is seen in the experience of the past five years, when but for the existence of such reserved funds the mills would have been obliged to stop. Out of what is left after all these things are provided for, the bonus for labor must be taken." Last April the company had a strike in its weave room because, on account of a depression of business, they were not running full time. The matter was soon adjusted by letting some of the looms stand idle and giving full work to the others.

IN NEW JERSEY, the firm of Lister Bros., proprietors of the Passaic Agricultural Chemical Works at Newark, began profit sharing in 1882, but discontinued it after one year, but the firm has for several years made a practice of rewarding faithful service by gifts of money in addition to stipulated wages, and from \$2,000 to \$3,000 per year has been thus divided. In 1882, under the plan of profit sharing, \$15,000 was divided, some of the employes receiving as much as \$250 each in addition to their regular wages. When this plan was abandoned the following year, some of the employes had their wages increased.

IN MINNESOTA, the Pillsbury Flour Mills, at Minneapolis, four years ago adopted a plan of profit sharing which has proved very beneficial to the employes of the firm. The employes are divided into two classes, the first class containing those who have been in the employ of the firm five years, and the second, those occupying positions of special importance, without regard to time employed. In 1885 the wages of the first class were increased by the division of profits about fifty per cent, and of the second class about sixty-five per cent. The amount divided in 1883 was \$25,000; in 1884, \$26,000; in 1885, \$35,000. According to the division of employes, the above amounts have been paid to about one hundred of the eleven hundred hands employed by the firm.

IN MASSACHUSETTS. From 1870 to 1875 thirteen co-operative manufacturing corporations were organized, only two of which are at present in existence. In 1875 ten co-operative corporations were in existence, among which was one, the Somerset Co-Operative Foundry Company, which was organized as far back as 1867 for the purchase and operation of the Boston Stove Foundry. Since the first year the company has done a prosperous business and at least \$50,000 has been expended for improvements, all of which was earned in the business. With the exception of the years 1873, 1875, 1879 and 1880, an annual dividend of ten per cent has been paid.

In 1871 a stock dividend of fifteen per cent was paid. According to the by-laws the capital stock of the company shall consist of \$15,000 divided into one hundred and fifty shares of \$100 each, and no person shall be permitted to hold more than ten shares. There shall be such distribution of the profits or earnings of the Association among the workmen, purchasers and stockholders as shall be described by the by-laws, at such times as therein prescribed and as often as once in twelve months, provided that no distribution shall be declared and paid until a sum equal to at least ten per cent of the net profits shall be appropriated for a contingent or sinking fund, until there shall have accumulated a sum equal to thirty per cent in excess of such capital stock. Any member having shares of stock to sell shall first offer them to the company. In taking apprentices, sons of stockholders shall have the preference, and no member shall be considered a working member except he shall hold five shares, but may be employed by the agent or foreman. Stock owning gives a preference in regard to employment and the sons of stockholders are preferred as apprentices. Most of the stockholders are workmen. Wages are uniform, for the same kind and amount of work, between employes who are stockholders and those who are non-stockholders. Some of the work is done by the day, but piece or job work predominates.

There are five co-operative shoe manufacturing companies in the State, only two of which failed to pay a dividend in 1884. Of the others one paid 10.35 per cent and another 14.15 per cent. The business has been made profitable only by conforming quite closely to the methods pursued by other manufacturing companies.

IN MAINE, a system of profit sharing was introduced last April by Ara Cushman & Co., shoe manufacturers, of Auburn, which is arranged somewhat after the Peace Dale method. The system is stated by Mr. Cushman as follows: "No change is to be made in the former wages paid or the method or basis of adjusting work, but after a fair amount is allowed for interest on capital invested, management of the business, and for risks, depreciation of plant, and other contingencies, whatever profit remains is to be divided between the firm and its employes in the proportion that labor bears to the rest of the cost of the goods. This dividend is to be based on the amount paid to each employe for labor during the year. No one is to be entitled to a dividend who has left the employ of the firm against its wishes or been discharged for any reason other than sickness or want of

work. The management of the business is to be entirely in the hands of the firm, and to be the same as heretofore unless better methods shall be suggested. Three of the employes are selected as representatives, with whom the firm arranges the details of the system, and who will be sufficiently informed about the conditions and results of the business to enable them at the end of the year to report whether the conditions agreed upon have been correctly and faithfully carried out. These representatives are not to disclose or make public any fact concerning the business except the amount or percentage of dividend available for the employes. They shall be persons in whom both the firm and the employes can place the utmost confidence. They must be citizens of Auburn, and two, at least, be owners of property and interested in the growth and prosperity of Auburn. If, with one year's trial this system shall have worked as well as we hope, and is likely to prove practical and satisfactory, we shall, if it is the wish of many of our workmen, change the organization of our firm into a corporation, so that the capital may be represented by shares of stock. We will then set aside a limited part of the stock, or number of shares, for such of the employes to buy as would like to invest their money in that way. The stock thus owned by the employes to receive the same return in interest and dividend as that held by ourselves. In this proposition we now present you, we ask you to run no risks and make no guarantees. For this reason the dividend to you must be smaller than it possibly might be, if you, with us, shared the risks of the business. We intend the wages paid you weekly to be fully an equivalent to you to the amount to be set aside for capital, management and the risks and guarantees of business. If for any reason the plan we propose should not be found to be as satisfactory to you or to ourselves as we hope and expect, we shall be ready and hold ourselves at liberty to discontinue it. We present the proposition after mature thought, with the sincere wish and earnest hope that if accepted and understood, it will be of some pecuniary benefit to you. But we do not wish it to be understood, as we do not claim that it is, a philanthropic or benevolent project. Sound business principles make the only foundation for a permanent and successful business. We mean for ours to continue to have such a basis and for our methods to be in harmony with correct thinking and just and liberal action. We hope it will be an incentive to all to make their services as valuable as possible, and a means of securing to all just and full returns for what

they contribute to the success of the business. If it should prove to be a method by which capital and labor can together achieve better results, and an element in making labor more thoughtful and intelligent, and both capital and labor more considerate of each other's interests, our purposes will be realized."

In 1885 the Keene Bros., shoe manufacturers, of Skowhegan, inaugurated a system of profit sharing which has received the commendation of Hon. Carroll D. Wright, Commissioner of the National Bureau of Statistics and also of the Massachusetts Bureau of Statistics. The system conforms quite closely to that adopted by mutual insurance companies, which at the end of every year make up their books and issue a "certificate of profits" in *pro-rata* proportion to the amount of insurance carried. This certificate is like the stock of a railroad company or other corporation, payable in full and negotiable by transfer from person to person, the same as bank stock or any other security, and having a market value either to hold or sell. Mutual marine insurance companies on this plan have existed in commercial centers for generations. Following the plan of these companies, mutual fire insurance companies for cotton and woolen mills have for years been managed with the highest business ability and have been very successful. As the firm does not care to make public the details of the business, it is not possible to further explain the system here. That the system is as good a one to apply to manufacturing as to insurance enterprises, is apparent from the following endorsement given it by Hon. Carroll D. Wright, than whom there is no better authority in America :

DEPARTMENT OF THE INTERIOR,

BUREAU OF LABOR,
WASHINGTON, D. C., Dec. 7, 1885. }

Messrs. KEENE BROTHERS, LYNN, Mass.

Gentlemen :—Your letter of the 3rd enclosing an account of your co-operative experiments in Maine has been forwarded to me here.

I am very much interested in the adoption of a form of co-operation known as "profit sharing." This, as I understand it, is the principle you have adopted. Simple co-operation applied to production cannot succeed. It lacks the vitality which is essential to business success, but the extended principle of co-operation as it is involved in profit sharing, preserves all the vitality of management, while it secures to the wage-receiving members not only a profit in the results of the combined work of labor and capital, but it secures their interested devotion to the welfare of the whole establishment. By granting certificates of profit you ac-

compish this end. In a nut-shell you have stated the experiment of M. Godin of Guise, in France, a brief account of which you will find in the November Harper's, but I presume you are thoroughly familiar with all such experiments.

In the Seventeenth Annual Report of the Massachusetts Bureau, to be published early in the coming year, you will find a chapter devoted to profit sharing. I only regret that your own experiment has not been carried to such an extent as to give it a place in such report.

Any manufacturer who will do something towards bringing the interests of labor and capital into more positive reciprocal relations than they now hold is a public benefactor and in this respect you are deserving great credit for your courage in this direction and in others. I have long been in the habit of taking an interest in your house, knowing the broad views you entertain. I am, sincerely yours,

CARROLL D. WRIGHT, Commissioner.

Owing to the labor troubles that have prevailed in Skowhegan for over a year, which have prevented the Keene Bros. from running their shoe factory at its full capacity and have otherwise injured their business, the firm has not been able to so successfully demonstrate the advantages of their system of profit sharing as would have been the case had these embarrassments not occurred. The settlement of these matters will prove advantageous to both the firm and its employes.

Profit sharing without wages has been practiced in the coast fisheries of this State for many years. The crews of the vessels are rewarded for their labor in direct proportion to the value of the catch. In cod fishing, each man keeps a separate account of the fish he catches and is paid accordingly. In mackerel and other seine fishing, where it is impossible to keep separate accounts of each man's share, all the members of the crew share the profits equally. The owners furnish the vessel, supplied with all equipments, provisions and fishing gear necessary for the trip, and for their share have one-half of the catch, the other half going to the crew in place of wages. This makes the system strictly co-operative.

REGULATION OF LABOR.

During the last session of the Legislature an attempt was made to secure the enactment of more restrictive legislation regarding the length of a day's work, and the employment of women and minors. Although considerable time was spent by the Judiciary Committee in perfecting the bill, and by the Legislature in a discussion of the merits of the same, no changes were made in the present statute. The present law is pretty comprehensive, and if properly enforced will be found more restrictive than any legislation now existing in the majority of the States. By chapter 82, section 43, page 700 of the Revised Statutes, ten hours of actual labor is made a legal day's work, except in monthly work, or when a longer time is stipulated, or in agricultural employment. By chapter 48, sections 13, 14 and 15, page 439, Revised Statutes, being acts of 1880, chapter 221, no child can be employed in a cotton or woolen factory without attending a public or private school for four months during the year preceding employment, if under 12 years of age, and for three months if between 12 and 15 years of age, the necessary evidence of such schooling being a teacher's certificate made under oath and filed with the employer. Violation on part of employer subjects him to a fine of \$100, half to informer and half to town school fund. No one under 16 years of age shall be employed over ten hours a day. Violation subjects employer to fine of \$100, half to employe and half to the town.

This statute allows corporations to contract with their employes for any length of a day's work desired, and it is in this way that various establishments are now operated more than ten hours per day. By such arrangements the present statute loses its force because corporations or other employers may refuse to employ any person refusing to labor as many hours per day as may be desired, and by such discrimination the laboring people may fail to obtain the benefit that the enactment of the law was intended to convey. In

Massachusetts the law is more restrictive than in almost any other State, and the legislation sought in this State in 1885 was to a certain extent the enactment of the Massachusetts statute that the laboring people of Maine might have the same advantages as their Massachusetts brethren. It is urged by manufacturers that to forbid them from contracting with their employes for extra hours' work is to discriminate against the industries of the State, and will prevent many of them from taking contracts that might otherwise be secured. Very few mills can be speeded higher than at present, and, therefore, not so much work can be performed, however willing employes may be to accomplish as much in ten hours as they now do in a day of eleven hours. The enactment of a law that will prevent the operation of manufactories more than ten hours per day will thus prevent the laboring people from earning as much where they work by the piece as they now do. As an offset to this loss, those favoring the law claim that it is in the interest of humanity because it will prevent the compulsion of laboring people to work more than what constitutes a legal day's work, and because it will enable the laboring people to devote more time to their own improvement. The Legislature will probably be again asked this winter to enact a "ten-hour" law, and to enable interested parties to know what has been done in the interests of labor in other States, the following abstracts of the labor legislation of the country have been compiled:

CALIFORNIA.—Title 15, chapter 1, section 651, paragraph 13,651, code of 1876, provides that persons employing minor children as wards or apprentices shall not work them over eight hours a day, except in vinicultural or horticultural pursuits.

Title 7, chapter 10, section and paragraph 3,244, provides that eight hours are a legal day's work in the absence of a special contract. The next section forbids such special contract in all work done for the State.

COLORADO.—No young person under 12 years of age, or woman or girl of any age is permitted to enter any coal mine to work therein, nor any minor under the age of 16 years, unless he can read and write. Violations of the law are punished by fine from \$100 to \$500. (Chapter 16, General Statutes).

CONNECTICUT.—No child under 14 years of age, who has resided in the United States nine months, can be employed at labor unless he has attended a public or other day school in which instruction is regularly given in the branches of education required in public

schools during twelve weeks, or sixty full school days of the twelve months next preceding the month in which the child is employed, nor unless six weeks' attendance has been consecutive. Any person employing such a child contrary to law is liable to a fine not exceeding \$60. Parent or guardian of child under 14 years of age must furnish employer with a certificate signed by teacher, school visitor, or committee of school, showing lawful school attendance of minor. Employer must require certificate, keep it while the child is employed, and show it during business hours to school visitor, or secretary, or agent of the State Board of Education, and the certificate is evidence. Parent or controller of child falsifying as to age or residence in the United States, or instructing child to make false statements, may be fined as much as \$7 or imprisoned as many as thirty days. (Laws of 1882, chapter 80, p. 162.)

No person in charge of any mechanical or manufacturing business or establishment can employ or suffer to be employed any minor under 15 years of age more than ten hours a day or fifty-eight hours a week. Violation subjects offender to a forfeit of \$50, half to complainant and half to the town. Parent or guardian compelling or permitting employment is liable to a fine of \$10. Eight hours' work is a lawful day's work, unless otherwise agreed. (Title 14, chapter 6, sections 9 and 10, General Statutes of 1875, p. 194, enacted in 1867.)

DAKOTA.—Every owner, stockholder, overseer, employer, clerk or foreman of any manufactory, workshop or other place used for mechanical or manufacturing purposes, who, having control, shall compel any woman or any child under 18 years of age, or permit any child under 14, to labor in any day exceeding ten hours is guilty of a misdemeanor and subject to a fine of from \$10 to \$100. (Ibid, section 739, p. 1261.)

GEORGIA.—Section 1885, code of 1882, being act of 1853-54, p. 37, provides that hours of labor shall be from sunrise to sunset for persons under 21 in all manufacturing establishments and machine shops.

ILLINOIS.—No person under 14 or female of any age is permitted to work in any mine. (Hurd's Revised Statutes of 1885, p. 820.)

Eight hours is a legal day's labor in all mechanical employments, except on farms and when otherwise agreed; this does not apply to service by the day, week, or month, or prevent contracts for longer

hours. (Act of March 5, 1867: Hurd's Revised Statutes, chapter 48, p. 592.)

INDIANA.—The owner, agent, overseer, or foreman of any cotton or woolen factory employing or permitting to be employed any person, male or female, under the age of 18 years in such factory for a longer period than ten hours in any day, shall be fined from \$50 to \$100. (Revised Statutes of 1881, section 2125.)

No boy under 14 years of age can be employed in any mine. Violation punishable by fine up to \$500; but act not to apply to mines employing less than ten men. (Ibid. 5477.)

Children under 12 years of age are not to be employed in the business of manufacturing iron, steel, nails, metals, machinery or tobacco. Children under 12 years of age must not be employed over eight hours a day by those permitted by law to employ them. Violation is punishable by fine of from \$10 to \$100. (Laws of 1885, chapter 88, p. 219.)

IOWA.—No boy under 12 years of age is allowed to work in mines, and where there is any doubt as to his age, parents or guardians must furnish affidavit. Persons violating act are liable to a fine up to \$500 or imprisonment up to six months. (Act of March 18, 1884. Chapter 21, Laws of 1884.)

KANSAS.—No person under 12 years of age shall be employed in mines, and none between 12 and 16, unless the latter can read and write and show by teacher's certificate school attendance at least three months in the previous year. (Act of February 28, 1883. Chapter 117, Laws of 1883.)

MARYLAND.—By chapter 125, acts of 1876, Revised Code, 1878, p. 820, children under 16 years of age must not be employed in any manufacturing establishment over ten hours a day. Violation by employer, parent, or guardian punishable by fine up to \$50.

MASSACHUSETTS.—The act forbidding the employment of minors under 18 years of age, and women, more than ten hours a day, except when necessary to make repairs in the machinery to insure its ordinary running, or where hours are differently apportioned for the sole purpose of making one day's work shorter, and which provides that in no case shall the week's work exceed sixty hours, is amended by making the act apply to "mechanical and mercantile" as well as "manufacturing" establishments on and after July 1, 1883. (Chapter 157, Acts of 1883; but by chapter 275, Acts of 1874, amendatory act does not apply to "mercantile" establishments.)

Chapter 52, section 1, Acts of 1876, being chapter 48, section 1 of the Public Statutes, which prohibited the employment of children under 10 years of age in any manufacturing, mechanical or mercantile establishment under a forfeiture by parent or guardian permitting such employment of from \$20 to \$50 for the use of the public schools, is amended by adding, subject to the same forfeiture, a clause declaring that "no child under 12 years of age shall be so employed during the hours in which the public schools are in session in the city or town in which it resides," which was to take effect July 1, 1883. (Chapter 224, Acts of 1883.) By chapter 222, Acts of 1885, this was further amended by forbidding the employment of children under 12 years of age "at any time during the days" instead of "during the hours" when the public schools are in session.

No minor under 18 years of age shall be employed in laboring in any mercantile establishment more than sixty hours in any one week. Longer employment, unless to make up lost time, is a violation of this act. Persons or corporations having in their employment persons in violation of this act, or failing to post notices in conspicuous places where such persons are employed, stating the number of hours required, not exceeding ten in any one day, and parents or guardians permitting such employment, are liable to a fine of from \$50 to \$100 for each offense. On trials for wrongful employment a sworn statement by minor, and his parent or guardian, made by him at the time of entering employment, as to his age, shall be *prima facie* evidence of the fact. (Chapter 275, Acts of 1884)

Chapter 48, sections 2 to 7, inclusive, provides that no child under 14 years of age shall be employed in any manufactory, mechanical or mercantile establishment, except during the vacations of the public schools, unless during the year preceding such employment he has, for at least twenty weeks, attended some public or private day school; nor shall such employment continue unless such child in each and every year attends school as aforesaid; and no child shall be so employed who does not present a certificate made by or under the direction of the school committee, of his attendance at school as provided. Employers shall require and keep on file a certificate of the age and place of birth of every child under 16 years of age employed, and the amount of his school attendance during the year next preceding such employment. The penalty for employment of children contrary to these provisions is not less than \$20 nor more than \$50. Children under 14 years of age who cannot read and

write are not to be employed while public schools are in session ; parents or guardians permitting such employment are subject to a fine of not less than \$20 nor more than \$50.

MICHIGAN.—No child under 14 years of age shall be employed in any business unless he has attended a public or private day school, taught by a person qualified in primary branches, at least four months out of the twelve next preceding the month of employment, except in districts where there is only a three-months school. A certificate of attendance from a superintendent of school, or a school director, is sufficient if acted upon by the employer in good faith. Making a false certificate is a misdemeanor. Certificates must be deposited with the employer at the time of the employment and be kept on file subject to inspection. No child under 10 years of age shall be employed in any factory, warehouse or workshop where goods are manufactured or prepared for manufacture. No child or young person under 18 years of age, and no woman, shall be employed over ten hours a day or sixty hours a week, and at least one hour shall be allowed in the labor period for dinner.

Ten hours are a legal day's work unless there be an agreement to the contrary, in factories, workshops, salt mills, saw mills, logging or lumber camps, booms or drives, mines or other places used for mechanical, manufacturing or other purposes where men and women are employed. Employers requiring more work shall pay *per diem* rates for over time. Employers taking advantage of the poverty or misfortune of employe or one seeking employment are guilty of a misdemeanor and liable to a fine of from \$5 to \$50 for each offense. This act does not apply to domestic or farm laborers. (Acts of 1885, No. 137, p. 154.)

MINNESOTA.—On all railroad lines the labor of locomotive engineers and firemen shall not exceed eighteen hours in one day, provided that no engineer or fireman shall desert his engine in case of accident or other unavoidable delay. Officer, director, superintendent, master mechanic, foreman, agent or employe compelling such labor, except as herein provided, or in cases of urgent necessity, may be fined from \$25 to \$100. (Acts of 1885, chapter 206, p. 277.)

Chapter 24, Statutes of 1878, provides that children under 18 years of age and women shall not work over ten hours a day in any manufactory or workshop. Any person compelling such work is liable to a fine of from \$10 to \$100. In any manufacturing or

mechanical business ten hours shall be a day's work in the absence of a special contract.

MISSOURI. No male person under 12 years of age, or female of any age, is permitted to work in a coal mine, nor is any boy under 14 years of age, unless he can read and write. (Acts of 1883, p. 83.)

NEW HAMPSHIRE.—No child under 16 years of age shall be employed in a manufacturing establishment unless he has attended a public school, or private day school taught by a person competent to teach common school branches, at least twelve weeks during the preceding year. No child under that age can be so employed except in vacation of the schools in his district, who can not write legibly and read fluently in readers of the grade usually classed as Third Reader. (Chapter 56, Laws of 1881, p. 445.)

Chapter 91, General Laws, section 13, p. 222, provides that persons employing in factories children under the age of 15, without certificate of necessary schooling, are liable to a fine of \$20 for each offense. Chapter 187, General Laws, section 14, provides that no person shall be compelled to work more than ten hours a day, which, in the absence of a special contract, are a legal day's work. Section 15 provides that no minor under the age of 15 shall be employed more than ten hours a day in any manufacturing establishment without the written consent of parent or guardian. Employer violating may be fined \$100. Chapter 21, Laws of 1879, p. 340, provides that no child under the age of 10 years shall be employed by any manufacturing company, under a penalty of from \$20 to \$100, one-half to go to the complainant and one-half to the State.

NEW JERSEY.—No boy under 12 or girl under 14 years of age shall be employed in any factory, mine, workshop or establishment where the manufacture of any kind of goods whatever is carried on. No child between 12 and 15 years of age shall be so employed unless such child has attended public, day or night school, or well-recognized private school, at least five days or evenings in each week for at least twelve consecutive weeks in the twelve months next preceding employment; such attendance may be divided into two terms of six consecutive weeks each, so far as the arrangements of school terms will permit, and unless such child or his parent or guardian shall have presented to the employer a certificate, to be signed by the teacher, giving the name of the parent or guardian, the name and number of schools attended, and number of weeks' attendance:

Provided, that if age be not known, teacher may certify to the best of his ability; and *provided*, that in case of orphan children, where necessity may require, the inspector may permit employment upon the application of the guardian.

No minor under 16 years of age can be employed more than ten hours a day or sixty hours a week in any manufacturing, mercantile or mechanical establishment. (Public Laws of 1885, chapter 188.)

Parents, guardians, or other persons controlling children from 12 to 16 years of age, temporarily discharged from employment to receive instruction, must send them to school while out of employment, unless excused by inspector or school board, under fine of from \$10 to \$25 for first offense, and a fine of \$25 or imprisonment from one to three months for each subsequent offense, fines to go to the school fund. When no school is within two miles of factory or shop where child under 15 is employed, or of his residence, attendance at school temporarily, approved by inspector, is compliance with the law. (Public Laws of 1885, chapter 217.)

NEW YORK.—By Revised Statutes, page 2354, Laws of 1870, chapter 385, it is provided that eight hours shall be a day's work for mechanics, workmen and laborers, except in farm or domestic labor, but overwork for extra pay is permitted. This act applies to those employed by the State or municipality, or employed by persons contracting for State work.

By Revised Statutes, page 1206, Laws of 1874, chapter 421, no child less than 14 years of age shall be employed during school hours, unless such child has attended a public or private day school or been satisfactorily instructed at home for fourteen of the preceding fifty-two weeks of every year. The usual certificate of attendance is provided for, and a fine of \$50 is made the penalty for each violation of the act.

OHIO.—No minor under 12 years of age shall be employed in any factory, workshop or establishment where goods are manufactured, nor under 18 years of age more than ten hours a day, and in no case shall hours of labor exceed sixty a week. Employers must post in every room notices stating the number of hours labor required each day. Violation punishable by fine of from \$50 to \$100, or imprisonment not less than thirty nor more than sixty days, to be prosecuted by inspector of shops and factories for the benefit of the school funds. (Laws of 1885, April 27.)

Section 4024, Revised Statutes, forbids employment of children under 14, residing in the State during preceding school year, under control of parent or guardian, not dependent on their own resources for support, during school hours, unless they have attended school twelve weeks of preceding school year. A certificate of attendance is required. Such employment must not be over forty weeks in the year unless such children furnish employers with certificates showing their exemption from this section, which section does not apply when the nearest school is over two miles from residence.

Section 6986, Revised Statutes, fines from \$5 to \$50 employers compelling women or children under 18, or permitting any child under 14, to work more than ten hours a day in any place used for mechanical or manufacturing purposes.

Section 4365 makes ten hours a legal day's work in any manufacturing or mechanical business, when the contract is silent, and all contracts shall be so construed.

PENNSYLVANIA.—By Public Laws, p. 672, Brightley's Purdon's Digest, 771, ten hours are made a day's work in cotton, woolen, silk, paper, bagging and flax factories, and no minor under 13 to be employed therein under penalty of \$50 for each offense, half to person suing and half to county. No minor between 13 and 16 to be employed more than nine months in the year, or who has not attended school three consecutive months in same year. Parents and guardians permitting employment of children contrary to act forfeit \$50, as above.

By Public Laws of 1855, p. 472, no operative under 21 can be employed more than ten hours a day or sixty hours a week in cotton, silk, woolen, flax, bagging or paper factory. Persons so employing forfeit \$50 to school fund.

By Public Laws of 1868, Brightley's Purdon's Digest, 1009, eight hours between rising and setting of the sun are made a day's work in the absence of an agreement for longer time, which any person may make. Act does not apply to farm labor or service by the year, month or week.

RHODE ISLAND.—No child under 10 years of age shall be employed in any manufacturing or mechanical establishment; parent or guardian permitting employment being liable to a fine up to \$20. No child under 14 years of age shall be so employed except during the vacation of the public schools, unless during preceding year he has attended some public or private day school for at least twelve

weeks, nor shall such employment continue unless there shall be a like attendance each year; but no child can be employed who does not present certificate of such attendance made by or under direction of the school committee. Owners, superintendents, and overseers must require and keep on file certificates of place and date of birth of children under 15 years of age, as nearly accurate as may be, so long as employment of such children continues, and the amount of school attendance for the year preceding employment. Owner, superintendent, or overseer employing, or parent or guardian permitting employment of children under 14 years of age, contrary to this act, are liable to a fine up to \$20. Owner, superintendent or overseer permitting employment of children under 15 years of age, while public schools are in session, who cannot write their names, ages, and places of residence, are liable to a fine of \$20. (Chapter 363. Acts of January, 1883.)

By title 20, chapter 69, section 26, Public Statutes, labor performed in any manufacturing establishment and all mechanical labor during ten hours is a legal day's work, unless otherwise agreed by the parties. By same chapter, section 23, no minor between 12 and 15 can be employed in any manufacturing establishment more than eleven hours a day, nor before 5 A. M. nor after 7.30 P. M.

VERMONT—By section 673, Revised Laws, Acts of 1867, No. 35, it is provided that no child between 10 and 14 years of age, who has resided in the State one year, shall be employed in a mill or factory unless such child has attended a public school three months during the preceding year. A person employing a child in violation of this section shall forfeit from \$10 to \$20, one-half to go to the complainant and one-half to the town.

Section 4320, Revised Laws, No. 36, provides for the punishment of owners, superintendents or overseers of manufacturing and mechanical establishments, who knowingly employ, or permit to work, children under 10 years of age, or employ children under 15 years more than ten hours a day, by a fine of \$50. Parents or guardians consenting to such employment, punishable in like manner.

WISCONSIN.—In all manufactories, workshops, or other places used for mechanical or manufacturing purposes, the time of labor of children under the age of 18 and of women employed therein shall not exceed eight hours in one day, and every stockholder, employer, director, officer, overseer, clerk or foreman, who shall compel any woman or any such child to labor exceeding eight hours, or who

shall permit any child under 14 years of age to labor more than ten hours in any one day in any such place, if he have control over such child sufficient to prevent it, or who shall employ at manual labor any child over 12 and under 14 years of age in any such factory or workshop for more than seven months in any one year, is liable to a fine of from \$5 to \$50 for each offence. (Acts of 1883, chapter 135.)

By section 1729, Revised Statutes, 504, in all engagements to labor in any manufacturing or mechanical business where there is no express contract to the contrary, a day's work shall consist of eight hours, and all engagements or contracts for labor in such cases shall be so construed; but the act does not apply to contracts for labor by the week, month or year.

Acts for the Regulation of Labor in Different States.

CONNECTICUT.—Persons or corporations employing laborers and requiring from them, under penalty of a forfeiture of a part of the wages earned by them, a notice of intention to leave such employment, are liable to the payment of a like forfeiture, to be recovered in an action on this statute, if employes are discharged without similar notice, except for incapacity or misconduct, or in case of a general suspension of labor by the employer. (Act of April 10. Chapter 72, Laws of 1885, p. 445.)

DAKOTA.—Every person who, by threats or intimidation, prevents or attempts to prevent any employe from continuing in employment or from accepting employment, or induces employe to quit work, or to return any work before it is finished, is guilty of a misdemeanor punishable by a fine up to \$500 or by imprisonment up to one year, or both. Every person intimidating employers and preventing them from hiring any person, or compelling such hiring, or forcing them to alter their ways of doing business, or to increase or decrease their force, is guilty of a misdemeanor. Any two or more associating together, who enter on mining property or, being near enough to be heard, use threats, gestures, etc., to intimidate workers or those who may desire to work, are guilty of a misdemeanor and subject to imprisonment from thirty days to six months and to a fine not more than \$250; the fine if not paid, to be discharged by imprisonment, each day to count for \$2.50. (Civil Code of 1883, including acts of 1885, sections 733, 734 and 735, pp. 1260 and 1261.)

INDIANA.—Whoever, by threats, intimidation or force, prevents or seeks to prevent any person from doing work for or furnishing

materials to any other person, firm or corporation engaged in any lawful business shall be liable to a fine of from \$20 to \$100, to which may be added imprisonment in the county jail from ten days to six months. Whoever, unlawfully, by threats, intimidation or force, prevents or attempts to prevent any railroad company or its agents, servants and employes from moving, running and operating locomotives, cars and trains of such railroad, or from transporting or carrying passengers and freight on its line of road, or attempts to or does prevent any express company, common carrier, or person engaged in transporting or carrying passengers or freight for hire, from so transporting or carrying either passengers or freight, shall be fined from \$50 to \$1,000, to which may be added imprisonment in the State's prison from two to twenty-one years, and such offender shall be disfranchised and rendered incapable of holding any office of trust or profit for any determinate period. (Revised Statutes of 1881, sections 2126 and 2127.)

Companies, corporations or associations shall be required, in the absence of a written contract to the contrary, to settle with and pay their employes engaged in mechanical or manual labor, in money, at least once a month. Employes, in case of refusal so to pay, may demand such payment from their employers, who, if they then neglect to pay for thirty days thereafter, are liable in a suit by employes for the amount due, reasonable attorney's fees, and a penalty of \$1 for each succeeding day: *Provided*, that such penalty shall not exceed twice the amount due and withheld. (Laws 1885, chapter 21, p. 36.)

MARYLAND.—An agreement or combination by two or more to do or procure to be done any act in contemplation or furtherance of a trade dispute between employers and workingmen shall not be indictable as a conspiracy if such act by one person would not be an offense. (Chapter 366, Acts of 1884.)

Chapter 379, Acts of 1878, provides for arbitration between employers and employes.

MASSACHUSETTS.—Chapter 74, section 1, Public Statutes, provides that employers requiring from employes, under penalty of forfeiture of wages earned, a notice of intention to leave employment, shall be liable to like forfeiture if employe be discharged without similar notice, except for incapacity or misconduct, unless in case of general suspension of labor by such employers.

Sections 2 and 3 provide that whoever, by intimidation or force, prevents or seeks to prevent a person from entering into or contin-

uing in the employment of a person or corporation, shall be punished by a fine of not more than \$100; and that employers are not to contract with employes for exemption from liability for injuries resulting from employer's own negligence.

By chapter 263 of the Acts of 1886, page 204, the governor with the advice and consent of the council shall on the first day of July in each year appoint three competent persons to serve as a State board of arbitration and conciliation, to whom shall be referred any controversy or difference between an employer and his employes, if at the time he employs not less than twenty-five persons in the same general line of work. The application for arbitration shall be signed by said employer, or by a majority of his employes in the department of the business in which the controversy or difference exists, and shall contain a concise statement of the grievances complained of and a promise to continue on in business or at work without any lock-out or strike until the decision of said board if it shall be made within three weeks of the date of the filing said application. The decision of the board of arbitration shall be binding upon the parties who join in said application for six months, or until either party has given the other notice in writing of his intention not to be bound by the same, at the expiration of sixty days therefrom. Section 7 provides that the parties to any controversy or difference, as provided in previous sections, may agree upon a board of arbitration and conciliation who shall, in the matters referred to them, have and exercise all the powers which the State board might have and exercise; and their jurisdiction of the matters referred to them shall be exclusive, except that they may ask and receive the advice and assistance of the State board in the disposition of the matters referred to them for determination. The report of any board constituted under this section shall at once be filed with the clerk of the city or town in which the controversy or difference arose, and a copy thereof shall be forwarded to the State board.

By chapter 87, Acts of 1886, page 73, every manufacturing, mining or quarrying, mercantile, railroad, street railway, telegraph, telephone and municipal corporation, and every incorporated express company and water company are required to pay weekly each and every employe engaged in its business, the wages earned by such employe to within six days of the date of said payment. Violations of this act are punishable by fine not exceeding fifty and not less than ten dollars on each complaint under which convicted, provided complaint is made within thirty days from the date thereof.

MICHIGAN.—Formation of corporations is authorized of five or more persons in the interest of trade or labor “for the improvement of their several social and material interests, the regulation of their wages, the laws and conditions of their employment, the protection of their joint and individual rights in the prosecution of their trades or industrial vocations, the collection and payment of funds for the benefit of sick, disabled members, etc., and all existing associations may become corporate.” (Acts of 1885, No. 145, p. 163.)

MISSOURI.—Railroad, mining, express, telegraph and manufacturing companies must give thirty days’ notice of a reduction of wages, by posting written or printed bills specifying parties and the amount of reduction, in a conspicuous place where employes are at work, or mailing same to each employe. For a violation the injured party may recover \$50 and costs. (Acts of 1885, p. 82.)

NEW HAMPSHIRE.—An act in amendment of section 1, chapter 269, of the General Laws, and to aid and protect the laboring and manufacturing interests of the State, adds at the end of the section: “Nor shall any person address to any person passing along any street, to, from or about his lawful business or occupation, any offensive, derisive, or annoying word or words, or call any such person by any derisive or offensive name: nor shall any person make any noise or exclamation in the presence or hearing of such person so passing with intent to deride, offend or annoy such person, or to prevent him from pursuing his lawful business or occupation.” Violation of this act is a misdemeanor. (Chapter 76, Laws of 1885, p. 274.)

NEW JERSEY.—Employers who own or control stores for the sale of general store goods and merchandise in connection with their manufacturing or other business, shall not attempt to control their employes or laborers in the purchase of store goods or supplies at said stores by withholding payment of wages longer than the usual time of payment, whereby employes are compelled to purchase supplies at said stores. Violation is punished by fine up to \$100 and costs. (Public Laws of 1881, chapter 190, p. 239.)

It is not unlawful for any two or more persons to unite, combine, or bind themselves by oath, covenant, agreement, alliance or otherwise, to persuade, advise, or encourage, by peaceable means, any person to enter into any combination for or against leaving or entering into the employment of any person or corporation. (Public Laws of 1883, chapter 28, p. 36.)

Manufacturers requiring from employes, under forfeiture of wages, notice of intention to quit, shall be liable to like forfeiture if they

discharge employes without similar notice, unless in case of a general suspension of business. (Public Laws of 1885, chapter 188.)

By Public Laws of 1880, chapter 138, page 170, provisions were made for the arbitration of labor disputes before an arbitrator selected by employers, another by employes, and a third by the other two. Arbitration is voluntary, but after submission the award is binding.

NEW YORK.—The orderly and peaceable assembling or cooperation of persons employed in any calling, trade or handicraft, for the purpose of obtaining an advance in the rate of wages, or compensation, or of maintaining such rate is not a conspiracy. (Laws of 1882, chapter 384.)

Nothing in this code shall be so construed as to prevent any person from demanding an increase of wages, or from assembling and using all lawful means to induce employers to pay such wages to all persons employed by them as shall be a just and fair compensation for services rendered. (Laws of 1882, chapter 384, amending section 675, penal code.)

OHIO.—Section 7015, Revised Statutes, fines from \$5 to \$100 employers who issue in payment of wages orders payable in anything but money, or by intervention of such orders pay wages in goods at higher prices than cash rates, or sell goods to laborers on orders issued by employers, or do any other thing by which wages are paid in goods at higher prices than cash rates.

Section 7016, fines from \$20 to \$100, or imprisons not more than sixty days, or punishes in both ways, those compelling or attempting to coerce employes to purchase goods from particular firms or corporations.

OREGON.—By section 670, General Statutes, and Acts of 1864, section 655, it is provided that persons preventing or endeavoring to prevent, by threats, force, or intimidation, employes from continuing or performing work, or accepting new work, or preventing or endeavoring to prevent employers from employing any person, or compelling them to employ any person, or forcing or inducing them to alter their modes of carrying on business, or limiting or increasing employes' wages or term of services, may be fined from \$20 to \$300, or be imprisoned from one to six months.

PENNSYLVANIA.—Presiding justices of common pleas courts, upon petition or argument, shall issue license for the establishment of tribunals to settle disputes in iron, steel, glass, textile fabrics and coal trades. Petition must be signed by fifty workmen or five sepa-

rate firms, individuals or corporations, within county of petitioners, or by five employers each employing at least ten men, or by the representatives of a firm, individual or corporation employing not less than seventy-five men, and the agreement shall be signed by both of said specified numbers and persons :

Provided, That if there be a strike or dispute at the time, and suspension exists, or is probable, the judge shall require testimony as to the representative character of petitioners, and if they do not represent at least half each party in dispute license may be denied. Workmen signing must be resident of judicial district one year, engaged in branch of trade they represent for two years, and be citizens of the United States. Employers signing must also be citizens, and engaged in some branch of the different business mentioned for one year, must each employ ten workmen of such branch and each may be a firm, individual or corporation. Petition must be sworn to by at least two signers. If petition be correct and contain names of an equal number of arbitrators on each side, and of an umpire mutually chosen, the judge shall issue a license authorizing the existence of a tribunal, and fixing the time and place of meeting, which shall be recorded in the court of common pleas. If petition have sufficient number of signers on one, but not both sides, license may issue conditioned on assent of delinquent side, in writing, with names of arbitrators, umpire, etc. ; if no assent within sixty days, petition to be dismissed.

One tribunal may be created in each judicial district for each of the trades named, to continue for one year, and take jurisdiction of any dispute between employers and workingmen, who have petitioned, or been represented in petition, for tribunal, or who submit disputes in writing. Vacancies in tribunal are to be filled by the judge from three names presented by remaining members of same class. Removal to adjoining county creates no vacancy in arbitrators or umpire, and disputes in one county may be referred to tribunal in adjoining county. The position of umpire can only be filled by the mutual choice of all the representatives of both employers and workingmen, and he acts only after failure of tribunal to agree in three meetings. His award is final only upon what is submitted to him in writing signed by all the members of the tribunal, or by parties submitting the same, and upon questions affecting the price of labor. It shall in no case be binding upon either employer or workingman, save as they may acquiesce or agree therein after such award.

The tribunal shall consist of not less than two employers or their representatives, and two workmen, the exact number being inserted in the petition or agreement, and they shall be named in license. There shall be a chairman and secretary. Tribunal shall receive no compensation from city or county, but expenses, other than fuel, light, and the use of room and furniture, which are furnished by city or county, may be paid by voluntary subscriptions, which tribunal may receive.

When there is no umpire, a chairman chosen administers oaths, signs subpoenas, etc., as umpires do when acting. No lawyers or agents are to appear on either side, and the proceedings are voluntary. Umpire's decisions as to admission of evidence are final. Committees from the tribunal, an equal number from each side, may unanimously decide questions. Rules are to be made by tribunal and umpire to govern proceedings. Umpire shall be sworn and make his award within ten days, which is made a matter of record by producing same to the judge within thirty days, who approves it. The act is to be cited, "Voluntary trade-tribunal act of 1883," and forms are given for petition, license, submission and award. (Brightley's Purdon's Digest, 1883; Public Laws of 1883, p. 15.)

RHODE ISLAND.—By title 30, chapter 141, section 8, Public Statutes, every person who alone, or in concert with others, attempts by force, violence, threats or intimidation to or does prevent another from entering upon or pursuing any employment upon satisfactory terms to employe, may be fined up to \$100, or be imprisoned up to ninety days.

TEXAS.—By title 9, chapter 1, article 289, penal code, it is made unlawful for persons to the number of three or more to assemble for the purpose of preventing any person from pursuing any labor, occupation or employment, or to intimidate any person from following his daily vocation, or to interfere in any manner with the labor or employment of another. Persons violating are subject to a fine up to \$500, and if they cause a riot, to imprisonment from six months to one year.

VERMONT.—Section 4226, Acts of 1877, No. 6, provides for the punishment of persons who threaten violence and injury to others with intent to prevent their employment in a mill, manufactory, shop, quarry, mine or railroad, by imprisonment up to three months, or a fine up to \$100.

Section 4227, Revised Laws, Acts of 1877, No. 6, provides for the punishment of persons who, by threats, intimidation or force, affright, drive away and prevent other persons from accepting, undertaking or prosecuting such employment, with intent to prevent the prosecution of work in such mill, shop, manufactory, mine, quarry or railroad, by imprisonment up to five years, or a fine up to \$500.

NAVIGATION.

STATISTICS SHOWING THE IMPORTS AND EXPORTS OF MAINE
COLLECTION DISTRICTS, FOR THE YEAR ENDING
JUNE 30, 1886.

Customs Districts.	Imports.	Domestic Exports.	Foreign Exports.	Total Imports and Exports.
	Dollars.	Dollars.	Dollars.	Dollars.
Aroostook	143,312	.....	.....	143,312
Bangor.....	770,690	209,829	.....	980,519
Bath.....	43,746	.....	.....	43,746
Belfast.....	12,895	7,846	.....	20,741
Machias.....	730	72,020	.....	72,750
Passamaquoddy.....	702,636	385,039	166,956	1,254,631
Portland and Falmouth.....	1,907,644	2,687,121	326,003	4,920,768
Saco.....	267	.....	.....	267
Waldoboro'.....	50,924	7,058	.....	57,982
Wiscasset.....	3,456	8,476	.....	11,932
Totals	3,636,300	3,377,389	492,959	7,506,648

Of the above imports, \$272,260 came from England, Scotland and Ireland, \$21,342 from other European ports, \$171,228 from the British West Indies, \$1,084,952 from Cuba and Porto Rico, \$3,604 from all other West Indian ports, \$1,997,845 from the Dominion of Canada, \$45,788 from South American ports, \$91,630 from China, Hong Kong and Japan, \$44,528 from Australasia and Oceanica, and \$105 from Prince Edward's Island.

Of the exports, \$2,085,658 were sent to England, Scotland and Ireland, \$107,525 to other European ports, \$86,838 to the British West Indies, \$389,907 to Cuba and Porto Rico, \$170,402 to all other West Indian ports, \$463,326 to the Dominion of Canada, \$491,996 to South American ports, \$51,774 to the East Indies, \$6,935 to Africa and adjacent islands, \$4,596 to Newfoundland, and \$335 to Prince Edward's Island.

Table showing the Direction of Imports and Exports for the Year ending June 30, 1886.

Districts into which Imported and from which Exported.	Portland District.		Passamaqu'ddy District.		Bath District.		Bangor District.		Belfast District.		Machias District.		Saco District.		Aroostook District.		Wiscasset District.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
England, Scotland and Ireland..	\$ 256,759	\$ 1,960,151	\$ 1,814	\$ 58,367	\$ 11,475	\$ 483	\$ 67,140											\$ 1729
Other European ports	14,156	12,626	1,523	.....	4,406	.....	94,899											1257
British West Indies	169,450	49,306	.....	7,594	.....	1,778	24,466		754		4,718							
Cuba and Porto Rico.....	1,084,952	317,446	.....	12,185	.....	.....	.....		995		58,263							1018
All other West Indian ports	1,880	127,562	.....	6,635	.....	.....	18,544	1,724	5,853		8,344							6396
Dominion of Canada.....	174,163	19,255	699,299	443,287	21,932	.....	946,979	184	11,171		730	600	259	.....	143,312			
South American ports	45,788	468,069	.....	23,927	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....
East Indies.....	.....	51,774	.....	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....
China, Hong Kong and Japan...	91,630	.....	.....	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....
Africa and adjacent islands.....	.....	6,935	.....	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....
Australasia and Oceania.....	38,595	.....	.....	.....	5,933	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....
Newfoundland .....	.....	.....	.....	.....	.....	.....	.....	.....	4,596		.....	.....	.....	.....	.....	.....	.....	.....
Prince Edward's Island .....	.....	.....	.....	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	105 335

INDUSTRIES OF MAINE.

In the Waldoboro' District the total exports were to the French West Indies and the foreign imports were from New Brunswick and Prince Edward's Island.

Statement, by Customs Districts, of the Number and Tonnage of Vessels in the Foreign Trade, which Entered into and Cleared from the Ports of Maine, and whether with Cargoes or in Ballast, during the Year ending June 30, 1886.

Customs Districts.	FOREIGN VESSELS.								AMERICAN VESSELS.							
	Entered.				Cleared.				Entered.				Cleared.			
	With Cargoes.		In Ballast.		With Cargoes.		In Ballast.		With Cargoes.		In Ballast.		With Cargoes.		In Ballast.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
Bangor.....	4	1,504	.....	.....	28	10,358	.....	.....	13	1,149	2	906	17	1,122	12	1,048
Bath	1	1,112	.....	.....	.....	.....	2	759	10	1,094	.....	.....	.....	.....	13	1,648
Belfast.....	6	798	1	135	9	2,334	13	2,121	121	8,322	.....	.....	1	148	119	8,183
Castine .....	.....	.....	.....	.....	.....	.....	8	1,253	.....	.....	.....	.....	1	.....	1	60
Frenchman's Bay .....	.....	.....	.....	.....	.....	.....	12	1,504	4	337	1	73	.....	125	2	85
Machias	3	770	1	64	22	7,236	161	23,549	3	93	.....	.....	2	212	2	72
Passamaquoddy	151	150,716	152	10,406	151	152,362	210	24,553	211	9,663	81	10,104	14	2,408	276	18,359
Portland	52	19,788	4	1,990	121	53,591	47	14,176	226	108,082	26	13,206	104	108,501	139	19,680
Saco.....	.....	.....	.....	.....	.....	.....	1	142	3	279	.....	.....	.....	.....	3	279
Waldoboro'	9	650	1	20	2	822	48	9,255	476	34,661	1	20	.....	.....	478	34,853
Wiscasset	4	1,051	.....	.....	5	1,115	5	712	3	826	.....	.....	4	712	2	646

Statement showing the Number and Tonnage of Registered, Enrolled and Licensed Vessels of Maine for 1885.

Customs Districts in which Documented.	Registered.		Enrolled.		Licensed.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Bangor.....	14	5,899.82	141	17,638.51	12	299.26	167	23,679.21
Bath	74	108,944.48	124	35,449.03	62	980.60	260	145,374.11
Belfast	28	26,950.34	164	20,123.65	59	673.54	255	47,747.53
Castine.....	3	1,049.93	187	12,662.24	61	771.22	251	14,483.39
Frenchman's Bay	2	935.78	187	12,511.10	38	473.42	227	13,920.30
Kennebunk.....	1	1,924.56	20	1,320.19	10	112.65	31	3,357.40
Machias	44	10,113.14	115	8,576.62	37	508.70	196	19,198.46
Passamaquoddy	22	4,853.38	113	13,184.35	45	692.34	187	18,830.07
Portland	133	91,080.15	177	22,242.95	69	1,064.05	379	114,387.15
Saco.....	1	696.98	11	1,618.75	7	67.42	19	2,383.15
Waldoboro'.....	40	46,964.98	229	28,659.24	80	963.11	349	76,587.33
Wiscasset	3	919.64	84	5,508.24	63	782.83	150	7,210.71
York.....	.....	.....	7	346.40	6	68.50	13	414.90
Total.....	365	300,433.11	1563	178,841.27	549	7,299.26	2488	487,573.71

By comparing the above with the total number and tonnage of vessels registered, enrolled and licensed, for each of the other States, Maine appears to stand second in both the number and tonnage of its vessels. New York has 5564 vessels with a total of 1,218,112.80 tons; Massachusetts has 2068 vessels with a total of 442,837.79 tons. The former State obtains its great lead in tonnage on account of having 1054 steam vessels with a total of 366,476 57 tons. Massachusetts has 156 steam vessels with a total of 68,941.39 tons. Maine has 119 steam vessels with a total of 22,242.25 tons. The total number of sailing vessels and steam vessels in the several customs districts of this State in 1885 was as follows:

Customs Districts.	Sailing Vessels		Steam Vessels.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.
Passamaquoddy.....	162	14,661.08	18	4,168.99	180	18,830.07
Machias.....	191	19,096.56	5	101.90	196	19,198.46
Frenchman's Bay	221	13,701.94	6	218.36	227	13,920.30
Castine.....	250	14,458.11	1	25.28	251	14,483.39
Bangor.....	155	22,890.66	12	788.55	167	23,679.21
Belfast	251	47,590.90	4	156.63	255	47,747.53
Waldoboro'.....	344	75,194.67	4	1,137.89	349	* 76,587.33
Wiscasset	148	7,105.03	2	105.68	150	7,210.71
Bath	231	141,276.80	28	3,530.48	260	† 145,374.11
Portland and Falmouth.....	343	102,609.73	36	11,777.42	379	114,387.15
Saco.....	16	2,152.08	3	231.07	19	2,383.15
Kennebunk	31	3,357.40	.....	.....	31	3,357.40
York.....	13	414.90	.....	.....	13	414.90
Total	2356	464,509.86	169	22,242.25	2477	487,573.71

* Includes one barge of 254.77 tons.

† " " " 566.83 "

The number and tonnage of vessels engaged in the cod and mackerel fisheries for the year 1885 was as follows :

Customs Districts.	Vessels Over 20 Tons.		Vessels Under 20 Tons.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.
	Passamaquoddy	10	387.24	14	200.77	24	588.01
Machias	5	140.94	22	283.43	27	424.37
Frenchman's Bay	24	1,446.84	23	251.70	47	1,698.54
Castine	36	2,415.17	18	232.67	54	2,647.82
Bangor			5	76.54	5	76.54
Belfast	35	1,677.91	35	373.96	70	2,051.87
Waldoboro'	64	2,589.50	61	727.61	125	3,317.11
Wiscasset	36	2,060.06	35	381.56	71	2,441.62
Bath	2	144.52	11	120.19	13	264.71
Portland and Falmouth	104	6,400.25	38	576.03	142	6,976.28
Saco	1	52.51	7	67.42	8	119.93
Kennebunk	7	213.72	10	122.65	17	326.37
York			4	47.77	4	47.77
Total	324	17,529.66	283	3,452.28	607	20,980.94

TONNAGE TAX.

By the act of June 26, 1884, changing the mode of assessing tonnage tax on vessels arriving from foreign ports in ports of the United States, there has been a large decrease in the amount of such taxes paid into the several ports of this State, as will be seen by the following tabular statement, for the fiscal years ending June 30, 1884, and June 30, 1885.

Ports.	1884.		1885.	
	No. Vessels.	Amount Collected.	No. Vessels.	Amount Collected.
Bangor	5	\$ 480 00	5	\$ 73 71
Bath	4	397 50	13	115 30
Belfast	13	483 90	35	175 33
Castine			4	38 40
Eastport	69	2,094 90	189	1,030 52
Ellsworth	1	3 60	6	34 57
Machias	4	81 00	5	13 08
Portland	86	13,755 60	159	4,436 37
Saco			1	2 64
Waldoboro'	34	778 80	177	292 02

SHIP-BUILDING.

Table showing the Number of Vessels and their Tonnage Built in
Maine Districts for Four Years ending December 31st.

Customs Districts.	1882.		1883.		1884.		1885.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Bath	64	42,137.71	61	36,147.82	36	25,668.65	23	12,636.31
Bangor	7	1,402.50	7	1,889.50	2	456.54	2	172.71
Belfast	16	6,681.03	16	9,008.39	7	5,374.62	1	2,497.43
Castine	5	1,055.57	5	838.07	4	961.94	1	80.17
Frenchman's Bay..	2	246.32	4	602.44	2	93.70	1	41.00
Kennebunk	8	730.92	3	897.04	6	1,498.74	3	356.48
Machias	15	2,904.40	19	4,881.04	9	2,115.91	8	1,332.69
Passamaquoddy ...	1	83.75	5	981.00	5	935.16		
Portland	13	5,379.53	11	5,768.49	6	1,530.20	3	1,751.70
Waldoboro'	26	13,258.58	26	11,274.01	12	6,502.04	6	3,416.25
Wiscasset	11	2,174.59	13	2,420.36	8	1,364.37	9	769.24
Totals	168	75,084.91	174	74,708.13	97	46,401.87	57	23,053.98

Table showing the Number and Tonnage of Each Class of Vessels
for Each Year.

Vessels.	1882.		1883.		1884.		1885.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Barques			4	3,654.36			1	793.29
Barkentines..	12	5,897.02	6	3,439.29	4	2,407.54	3	1,928.61
Brigs			2	936.40				
Schooners	124	39,821.52	129	27,937.79	76	26,003.66	38	9,378.34
Sloops	7	120.91	7	204.69	2	13.64	5	96.29
Ships	14	24,862.24	13	26,251.92	6	13,923.62	5	9,679.15
Steamers	11	4,383.22	9	2,283.68	9	4,053.41	5	1,176.30

Table showing the Number of Vessels built of given capacities.

	1882.	1883.	1884.	1885.
Under 100 tons	48	48	29	30
From 100 to 200 tons	13	23	9	5
From 200 to 300 tons	14	8	7	2
From 300 to 400 tons	18	17	5	1
From 400 to 500 tons	24	25	8	
From 500 to 600 tons	10	17	8	1
From 600 to 700 tons	13	10	13	4
From 700 to 800 tons	10	5	5	8
From 800 to 900 tons	1	2	3	1
From 900 to 1000 tons			3	
From 1000 to 2000 tons	12	7	2	3
Over 2000 tons	5	8	5	2

The largest number of tons of shipping was built in 1882 for many years, since which time the annual operations have rapidly decreased. One principal reason for the decrease of work is the change that has occurred in shipments during the past twenty years, the iron steamers of foreign nations having been given the preference over American wooden vessels. The substitution of iron for wood in ship-building in England, with the cheapness of that material and the low price of labor, and the great improvement made in marine engines has enabled England, followed by France and Germany, to put a fleet of steamers on the ocean which have monopolized the Atlantic carrying trade, including the cotton trade from the Gulf ports which in former years was very largely done by Maine ships. The increased number of railroad lines in all directions has also created competition in the transportation of goods that formerly were sent by vessel, and have thus assisted in reducing the profitableness of ship owning.

THE ICE BUSINESS.

For several years the ice business of this State has been done upon a pretty narrow margin. There has, however, been some money made by the different operators, although the business has fallen from the high estate of a few years ago. On the Penobscot River operations have been annually increasing, but the "ice fields" are limited compared with the opportunities for cutting ice upon the Kennebec River, and for this reason the latter will remain the source of principal supply for Maine shipments. The amount of capital invested in the business is very large, and will average one dollar for every ton capacity of the ice houses. The number of men annually employed in cutting and housing the ice varies from 6000 to 7000, who are paid an average of \$1.50 per day. The number of teams employed during the same period varies from 500 to 600, for which an average of \$2.75 per day is paid. As the principal part of the work is done at a time of year when other operations are pretty quiet, the ice business becomes a valuable auxiliary employment for workmen and teams that otherwise would be generally deprived of an income during the winter months. The winter of 1885-6 was more expensive for Kennebec operators than any previous year on account of the winter freshets which broke up the ice fields and rendered the new fields that immediately formed almost worthless because of the turbid character of the water. As a result, several operators did not fill their ice houses as usual, while others found themselves compelled to erect new houses at points where good ice could be obtained. The new houses erected were as follows: At Carney's Point, Cochran and Oler Ice Co., 35,000 tons; at Swan Island, Cochran and Oler and Charles Russell, 12,000 tons, and B. W. and H. F. Morse, 12,000 tons; at Augusta, White and Cony, 8,000 tons. Early in the summer a fire which started at Pittston destroyed the ice houses of Bodwell and Allen at Pittston and other houses belonging to the

Knickerbocker Ice Co. at Farmingdale and Chelsea. By this fire the latter company lost about 25,000 tons of ice. Messrs. Bodwell and Allen have rebuilt their houses with a capacity of 20,000 tons, and the Knickerbocker Ice Co. has rebuilt its Farmingdale house with a capacity of 20,000 tons and the Chelsea houses will be rebuilt with a capacity of 30,000 tons. On the Penobscot, several of the dealers largely increased the capacity of their ice houses, and additional enlargements will probably be made this winter.

Ice cannot be sold for a series of years for less than an average of seventy-five cents per ton, without loss to the operator. During the past year sales have been made as high as \$2.00 per ton, and as low as sixty cents, the average price received bringing operators a good profit notwithstanding the extra expense of securing the ice. Philadelphia is considered the best market for Maine ice. Other good markets are found at Mobile, New Orleans, Wilmington, S. C., Washington, Baltimore, Wilmington, Del., and New York.

In November last, an Ice Exchange was formed of nearly all the ice dealers on the Penobscot and Kennebec rivers and all the ice remaining unsold at the close of the season was held by the Exchange. The object of the Association is to try and maintain prices better than can be done where there are so many operators seeking to dispose of their stocks regardless of what prices others are placing it upon the market. The following gentlemen were elected officers of the Exchange :

President, J. Manchester Haynes, Augusta. Vice Presidents, Jeremiah Russell, Richmond ; C. B. Church, Washington, D. C. ; W. H. Oler, Baltimore, Md. ; T. J. Stewart, Bangor ; J. D. Rust, Rockport. Secretary, Arthur Berry, Gardiner. Executive Committee, J. Manchester Haynes, Augusta ; Ashbe Chaplin, Portland ; Charles W. Morse, Bath ; D. C. Shepard, Gardiner ; H. P. Sargent, Brewer ; Addison Austin, Newcastle ; Frank H. Clergue, Bangor.

A very large proportion of the ice cut upon the Kennebec River is cut by companies that have a regular market for the product. Such companies are the Knickerbocker Ice Co. of Philadelphia, the Great Falls Ice Co. and Independent Ice Co. of Washington, D. C., the Consumers Ice Co. of New York, Cochran and Oler of Baltimore, Md., and Chas. Russell & Co. of Boston. The balance of the operators have to seek a market wherever it can be found, and they can therefore exert a great influence upon the market. It is expected that the Ice Exchange will remove some of the difficulties that have

prevented the business from remaining as profitable as a few years ago.

The amount of old ice on hand at the close of the season of 1885, and the amount cut during the winter of 1885-86 was as follows :

Companies.	Tons New Ice.	Tons Old Ice.
KENNEBEC RIVER.		
Cony and White, Augusta	7,000	
Glazier and Bodwell, Hallowell		8,000
Knickerbocker Ice Company, Hallowell		10,000
A. Rich, Farmingdale	50,000	10,000
Knickerbocker Ice Company, Farmingdale	35,000	10,000
Atkins and McCausland, Farmingdale		8,000
Knickerbocker Ice Company, Chelsea		25,000
Centennial Ice Company, Pittston		8,000
Knickerbocker Ice Company, Pittston		21,000
Great Falls Ice Company, Pittston	10,000	8,000
Powers & Co., Pittston		2,500
Independent Ice Company, Pittston	10,000	12,000
Oakland Ice Company, Pittston		2,000
Consumers Ice Company, Pittston	12,000	
Clark and Champlin, Pittston		1,000
Knickerbocker Ice Company, Dresden		7,500
A. Berry & Son, Dresden	20,000	4,000
Russell Brothers, Dresden	20,000	
E. D. Haley, South Gardiner	10,000	
Haynes and DeWitt, Iceboro'	12,000	
Knickerbocker Ice Company, Iceboro'	15,000	
Sagadahoc Ice Company, Swan Island	12,000	
Cochran and Oler, Swan Island	30,000	
Charles Russell & Co., Swan Island	17,000	
B. W. and H. F. Morse, Richmond	15,000	
B. W. and H. F. Morse, Twing's Point	73,000	
Clark and Champlin, Bowdoinham	70,000	
— Brown, Abbigegasset	12,000	
Arctic Ice Company, Woolwich	3,000	
PENOBSCOT RIVER.		
Arctic Ice Company, Orrington	22,000	8,000
Katahdin Ice Company, Bangor	25,000	
D. Sargent & Sons, Brewer	25,000	4,000
Union Ice Company, Orrington	15,000	
E & I. K. Stetson, Brewer	7,500	2,500
Orrington Ice Company, Orrington	22,000	
Morse & Co., Bangor	10,000	
Dirigo Ice Company, Bangor	10,000	1,500
Penobscot River Company, Bangor	18,000	
Engle and Waterman, Brewer		4,000
Warren and others, Bangor	1,500	
CATHANCE RIVER.		
Maine Central Company		500
Crystal Ice Company, Bowdoinham	4,500	1,500
Tidal Wave Ice Company, Bowdoinham	2,300	700
Spring Cove Ice Company, Bowdoinham	4,000	600
S. B. Glazier, Bowdoinham	3,900	
Brick Yard Ice Company, Bowdoinham	3,500	
ALONG THE COAST.		
Haynes and DeWitt, Wiscasset	30,000	4,000
J. Merrill, Edgecomb	2,500	2,000
Merrill and Webster, Edgecomb	3,000	

Companies.	Tons New Ice.	Tons Old Ice.
Haynes and Weeks, Boothbay	12,000	
Crystal Lake Company, Boothbay	2,500	
Maine Ice Company, Boothbay	9,000	5,000
Knickerbocker Ice Company, Boothbay	55,000	18,000
S. B. Glazier, Harmon's Harbor	3,000	
Chase and Hughes, Horse Island	15,000	10,000
Parker's Bay Company, Parker's Head		2,000
Drummond Pond Company, Phippsburg	12,000	
W. D. Mussenden, Phippsburg	5,000	
S. B. Glazier, Fort Popham	7,000	2,000
Water Cove Company, Small Point	7,000	
Bristol Company, Clark's Cove	18,000	
H. G. Lowe, Georgetown	2,500	
Charles Russell & Co., Pool's Landing	10,000	
E. Haggett, Newcastle	9,000	
Gun Point Company, Harpswell	8,000	2,500
Samuel Jordan, Harpswell	10,000	
Houghton's Pond Company, Harpswell	5,000	
Harpswell Neck parties	5,000	
Robert Gøddard, Dingley Island	4,000	
J. P. Armsbrust, Vinalhaven	5,000	
H. E. Pierce, Belfast	12,000	2,000
Sibley and Townsend, Belfast		2,000
Hupper & Co., St. George	11,000	
Carleton & Co., Rockport	10,000	
Rockport Ice Company, Rockport	10,000	
Barrett & Co., Rockport		1,000
Clark and Champlin, Saco	5,000	
Bryant and others, Saco	7,300	
H. B. Osgood, Biddeford	2,500	
Clark and Champlin, Portland	50,000	
Androscoggin Ice Company, Portland	8,000	
RECAPITULATION.		
Kennebec River	433,500	145,000
Penobscot River	156,000	20,000
Cathance River	17,300	3,300
Coast	358,300	50,500
Total	965,100	218,800
	218,800	
Tons on hand at beginning of season	1,183,900	

COUNTY FINANCES.

*Table showing the Receipts and Expenditures and Balances on hand
in the several Counties for the Year 1885.*

Counties.	Cash on Hand January 1, 1885.	Receipts.	Expenditures.	Balance on Hand December 31, 1885.
Androscoggin.....	\$20,302 00	\$33,696 54	\$31,107 84	\$22,890 70
Aroostook	1,066 57	18,050 93	19,033 28	84 22
Cumberland	45,720 16	60,092 66	77,507 90	28,304 92
Franklin	6,280 89	24,662 20	28,874 20	2,068 89
Hancock	5,688 19	42,465 40	39,596 51	8,557 08
Kennebec	13,473 80	48,810 65	49,281 13	13,002 32
Knox	990 50	32,162 27	26,360 88	6,791 89
Lincoln	4,188 28	10,159 57	11,812 01	2,435 84
Oxford	7,140 15	11,733 87	14,589 01	4,285 01
Penobscot	7,635 30	53,624 05	58,316 58	2,942 77
Piscataquis	675 47	35,593 41	32,345 11	3,923 77
Sagadahoc	2,428 42	13,173 50	15,518 56	83 36
Somerset.....	863 93	19,817 75	20,641 20	70 48
Waldo	52 97	30,765 74	25,952 68	233 14
Washington	11,418 61	14,316 52	15,446 34	10,288 79
York	2,137 45	33,804 30	32,841 68	3,100 07

SUMMER RESORTS.

The natural attractions of the State of Maine as a summer resort have been recognized by a certain class of pleasure seekers, notably by sportsmen of the rod and gun, for many years, but it has been comparatively only a few years since our summer resorts have come to be among our leading industries. The natural advantages of this State as a summer resort consist, first, in the geographical position at the extreme north-eastern part of the United States, and consequently in a comparatively high northern latitude; second, in its extended line of sea-coast with its numerous sinuosities of bays, coves and inlets; third, in its broad belt of forest which lies along its northern border, where the choicest game is found in great variety and abundance; fourth, in its land-locked bodies of the purest water, its numerous rivers and crystal streams, the natural habitat of the salmon and the trout; fifth, in its grand mountain scenery, surpassing, in this respect, any other of the Atlantic States, and lastly, in its pure, bracing, invigorating and health-restoring air, where malaria is unknown and where the severer forms of contagious and infectious disease are never met with except as the results of sanitary neglect.

The State of Maine is situated between $43^{\circ} 6'$ and $47^{\circ} 23' 33''$ of north latitude, and between $66^{\circ} 56' 48''$ and $71^{\circ} 6' 41''$ of west longitude. Its extreme length is 303 miles and its breadth 288 miles. Its area is 31,500 square miles; its coast line, following the sinuosities, is 2,486 miles, and its numerous coves, bays and inlets afford almost innumerable harbors for ships or boats, giving great facilities for commerce, and still greater for seaside resorts. The direct southerly line of the State, from Kittery to West Quoddy Head, is about 220 miles in length. The settlements in the State, from the coast line, extend on an average about eighty miles into the interior. There are scattering settlements north of a line extending from



SCENE IN THE FOREST BELT, NORTHERN MAINE.

Upton on New Hampshire, to Weston on New Brunswick, and Aroostook County is almost wholly north of this line, but the great settled portion of the State lies south of it. North of this line, with the exceptions just mentioned, is a vast forest region varying in width from forty to nearly one hundred miles before the Canadian border is reached, and in length two hundred and fifty miles, more or less. The four principal rivers of the State, with the exception of the Saco, which rises in the White Mountain region, have their sources in this great forest belt, and flow in a southerly direction to the coast. The lakes of which these rivers are the overflow, are fed by streams which issue from the forest above described, some of them being the outlets of small ponds and others born away up among the mountains, and traversing many miles of wilderness before reaching the lakes. The headwaters of these rivers form a famous hunting ground, where deer, caribou and moose are found in abundance, where the black bear roams at will, where numerous furbearing animals are hunted for their peltries, and where the smaller game is almost innumerable. The streams, ponds and lakes abound with the speckled trout, which in the larger lakes sometimes reach an enormous size, individual specimens often weighing from six to ten pounds, and a variety called the togue sometimes weighing twenty pounds. The chief rallying points for this hunter's paradise are the Rangeley and Moosehead lakes, which will be spoken of more at length hereafter.

The mountains of Maine are very largely situated in the counties of Oxford, Franklin, Somerset, Piscataquis and Penobscot, and for the most part in the northerly and sparsely or unsettled portions of these counties, though in Oxford and Franklin the settlers have long since passed beyond the mountain barriers, made for themselves homes in the narrow valleys or upon the foot-hills, and enjoy a scenery as grand and an atmosphere as invigorating as any on the Atlantic coast. From the bases of this northern range of mountains, the land dips toward the coast, sufficiently sharp to afford excellent drainage and an abundance of water power on our rivers. The territory from the mountains to the sea is a drift formation, broken into high hills and ridges and everywhere showing glacial action. From these hill-tops in all parts of the State, grand mountain views can be had. Toward the west Kearsage is easily recognized, farther toward the north are the White Hills and then in succession may be seen Lincoln Peak and Saddleback in Oxford County, Saddleback and

Mount Blue in Franklin, and Mount Bigelow and Mount Katahdin. The hill-tops above referred to are generally cleared and cultivated to their summits, and often the farmer's home has been erected upon the highest point, and the panoramic mountain view is an every-day enjoyment. The peculiar formation of the inland portions of Maine are such as to afford almost every variety of scenery, from which the most exacting and fastidious cannot fail of selecting what will suit.

The coast line of Maine, like the interior, is very varied. We have some of the finest beaches in the world, and in striking contrast, we have some of the most rugged coast scenery to be found in America. We have numerous harbors where shipping can out-ride the severest storms, and stretches of coast forever exposed to the fury of ocean. We have rocky headlands fit only for summer cottage sites, and sheltered nooks where the rich soil can be cultivated down to tide water. Here, as inland, so varied is the scenery and so varying the conditions, that everybody can be suited. If bathing facilities are desired, they can be had at York, Wells, Old Orchard, Small Point and Fort Popham; if rocky headlands for cottage sites are wanted, they are at Small Point, Ocean Point, Bar Harbor and at many other places; if an island home is sought, it may be found among the numerous islands of Casco Bay, and in fact almost anywhere along the coast; if sea fishing as a pastime is enjoyed, the entire coast of Maine abounds in cod, mackerel, haddock and cunners. For yachting or boating of any kind the Maine coast affords unrivaled facilities. The coast has been carefully surveyed and danger signals are placed wherever they are needed; while the numerous harbors afford safe retreats in case of sudden fogs or storms. Our railway facilities are such that the most important places on the coast can now be reached by cars as well as by boat; such is the case at Kittery, Old Orchard, Portland, Bath, Belfast and Bar Harbor, while York Beach, Wells and several other popular resorts are situated only at short distances from the lines of railway.

Having briefly outlined the State as a great summer resort, having referred to its famous hunting and fishing facilities, the variety of its inland charms, and the diversity of its coast attractions, a particular description of the more important resorts, and their value to the State from an industrial standpoint, will be in order. Of their value, only a crude estimate can be made. It should be borne in

mind, that our well-patronized summer resorts benefit us in various ways; almost every one is helped thereby. They give employment to our railways and steamboats; they also give employment to a large number of our citizens in the capacity of guides, boatmen, drivers, waiters and common laborers; they supply a home market for the products of the farm and garden, and they annually are the means of bringing millions of dollars into the State and putting it into circulation here. The business of conducting these resorts has become one of our leading industries, and in its far-reaching benefits, it is perhaps surpassed only by agriculture and manufactures. It is a rich mine and should be encouraged and worked. Aside from the advantages enumerated above, our summer resorts are a direct source of benefit to our citizens, in that they afford facilities for making that change of residence during the summer months which is regarded as conducive to health. The dwellers in the interior go down to the sea for a few weeks, while the dwellers by the sea seek recuperation upon the hills or among the mountains. This brief change of residence and change of scene, which is growing more and more popular, operates as a sedative and tonic to the overworked mind and body, tends to preserve the health and conduces to contentment, happiness and long life.

KITTERY—At the extreme south-westerly corner of the State, is the ancient town of Kittery. It is the oldest incorporated town in the State, and among the earliest settled. It is situated on the left bank of the Piscataqua River and at its mouth. The Isles of Shoals, which lie mostly in New Hampshire, are situated off Kittery. The chief attractions of Kittery are the Navy Yard, Pepperell mansion and Sparhawk house. Its hotels are the Harbor View House and Pepperell House. It has a large number of temporary visitors and a few summer boarders. The eastern division of the Boston and Maine railroad passes through Kittery.

YORK—The ancient Gorgeana, the first incorporated city in the New World, and named for the proprietor of Maine, when it passed under the jurisdiction of the Colony of the Massachusetts Bay, became the town of York. It was first called Agamenticus. There is a daily stage between York and Portsmouth. It has a fine beach and is a popular resort for summer boarders, though its accommodations are somewhat limited. Its leading hotel is the Marshall House. There are also the Sea Cottage, Hotel Bartlett, Agamenticus House,

Thompson House, Bay View House, Cliff House at Cape Neddick, and several other hotels and summer boarding-houses.

WELLS—This old town, which was settled in 1640, is situated on the line of the Boston and Maine Railroad. It has a good beach and two good hotels, the Hotel Matthews and the Bay View House.

OLD ORCHARD—This is one of Maine's most famous summer resorts and Old Orchard Beach is the most important Maine beach, and one of the best in the country. The Boston and Maine Railroad passes in close proximity to it, and its accessibility causes it to be visited by vast numbers of people. It has a number of large and several smaller hotels which are well patronized during the summer months. It was formerly a part of Saco, but it is now incorporated as a town. Its patronage is largely by persons residing outside of the State. The Old Orchard House is the largest among its hotels.

SCARBORO' BEACH—This is the last of the so-called beach resorts in Maine, and is situated between Old Orchard and Portland. Its hotels are the Atlantic House, Kirk-Wood House and Sparhawk House. It is situated within easy distance of the Boston and Maine Railroad.

CASCO BAY.—The islands of Casco Bay are among the most attractive summer resorts on the coast. Large numbers of Portland people spend their summers here in their own cottages, and upon several of them are good hotels. Cushing's Island is visited every year by large numbers of people from Canada, and has a good hotel, the Ottawa House. Peak's Island has Valley View House, Union House, Bay View House, Avenue House, and several others. Small steamers make several trips a day between Portland and the islands. The Waldo is a hotel upon Little Chebeague.

HARPSWELL—This place is connected with Brunswick and the Maine Central Railroad by a daily stage. It embraces numerous islands in Casco Bay, Orr's Island being the most noted. A colony of Auburn and Lewiston people have cottages here, and there are several good hotels, among which are the Mansion House, Merri-coneag Hotel, Bonanza House, and several boarding-houses. Harpswell is a famous place for sea fishing.

SMALL POINT—This place, which forms the western limit of Casco Bay, is noted as being the site of the ancient town of Augusta, which was destroyed by the Indians in 1721. It has just begun to be developed as a summer resort, but it has excellent capabilities and promises to be among the most popular resorts on the coast.

It has a fine beach several miles in length, while the Point is made up of a granite ledge covered in places by a thin soil. The old farm house has been converted into a boarding house, and a cottage has been erected, the two accommodating about one hundred guests. Stages run twice daily between here and Bath, and a railway is projected between the two points. Small Point is owned by Hon. J. R. Bodwell and M. B. Spinney, and was well patronized during the past season. Several cottages and a hotel are to be erected here the coming season.

HUNNEWELL'S POINT—This place, situated near the mouth of the Kennebec, on the right bank, near Fort Popham, has been developed by the Fort Popham Summer Resort Association, the principal owners of which reside in Augusta. There is a good beach here, and a good hotel, the Hunnewell's Point House. Historic interest attaches to this place as being near the site of the first English colony on American soil, known as the Popham Colony, which was here in 1607.

BOOTHBAY—Squirrel Island, Mouse Island and Capitol Island, all lying off Boothbay and belonging to that town, are well-known summer resorts. The former has a large summer population which comes here from distant parts of the State and resides in cottages. There is also a good hotel here and one each at Mouse and Capitol islands. Boothbay Harbor is a pleasant place with a fine sea view, and has some good hotels. Ocean Point, formerly Liniken's Neck, is a point of land extending far into the sea and possessing many advantages as a summer resort. There are several cottages here owned mostly by Augusta people, and a hotel, the Ocean Point House. Boats ply regularly, during the summer season, between Bath and all these points, and also from the upper Kennebec as far as Augusta.

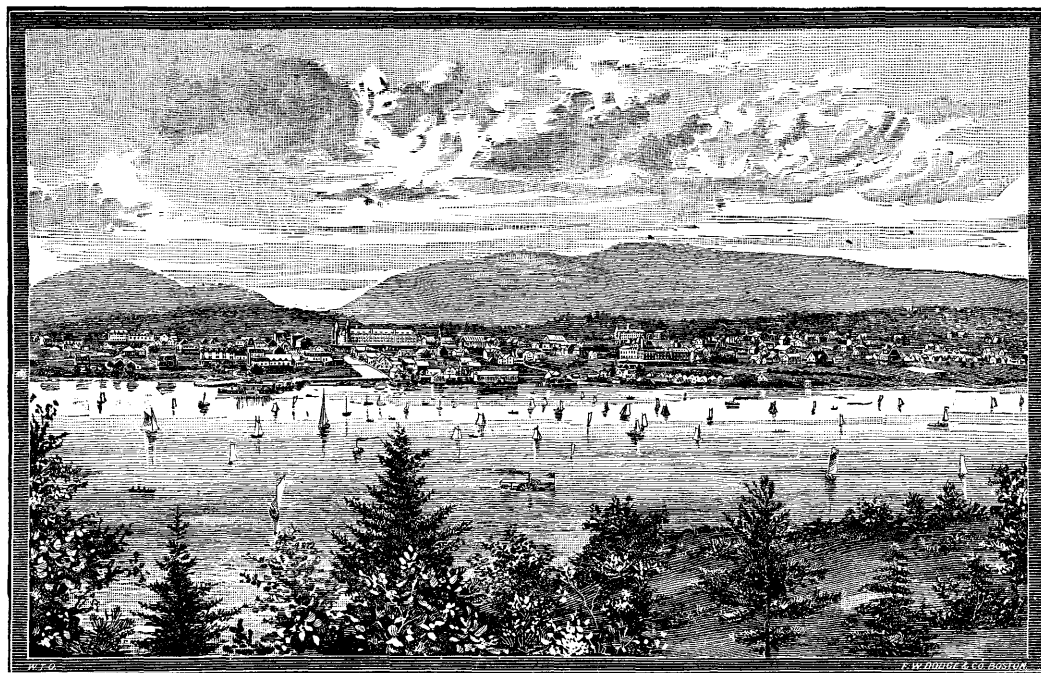
Castine, Northport and some other places on Penobscot Bay have a number of summer residents and the number increases every year. Castine is one of the most interesting spots on the coast from an historical standpoint, and the village is very pleasantly located for a summer resort. It is situated on a sunny slope and has fine views, both seaward and landward. Back of the town, on an eminence, are the ruins of Fort George, erected and occupied by British troops during the war of the Revolution. Northport has been used as a camp ground for religious meetings for a number of years, and numerous cottages have been erected, which are occupied during the

summer. There are several other towns around the Bay where hotels have been erected for the accommodation of summer residents, as at Camden, Rockland and Brooksville on the mainland, and North Haven and Vinal Haven, which are islands near the entrance to the Bay.

Mount Desert Island, with Isle au Haut and the Cranberry Isles in the vicinity, have already become famous for their sea-side resorts. Bar Harbor, at the easterly side of Mount Desert and on the westerly side of Frenchman's Bay, has a popularity and patronage excelled by few, if any, places on the Atlantic coast. Millions of dollars have been expended in cottages within twenty years, and a score of large hotels are inadequate to supply the demands of the visitors. Real estate now brings almost fabulous prices, and is constantly increasing in value. South West Harbor, at the mouth of Somes' Sound, and Somesville at its head, have fine hotels and numerous summer cottages, while North East Harbor, Seal Cove, Otter Creek, Hull's Cove and several other points around the island have more or less of transient summer residents. At the Bluffs, the terminus of the Mount Desert Branch of the Maine Central Railroad, is a fine large hotel which was opened to the public in the spring of the present year and has been well patronized. This entire region, island and coast, promises in the near future to become one vast summer resort, where tens of thousands of people will spend the summer months, and annually expend large sums of money.

East of Bar Harbor, along the coast to the utmost limits of the State, are towns and islands, Gouldsboro', Steuben, Addison, Jonesport, Lubec, &c., which have attracted more or less of summer residents, and persons who visit any one of these localities once are quite sure to come again. All the Maine sea-coast resorts have certain features in common, such as pure, bracing air, beautiful scenery and facilities for boating and sea-fishing, but each place also possesses some quality peculiar to itself. They are all quite easily accessible, either by rail or steamer, have a daily mail and telegraphic communication with the world.

In the valley of the Saco, at the western extremity of the State, is the beautiful village of Fryeburgh. This is the ancient Piquaket, where a noted tribe of Indians formerly dwelt, and the locality embalmed in poetry by Governor Enoch Lincoln. It is forty miles from Portland, by the Portland and Ogdensburg Railway, and adjoins the town of Conway, so noted as a summer resort. Fryeburgh

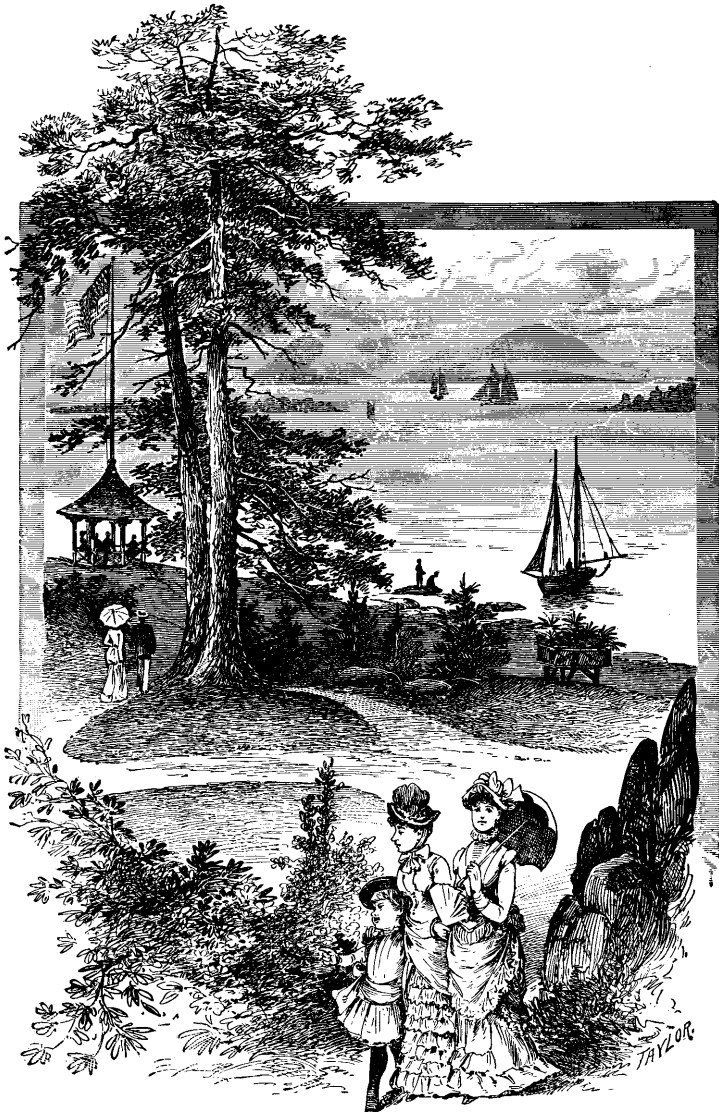


BAR HARBOR.

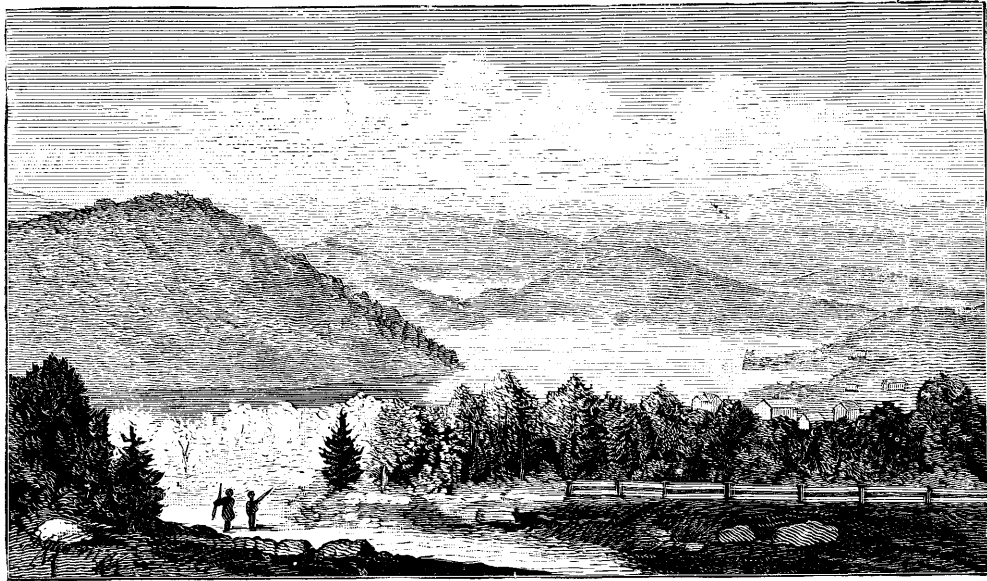


BRAD AVERY SUPPLY CO.

MOUNT DESERT, LOOKING UP SOMES'S SOUND



THE "BLUFFS," HANCOCK POINT.



BRYANT'S POND.

is a delightful village and town; its bracing air comes down from the White Hills, which are only a few miles away, and the meandering Saco, by its sharp curves and doublings upon itself, makes nearly forty miles in passing through the town. There is quite a large summer population here, and the business of keeping summer boarders has become an important industry. The Oxford and Fryeburgh houses are the only hotels here, and are well managed. There are other resorts on the Saco, within the limits of the State, but Fryeburgh is the principal one.

On the Androscoggin, Bethel is the chief resort of rest and pleasure seekers, during the summer. The village of Bethel Hill is pleasantly situated on the right bank of the Androscoggin about 70 miles from Portland. The surrounding mountain scenery is grand, and the valley of the Androscoggin, with its broad belts of interval flanked by cultivated fields and wood-crowned hills, affords a combination of views rarely equalled. Here and at Mayville, a hamlet on the opposite side of the river, nearly two hundred persons from cities outside of the State come and spend a couple of months each summer, distributing among the people some fifteen thousand dollars. From Bethel to the Umbagog Lake, the distance is about twenty miles, the road leading through Newry, Grafton and Upton. This is one of the thoroughfares to the lake region, and in summer a daily stage connects with the Grand Trunk Railway at Bethel. There are two good hotels in Bethel, and numerous boarding-houses.

Andover is another Oxford County summer resort. It is situated twenty miles from the Bryant's Pond station of the Grand Trunk Railway, and twelve from the south arm of Richardson's Lake. About nine thousand dollars are left in Andover every year, by rest and pleasure seekers who make their homes here during the summer. This is also an important rallying point for persons bound to the lakes for the purpose of hunting and fishing. Andover has been settled over a century, and has always been a border town, its northern line impinging upon the great forest belt of northern Maine. Its people are cultured, and in moral and mental endowments have always taken high rank. A daily stage connects it with the railway at Bryant's Pond.

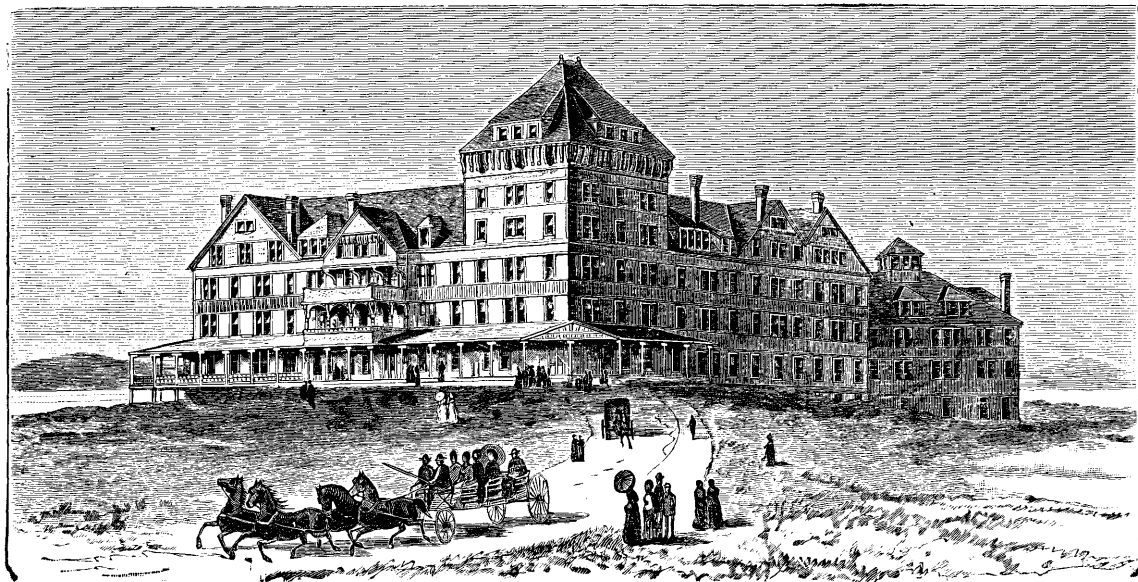
Paris Hill on the Grand Trunk, about 45 miles from Portland, is becoming quite popular as a summer resort. It is said to be the highest village in the State, and pure air and water and its extended

range of mountain scenery are among its recommendations. It has two good hotels, and several private families take summer boarders; the hotels are well patronized.

The principal thoroughfare to the Rangeley Lake is by way of Farmington and Phillips. The latter place is at the end of railway transportation and here are two good hotels. Farmington is one of the most delightful towns in the State. It is situated in the valley of the Sandy River, is a fine agricultural town, and its village is a gem. This has long been the favorite haunt of rest seekers from the cities, and before the railroad was extended to Phillips, this was the rallying point for the Rangeley Lake. It has good hotels and private boarding-houses, and the population of the village is largely increased during the hot weather. Since this was written, a conflagration has destroyed a large part of the village, but its wide-awake people have already begun to rebuild, and soon the village will appear more beautiful than ever. The village of Phillips is now the rallying point for the lake region, and many people find it a pleasant place in which to spend the summer. The four lakes, the Rangeley, Mooslucmaguntook, the Richardson and the Umbagog are now supplied with steamers, and at various places around, are capacious hotels which are well patronized during the hunting and fishing season. The amount annually paid to hotels, steamers, boatmen and guides is large.

The Buckfield and Rumford Falls Railroad leaves the Grand Trunk at Mechanic Falls and extends to Canton, a distance of about twenty miles. It passes through Hebron, Buckfield and Sumner. The entire route is a romantic one, and when the road is extended to Rumford Falls, this will become a favorite route to the lake region. More or less of summer pleasure and rest seekers have already found their way into the region pierced by this road, and the number of such is steadily increasing. The Androscoggin Valley is here quite as attractive as it is higher up, while the surrounding scenery is no less striking and picturesque.

There are many places on the Kennebec River which have become favorite summer resorts. The numerous ponds are well supplied with fish, and the woods abound with game, and in the proper season fishing and hunting are excellent. Around these ponds several hotels have been built which do a good business in summer. More or less of summer boarders also frequent the villages which they find sufficiently attractive to draw them here year after year. Kennebec



KINEO HOUSE, MOOSEHEAD LAKE.

County abounds in hills and from every hill-top a fine view is had of the surrounding country. The White Hills are seen from many elevations, and there are hill-top farms in this county from which ten out of the sixteen counties of the State can be seen, and landmarks in them plainly made out. These elevations are attractive spots for summer boarding-houses, as good drainage, pure air and water and charming landscape views are assured. Toward the headwaters of the Kennebec is the ancient town of Norridgewock, with its charming village, its Indian legends, and its fine scenery. Many people from out of the State make their summer homes here.

Moosehead Lake is the finest inland resort in the State, and has one of the best hotels. The route is by way of the Maine Central to Bangor, and then over the Bangor and Piscataquis to the shore of the lake in the town of Greenville. A short steamboat trip takes the tourist to the Kineo House, and at this capacious hostelry he will find every comfort and every luxury which the season can supply. The proprietor of the hotel furnishes boats and guides to those going into the wilderness beyond, and sustenance for the trip. This house is liberally patronized, and a large amount of money is annually left here. Its capacity is six hundred guests and oftentimes is inadequate to the demands of tourists. Greenville, at the foot of the lake, has some good hotels and is a favorite stopping place. A short branch road from Milo Junction leads to the Katahdn Iron Works, where there is a good hotel which receives a liberal patronage. There are many other points of interest on this route which must be omitted for lack of space. Many hotels are almost entirely sustained by the patronage of tourists.

The Penobscot from the sea to Mattawamkeag Point is annually visited by large numbers of tourists and many of them spend the summer at different points. Beyond Mattawamkeag the road branches, one branch leading into Aroostook County by the way of Patten, and the other leading directly to Houlton. These roads are thoroughfares of travel in summer, notwithstanding the all-rail route through New Brunswick, and the hotels do a good business.

An attractive spot for rest and recuperation is at the head of Damariscotta Pond in the town of Jefferson. An excellent hotel is in operation here, and a small steamer makes trips twice daily down the pond to Muscongus station of the Knox and Lincoln Railroad in the town of Nobleboro'. It is only fifteen miles, through a delightful country, from Augusta to Brown's Hotel, and a stage makes daily

trips during the summer months. This place has an increasing and well-deserved patronage.

Lake Auburn has come into notice within a few years as a pleasure resort. The place is connected with Auburn and Lewiston by horse-cars, and a commodious hotel has been erected here. There is a spring in the vicinity whose waters are claimed to possess healing virtues. The number of visitors and regular boarders at this resort is increasing.

Poland Springs, a little distance from the Grand Trunk Railway, has become a famous summer resort, and during the past season the two capacious hotels have been taxed to the utmost. The healing qualities of the water have a wide-spread reputation, and are a great source of profit to the owners. No Maine inland resort is as well patronized as this, and in addition to the income from boarders, a large amount is realized from the sale of water, which is shipped in barrels to various parts of the country.

There are hundreds of other summer resorts in the State which have been omitted, not so much on account of their insignificance as for lack of space. A large volume would be required to describe them all. But enough has been written to show the great importance of our summer resorts from an industrial standpoint and as a source of gain. Agriculture will always be the chief pursuit of our people, and manufactures must stand next. Lumbering, though not as important an industry as formerly, still ranks at the third in importance and will for years to come. The ice business except for its uncertain character would stand next, but, like the summer resorts, it is a business that does not impoverish the State. Our summer resorts are an auxiliary to every other important industry. They afford the farmer and gardener a home market for his products; they absorb a large amount of lumber, and give employment to a great many mechanics and common laborers; they increase the consumption of ice, and of every commodity produced in the State, and they make dividends possible by our various lines of railway. The amount of money brought into the State through their means has become a necessity in many places and great financial embarrassment would result from its sudden suspension.

A tabulated statement showing the amount of money received at our different summer resorts from persons residing out of the State would be interesting and valuable, but the necessary information could not be obtained without entailing large expense. Circulars

asking for this information were sent to the leading summer hotels, but only a very few responded. This being the case, any estimate of the amount might be very wide of the fact. But that it reaches millions of dollars no one will doubt, and that it promises to become and hold its place as one of our leading industries is equally certain.

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