
PRINTING AND PUBLISHING.

(1037)

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The separation of the statistics of printing and publishing into "newspapers and periodicals" and "book and job printing" is necessarily so difficult that a complete division has not been attempted in the tables and discussion which appear in this report.

In this industry the practice of the large cities differs sharply from that of the smaller communities. In the former, book and miscellaneous printing and the printing and publishing of newspapers and periodicals are separated into two distinct industries. While it is true that type and printing presses are employed in both, the plant of a large city newspaper is adapted solely to its own routine requirements, would be practically useless in a job office, and seldom contains enough job material even to produce its own stationery. In the large communities newspaper proprietors have secured their experience in their own profession, and frequently are unfamiliar with job printing. The city job printer, on the other hand, considers his calling a distinct one, knows little of the mechanical requirements of the daily paper, and does not regard newspapers as competitors in the remotest sense. These are the extremes. Between them are the small publications and the numerous trade periodicals, which seldom own their own plants. Publications of this description patronize job printers to avoid the installation of individual plants, but in any division of the products of the industry they should, of course, be classed with newspapers.

In villages, towns, and cities of less than 20,000 inhabitants, with few exceptions, the newspaper office is the job office, and the accounts of the two ventures are so interwoven that satisfactory separation is impossible.

The newspaper is merely one item of the total product, but generally gives the establishment its name, directs its policy, and often determines the success or failure of the office.

At the Tenth Census newspapers and periodicals were treated in an able and exhaustive report by Mr. S. N. D. North. The job office, however, received no attention, except in the most general way, at either the Tenth or the Eleventh Census. In 1900 the job offices in the large cities were so numerous, represented so great an investment, used such a diversity of materials, and turned out products of so great value, that more than passing reference to this branch of the industry is clearly due.

This report is divided into two parts: Part I, tables and analysis; Part II, progress in the printing and publishing industry. In Part I are presented 55 tables, preceded by a summary. Of these tables, 4 relate to the general subject of printing and publishing, 50 to newspapers and periodicals, and 1 to book and job printing. Of these tables the more important are so constructed as to be comparable with the tables presenting the statistics of this industry at the Eleventh Census. The remaining tables are merely comparisons derived from the 19 main tables, and with a few exceptions contain no original figures.

In Part II is presented a detailed description, also preceded by a summary, of the principal mechanical improvements, and of the changes in news gathering, which have marked this industry since 1890, and in some cases since 1880.

I. TABLES AND ANALYSIS.

The more important conclusions, which seem justified from careful consideration of the tables appearing in this report, may be thus summed up:

When the two branches of the industry are separated—as far as separation of products so closely related is possible—the total value of all book and job printing products is about equal to the total value of all distinctive newspaper products; the former, including the printing and publishing of music, being \$168,930,707, or 48.7 per cent of the total, and the latter \$175,789,610, or 50.7 per cent of the total.

The capital invested in both branches of this industry

showed a marked increase, while the value of products per establishment declined. The number of establishments in the newspaper and periodical branch, proportionately 83 to every 100 publications in 1890, remained nearly stationary in 1900, being 84 to every 100 publications.

Of all newspaper and periodical establishments 63.3 per cent were owned by individuals, 19.7 per cent in partnership, and only 17.0 per cent by corporations, indicating that combinations of any consequence are unlikely in this industry.

The total number of wage-earners increased only 10

per cent, but the value of products earned by them increased 24 per cent. There was a much greater relative increase among women than men, suggesting that competition may have led to a search for a less expensive form of labor.

Of the total value of products, advertising formed 43 per cent, subscriptions and sales 35.8 per cent, and book and job printing, including miscellaneous products, 21.2 per cent. The proportion of subscriptions and sales steadily declined from 1880, while the proportion which advertising formed steadily increased until it was over half. This suggests that publications depend more and more upon advertising as their principal source of income.

In 1890 the increase in the number of all publications was greater than the increase in population, but in 1900 the increase in number of publications and in population was about the same. It appears, however, that the per cent of increase in the number of daily newspapers and the per cent of increase in urban population remained about the same for two decades, suggesting a certain degree of relationship between these figures.

During the decade there was an increase in the proportion of daily, triweekly, semiweekly, and monthly publications, indicating that the first three mentioned have attracted support from the weekly, and that the monthly has drawn away support from the quarterly.

There was a marked decline in the proportion of publications devoted to special topics, and an advance only in the classes devoted to news topics and to general reading. The total circulation per issue of dailies was enough to supply one for every five inhabitants. The total circulation per issue of weeklies and monthlies was one to two inhabitants.

Publications printed in English formed 94.3 per cent of all publications reporting for 1900, showing a considerable increase over the corresponding figures for the preceding decade. The figures for publications printed in foreign languages indicate a rather close connection with the movement of immigration. The publications printed in foreign languages appear to depend to a large extent upon recent arrivals speaking the language in which the publication is printed. The increase or decrease is, in general, in proportion with the increase or decrease in immigration. The decrease in the proportion of all publications printed in foreign languages may be compared with the facts brought out in Volume II, Twelfth Census, page cxxv, that in 1900 12.2 per cent, and in 1890 15.6 per cent of the foreign born white population at least 10 years of age were unable to speak English, suggests that the immigrants reaching the United States during the past decade have been more ignorant and less interested in the perusal of publications than those who preceded.

One and one-quarter billion pounds of paper were used during the census year. Of this amount 77.6 per cent was consumed for newspapers, 16.4 per cent for

books and periodicals, and 6 per cent for job printing, but the proportionate cost was 58.7 per cent, 24.7 per cent, and 16.6 per cent, respectively.

Daily evening newspapers increased more rapidly than daily morning papers. In 1890 there were two evening papers to every morning paper; in 1900 the proportion was about one to three.

The circulation per issue of daily papers in certain large cities, compared with the population, indicates that the inhabitants of certain cities were tributary, in the matter of publication, to certain others. In the circulation of weeklies and monthlies, special publications issued in certain states had a marked effect upon the standing of the product of those states in this industry, as, for example, in Maine and Tennessee.

On analyzing the total circulation reported for each state, it is found that 10 leading states supplied four-fifths of the circulation per issue of all publications. This fact is shown to be true, to a greater or less degree, of all of the principal classes of publications, indicating the concentration of circulation in certain populous states.

However, the influence exerted by 10 states in circulation, is not maintained in number of establishments, capital, or value of products. During the last two decades the number of establishments increased more rapidly in states having a small number of establishments than in those having many. This also suggests, to some extent, concentration of establishments in the more populous states.

All but 16 states and territories showed an increase in the number of publications to each 1,000 inhabitants, but the per cent of increase in aggregate circulation per issue declined in 39 states.

The proportion of inhabitants to each weekly was far more uniform than the proportion to each daily, ranging in the former case from 2,016 for Nevada to 20,407 for Rhode Island; in the latter from 4,703 for Nevada to 191,474 for South Carolina.

Weekly publications were most numerous in proportion to inhabitants in the West and Northwest. New England ranked high in dailies but low in weeklies, suggesting that in that densely settled region the daily had to some extent supplanted the weekly. During the decade the number of inhabitants to each weekly publication increased in 26 out of 49 states, but in less than half of the states and territories did the increase in the number of weeklies keep pace with the increase in population.

The proportion of inhabitants to dailies decreased in 31 states and territories, showing a marked gain in the number of dailies in proportion to the population. All states bordering upon the Great Lakes, and 15 out of 21 seaboard states, showed an increase in the proportionate number of daily newspapers to the number of inhabitants. The states in which the daily lost

ground were, in general, those in the far Northwest, where the weekly made its principal gain.

Of all the minor geographic divisions, the Southern North Atlantic—New York, New Jersey, and Pennsylvania—show the most striking advance in the proportion of the total circulation reported. In circulation of daily newspapers all states and territories showed a decided increase. In circulation of weekly publications the Southern South Atlantic group showed a decrease, but all other groups of states and territories showed a moderate increase. In circulation of monthly publications a decrease was shown in the Southern South Atlantic and the Western South Central groups; elsewhere in the United States the increase was very large.

While circulation was centralized, both for the 10 states mentioned as possessing a preponderance of the circulation, and for geographic divisions, no such centralization existed in number of establishments. New England and the Southern North Atlantic states possessed but 21.6 per cent of all establishments, while all except 4 of the states bordering on the Atlantic and Pacific oceans and the Great Lakes showed a per cent of increase less than the average increase for the United States.

The distribution of capital by geographic divisions varied radically from that of the number of establishments. In 8 out of 11 minor geographic divisions the proportion of the total capital reported was less in 1900 than in 1890. The only marked advance was in the Southern North Atlantic group, and this advance was made at the expense of nearly all the others. This fact

suggests that the centralization of the industry made most rapid progress in this group. It should be noted that in all divisions the increase was large. So great, however, was the increase in capital in the group mentioned, that it materially affected the per cent of increase for the United States; this was 52.4 per cent, but for the United States, exclusive of the Southern North Atlantic group, it was only 39.3 per cent.

The value of products, considered by minor geographic divisions, showed greater uniformity than the other items mentioned. All divisions showed advances in 1900 except the Southern North Atlantic group.

Table 1 presents the totals, at the census of 1900, for the three classes into which this industry is divided. As already explained, complete separation was impracticable. The value of products for newspapers and periodicals includes the value of a large amount of job printing—shown in Table 5 to be \$44,859,226. If this amount be added to \$124,071,481, the combined value of products reported for book and job printing and the printing and publishing of music in Table 1, the resulting amount, \$168,930,707, or 48.7 per cent of the total value of the products of the industry, represents that share which properly may be claimed for book and job printing, as distinguished from newspapers and periodicals; for the latter the value of products amounted to \$175,789,610, or 50.7 per cent of the total. The remaining six-tenths of 1 per cent is a miscellaneous item which can not be classified.

TABLE 1.—SUMMARY BY CLASSES OF PRINTING AND PUBLISHING, 1900.

CLASSES.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products.
			Number.	Salaries.	Average number.	Total wages.			
Total.....	22,312	\$292,517,072	37,799	\$36,090,719	182,992	\$84,249,954	\$55,807,529	\$86,856,900	\$847,055,050
Newspapers and periodicals.....	15,805	192,443,708	27,579	27,015,791	94,604	50,388,051	38,544,642	50,214,904	222,988,569
Book and job.....	6,920	97,759,898	9,906	8,830,413	67,610	33,541,701	16,680,190	36,161,712	121,799,098
Music.....	87	2,313,966	314	244,515	778	375,202	663,097	449,674	2,272,385

Classing the printing and publishing of music with book and job printing, the totals in Table 1 are divided between the two branches of the industry in the following proportions:

TABLE 2.—Proportion in which the totals are divided between the two branches, 1900.

	Newspapers and periodicals.	Book and job printing.
Number of establishments.....	68.6	31.4
Capital.....	65.3	34.2
Salaried officials, clerks, etc.....	73.0	27.0
Salaries.....	74.9	25.1
Wage-earners.....	58.0	42.0
Wages.....	59.7	40.3
Miscellaneous expenses.....	69.0	31.0
Cost of materials used.....	57.8	42.2
Value of products.....	64.3	35.7

of establishments, indicating that the average capital per establishment was lower for that class than for book and job printing. Doubtless this is due to the fact, already explained, that book and job offices are generally located in the larger cities.

A comparison of the average capital, cost of materials, and value of products per establishment in the two main branches of the industry, not including the printing and publishing of music, is presented in Table 3.

TABLE 3.—Comparison of the average capital, cost of materials, and value of products in the two main branches of the industry, 1900.

	Newspapers and periodicals.	Book and job printing.
Capital.....	\$12,574	\$14,127
Cost of materials used.....	3,281	5,230
Value of products.....	14,569	17,601

It is here shown that newspapers and periodicals possessed a smaller proportion of capital than of number

From Table 1 it appears that 74.5 per cent of the value of all products of newspapers and periodicals was expended for wages, materials, and other items of expenditure, while the corresponding per cent for book and job printing was 78.2. In the newspaper and periodical class the cost of materials represented 22.5 per cent of the value of products, and in the book and job printing class 29.5 per cent, or about one-third greater. Were it possible to extricate from the statistics for the newspaper and periodical class the figures for book and job work produced in newspaper offices, it is probable the difference in these percentages would be still more significant. Newspapers and periodicals generally use inexpensive raw materials, while the materials required by the book and job printing office are varied and much more expensive.

If the ratio between cost of materials and value of products in the book and job printing class be applied to the value of book and job work produced in newspaper offices, it will appear that, of the total cost of materials shown in Table 5 for newspapers and periodicals, an expenditure of \$36,891,714 was made for materials for newspapers and periodicals, and of \$13,323,190 for those for book and job work produced in newspaper offices. According to these figures the cost of materials for newspapers and periodicals was 21 per cent of the value of newspaper products, and for book and job printing it was 29.7 per cent of the book and job products shown in Tables 1 and 5—indicating that the ratio of cost of materials to value of products was more than 40 per cent greater for book and job printing than for the printing and publishing of newspapers and periodicals.

Table 4 presents a comparative summary for the whole industry for 1890 and 1900. Comparison with the figures for the censuses of 1850 to 1880, although much to be desired, is impracticable. The figures for the earlier decades, and even some of those for 1880, are not comparable with those of the Eleventh and Twelfth censuses. The difficulty in separating the two parts of the industry, which already has been noted appears to have resulted in an underestimate of the number of establishments at one or more censuses. This, with other points of difference, renders the figures for 1850 to 1880, inclusive, practically valueless for purposes of comparison.

TABLE 4.—Comparative summary of printing and publishing, 1890 and 1900, with per cent of increase.

	1900	1890	Per cent of increase.
Number of establishments	22,312	16,566	34.7
Capital	\$292,517,072	\$195,387,445	49.7
Salaried officials, clerks, etc., number	37,799	128,391	33.1
Salaries	\$36,090,719	\$26,272,756	37.4
Wage-earners, average number	162,992	186,836	19.1
Total wages	\$84,249,954	\$78,810,319	6.9
Men, 16 years and over	125,964	110,484	14.1
Wages	\$74,288,521	\$71,810,415	4.2
Women, 16 years and over	28,765	19,026	51.2
Wages	\$8,878,078	\$6,604,046	34.4
Children, under 16 years	8,268	7,336	12.0
Wages	\$1,083,360	\$895,858	20.9
Miscellaneous expenses	\$55,897,929	\$46,971,768	19.0
Cost of materials used	\$86,856,290	\$68,758,915	26.1
Value of products	\$347,055,050	\$275,452,515	26.0

¹ Includes proprietors and firm members, with their salaries; number only reported in 1900, but not included in this table.

The figures for all the items appearing in Table 4 have become so great that a small per cent of increase now represents an absolute increase greater than that shown by a relatively high per cent in earlier decades. While the percentages of increase for the several items are very moderate, the absolute increases are gratifyingly large.

For the censuses from 1850 to 1880, inclusive, the statistics of capital were regarded, even at the time of enumeration, as difficult to secure and of uncertain value. Gen. F. A. Walker, Superintendent of the Ninth Census, expressed this opinion: "No man in business knows what he is worth; far less can he say what portion of his estate is to be treated as capital."¹ Prior to 1890 the inquiry concerning capital was a general one, different in form from that now employed.

NEWSPAPERS AND PERIODICALS.

A comparative summary of the figures relating to newspapers and periodicals, from 1880 to 1900, inclusive, is presented in Table 5.

To some extent this table also illustrates the difficulty of making satisfactory comparisons prior to 1890. Out of 23 items shown for 1890 and 1900, only 9 were reported in 1880, the number of establishments, capital, and certain other items being omitted.

TABLE 5.—Comparative summary of newspapers and periodicals, 1880 to 1900, with per cent of increase for each decade.

	DATE OF CENSUS.			PER CENT OF INCREASE.	
	1900	1890	1880	1890 to 1900	1880 to 1890
Number of establishments	15,305	12,362	(2)	23.8	.....
Capital	\$192,448,708	\$126,269,885	\$53,000,000	52.4	138.2
Salaried officials, clerks, etc., number	27,579	320,120	(5)	37.1	.....
Salaries	\$27,016,791	\$17,777,173	(5)	52.0	.....
Wage-earners, average number	94,604	85,975	71,615	10.0	20.1
Total wages	\$50,333,051	\$50,824,359	\$28,559,335	41.0	78.0
Men, 16 years and over	73,653	70,424	(5)	4.6	.....
Wages	\$44,961,538	\$46,960,047	(5)	4.3	.....
Women, 16 years and over	14,815	9,587	(5)	54.5	.....
Wages	\$4,628,221	\$3,222,192	(5)	43.6	.....
Children, under 16 years	6,138	5,964	(5)	2.9	.....
Wages	\$743,297	\$642,120	(5)	15.8	.....
Miscellaneous expenses	\$38,544,642	\$35,727,039	(2)	7.9	.....
Materials used:					
Total cost	\$50,214,904	\$38,955,322	(2)	28.9	.....
Paper, pounds	1,233,142,248	522,876,161	189,145,048	123.0	192.3
Products:					
Total value	\$222,983,569	\$179,859,750	(2)	24.0	.....
Newspaper products	\$175,789,610	\$143,586,448	\$89,009,074	22.4	61.3
Advertising	\$95,861,127	\$71,243,361	\$39,136,306	34.6	82.0
Subscriptions and sales	\$79,928,483	\$72,343,087	\$49,872,768	10.5	45.1
Book and job printing products	\$44,859,226	\$32,812,113	(2)	36.7	.....
All other products	\$2,334,733	\$3,461,189	(2)	43.25	.....

¹ Tenth Census: The Newspaper and Periodical Press, by S. N. D. North, page 79.

² Not reported.

³ Estimated.

⁴ Includes proprietors and firm members, with their salaries; number only reported in 1900, but not included in this table. (See Table 58.)

⁵ Not reported separately.

⁶ Decrease.

TABLE 5.—Comparative summary of newspapers and periodicals, 1880 to 1900, with per cent of increase for each decade—Continued.

	DATE OF CENSUS.			PER CENT OF INCREASE.	
	1900	1890	1880	1890 to 1900	1880 to 1890
Number of publications ¹	18,226	14,901	10,182	22.3	47.1
Aggregate circulation per issue ²	114,299,334	69,188,934	31,779,686	65.3	117.6
Aggregate number of copies issued during the census year ³	8,168,148,749	4,681,113,530	2,067,848,209	74.5	126.4

¹ Does not include certain publications which did not report operations as follows: In 1880, 1,182; in 1890, 2,715; in 1900, 3,046.
² "Aggregate circulation per issue" is the sum of the totals for the average circulation per issue reported by each establishment.
³ Obtained for each class of publication by multiplying the aggregate circulation per issue by the number of issues during the year.

PUBLICATIONS NOT REPORTING.

In any discussion of the statistics of newspapers and periodicals, early reference should be made to the number of publications from which no report was received.

The numbers reporting and not reporting at the censuses of 1880, 1890, and 1900 were as follows:

TABLE 6.—Publications reporting and not reporting, 1880 to 1900.

YEAR.	NUMBER OF PUBLICATIONS.			Per cent those not reporting form of total.
	Total.	Report-ing.	Not re- porting.	
1900.....	21,272	18,226	3,046	14.3
1890.....	17,616	14,901	2,715	15.4
1880.....	11,814	10,182	1,182	10.4

The number of publications classed as not reporting was ascertained by reference to the standard newspaper directories. By this method of comparison it appears that at the Twelfth Census the number of publications not reporting amounted to 14.3 per cent of the total, a proportion slightly less than that for 1890. Of the 3,046 publications stated as not reporting, a considerable number undoubtedly had gone out of existence; many others were so small and unimportant that they were in no respect a factor in this enumeration; and still others were doubtless of a class not reported by the census. It is clear, therefore, that the number of unreported publications which, by reason of standing, capital, and value of products, were entitled to consideration, was so small that had the totals been obtained, they would have but slight influence upon the figures presented in this report. Therefore, the publications not reporting in 1900 will be regarded as a negligible quantity.

NUMBER OF ESTABLISHMENTS AND PUBLICATIONS.

As the census of 1880 did not record the number of establishments, the figures relating to this subject can be compared only for 1890 and 1900. The proportion of establishments to publications remained practically stationary during the decade, being 82.9 to every 100

publications in 1890, and 84 in 1900. In the absence of information concerning the number of establishments in 1880, it is interesting to observe that if the ratio for 1880 was the mean of those given above, the number of establishments in 1880 was approximately 8,450, but for obvious reasons no statistical value can be claimed for this figure.

By considering here the details presented in Table 58 concerning number of establishments, it appears that 9,686, or 63.3 per cent of the total number, were owned and operated by individuals; 3,016, or 19.7 per cent, were owned and operated by some form of partnership; and 2,603, or 17.0 per cent, were owned and operated by corporations (including 183 miscellaneous forms of ownership). These figures indicate the complete absence of the extended combinations and consolidations so frequently encountered in other industries.

Comparison of Tables 4 and 5 reveals the fact that the increase in the number of all establishments, 34.7 per cent, was more rapid than in the number in the newspaper and periodical class, which increased 23.8 per cent. This is due to the marked growth in the number of establishments in the book and job printing class, which increased 67.8 per cent.

It appears from Table 5 that the increase in the number of publications was less rapid from 1890 to 1900 than during the previous decade, and that the increase in the total number of copies of newspapers and periodicals issued during the census year, though very large, amounting to 74.5 per cent, was much less than that shown in 1890, which amounted to 126.4 per cent.

CAPITAL.

Analysis of the statistics of capital and products presented in Table 5, is given below:

TABLE 7.—Average capital, average value of products, and per cent that value of products forms of capital, 1890 and 1900.

YEAR.	Average capital.	Average value of products.	Per cent that value of products forms of capital.
1900.....	\$12,574	\$14,569	115.9
1890.....	10,214	14,549	142.4

In 1890 the average capital was \$10,214, and in 1900 it was \$12,574, an increase of 23.1 per cent. The average value of products, however, was almost stationary; therefore, the per cent of value of products to capital, which was 142.5 in 1890, fell to 115.9 in 1900. These figures are confirmatory of a change especially characteristic of the last decade, by which increasing capital is required to produce the same or even a smaller value of products.

Comparison of Tables 4 and 5 also shows that the increase in capital in newspaper and periodical estab-

lishments, 52.4 per cent, was more rapid than in all establishments, in which it was 49.8 per cent.

WAGE-EARNERS.

Table 5 shows that during the decade from 1890 to 1900 the total number of employees in the newspaper and periodical class increased 10 per cent. Table 8 shows the changes in the proportion of men, women, and children employed.

TABLE 8.—Total number of wage-earners, and proportion of men, women, and children employed, 1890 and 1900.

YEAR.	Total Wage-earners.	PER CENT OF TOTAL.		
		Men.	Women.	Children.
1900.....	94,604	77.8	15.7	6.5
1890.....	85,975	81.9	11.2	6.9

The proportion of women to the total number increased from 11.2 to 15.7, a difference of 4.5 per cent. This gain was made practically at the expense of male wage-earners, the proportion of whom decreased from 81.9 to 77.9, a difference of 4.0 per cent. The proportion of children employed for wages remained practically stationary.

It has been explained in Volumes VII and VIII of the Twelfth Census Reports that for comparative purposes the figures for 1890 and 1900 relating to wage-earners and wages are less trustworthy than other items reported, because of changes in classification. In the reports mentioned these changes are explained in detail. Should the figures given in Table 5 be accepted as permitting an approximate comparison, it would appear that an increase of 10 per cent in wage-earners secured an increase of 24 per cent in value of products, and that the absolute increase in male wage-earners was but 3,229, while the absolute increase in female wage-earners was 5,228. Indeed, the latter figure would have been even larger had the age classification remained the same in 1900 as in 1890.

VALUE OF PRODUCTS.

The total value of all products of newspaper and periodical establishments increased \$43,123,819, or 24 per cent, between 1890 and 1900. Of the items composing the total value of products, by far the lowest increase, 10.5 per cent, was shown for "subscriptions and sales." This fact, taken in connection with the decided increase in the amount of paper used, illustrates one of the marked features of the development of the industry—the increase in the number of pages issued by almost all newspapers and magazines. The causes of this increase in the size of publications are discussed elsewhere in this report.

Of the total value of products given in Table 5, adver-

tising forms 43 per cent, subscriptions and sales 35.8 per cent, and book and job printing and all other products together 21.2 per cent. Of these three items book and job printing shows the largest per cent of increase during the last decade. Comparison of the percentages of increase in advertising and in subscriptions and sales for the decades from 1880 to 1890 and from 1890 to 1900 shows a shrinkage from 82 per cent to 34.6 per cent in the former and from 45.1 per cent to 10.5 per cent in the latter.

The decline in the relative importance of subscriptions and sales and the advance of advertising are clearly shown for three census years in Table 9.

TABLE 9.—Proportion which advertising and subscriptions and sales form of total value of newspaper products, 1880 to 1900.

YEAR.	Advertis- ing, per cent.	Subscrip- tions and sales, per cent.
1900.....	54.5	45.5
1890.....	49.6	50.4
1880.....	44.0	56.0

A comparison, for 1890 and 1900, of the proportion contributed to the total value of all products by the two items referred to above, shows a decline in subscriptions and sales, an advance in advertising, and also a slight advance in book and job printing.

TABLE 10.—Proportion which advertising, subscriptions and sales, and book and job printing form of the total value of all products, 1890 and 1900.

YEAR.	Per cent which ad- vertising forms of value of products.	Per cent which sub- scriptions and sales form of value of products.	Per cent which book and job printing forms of value of products.
1900.....	43.0	35.8	21.2
1890.....	39.6	40.2	20.2

Tables 9 and 10 establish the important fact that publishers are depending more on advertising and less on subscriptions and sales for financial return. This conclusion is confirmed by the fact that the most notable increases for the past decade, shown in Table 5—except that for paper, already referred to—are in "aggregate circulation per issue" and "aggregate number of copies issued during the census year," suggesting the conclusion that the publishers of newspapers and periodicals, pushed by competition and by the necessity for an increase of circulation to meet the exactions of the advertiser have increased their capital and forced a larger circulation, which has not shown a proportionate increase in the financial return.

PERIOD OF ISSUE AND CHARACTER OF PUBLICATION.

Publications are classified in Table 11 by period of issue and by character.

TABLE 11.—Classified according to period of issue and character of publication, 1880 to 1900, with per cent of increase for each decade.

	NUMBER OF PUBLICATIONS REPORTING.			PER CENT OF INCREASE.	
	1900	1890	1880	1890 to 1900	1880 to 1890
Total	18,226	14,901	11,314	22.8	31.7
Period of issue:					
Daily	2,226	1,610	971	38.8	65.8
Triweekly	62	34	73	82.4	253.4
Semiweekly	637	194	133	228.3	45.9
Weekly	12,979	10,814	8,633	20.0	25.3
Monthly	1,817	1,784	1,167	4.8	48.6
Quarterly	237	225	116	5.3	94.0
All other classes	268	290	221	27.6	31.2
Character of publication:					
News, politics, and family reading	14,867	11,326	8,863	31.3	27.8
Religion	952	1,025	653	27.1	35.4
Agriculture, horticulture, dairying, and stock raising	307	263	173	16.7	52.0
Commerce, finance, insurance, railroads, and trade	3710	671	363	5.8	84.8
General literature, including magazines	239	291	189	27.9	54.0
Medicine and surgery	111	123	114	29.8	7.9
Law	62	47	45	31.9	4.4
Science and mechanics	66	83	68	20.5	22.1
Fraternals organizations	200	216	149	27.4	45.0
Education and history	4259	256	248	1.2	8.2
Society, art, music, and fashion	88	152	72	242.1	111.1
Miscellaneous	6865	448	477	218.5	26.1

¹ Includes 1,182 publications not reporting operations, as they can not be excluded from the classification.
² Decrease.
³ Includes 520 "trade journals."
⁴ Includes 139 "college and school periodicals."
⁵ Includes 72 "Sunday newspapers."

It will be observed from Table 11 that while the tri-weekly, a class with unimportant totals, suffered a severe decline during the decade from 1880 to 1890, the other classes of publications under "period of issue" increased by percentages ranging from 25.3 to 94. In the decade from 1890 to 1900 there were no decreases, but the increases recorded for the daily, weekly, monthly, and quarterly classes were much smaller than for the same classes during the preceding decade. The most noteworthy increase was in the semiweekly publications, of which there were 133 in 1880, 194 in 1890, and 637 in 1900. The increase shown at the last-named date was 443 publications, or 228.4 per cent. This is in marked contrast to the moderate advances recorded for the other classes, and doubtless reflects an effort, on the part of a considerable number of publishers of weekly newspapers in towns located near large cities, to overcome the injurious effects of competition with city dailies. There have been many instances, during the decade, in which a weekly has been advanced to a semi-weekly, thus doubling the number of issues with little or no increase in the subscription price:

As shown by this table, the absolute increase in the number of publications during the decade was 3,325. For the decade ending in 1890 the per cent of increase in the number of all publications was greater than the per cent of increase in population, the former being 31.7 per cent and the latter 24.9. In the decade from 1890 to 1900 the percentages for both items decreased,

becoming 22.3 for all publications and 20.7 for population—a similarity which, while interesting, was doubtless merely a coincidence. It is worthy of note, however, that for two decades the per cent of increase in the number of daily newspapers has been nearly the same as the per cent of increase in urban population. The foregoing facts, together with the number of inhabitants to each publication, are presented in Table 12.

TABLE 12.—Number of inhabitants to each publication, 1880 to 1900, and per cent of increase for each decade in urban population and in number of daily newspapers.

YEAR.	Number of inhabitants to each publication.	PER CENT OF INCREASE IN PRECEDING DECADE.	
		In urban population.	In number of daily newspapers.
1900	4,170	36.8	38.8
1890	4,224	61.4	65.8
1880	4,433	.....	.....

The two following tabular comparisons give the percentage which each class forms of the total number of publications for 1880, 1890, and 1900, when classified by "period of issue" and by "character of publication."

TABLE 13.—Per cent that each class, by period of issue, forms of total number of publications, 1880 to 1900.

PERIOD OF ISSUE.	1900	1890	1880
Daily	12.2	10.8	8.6
Triweekly	0.3	0.2	0.6
Semiweekly	3.5	1.3	1.2
Weekly	71.2	72.6	76.3
Monthly	10.0	11.6	10.3
Quarterly	1.3	1.5	1.0
All other classes	1.5	2.0	2.0

TABLE 14.—Per cent that each class, by character of publication, forms of total number of publications, 1880 to 1900.

CHARACTER OF PUBLICATION.	1900	1890	1880
News, politics, and family reading	81.6	76.0	78.8
Religion	5.2	6.9	4.9
Agriculture, horticulture, dairying, and stock raising	1.7	1.8	1.5
Commerce, finance, insurance, railroads, and trade	3.9	4.5	3.2
General literature, including magazines	1.3	2.0	1.7
Medicine and surgery	0.6	0.8	1.0
Law	0.3	0.3	0.4
Science and mechanics	0.4	0.6	0.6
Fraternals organizations	1.1	1.4	1.3
Education and history	1.4	1.7	2.2
Society, art, music, and fashion	0.5	1.0	0.7
Miscellaneous	2.0	3.0	4.2

From Table 13 it will be observed that for the twenty-year period from 1880 to 1900 the daily, the semi-weekly, and the quarterly show small relative advances, and the weekly and the monthly show small declines. The changes shown for the past decade are of especial interest; the quarterly falls out of the advancing class, but the daily and the semiweekly continue to show mod-

erate advances, made at the expense of the quarterly as well as of the weekly and the monthly. This result is a manifestation of the energetic and impatient spirit of the period.

Examination of the above comparison of character of publications reveals the fact that during the decade from 1880 to 1890 there was a slight decline in the relative importance of publications devoted to news, politics, and general reading, but that publications devoted to religion, to agriculture and kindred pursuits, to business interests, to general literature, to fraternal orders, and to society, art, music, and fashion, benefiting by the decline of the first-named class, showed small advances. The figures for the Twelfth Census show that a marked change took place during the last decade. The advance of publications devoted to special subjects was checked, while those devoted to news, politics, and general reading made a decided relative increase at the expense of all others, except those devoted to law, a relatively insignificant class, which remained stationary. The reason for the change thus indicated is unmistakable. Publications devoted to specialties slowly yielded ground to the large daily newspapers, which invaded every field of journalism.

This noteworthy situation seems to have been due principally to three causes: The resistless activity of the period, which made the Sunday edition of the daily newspaper a department store of journalism, ransacking all lines of thought and every public interest for material to present; the perfection of the composing machine, by the use of which one competent operator can accomplish the work of from 5 to 10 compositors;

and the development of the inexpensive and satisfactory methods of illustration known as the "line cut" and the "half-tone," which made possible the rapid transference of a photograph to the columns of a newspaper.

It is impossible to measure the effect of the invention of mechanical composition. If it were not for the entirely new situation which it produced, the will and the ability to expand the daily from old-fashioned proportions might have struggled in vain against the high cost of hand composition, notwithstanding the mental activity of the period. The daily press and many other periodicals have been prompt to seize upon this advance in the industry, and are now equipped for machine composition. In this manner a revolution has been accomplished in the output of many publications; the number of printed pages has been greatly increased; the freer use of composition has made possible the introduction of departments or columns devoted to periodic or even daily consideration of special subjects, often cleverly treated; and the daily paper, or the Sunday edition of the daily, has to some extent supplanted publications devoted to specialties. The reading matter now presented is not only satisfying to the reader, but, in amount, often beyond his capacity to assimilate. This is true especially of many of the Sunday publications, which varied in 1900 from 24 to 120 pages, with special departments or supplements devoted to leading subjects, such as literature, art, religion, science, sports, music, the drama, etc.

Table 15 presents the number and circulation of newspapers and periodicals, classified according to period of issue, from 1850 to 1900.

TABLE 15.—NUMBER AND CIRCULATION OF NEWSPAPERS AND PERIODICALS, CLASSIFIED ACCORDING TO PERIOD OF ISSUE, 1850 TO 1900.

YEAR.	ALL CLASSES.			DAILY.		TRIWEEKLY.		SEMIWEEKLY.	
	Number.	Total circulation per issue.	Aggregate number of copies issued during the census year.	Number.	Total circulation per issue.	Number.	Total circulation per issue.	Number.	Total circulation per issue.
1900.....	18,226	114,299,334	18,168,148,749	2,226	15,102,156	62	228,610	637	2,892,868
1890.....	14,901	69,138,934	4,681,113,530	1,610	8,387,188	34	50,087	194	561,743
1880.....	² 11,314	³ 31,773,686	2,067,848,209	971	3,566,395	73	68,086	133	264,910
1870.....	5,871	20,842,475	1,508,548,250	574	2,601,547	107	155,105	115	247,197
1860.....	4,051	13,663,409	927,951,548	387	1,478,435	86	107,170	79	176,165
1850.....	2,526	5,142,177	426,409,978	254	758,464	115	75,712	31	53,511

YEAR.	WEEKLY.		MONTHLY.		QUARTERLY.		ALL OTHER CLASSES. ⁴	
	Number.	Total circulation per issue.	Number.	Total circulation per issue.	Number.	Total circulation per issue.	Number.	Total circulation per issue.
1900.....	12,979	39,852,052	1,817	39,519,897	237	11,217,422	268	5,546,329
1890.....	10,814	28,954,515	1,734	19,624,033	225	8,124,500	290	3,436,853
1880.....	8,638	³ 16,266,830	1,167	³ 8,139,881	116	³ 1,944,299	221	³ 1,379,285
1870.....	4,285	10,594,643	622	5,650,843	49	211,670	109	1,381,470
1860.....	3,173	7,581,930	280	3,411,959	30	101,000	16	307,750
1850.....	1,902	2,944,629	100	740,651	19	25,875	105	543,545

¹ Obtained, for each class of publications, by multiplying the average circulation for each issue by the number of issues during the year.

² Includes 1,182 publications not reporting circulation, as they can not be excluded from the classification.

³ The circulation of 5 weeklies, 1 semimonthly, 14 monthlies, and 12 quarterlies not reported separately, amounting to 150,000, is given only for "all classes."

⁴ Includes publications issued semimonthly, semiannually, annually, etc.

By dividing a total circulation of 100 per cent proportionately among the different classes, for a period of half a century, the following results are obtained:

TABLE 16.—Per cent that circulation per issue of each class forms of total circulation per issue, 1850 to 1900.

PERIOD OF ISSUE.	1900	1890	1880	1870	1860	1850
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0
Daily.....	13.2	12.1	11.2	12.5	10.8	14.7
Triweekly.....	0.2	0.1	0.2	0.8	0.8	1.5
Semiweekly.....	2.5	0.8	1.9	1.2	1.8	1.0
Weekly.....	34.9	41.9	51.2	50.8	55.5	57.3
Monthly.....	34.6	28.4	26.0	27.1	25.0	14.4
Quarterly.....	9.8	11.7	6.1	1.0	0.7	0.5
All other classes.....	4.8	5.0	4.4	6.6	5.9	10.6

From Table 16 it will be observed that the daily class, after fluctuating during the period from 1850 to 1880, advanced from 11.2 per cent in 1880 to 13.2 per cent in 1900; that the weekly declined steadily in relative importance from 57.3 per cent, or more than half of the circulation of all newspapers and periodicals, in 1850, to 34.9 per cent in 1900. Of the other classes the most notable change in circulation was shown by the monthlies, which advanced 6.2 per cent during the last decade. It is probable that this change is due to the establishment of inexpensive magazines, which have a large circulation, and which, in their present perfection, are distinctly a product of the decade from 1890 to 1900. Among the causes which have made them possible are cheapened composition and illustration, and the improvements in the manufacture of printing presses.

TABLE 17.—Absolute increase in the total circulation per issue of each class, 1850 to 1900.

PERIOD OF ISSUE.	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
All classes.....	45,160,400	37,359,248	10,937,211	7,179,066	8,521,282
Daily.....	6,714,968	4,820,793	964,848	1,123,112	719,981
Triweekly.....	178,543	118,019	187,019	47,935	81,458
Semiweekly.....	2,271,125	296,833	17,718	72,032	121,654
Weekly.....	10,897,537	12,687,685	5,672,187	3,012,713	4,637,301
Monthly.....	19,895,859	11,484,157	2,489,038	2,238,884	2,671,308
Quarterly.....	3,092,922	6,180,201	1,782,629	110,670	75,125
All other classes.....	2,109,446	2,057,593	12,185	573,720	284,405

¹ Decrease.

This comparison, drawn from Table 15, throws additional light upon the increase in the circulation of newspapers and periodicals during the past decade. With the exception of the weekly and the quarterly, each class showed a greater absolute increase from 1890 to 1900 than during any other decade of the half century. For both the weekly and the quarterly, the increase during the decade from 1890 to 1900 was exceeded only by that of the preceding decade. This statement emphasizes the rapid growth in the circulation of monthly publications. The normal increase in the circulation of this class of periodicals, which during the twenty years from 1860 to 1880 remained nearly constant at about 2,500,000, advanced in 1890 to 11,484,157, and in 1900 this figure was almost doubled, the absolute increase being 19,895,859.

TABLE 18.—Aggregate circulation per issue of daily, weekly, and monthly publications, and circulation per 1,000 inhabitants, 1880 to 1900.

PERIOD OF ISSUE.	AGGREGATE CIRCULATION PER ISSUE.			CIRCULATION PER 1,000 INHABITANTS.		
	1900	1890	1880	1900	1890	1880
Daily.....	15,102,156	8,337,188	3,566,395	199	138	71
Weekly.....	39,852,052	23,954,515	14,266,330	524	400	324
Monthly.....	89,519,897	19,624,038	8,139,881	520	312	162

From Table 18 it appears that the total circulation per issue of daily newspapers was sufficient to supply about one in every five inhabitants, and of weeklies and monthlies each about one in every two inhabitants. In this respect the increase was most marked in the monthly class.

The average circulation per issue of newspapers and periodicals, by period of issue, from 1880 to 1900, is presented in Table 19.

TABLE 19.—Average circulation per issue, 1880 to 1900.

PERIOD OF ISSUE.	AVERAGE CIRCULATION PER ISSUE.		
	1900	1890	1880
All classes.....	6,271	4,640	3,122
Daily.....	6,784	5,209	4,137
Triweekly.....	3,687	1,473	1,001
Semiweekly.....	4,447	2,896	2,136
Weekly.....	3,071	2,678	2,113
Monthly.....	21,750	11,817	7,394
Quarterly.....	47,331	36,109	16,505
All other classes.....	20,695	11,851	6,474

Representing by percentages the fluctuations shown in this table, the movement of circulation for the past two decades was as follows:

TABLE 20.—Per cent of increase in average circulation, by periods of issue, from 1880 to 1890 and from 1890 to 1900.

PERIOD OF ISSUE.	1890 to 1900	1880 to 1890
All classes.....	35.2	48.6
Daily.....	30.2	25.9
Triweekly.....	150.3	47.2
Semiweekly.....	53.6	35.6
Weekly.....	14.7	26.7
Monthly.....	92.2	44.5
Quarterly.....	31.1	118.8
All other classes.....	74.6	88.1

The tendencies already pointed out appear again in this comparison. Of the important classes, the daily, semiweekly, and monthly show decided advances in the percentage of increase in average circulation during the decade just ended, while the weekly shows a marked decline.

PUBLICATIONS IN DIFFERENT LANGUAGES.

Table 21 presents an interesting classification of the total number of publications reported, into the languages in which they are published.

TABLE 21.—*Newspapers and periodicals classified according to language in which printed, 1880 to 1900.*

LANGUAGE	NUMBER OF PUBLICATIONS.		
	1900	1890	1880
Total.....	18,226	14,901	11,814
English.....	17,194	13,848	10,515
Armenian.....	1	1	1
Bohemian.....	23	22	13
Bohemian and English.....	1	1	1
Catalan.....	1	1	1
Chinese.....	5	3	2
Dutch.....	12	16	9
Finnish.....	7	4	4
French.....	27	40	41
French and English.....	4	5	5
Gaelic.....	1	1	1
Gaelic and English.....	3	3	3
German.....	618	727	641
German and English.....	20	27	27
German and Hebrew.....	3	4	4
Hebrew.....	13	5	5
Hungarian.....	2	1	1
Indian and English.....	3	1	8
Irish.....	1	1	1
Italian.....	35	13	4
Italian and English.....	1	1	1
Lithuanian.....	9	1	1
Polish.....	33	18	2
Portuguese.....	2	2	2
Scandinavian ²	115	112	49
Slavonic, not specified.....	4	2	2
Spanish.....	39	1	26
Spanish and English.....	1	7	1
Volapuk.....	1	1	1
Volapuk and English.....	1	1	1
Welsh.....	1	4	5
Welsh and English.....	1	1	1
All other languages.....	52	1	1

¹Includes 1,182 publications not reporting operations, as they can not be excluded from the classification.

²Includes Danish, Norwegian, and Swedish.

There were 15 different languages or combinations of languages represented in 1880, 30 in 1890, and 25 in 1900. The principal languages in which increases in the number of periodicals published were shown in 1900, were English, Bohemian, Hebrew, Italian, Polish, Scandinavian, and Spanish. Decreases were shown in the number of periodicals published in Dutch, French, and German. The languages represented by publications in 1880 or in 1890, but not in 1900, were Armenian, Catalan, Gaelic, Irish, "Volapuk," and Welsh. The proportion of the total number of publications printed in each of the principal languages in 1880, 1890, and 1900 is best shown by percentages, as follows:

TABLE 22.—*Per cent that number of publications in each of the principal languages forms of the total number, 1880 to 1900.*

LANGUAGE	1900	1890	1880
English.....	94.3	92.9	92.9
Bohemian.....	0.2	0.2	0.1
French.....	0.2	0.3	0.4
German.....	3.4	4.9	5.7
Italian.....	0.2	0.1	0.1
Polish.....	0.2	0.1	0.1
Scandinavian.....	0.6	0.8	0.4
Spanish.....	0.2	0.2	0.2

In 1880, 92.9 per cent of all publications were printed in English; in 1890, although the number of languages or combinations represented was doubled, the proportion of periodicals printed in English remained unchanged; but in 1900 it had advanced to 94.3 per cent.

This advance is significant, when considered in connection with the accompanying decrease from 7.1 per cent in 1890 to 5.7 per cent in 1900 in the proportion of publications printed wholly or in part in other languages. On closer examination of Table 22 it will be observed that during the past decade there was an increase in the proportionate number of publications printed in Italian and in Polish; that there was a decline in the relative importance of publications printed in French, German, and the Scandinavian tongues; and that the proportion of publications printed in Bohemian and Spanish remained the same in 1900 as in 1890.

By considering the percentages of increase or decrease in the number of publications printed in the principal languages, in connection with the statistics of population born in the countries in which those languages are spoken, additional light is thrown on the figures presented in Table 21.¹

TABLE 23.—*Comparison of the per cent of increase or decrease in the number of publications printed wholly or partly in the principal foreign languages, with the per cent of increase or decrease in population born in the countries in which those languages are spoken, from 1880 to 1890 and from 1890 to 1900.*

COUNTRY.	PER CENT OF INCREASE OR DECREASE IN NUMBER OF PUBLICATIONS.		PER CENT OF INCREASE OR DECREASE IN FOREIGN BORN POPULATION.	
	1890 to 1900	1880 to 1890	1890 to 1900	1880 to 1890
France.....	131.1	9.8	17.8	5.8
Germany.....	116.0	17.6	14.2	41.6
Italy.....	150.0	250.0	185.2	812.8
Poland and Russia.....	85.0	900.0	144.7	291.1
Scandinavia.....	2.7	123.6	14.0	112.0

¹Decrease.

The percentages of increase and decrease in number of publications appearing in Table 23, though based upon figures too small to be of any value in themselves, are of great interest in comparison with the percentages given in the second part of the statement, because they indicate the degree of sympathy existing between the increase or decrease in the number of publications printed in the language and devoted to the interests of any one country, and the movement of emigration from that country. From these figures it is reasonable to conclude that publications of this character depend for support, to a large extent, upon comparatively recent arrivals, and that in general, when emigration from a country decreases, the number of publications printed in the language of that country decreases, and when immigration shows an increase the number of publications also increases. In 1900 the Scandinavian countries furnished the only exception to the conclusion that immigrants, after settling in the United States, soon lose interest in their native land to the extent of ceasing to support publications printed in their mother tongue. The immigration of Scandinavians decreased, while the

¹Twelfth Census, Population, Part I, page clxxi.

number of publications printed in the Scandinavian languages showed a slight increase.

If the number of residents of the United States in 1900 reporting birth in each of six important foreign countries be divided by the total number of publications printed in the language of their native country, the following figures appear:

TABLE 24.—Number of residents of the United States born in specified countries to each publication printed in the languages of those countries, 1880 to 1900.

COUNTRY.	1900	1890	1880
Bohemia.....	5,418	5,185	6,566
France.....	3,866	2,515	2,609
Germany.....	4,213	3,693	3,068
Holland.....	8,754	5,114	6,454
Italy.....	13,834	13,041	11,058
Scandinavia.....	9,255	8,333	8,985

It will be recalled that the number of inhabitants to each publication in 1900 has been shown to be 4,169. From Table 24 it appears that the number of residents of the United States in 1900 born in each of the above-named countries, except France and Germany, to each publication printed in their native tongue, was much larger than the average for the United States. In each case, also, the figures for 1900 show an increase over 1890—that is, a decrease in the proportionate number of publications printed in the language of each of these countries to the number of natives of each residing in the United States.

QUANTITY AND COST OF PAPER USED.

Table 25 shows the quantity and cost of paper used, and the average cost per pound, in 1900.

TABLE 25.—Quantity, cost, and average cost per pound of paper used, 1900.

KIND.	Pounds.	Cost.	Average cost per pound (cents).
Total.....	1,233,142,248	\$37,823,856	3.1
News.....	956,885,921	22,197,060	2.3
Book and periodical.....	202,296,263	9,856,490	4.6
Job printing.....	74,510,064	6,270,306	8.4

In this table is presented a division of the paper used in 1900, according to the several classes of products which, combined, produced the total value of products of newspaper and periodical establishments. About one and a quarter billions of pounds were used during the census year. This large quantity was utilized in the following proportions:

News.....	Per cent. 77.6
Book and periodical.....	16.4
Job printing.....	6.0

It is important, however, to observe that these proportions in weight do not by any means hold good in cost. The latter shows the following proportions:

News.....	Per cent. 58.7
Book and periodical.....	24.7
Job printing.....	16.6

TABLE 26.—Per cent that quantity and cost of paper used form of total, 1890 and 1900.

KIND.	QUANTITY.		COST.	
	1900	1890	1900	1890
Newspapers.....	77.6	74.1	58.7	61.1
Books and periodicals.....	16.4	25.9	24.7	38.9
Job printing.....	6.0		16.6	

It is clear that while the quantity of paper used for newspapers far exceeds that consumed in the other branches of the industry, it is proportionately much less expensive.

The average cost per pound shown in Table 25 adds confirmation to the deduction drawn from Table 5, that the cost of materials for book and job work was over 40 per cent greater than that for newspapers and periodicals. If the item of paper alone were considered, this per cent would be increased. The average cost per pound of paper consumed by newspapers and periodicals combined was 2.3 cents. The average cost per pound of paper for books and periodicals and job printing combined was 5.6 cents.

VALUE OF PRODUCTS.

The items composing the total value of products of newspaper and periodical establishments are presented in detail in Table 27.

TABLE 27.—Value of products, with per cent which each class forms of the total, 1900.

	Value.	Per cent of total.
Total.....	\$222,983,539	100.0
Newspaper products:		
Advertising.....	95,861,127	43.0
Subscriptions and sales.....	79,923,483	35.9
Book and job printing products:		
Book and pamphlet publications.....	18,407,523	8.3
Sheet music and books of music.....	544,802	0.2
Job printing.....	22,793,322	10.2
Bookbinding.....	2,067,450	0.9
Blank books.....	654,557	0.3
Electrotyping, engraving, etc.....	491,567	0.2
All other products.....	2,334,733	1.0

The relative importance of these items was considered at some length under Table 5.

RANK OF STATES AND TERRITORIES ACCORDING TO CIRCULATION.

In Table 28 is shown the rank of the several states and territories, according to aggregate circulation, in each class of newspapers and periodicals, by period of

issue. This table is of interest as showing relative position at the Twelfth Census, but obviously presents nothing of statistical value, since a decline in rank does not necessarily imply a decrease in aggregate circula-

tion, but may be due, on the contrary, to greater increase of population, or greater increase in the circulation of publications of other classes, or in other sections of the country.

TABLE 28.—RANK OF STATES AND TERRITORIES ACCORDING TO AGGREGATE CIRCULATION PER ISSUE OF NEWSPAPERS AND PERIODICALS, 1900.

STATES AND TERRITORIES.	All classes.	Daily.	Triweekly.	Semi-weekly.	Weekly.	Monthly.	Quarterly.	All other classes.
Alabama	32	30	16	37	32	38		20
Arizona	47	45			48	49		
Arkansas	30	35	14	27	26	30	20	39
California	14	7	18	20	16	17	10	14
Colorado	24	18	19	38	23	22	26	34
Connecticut	25	15		18	31	25	25	17
Delaware	44	30		41	43	42		
District of Columbia	20	25		44	21	11	24	10
Florida	43	37	14	34	40	33		
Georgia	23	24		14	19	23	28	21
Idaho	46	47		36	45	46		37
Illinois	3	3	6	6	2	4	4	7
Indiana	11	9		12	10	9	11	12
Indian Territory	45	49			42	47		
Iowa	13	13	2	7	8	13	14	11
Kansas	16	23	15	22	14	12	15	15
Kentucky	17	17	12	9	17	15		9
Louisiana	28	22	10	15	35	31	18	29
Maine	5	28		23	24	2	16	28
Maryland	21	11		24	24	20	22	33
Massachusetts	6	5		16	5	5	7	4
Michigan	10	8	5	5	12	8	13	18
Minnesota	12	10	8	11	9	10	21	6
Mississippi	37	43	17	43	38	39		35
Missouri	7	6	20	2	6		6	5
Montana	40	34		28	41	40	17	
Nebraska	18	20	13	13	15	16	28	26
Nevada	50	46	21	40	50	48		
New Hampshire	34	33	7		30	43		
New Jersey	9	12		39	18	29	8	1
New Mexico	49	48			47	48	29	32
New York	1	1	1	1	1	1	1	2
North Carolina	29	31		19	25	34	30	27
North Dakota	39	41		32	38	36		
Ohio	4	4	3	4	4	6	3	3
Oklahoma	42	44		46	39	45		40
Oregon	26	29		25	28	21		31
Pennsylvania	2	2	4	3	3	3	2	8
Rhode Island	36	21	22	33	44	44	22	
South Carolina	33	40	20	21	36	35		36
South Dakota	31	42		42	34	28		13
Tennessee	8	16		31	7	14	5	22
Texas	19	19		10	13	24		24
Utah	41	39	11	17	46	32	32	19
Vermont	35	38		29	37	27	31	22
Virginia	22	26	9	26	22	19	9	25
Washington	27	27	19	30	29	26	19	30
West Virginia	33	32		35	27	41		33
Wisconsin	15	14	14	8	11	18	12	16
Wyoming	48	50	19	45	49	37		

It will be observed that the four most populous states—New York, Pennsylvania, Illinois, and Ohio—maintain the same rank in aggregate circulation that they do in population. At that point uniformity in rank ceases, except in the case of Nevada, which is

last in rank, both in population and in aggregate circulation.

Table 29 presents statistics relating to daily publications in 50 cities, for 1900; Table 30 gives the same information for 27 cities, for 1880, 1890, and 1900.

PRINTING AND PUBLISHING.

TABLE 29.—STATISTICS RELATING TO DAILY PUBLICATIONS IN 50 CITIES, 1900.

CITIES.	Population of cities.	DAILY PAPERS.				Number of inhabitants to each copy per issue.	Rank of cities according to increasing number of inhabitants to each copy per issue.
		Total.	Morning.	Evening.	Aggregate circulation per issue.		
New York, N. Y.	3,487,202	58	29	29	2,782,089	1.26	8
Chicago, Ill.	1,698,676	37	16	21	1,099,655	1.64	17
Philadelphia, Pa.	1,298,697	21	10	11	1,008,752	1.28	10
St. Louis, Mo.	576,238	13	7	6	878,080	1.54	17
Boston, Mass.	560,892	16	8	8	761,089	0.74	8
Baltimore, Md.	508,957	9	6	3	232,252	2.19	27
Cleveland, Ohio.	381,768	11	3	8	258,478	1.48	14
Buffalo, N. Y.	352,887	12	3	9	217,989	1.62	18
San Francisco, Cal.	342,782	23	15	8	304,185	1.13	6
Cincinnati, Ohio.	325,902	18	7	6	516,708	0.68	1
Pittsburg, Pa.	321,616	11	7	4	421,741	0.76	4
New Orleans, La.	287,104	9	5	4	96,860	2.98	89
Detroit, Mich.	285,704	8	3	5	207,110	1.38	11
Milwaukee, Wis.	285,315	11	4	7	132,805	2.15	25
Washington, D. C.	278,718	8	3	5	100,848	2.76	38
Newark, N. J.	246,070	3	1	2	71,882	3.43	40
Jersey City, N. J.	206,433	2	-----	2	19,580	10.54	43
Louisville, Ky.	204,731	8	5	3	186,950	1.49	15
Minneapolis, Minn.	202,718	9	6	3	187,906	1.47	13
Providence, R. I.	175,597	3	1	2	76,000	2.31	31
Indianapolis, Ind.	169,164	9	4	5	135,698	1.25	7
Kansas City, Mo.	168,752	9	4	5	226,252	0.72	2
St. Paul, Minn.	163,065	7	2	5	114,446	1.42	12
Rochester, N. Y.	162,608	7	2	5	88,489	1.84	21
Denver, Colo.	138,859	7	2	5	104,485	1.28	10
Toledo, Ohio.	131,822	7	3	4	76,850	1.72	19
Columbus, Ohio.	125,560	7	2	5	115,728	1.08	5
Worcester, Mass.	118,421	5	2	3	49,440	2.40	32
Syracuse, N. Y.	108,374	6	1	5	71,982	1.51	16
New Haven, Conn.	108,027	5	2	3	42,000	2.57	35
Paterson, N. J.	105,171	5	1	4	23,108	4.55	41
Fall River, Mass.	104,868	4	-----	4	18,850	5.56	42
St. Joseph, Mo.	102,979	7	3	4	45,058	2.29	30
Omaha, Nebr.	102,555	8	4	4	80,740	1.27	9
Los Angeles, Cal.	102,479	6	3	3	48,250	2.12	24
Memphis, Tenn.	102,320	3	2	1	95,000	1.08	5
Scranton, Pa.	102,026	4	2	2	46,822	2.18	26
Lowell, Mass.	94,969	7	2	5	45,160	2.10	23
Albany, N. Y.	94,151	8	2	6	75,521	1.25	7
Cambridge, Mass.	91,886	1	1	-----	2,000	45.94	44
Portland, Oreg.	90,426	4	3	1	37,400	2.42	33
Atlanta, Ga.	89,872	3	2	1	46,061	1.95	22
Grand Rapids, Mich.	87,565	4	2	2	56,900	1.54	17
Dayton, Ohio.	85,333	5	1	4	34,200	2.60	34
Richmond, Va.	85,050	6	4	2	37,810	2.25	29
Nashville, Tenn.	80,865	2	1	1	30,000	2.70	37
Seattle, Wash.	80,671	5	3	2	44,580	1.81	20
Hartford, Conn.	79,850	4	2	2	33,000	2.42	33
Reading, Pa.	78,961	5	1	4	30,528	2.59	36
Wilmington, Del.	76,608	6	2	4	34,277	2.23	28

TABLE 30.—STATISTICS RELATING TO DAILY PUBLICATIONS IN 27 CITIES, 1880 TO 1900.

CITIES.	Year.	Population of cities.	DAILY PAPERS.				Number of inhabitants to each copy per issue.	Rank of cities according to increasing number of inhabitants to each copy per issue.
			Total.	Morning.	Evening.	Aggregate circulation per issue.		
New York, N. Y.	1900	3,487,202	158	29	129	12,782,089	1.26	-----
Manhattan and Bronx boroughs	1900	2,050,600	47	28	19	2,632,213	0.78	5
	1890	1,515,301	50	34	16	1,698,553	0.89	1
	1880	1,206,209	29	20	9	765,843	1.58	2
Brooklyn borough	1900	1,166,582	6	1	5	95,476	12.22	25
	1890	806,343	5	-----	5	82,448	9.78	27
	1880	566,668	4	-----	4	48,587	11.67	22
Chicago, Ill.	1900	1,698,676	37	16	21	1,099,655	1.54	15
	1890	1,099,850	27	14	13	644,000	1.71	11
	1880	508,185	18	10	8	220,577	2.28	9
Philadelphia, Pa.	1900	1,298,697	21	10	11	1,008,752	1.28	9
	1890	1,046,964	24	13	11	804,008	1.30	6
	1880	847,170	24	13	11	375,274	2.26	8

¹Queens borough had 5 evening daily newspapers, with a circulation of 4,400.

MANUFACTURES.

TABLE 30.—STATISTICS RELATING TO DAILY PUBLICATIONS IN 27 CITIES, 1880 TO 1900—Continued.

CITIES.	Year.	Population of cities.	DAILY PAPERS.				Number of inhabitants to each copy per issue.	Rank of cities according to increasing number of inhabitants to each copy per issue.
			Total.	Morning.	Evening.	Aggregate circulation per issue.		
St. Louis, Mo.....	1900	575,238	13	7	6	373,080	1.54	15
	1890	451,770	15	9	6	238,525	1.89	13
	1880	350,518	9	8	1	99,364	3.52	14
Boston, Mass.....	1900	560,892	16	8	8	761,039	0.74	3
	1890	448,477	12	6	7	466,471	0.96	2
	1880	392,839	11	6	5	221,315	1.64	4
Baltimore, Md.....	1900	508,957	9	6	3	232,252	2.19	19
	1890	434,439	7	6	1	133,510	3.25	22
	1880	332,313	9	6	3	128,643	2.58	10
Cleveland, Ohio.....	1900	381,768	11	3	8	258,473	1.48	13
	1890	261,353	13	4	9	133,800	1.95	14
	1880	160,146	8	2	6	48,730	3.29	12
Buffalo, N. Y.....	1900	352,387	12	3	9	217,989	1.62	16
	1890	255,064	10	3	7	120,800	2.12	17
	1880	155,134	7	2	5	26,100	5.94	19
San Francisco, Cal.....	1900	342,782	23	15	8	304,185	1.13	6
	1890	238,997	21	14	7	236,912	1.04	5
	1880	233,959	21	11	10	143,232	1.63	8
Cincinnati, Ohio.....	1900	325,902	13	7	6	516,708	0.63	1
	1890	296,903	14	10	4	213,500	1.39	7
	1880	255,139	12	8	4	117,549	2.17	7
Pittsburg, Pa.....	1900	321,616	11	7	4	421,741	0.76	4
	1890	238,617	10	7	3	232,462	1.03	4
	1880	156,389	9	6	3	111,001	1.41	1
New Orleans, La.....	1900	287,104	9	5	4	96,360	2.93	22
	1890	242,039	9	4	5	73,900	3.23	23
	1880	216,090	10	6	4	37,565	5.76	18
Detroit, Mich.....	1900	285,704	8	3	5	207,110	1.33	10
	1890	205,376	8	2	6	134,388	1.53	8
	1880	116,340	6	3	3	41,533	2.80	11
Milwaukee, Wis.....	1900	285,315	11	4	7	132,305	2.15	13
	1890	204,463	10	5	5	63,200	3.21	21
	1880	115,537	7	4	3	24,300	4.76	16
Washington, D. C.....	1900	278,713	3	3	5	100,848	2.76	21
	1890	230,332	4	2	2	62,051	3.63	25
	1880	147,293	5	3	2	34,500	4.27	15
Newark, N. J.....	1900	246,070	3	1	2	71,332	3.43	23
	1890	131,330	6	3	3	60,000	3.59	24
	1880	136,503	6	4	2	18,300	7.46	20
Jersey City, N. J.....	1900	206,433	2	.....	2	19,530	10.54	24
	1890	106,003	4	1	3	23,300	5.76	25
	1880	120,722	2	.....	2	11,176	10.80	21
Louisville, Ky.....	1900	204,731	3	5	3	136,950	1.49	14
	1890	161,129	5	3	2	95,100	1.69	10
	1880	123,753	5	4	1	22,215	5.57	17
Minneapolis, Minn.....	1900	202,713	9	6	3	137,906	1.47	12
	1890	164,733	9	4	5	92,323	1.78	12
	1880	.....	.....	.....	.....	.....	.....	.....
Providence, R. I.....	1900	175,597	3	1	2	76,000	2.31	20
	1890	132,146	3	1	2	52,000	2.54	20
	1880	104,357	5	2	3	29,900	3.51	13
Indianapolis, Ind.....	1900	169,164	9	4	5	135,693	1.25	7
	1890	105,436	7	3	4	64,213	1.64	9
	1880	75,056	4	3	1	35,537	2.11	6
Kansas City, Mo.....	1900	163,752	9	4	5	226,252	0.72	2
	1890	132,716	9	6	3	130,700	1.02	3
	1880	.....	.....	.....	.....	.....	.....	.....
St. Paul, Minn.....	1900	163,035	7	2	5	114,446	1.42	11
	1890	133,156	7	3	4	67,350	1.96	15
	1880	41,473	6	3	3	19,333	2.08	5
Rochester, N. Y.....	1900	162,603	7	2	5	33,439	1.34	17
	1890	133,396	7	2	5	65,276	2.05	16
	1880	.....	.....	.....	.....	.....	.....	.....
Denver, Colo.....	1900	133,359	7	2	5	104,435	1.23	9
	1890	106,713	5	3	2	48,000	2.22	13
	1880	.....	.....	.....	.....	.....	.....	.....
Omaha, Nebr.....	1900	102,555	3	4	4	30,740	1.27	3
	1890	140,452	3	2	6	60,329	2.33	19
	1880	.....	.....	.....	.....	.....	.....	.....

¹Not reported separately.

DAILY NEWSPAPERS IN LARGE CITIES.

Scrutiny of Table 29 reveals the fact that in the 50 largest cities in the United States in 1900 there were published 451 daily newspapers, of which 204 were published in the morning and 247 in the evening, showing an excess of 43, or 17.4 per cent, for evening publications. The average number of dailies per city was 9—4.1 for morning and 4.9 for evening newspapers. Six cities reported the same number of morning as of evening newspapers; 14 cities reported more morning than evening newspapers; and 28 cities reported a greater number of evening than morning newspapers. An examination of the data given in Table 30 reveals the following figures:

TABLE 31.—Number of morning and evening daily newspapers in 26 cities, with number of cities showing excess in each class, 1880 to 1900.

YEAR.	DAILY NEWSPAPERS.			NUMBER OF CITIES SHOWING EXCESS IN—		Number of cities showing no difference.
	Total.	Morning.	Evening.	Morning.	Evening.	
1900.....	332	157	175	8	15	3
1890.....	309	163	146	11	12	3
1880 ¹	217	124	93	15	4	2

¹ Five cities not separately reported.

Table 31 presents an interesting proof that evening newspapers have been increasing more rapidly than morning newspapers. In 1880, 21 leading cities reported 124 morning dailies and 93 evening dailies. In 1900 the same cities, with 5 new ones added because of increase in population, reported 157 morning newspapers and 175 evening newspapers—an increase of 33 publications in the former class and of 82 in the latter. Considering the cities as units, 15 out of 21 showed, in 1880, an excess of morning dailies, and 4, an excess of evening dailies, while in 2 cities the classes were equal. Out of the 26 largest cities in the United States in 1900, 15 showed an excess of evening publications and 8 an excess of morning publications, and 3 reported the same number in each class.

The tendency here shown for a limited number of large cities is confirmed by the figures for the United States.

In 1890 the total number of daily newspapers was 1,610, of which 559 were published in the morning and 1,051 in the evening; in 1900 there were 595 morning papers, an increase of 6.4 per cent, and 1,631 evening papers, an increase of 55.2 per cent. This difference appears more striking when it is recalled that the increase, during the decade, in all daily publications was 38.3 per cent. In 1890 the proportion of evening dailies to morning dailies was about 2 to 1; in 1900 about 3 to 1.

Intelligent consideration of the figures, for the cities treated in Tables 29 and 30, drawn from a com-

parison of aggregate circulation per issue with population, presupposes knowledge of their limitations. The figures thus secured, while interesting in themselves, possess no especial statistical value, because they are seriously affected by local conditions. It will be observed that the "rank of cities according to number of inhabitants to each copy per issue" bears no relation to the rank of these cities in population. What the aggregate circulation within a city really is, has never been ascertained. Were these statistics obtainable, it would doubtless appear that a fairly constant ratio exists between aggregate circulation and number of inhabitants.

According to figures presented in Tables 29 and 30, the rank of a city depends upon its ability to market, outside of its own limits, its newspaper and periodical products. The most important factors affecting rank as here recorded are the existence of a large adjacent community; of very populous and extended suburbs; and of a large tributary section. Of the first class, New York is the most conspicuous example: Brooklyn, which, although a part of New York city, is given separately in Table 30 for purposes of comparison, depends almost exclusively upon New York for newspaper and periodical service; Jersey City and Hoboken, N. J., are equally dependent; while Newark and Paterson, N. J., both within a radius of 20 miles, rely upon New York, to a great extent, for newspapers and periodicals. In this class, also, should be mentioned Allegheny, Pa., an independent municipality, but virtually a part of Pittsburg. Of the second class, Philadelphia, Pa., and Cincinnati, Ohio, are examples. Boston, Mass., is an example of the third class; the publications of that city not only fulfill most of the requirements of the many near-by cities, but circulate freely throughout all parts of New England.

The effect of these local conditions is twofold—the rank of the larger city is advanced, and that of the adjacent smaller city is reduced.

TABLE 32.—Comparison of the number of inhabitants to each copy per issue in certain large cities, with that of adjacent smaller cities, 1900.

LARGE CITIES.	Rank.	Number of inhabitants to each copy per issue.	ADJACENT SMALLER CITIES.	Rank.	Number of inhabitants to each copy per issue.
New York (Manhattan and Bronx boroughs)	15	0.78	Brooklyn.....	125	12.22
Philadelphia.....	10	1.28	Newark.....	40	3.43
Boston.....	3	0.74	Jersey City.....	43	10.54
San Francisco.....	6	1.13	Paterson.....	41	4.55
Cincinnati.....	1	0.63	Camden.....	.....	4.69
Pittsburg.....	4	0.76	Fall River.....	42	5.56
Kansas City, Mo.....	2	0.72	Cambridge.....	44	45.94
			Oakland.....	.....	4.03
			Covington.....	.....	13.42
			Allegheny.....	.....	(²)
			Kansas City, Kans.....	.....	22.35

¹ As shown in Table 30.

² No daily papers.

Table 32 shows that in 1900 Cambridge, Mass., was a conspicuous example of dependence upon a larger

city for newspapers and periodicals. Cambridge is practically a part of Boston. While it is a community noted for intelligence and cultivation, and the seat of a famous university, it has patronized the publications of its larger neighbor, thus elevating the rank of the latter and establishing an apparently low record for itself.

Business managers of daily newspapers in the larger cities have been prompt to take advantage of the constantly improving mail service, and of the increased ease and speed of railway communication. The improvements along these lines during the past twenty years are reflected in the changes shown by Table 29. In 1880 no city reported a circulation as great as the number of its inhabitants. The five cities having the smallest number of inhabitants to a copy per issue were—

Pittsburg	1.41
New York	1.58
San Francisco	1.63
Boston	1.64
St. Paul	2.08

The figures here given for Pittsburg would have entitled it to eleventh place in 1900. In 1880 there were but 4 cities with less than 2 inhabitants to a copy; in 1890 there were 15 cities with less than 2, and 2 cities with less than 1; but the city which ranked first in that year would have been fifth in 1900, when 19 cities had less than 2 inhabitants to a copy, and 4 cities had less than 1. It is likely that the figures for 1880 approximately reflect local demand, while those for 1900 reflect systematic and elaborate extension.

CIRCULATION.

In Table 33 are presented, for each state and territory, the population, circulation, and number of inhabitants to each copy per issue, in 1900.

TABLE 33.—Aggregate circulation and number of inhabitants to each copy per issue, by states and territories, 1900.

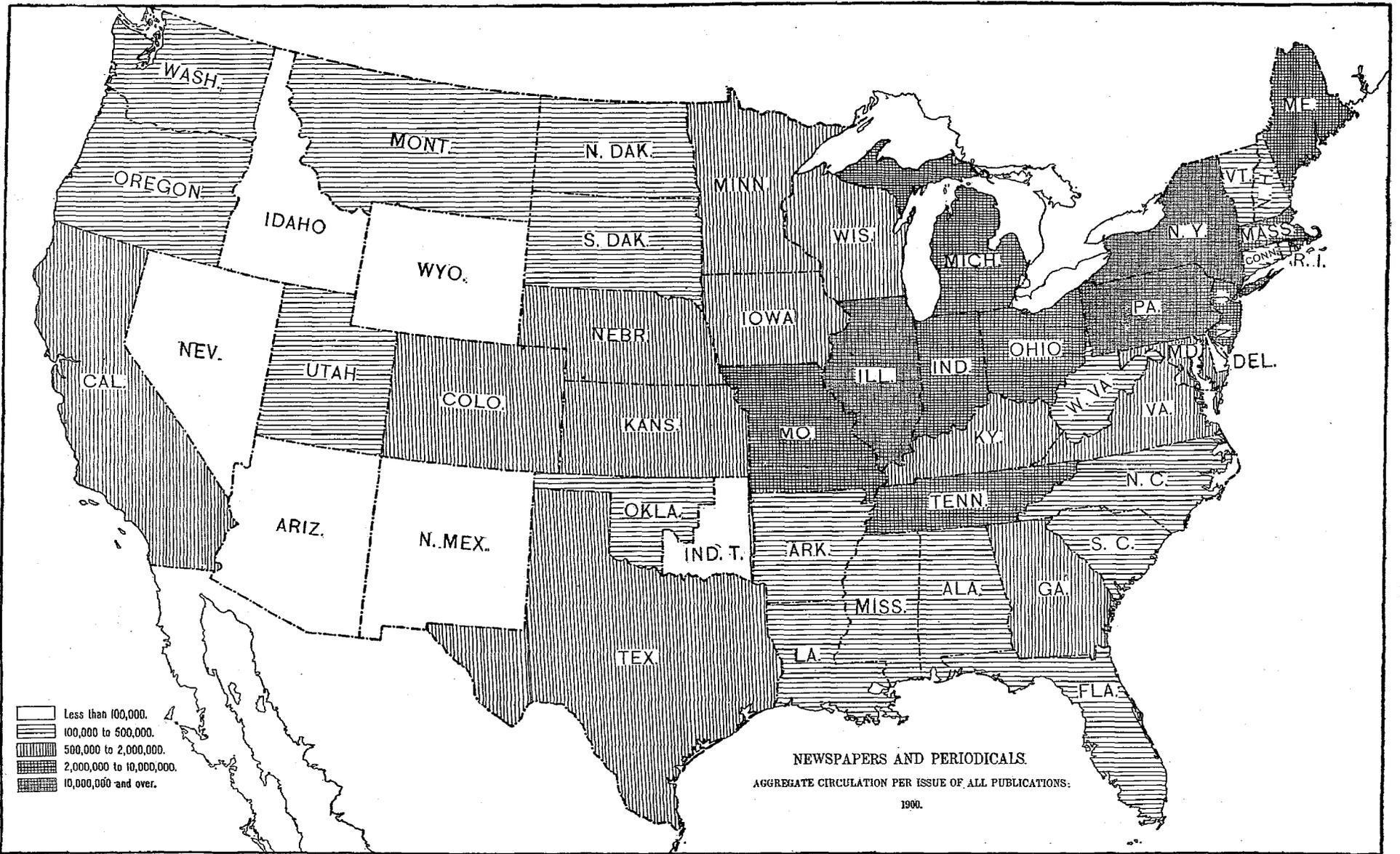
STATES AND TERRITORIES.	Population.	Aggregate circulation per issue.	Number of inhabitants to each copy per issue.
United States.....	1 75, 094, 575	114, 299, 384	0.66
Alabama	1, 828, 697	230, 079	7.95
Arizona	122, 331	34, 054	3.61
Arkansas	1, 311, 564	262, 903	4.99
California	1, 485, 053	1, 443, 656	1.03
Colorado	539, 700	521, 213	1.04
Connecticut	908, 420	457, 622	1.99
Delaware	184, 735	85, 900	2.15
District of Columbia	273, 713	320, 335	0.84
Florida	523, 542	112, 302	4.71
Georgia	2, 210, 331	543, 493	4.08
Idaho	161, 772	48, 795	3.32
Illinois	4, 321, 550	10, 429, 368	0.46
Indiana	2, 516, 462	2, 108, 805	1.19
Indian Territory	392, 060	50, 141	7.82
Iowa	2, 231, 353	1, 834, 375	1.18

¹ Exclusive of Alaska, Hawaii, and persons in the military and naval service of the United States (including civilian employees, etc.) stationed abroad, not credited to any state or territory.

TABLE 33.—Aggregate circulation and number of inhabitants to each copy per issue, by states and territories, 1900—Continued.

STATES AND TERRITORIES.	Population.	Aggregate circulation per issue.	Number of inhabitants to each copy per issue.
Kansas	1, 470, 495	1, 144, 320	1.29
Kentucky	2, 147, 174	1, 093, 172	1.95
Louisiana	1, 331, 625	300, 072	4.40
Maine	694, 466	6, 434, 065	0.11
Maryland	1, 183, 044	679, 337	1.75
Massachusetts	2, 305, 346	6, 199, 127	0.45
Michigan	2, 420, 382	2, 374, 403	1.02
Minnesota	1, 751, 394	1, 949, 630	0.90
Mississippi	1, 551, 270	163, 942	9.18
Missouri	3, 106, 665	5, 493, 302	0.57
Montana	243, 329	127, 148	1.91
Nebraska	1, 066, 300	1, 093, 588	0.97
Nevada	42, 335	13, 153	2.39
New Hampshire	417, 588	211, 319	1.94
New Jersey	1, 389, 639	3, 009, 104	0.63
New Mexico	195, 310	32, 420	6.02
New York	7, 263, 394	37, 626, 095	0.19
North Carolina	1, 393, 310	287, 016	6.58
North Dakota	313, 146	133, 390	2.30
Ohio	4, 157, 545	7, 467, 358	0.56
Oklahoma	393, 331	120, 077	3.32
Oregon	413, 536	311, 950	1.33
Pennsylvania	6, 302, 115	11, 280, 367	0.56
Rhode Island	423, 556	170, 594	2.51
South Carolina	1, 340, 316	161, 938	8.27
South Dakota	401, 370	232, 166	1.73
Tennessee	2, 020, 616	3, 131, 017	0.65
Texas	3, 043, 710	1, 054, 751	2.89
Utah	276, 749	123, 279	2.24
Vermont	343, 641	188, 646	1.82
Virginia	1, 854, 184	627, 230	2.96
Washington	513, 103	307, 123	1.69
West Virginia	953, 300	226, 013	4.24
Wisconsin	2, 069, 042	1, 426, 499	1.45
Wyoming	92, 331	32, 637	2.83

The conditions described in connection with Tables 29 and 30, as to "number of inhabitants to each copy per issue," apply also to this table. The large cities showing heavy circulation in Tables 29 and 30 are important publishing centers, distributing their products far beyond city and state boundaries. This improves the relative standing of the states which produce, as compared with those which consume. The most notable example is New York, which may be termed the national producing center for leading publications of nearly all classes, as it distributes periodical literature over the entire United States, recording the enormous total of 37,626,095 aggregate circulation per issue of all classes, or more than three times the product of any other state. Another example is Maine, which records the noteworthy aggregate circulation per issue of all classes of 6,434,065 copies, the number of inhabitants to each copy per issue being a fraction so small that in this particular Maine heads the list of states. It is clear that the market for the products of these centers of commercial activity is a national one. The relation, therefore, of population to aggregate circulation might almost be termed fortuitous. On the other hand, it must not be overlooked that the states which are large exporters are likely to be also large importers of periodical literature.



The aggregate circulation per issue attained by the periodicals of each state, when considered as representing the extent to which the enterprise of citizens markets the product of an industry at home and abroad, possesses much significance. This feature of Table 33 is considered in detail in connection with Tables 34 and 35.

Table 34 presents a comparative summary of the main facts relating to the industry, by states and territories, 1880 to 1900. Table 35 presents a comparative summary of average and aggregate circulation per issue, classified according to period of issue, by states and territories, 1880 to 1900.

TABLE 34.—COMPARATIVE SUMMARY OF NEWSPAPERS AND PERIODICALS, BY STATES AND TERRITORIES, 1880 TO 1900.

STATES AND TERRITORIES.	Year.	NUMBER OF PUBLICATIONS.			Aggregate circulation per issue.	Aggregate number of copies issued during the census year.	WAGE-EARNERS.		Pounds of paper used.	VALUE OF NEWSPAPER PRODUCTS.		
		Total.	Reporting.	Not reporting. ¹			Average number.	Total wages.		Total.	Advertising.	Subscriptions and sales.
United States....	1900	21,272	18,226	3,046	114,299,834	28,168,148,749	894,604	\$50,338,051	1,233,142,248	\$175,789,610	\$95,861,127	\$70,928,433
	1890	17,616	14,901	2,715	69,138,934	4,681,113,530	75,437	40,074,937	652,876,161	143,586,448	71,243,861	72,343,037
	1880	11,314	11,314	.....	31,779,686	2,067,848,209	71,615	28,659,336	189,145,048	39,009,074	39,136,306	49,872,768
Alabama.....	1900	238	175	58	230,079	25,758,633	543	241,625	2,950,889	704,767	410,090	294,677
	1890	177	136	41	246,847	19,277,464	478	225,018	2,007,288	695,114	365,654	332,460
	1880	125	125	.....	98,073	6,778,544	480,854	110,083	480,854	423,911	202,665	203,246
Arizona.....	1900	54	43	11	34,054	5,161,096	139	73,640	548,651	170,083	110,143	59,940
	1890	35	29	6	22,309	2,551,923	84	51,079	189,020	114,630	59,680	54,960
	1880	17	17	.....	13,550	1,413,600	107	45,828	105,048	95,700	58,000	37,700
Arkansas.....	1900	261	236	25	262,903	25,077,996	600	215,410	2,455,256	532,869	268,424	264,445
	1890	193	164	29	192,749	13,768,353	480	214,083	1,083,505	461,261	232,376	228,885
	1880	117	117	.....	103,501	4,990,595	438	119,048	383,857	340,103	182,201	157,942
California.....	1900	709	622	87	1,448,656	205,789,752	2,683	1,304,619	35,113,672	5,301,721	3,437,976	2,368,745
	1890	555	455	100	1,151,389	163,716,613	2,376	1,681,240	20,229,309	5,595,605	3,099,458	2,496,162
	1880	361	361	.....	640,026	72,361,836	2,349	1,300,140	6,375,390	3,936,238	2,150,917	1,785,321
Colorado.....	1900	329	248	81	521,213	71,702,076	1,303	770,382	12,083,992	2,105,892	1,239,388	816,091
	1890	257	186	71	229,669	30,022,103	868	699,509	4,984,842	1,804,280	1,125,534	678,746
	1880	87	87	.....	95,744	8,377,831	617	338,945	1,015,110	1,015,110	567,442	447,068
Connecticut.....	1900	207	155	52	457,622	79,366,409	1,151	703,587	10,693,278	1,755,779	1,068,998	656,781
	1890	180	156	24	496,084	48,253,243	898	530,757	4,676,762	1,490,107	766,517	723,590
	1880	139	139	.....	237,660	20,366,449	911	378,566	1,782,050	939,482	460,070	479,412
Delaware.....	1900	42	30	12	85,900	15,037,901	220	86,208	1,299,532	174,933	116,116	58,617
	1890	41	32	9	55,582	8,033,402	153	63,634	580,213	109,646	105,316	64,330
	1880	26	26	.....	34,425	5,172,993	190	55,279	344,864	166,088	91,933	64,105
District of Columbia...	1900	87	69	18	820,835	56,720,360	600	393,220	8,787,333	1,690,643	1,069,480	621,163
	1890	48	17	31	321,151	31,715,418	347	236,090	5,357,486	1,136,733	532,918	553,865
	1880	44	44	.....	213,923	15,874,432	343	205,924	569,657	1,157,520	225,928	343,729
Florida.....	1900	161	97	64	112,302	14,454,595	305	134,366	1,706,343	393,594	223,352	170,242
	1890	122	97	25	107,257	10,113,301	392	161,251	1,036,332	373,888	188,589	185,239
	1880	45	45	.....	27,332	2,066,644	182	43,253	118,891	116,700	66,659	50,011
Georgia.....	1900	366	265	101	549,493	57,001,092	1,050	450,378	7,689,963	1,441,968	808,284	633,684
	1890	279	230	49	733,223	48,512,208	1,031	478,436	7,028,445	1,633,285	838,034	795,252
	1880	200	200	.....	269,066	20,994,549	1,084	331,327	1,530,330	948,629	468,511	480,118
Idaho.....	1900	73	72	1	48,795	4,170,980	187	92,319	617,790	199,948	110,010	89,338
	1890	43	33	10	21,270	1,593,500	79	48,467	141,176	117,040	67,060	49,380
	1880	10	10	.....	5,650	367,600	32	18,000	23,853	35,000	19,190	18,100
Illinois.....	1900	1,755	1,543	207	10,429,368	746,880,247	7,478	3,704,341	114,853,569	16,386,952	9,029,291	7,357,661
	1890	1,416	1,241	175	7,891,219	465,924,592	6,718	3,712,616	60,907,589	13,523,673	7,072,055	6,453,613
	1880	1,017	1,017	.....	2,421,275	174,096,505	6,583	2,736,717	15,649,393	7,264,585	3,179,951	4,084,631
Indiana.....	1900	837	841	46	2,108,805	175,432,092	4,084	1,784,059	25,546,399	3,912,514	2,070,544	1,841,970
	1890	630	620	60	1,299,418	94,466,572	2,370	955,004	8,619,064	2,784,087	1,413,047	1,371,040
	1880	467	467	.....	661,111	44,908,191	2,676	746,350	3,502,848	2,026,113	1,057,688	978,425
Indian Territory.....	1900	85	64	21	50,141	3,554,332	138	43,339	396,180	110,916	60,394	50,522
	1890	13	9	4	8,995	480,740	19	7,728	43,766	18,290	9,360	3,930
	1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iowa.....	1900	1,104	1,045	59	1,884,375	158,895,153	3,393	1,311,179	20,716,211	3,777,690	1,939,852	1,337,338
	1890	804	703	101	1,038,019	80,780,202	2,695	1,101,785	7,809,310	2,670,693	1,371,817	1,298,376
	1880	569	569	.....	547,340	35,747,302	2,637	647,407	2,765,927	2,088,170	1,150,806	937,364
Kansas.....	1900	711	684	27	1,144,320	75,337,961	1,766	623,783	8,512,671	1,698,656	893,730	804,376
	1890	736	693	93	756,746	57,469,392	1,865	631,404	6,276,496	1,831,248	1,007,019	874,229
	1880	347	347	.....	280,729	18,569,223	1,499	355,438	1,347,475	1,006,300	591,723	415,077
Kentucky.....	1900	332	282	50	1,099,172	96,862,156	1,154	521,739	11,416,789	1,818,706	942,010	376,696
	1890	270	218	52	727,781	71,543,310	1,350	692,959	5,780,580	1,331,485	953,254	878,231
	1880	205	205	.....	397,564	25,332,423	1,356	272,136	2,041,378	1,468,617	671,834	796,733
Louisiana.....	1900	195	160	35	300,072	49,348,430	873	532,395	6,932,114	1,300,333	751,304	549,034
	1890	173	129	44	353,133	40,145,248	634	333,429	3,906,224	1,231,005	617,536	563,419
	1880	112	112	.....	131,630	15,602,320	736	411,616	1,625,250	1,130,655	677,262	513,393
Maine.....	1900	178	177	1	6,434,065	106,420,850	1,309	473,026	10,055,303	1,376,214	1,044,395	331,519
	1890	172	146	26	2,442,046	53,206,443	853	353,407	5,779,649	1,405,150	575,122	330,023
	1880	123	123	.....	1,214,460	25,661,345	1,036	317,006	2,667,686	1,236,461	214,394	1,022,067

¹ Publications which were in existence, but from which no returns were received.
² Obtained, for each class of publications, by multiplying the aggregate circulation per issue by the number of issues during the year.
³ Includes the employees engaged in the book and job printing branch of the industry, and their wages.
⁴ For purposes of comparison the figures for "book and job printing" and "all other products" are excluded.
⁵ In 1880 Indian Territory and Oklahoma were reported as Indian Territory, and North Dakota and South Dakota as Dakota; the 1880 figures are included only in the totals.
⁶ Includes 1,182 publications not reporting operations, as they can not be excluded from the classification.

PRINTING AND PUBLISHING.

TABLE 34.—COMPARATIVE SUMMARY OF NEWSPAPERS AND PERIODICALS BY STATES AND TERRITORIES, 1880 TO 1900—Continued.

STATES AND TERRITORIES.	Year.	NUMBER OF PUBLICATIONS.			Aggregate circulation per issue.	Aggregate number of copies issued during the census year.	WAGE-EARNERS.		Pounds of paper used.	VALUE OF NEWSPAPER PRODUCTS.		
		Total.	Reporting.	Not reporting. ¹			Average number.	Total wages.		Total.	Advertising.	Subscriptions and sales.
Maryland	1900	213	166	47	679,867	98,959,220	1,529	\$758,335	16,464,816	\$2,263,333	\$1,490,189	\$773,149
	1890	170	124	46	392,068	56,855,415	857	424,666	6,477,706	1,739,705	1,039,291	700,414
	1880	143	143	.....	414,693	60,115,182	1,163	486,958	3,983,128	1,567,893	883,847	708,046
Massachusetts	1900	627	486	141	6,199,127	531,739,780	5,432	3,769,204	92,347,453	13,170,875	6,906,320	6,264,555
	1890	668	568	100	4,662,159	261,440,450	4,214	2,473,531	34,784,860	8,549,920	3,970,820	4,579,100
	1880	427	427	.....	2,012,929	149,819,973	3,416	2,074,749	15,118,634	6,367,760	2,512,522	3,855,238
Michigan	1900	802	698	104	2,374,403	200,457,376	2,916	1,302,493	24,267,484	3,819,560	2,137,461	1,682,293
	1890	657	589	68	1,511,915	122,904,401	2,772	1,122,366	11,680,577	3,274,089	1,711,309	1,562,730
	1880	464	464	.....	620,974	46,659,470	2,439	729,673	4,648,339	2,057,438	1,002,092	1,055,346
Minnesota	1900	669	622	47	1,949,630	169,257,418	2,714	1,304,229	26,663,512	3,981,874	2,205,482	1,686,392
	1890	445	392	53	1,023,005	95,551,959	1,919	1,045,013	10,193,158	3,153,605	1,639,136	1,514,469
	1880	223	223	.....	222,074	18,097,781	1,778	390,161	1,545,303	947,903	524,540	423,363
Mississippi	1900	223	178	45	168,942	13,393,752	440	164,495	1,560,884	395,068	195,133	199,935
	1890	161	119	42	108,061	7,266,300	272	90,159	493,593	279,025	139,449	139,449
	1880	123	123	.....	87,904	5,293,413	468	109,086	426,012	380,893	211,974	168,959
Missouri	1900	1,052	940	112	5,495,302	446,832,760	3,758	2,056,148	63,173,770	3,144,216	4,615,545	3,623,671
	1890	803	707	96	2,615,135	225,781,297	3,831	2,023,061	27,462,453	6,326,120	3,465,701	3,360,419
	1880	530	530	.....	965,285	79,265,309	3,215	1,284,831	9,925,367	3,678,921	1,710,241	1,863,680
Montana	1900	95	89	6	127,148	19,012,404	455	310,302	2,913,505	705,229	390,598	314,631
	1890	61	52	9	68,980	9,106,770	229	230,890	783,627	427,744	227,865	199,379
	1880	18	18	.....	20,827	1,280,480	94	66,700	114,990	177,760	84,130	93,620
Nebraska	1900	626	538	88	1,095,538	85,959,730	1,334	626,597	11,544,593	1,837,933	1,002,462	885,471
	1890	550	446	104	635,505	52,037,259	1,331	656,001	6,533,456	2,007,990	1,091,110	916,380
	1880	189	189	.....	154,570	11,717,103	762	250,732	903,207	1,091,110	391,825	320,719
Nevada	1900	36	35	1	13,153	2,395,582	68	35,024	156,576	93,702	49,272	44,439
	1890	25	15	10	14,680	3,010,210	51	46,121	158,062	93,209	51,335	41,374
	1880	37	37	.....	27,745	6,320,575	202	162,338	354,444	333,800	215,139	123,611
New Hampshire	1900	107	88	19	211,819	22,421,947	571	261,871	3,445,063	507,663	274,318	232,346
	1890	127	111	16	261,040	21,314,338	527	234,272	1,911,461	544,786	263,253	231,533
	1880	87	87	.....	185,968	9,635,410	412	119,203	581,916	359,859	179,015	180,344
New Jersey	1900	389	298	91	3,009,104	103,924,361	2,077	1,162,033	17,034,314	2,663,399	1,813,518	850,381
	1890	313	263	55	1,488,777	75,855,311	1,694	857,750	6,447,571	2,234,291	1,201,280	1,033,011
	1880	215	215	.....	249,478	22,150,095	1,364	454,533	1,698,173	1,175,015	694,157	480,858
New Mexico	1900	55	42	13	32,420	3,020,460	142	75,477	330,587	123,339	78,513	52,326
	1890	41	34	7	23,157	2,524,262	97	55,047	160,334	152,480	73,230	74,250
	1880	18	18	.....	6,355	833,860	79	31,292	56,352	70,972	35,833	35,089
New York	1900	2,067	1,477	590	37,626,095	2,324,952,933	16,460	10,924,755	373,603,033	49,216,268	25,369,048	23,347,220
	1890	1,933	1,627	311	18,031,391	1,177,147,744	11,833	7,654,864	165,413,361	37,842,322	17,861,153	19,331,507
	1880	1,411	1,411	.....	9,374,134	577,755,819	12,402	6,460,071	57,823,682	24,265,911	13,841,173	15,692,733
North Carolina	1900	261	200	61	287,916	23,031,732	653	230,941	2,562,334	610,418	290,556	319,352
	1890	176	135	41	173,077	14,321,936	460	161,616	1,111,101	440,710	211,733	223,977
	1880	142	142	.....	105,501	6,319,332	502	119,809	460,590	344,132	178,924	165,308
North Dakota	1900	157	139	18	133,890	12,544,181	326	143,096	1,662,300	420,195	259,041	161,154
	1890	112	87	25	86,425	6,357,508	260	140,563	510,604	307,392	179,216	123,176
	1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio	1900	1,236	1,039	197	7,467,358	591,525,155	6,360	3,119,596	73,544,764	9,643,932	4,803,620	4,780,362
	1890	1,093	932	161	5,639,781	306,563,217	5,407	2,554,436	29,823,311	8,360,115	3,850,306	4,509,809
	1880	774	774	.....	3,093,931	162,579,330	5,313	1,761,038	11,065,159	6,109,443	2,460,642	3,643,306
Oklahoma	1900	127	110	17	120,077	10,693,566	379	139,021	1,407,298	250,681	133,537	112,144
	1890	30	21	9	14,654	1,462,332	69	25,133	93,445	45,495	26,300	19,195
	1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oregon	1900	207	188	19	311,950	29,484,167	610	292,579	4,276,251	825,455	463,172	362,283
	1890	137	126	11	203,855	19,159,764	509	346,317	2,150,770	951,827	544,323	407,439
	1880	74	74	.....	85,736	3,573,213	343	128,430	709,336	367,189	177,095	190,094
Pennsylvania	1900	1,444	1,365	79	11,280,387	923,173,870	9,565	5,094,769	155,346,813	18,364,367	10,741,023	7,623,339
	1890	1,476	1,271	205	9,472,033	633,014,599	7,537	3,841,669	71,130,406	16,330,532	7,345,234	9,035,343
	1880	973	973	.....	5,031,061	297,559,892	7,233	2,915,162	23,026,402	9,319,497	4,213,770	5,100,727
Rhode Island	1900	61	40	21	170,594	42,692,180	438	313,219	5,564,505	366,401	555,503	310,393
	1890	72	54	18	143,868	26,223,741	432	233,011	3,135,927	727,040	443,901	233,139
	1880	44	44	.....	97,121	14,496,493	432	206,523	123,745	455,726	244,155	211,571
South Carolina	1900	134	117	17	161,938	15,355,730	413	156,924	1,849,953	416,594	193,422	213,172
	1890	100	84	16	121,672	11,243,784	330	146,237	1,007,103	445,661	212,031	233,530
	1880	81	81	.....	69,902	6,774,415	393	110,031	432,478	309,233	145,907	163,331
South Dakota	1900	269	218	51	232,166	14,597,255	422	164,456	1,569,169	475,663	245,737	229,931
	1890	227	174	53	142,362	10,336,233	416	132,575	813,714	450,415	249,433	200,932
	1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee	1900	293	251	42	3,131,017	124,423,368	951	456,413	9,786,319	1,715,836	761,735	954,101
	1890	254	219	35	1,450,113	72,034,743	965	439,943	5,135,720	1,479,767	737,741	742,026
	1880	193	193	.....	293,233	18,293,372	900	265,456	1,423,433	784,031	373,450	410,631
Texas	1900	820	722	98	1,054,761	100,311,006	1,329	916,029	11,075,393	2,864,337	1,600,616	1,233,771
	1890	512	437	75	653,133	55,640,136	1,455	761,324	5,345,193	2,212,990	1,263,333	949,532
	1880	230	230	.....	263,239	19,333,792	1,457	772,059	1,791,533	1,100,235	570,039	530,206

¹ Publications which were in existence, but from which no returns were received.
² In 1880 Indian Territory and Oklahoma were reported as Indian Territory, and North Dakota and South Dakota as Dakota; the 1880 figures are included only in the totals.

TABLE 34.—COMPARATIVE SUMMARY OF NEWSPAPERS AND PERIODICALS BY STATES AND TERRITORIES, 1880 TO 1900—Continued.

STATES AND TERRITORIES.	Year.	NUMBER OF PUBLICATIONS.			Aggregate circulation per issue.	Aggregate number of copies issued during the census year.	WAGE-EARNERS.		Pounds of paper used.	VALUE OF NEWSPAPER PRODUCTS.		
		Total.	Reporting.	Not reporting. ¹			Average number.	Total wages.		Total.	Advertising.	Subscriptions and sales.
Utah.....	1900	80	72	8	123,279	14,304,587	431	\$235,174	2,424,121	\$455,498	\$234,037	\$221,411
	1890	39	28	11	68,000	9,626,740	294	183,651	1,206,050	483,555	271,770	211,785
	1880	22	22	.....	36,175	3,867,500	168	88,580	321,039	177,058	81,270	95,788
Vermont.....	1900	80	79	1	188,646	15,281,431	436	176,748	1,943,599	371,110	200,307	170,803
	1890	76	70	6	207,565	9,189,590	307	134,386	996,377	322,160	141,027	181,133
	1880	82	82	.....	180,192	5,681,464	371	92,959	538,301	262,719	102,619	160,100
Virginia.....	1900	255	204	51	627,280	51,213,030	771	338,618	4,581,295	907,025	510,729	396,296
	1890	231	185	46	346,056	28,172,077	652	272,634	1,977,387	818,073	424,255	393,318
	1880	194	194	.....	256,471	18,422,845	961	261,362	1,352,980	698,826	356,204	342,622
Washington.....	1900	228	199	24	307,128	38,239,106	626	315,500	4,505,960	1,178,721	72,517	406,204
	1890	172	144	28	204,488	23,547,244	569	434,710	2,615,931	1,149,285	759,784	389,501
	1880	29	23	.....	16,751	1,062,103	109	34,975	76,968	87,400	48,840	33,560
West Virginia.....	1900	192	176	16	226,018	24,463,373	707	295,413	2,916,288	576,493	282,845	293,643
	1890	144	112	32	130,328	12,428,686	401	135,312	1,080,543	389,257	188,351	200,906
	1880	109	109	.....	85,958	4,903,466	511	99,671	378,670	301,411	169,280	132,131
Wisconsin.....	1900	654	595	59	1,426,499	132,510,954	2,679	1,174,242	17,333,974	2,900,231	1,414,475	1,485,756
	1890	521	456	65	1,053,389	86,422,737	2,040	769,046	7,574,249	2,354,325	1,015,423	1,339,402
	1880	340	340	.....	436,576	27,901,051	1,980	531,903	2,428,546	1,589,725	754,920	834,805
Wyoming.....	1900	44	42	2	32,687	2,446,644	86	47,840	302,462	108,351	62,150	46,701
	1890	31	25	6	24,370	2,473,860	62	48,942	172,995	149,242	88,028	61,214
	1880	11	11	.....	5,686	803,260	46	25,900	77,506	47,300	32,950	14,550

¹Publications which were in existence, but from which no returns were received.

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MANUFACTURES.

TABLE 35.—COMPARATIVE STATEMENT OF NEWSPAPERS AND PERIODICALS, AVERAGE AND AGGREGATE CIRCU-

STATES AND TERRITORIES.	Year.	AVERAGE CIRCULATION PER ISSUE.							
		All classes.	Daily.	Triweekly.	Semi-weekly.	Weekly.	Monthly.	Quarterly.	All other classes.
1 United States.....	1900	6,271	6,784	3,637	4,447	3,071	21,750	47,331	20,695
	1890	4,640	5,209	1,473	2,896	2,678	11,317	36,109	11,351
	1880	3,122	4,137	1,001	2,136	2,113	7,834	16,505	6,474
2 Alabama.....	1900	1,315	2,560	700	2,170	1,086	1,700	.....	2,392
	1890	1,315	2,297	.....	1,500	1,606	974	14,500	1,976
	1880	862	1,932	200	.....	778	1,175	.....	1,500
3 Arizona.....	1900	792	1,146	.....	.....	700	206	.....	.....
	1890	760	651	.....	.....	814	.....	.....	.....
	1880	968	720	.....	.....	1,106	.....	.....	.....
4 Arkansas.....	1900	1,114	1,907	1,000	2,321	943	2,363	5,000	333
	1890	1,175	1,137	.....	.....	1,172	1,393	.....	600
	1880	1,067	1,006	.....	1,500	927	500	.....	5,283
5 California.....	1900	2,329	4,065	480	1,061	1,557	2,744	18,750	2,975
	1890	2,531	4,591	375	619	1,942	3,336	7,000	1,650
	1880	2,006	3,238	2,750	2,071	1,560	3,064	1,725	1,425
6 Colorado.....	1900	2,102	3,738	500	667	1,595	3,338	1,250	692
	1890	1,235	2,963	1,300	720	842	4,875	.....	.....
	1880	1,294	1,884	.....	600	1,070	2,475	.....	.....
7 Connecticut.....	1900	2,952	4,746	.....	1,333	2,101	4,931	900	4,450
	1890	3,180	3,443	.....	745	1,321	9,264	4,500	1,275
	1880	1,917	2,968	.....	850	1,737	2,533	700	794
8 Delaware.....	1900	2,363	5,713	.....	1,700	2,084	3,075	.....	.....
	1890	1,737	4,090	.....	.....	1,310	1,250	.....	.....
	1880	1,434	3,950	.....	.....	923	1,000	.....	.....
9 District of Columbia.....	1900	11,396	12,606	.....	1,000	9,308	16,093	1,380	11,628
	1890	13,891	15,663	.....	.....	22,136	7,500	.....	.....
	1880	9,435	9,125	.....	.....	5,535	4,747	1,050	.....
10 Florida.....	1900	1,158	2,537	1,000	5,000	872	1,513	.....	.....
	1890	1,106	1,334	500	.....	1,083	2,000	.....	300
	1880	739	1,300	.....	500	719	.....	.....	.....
11 Georgia.....	1900	2,074	3,310	.....	3,771	1,619	3,966	1,000	2,058
	1890	3,133	3,713	.....	2,000	2,499	6,166	3,000	12,200
	1880	1,259	2,141	600	1,100	1,069	3,706	.....	700
12 Idaho.....	1900	673	1,020	.....	929	615	1,500	.....	625
	1890	645	567	.....	440	863	.....	.....	.....
	1880	628	.....	500	500	664	.....	.....	.....
13 Illinois.....	1900	6,737	7,356	1,335	2,371	3,867	14,032	73,193	5,431
	1890	6,850	6,401	450	1,541	4,007	3,941	64,407	5,232
	1880	2,551	3,955	1,035	1,713	2,269	4,463	1,500	2,473
14 Indiana.....	1900	2,507	2,214	.....	1,833	1,530	11,176	7,770	3,867
	1890	2,096	1,305	.....	1,420	1,504	6,097	4,367	5,055
	1880	1,552	1,913	853	2,250	1,464	2,410	.....	979
15 Indian Territory.....	1900	733	553	.....	.....	319	450	.....	.....
	1890	999	500	.....	.....	1,062	.....	.....	.....
	1880	.....	.....	.....	.....	.....	.....	.....	.....
16 Iowa.....	1900	1,304	3,347	2,746	2,903	1,331	4,706	3,441	3,749
	1890	1,543	2,404	2,400	1,023	1,341	3,411	3,133	3,430
	1880	1,071	1,479	200	633	997	1,990	3,000	332
17 Kansas.....	1900	1,673	1,933	800	6,630	1,161	6,235	4,260	2,722
	1890	1,092	1,913	.....	327	960	3,371	700	743
	1880	961	1,523	.....	1,300	373	1,871	.....	1,200
18 Kentucky.....	1900	3,393	6,097	1,300	5,232	2,239	3,202	2,167	22,530
	1890	3,333	5,406	3,300	2,335	2,700	2,265	.....	13,456
	1880	2,134	3,045	900	1,141	1,743	1,272	.....	42,350
19 Louisiana.....	1900	1,375	4,652	1,200	5,450	1,227	933	.....	2,900
	1890	2,777	6,550	.....	5,200	2,232	3,123	1,700	2,067
	1880	1,330	3,460	1,000	3,000	969	475	.....	2,200
20 Maine.....	1900	36,351	3,939	.....	3,546	2,203	136,011	331	2,050
	1890	16,726	2,770	.....	1,350	2,321	54,574	1,000	50,433
	1880	11,041	1,394	430	.....	1,362	60,933	1,500	400
21 Maryland.....	1900	4,096	13,796	.....	3,630	2,492	6,217	3,000	767
	1890	3,162	12,462	.....	.....	2,062	3,679	6,925	2,916
	1880	3,166	9,472	.....	.....	2,503	1,976	900	1,413
22 Massachusetts.....	1900	12,755	11,539	.....	4,621	7,569	26,555	24,206	43,669
	1890	3,203	7,960	.....	3,334	5,363	10,795	23,223	13,611
	1880	5,122	7,739	400	2,671	4,273	7,370	3,157	1,406
23 Michigan.....	1900	3,402	5,293	1,595	3,352	1,441	15,139	10,030	2,123
	1890	2,567	4,096	1,700	1,333	1,343	7,709	10,552	3,611
	1880	1,465	2,167	2,033	1,322	1,347	1,933	6,375	1,707
24 Minnesota.....	1900	3,134	6,324	5,000	10,629	1,343	7,539	2,275	14,104
	1890	2,610	6,014	.....	15,000	1,667	3,546	1,000	26,346
	1880	1,116	3,562	750	.....	909	5,030	.....	475
25 Mississippi.....	1900	949	1,253	502	540	914	1,653	.....	350
	1890	903	1,225	500	.....	394	.....	.....	1,013
	1880	306	340	733	400	773	2,033	.....	.....

¹ Includes 150,000 circulation for 5 weeklies, 1 semimonthly, 14 monthlies, and 12 quarterlies in Georgia and Illinois, not separately returned.

² Includes 6 semiannual publications, having a circulation of 19,750, distributed as follows: Illinois, 1; Michigan, 1; New York, 3; Pennsylvania, 1.

³ Includes 50,000 circulation for 1 weekly, 1 semimonthly, and 1 monthly not separately returned.

PRINTING AND PUBLISHING.

LATION PER ISSUE, CLASSIFIED ACCORDING TO PERIOD OF ISSUE, BY STATES AND TERRITORIES, 1880 TO 1900.

AGGREGATE CIRCULATION PER ISSUE.

All classes.	Daily.	Triweekly.	Semiweekly.	Weekly.	Monthly.	Quarterly.	All other classes.
114,299,334 69,183,934 131,779,686	15,102,156 8,387,188 3,566,395	228,610 50,067 68,086	2,832,868 561,743 264,910	39,852,052 28,954,515 16,266,880	39,519,897 19,624,038 8,139,881	11,217,422 8,124,500 21,964,049	5,546,329 8,436,883 1,369,585
230,079 246,847 93,073	48,645 32,154 9,600	700	4,840 1,500	155,244 173,477 73,163	6,800 8,766 7,050	29,000	14,350 1,950 3,000
34,054 22,809 13,550	11,456 5,210 3,600			22,332 17,099 9,950	206		
262,903 192,749 103,501	38,140 15,917 5,030	1,000	11,285 1,500	187,578 166,482 80,621	18,900 9,750 500	5,000	1,000 600 15,850
1,448,656 1,151,389 640,026	475,506 399,454 157,814	480 750 5,500	23,342 6,410 20,710	618,146 604,050 345,962	194,792 123,425 98,040	112,500 7,000 3,450	23,800 9,900 8,550
521,213 229,669 95,744	157,016 68,150 26,375	500 1,300	2,000 2,160 600	285,425 128,809 68,869	72,947 29,250 9,900	1,250	2,075
457,622 496,084 237,660	208,815 117,240 47,490		29,325 1,490 1,700	155,507 182,472 152,895	44,375 136,276 31,000	1,800 4,500 1,400	17,800 5,100 3,175
85,900 55,582 34,425	34,277 20,450 15,800		1,700	43,778 30,132 17,625	6,150 5,000 1,000		
820,835 321,151 213,923	100,848 62,651 86,500		1,000	304,037 243,500 105,162	354,050 15,000 71,211	2,760 1,050	58,140
112,302 107,257 27,332	27,907 16,605 2,600	1,000 1,000	5,000	66,295 87,052 28,732	12,100 2,000		600
549,493 733,228 269,066	102,872 70,546 27,830	1,800	33,941 2,000 3,300	331,905 442,250 150,636	67,425 178,827 33,350	1,000 3,000	12,350 36,600 2,100
43,795 21,270 6,650	5,100 1,700		4,645 380 500	36,300 18,090 4,650	1,500		1,250
10,429,368 7,391,219 4,421,275	1,449,087 774,436 270,923	5,338 900 6,510	170,720 30,820 29,129	3,866,938 3,437,663 1,527,042	3,072,332 1,627,250 401,646	1,083,434 1,867,800 31,500	180,874 162,300 54,525
2,108,805 1,299,418 661,111	345,404 166,051 72,693		77,185 2,840 2,250	858,424 673,793 618,322	715,292 371,909 60,250	77,700 29,200	34,800 55,620 5,875
50,141 3,995	3,350 500			45,891 3,495	900		
1,884,875 1,088,019 547,340	217,589 110,563 38,465	19,224 4,300 200	168,672 14,397 1,900	1,105,666 795,077 449,650	301,205 133,032 61,740	27,529 12,750 3,000	44,990 17,400 2,495
1,144,320 756,746 280,729	105,348 82,286 24,396	800	20,040 2,480 1,300	653,507 595,089 230,141	321,050 72,933 26,192	21,800 700	21,775 2,228 1,200
1,099,172 727,781 397,564	184,624 135,150 33,492	1,800 3,300 1,300	125,575 20,200 6,344	425,323 445,485 240,473	262,450 29,461 29,255	6,500	112,900 94,195 85,700
900,072 358,183 131,630	106,990 78,600 38,005	2,400	32,693 5,200 3,000	137,434 225,833 81,415	14,750 40,600 950	1,700	5,800 6,200 2,200
6,434,065 2,442,046 1,214,460	59,838 41,545 18,940		17,728 1,350	220,759 230,642 156,940	6,120,490 1,964,669 1,086,200	7,050 2,000 1,500	8,200 201,552 400
679,567 392,068 414,693	247,552 137,035 132,613		17,360	316,505 210,310 255,770	93,250 22,075 19,700	3,000 13,850 900	2,200 8,748 5,650
6,199,127 4,662,159 2,012,929	1,130,820 445,781 230,399	400	32,350 25,449 34,727	2,066,369 1,802,125 1,089,515	2,257,142 1,327,740 574,533	363,096 781,310 22,100	349,350 279,163 11,260
2,374,403 1,511,915 620,374	370,843 212,975 62,339	7,975 1,700 6,250	192,093 6,930 3,365	752,032 869,704 433,927	934,025 377,734 33,293	50,400 10,552 13,750	17,025 32,500 11,950
1,949,630 1,023,005 222,074	300,266 180,433 28,493	5,000	95,660 15,000	908,478 518,533 167,205	452,329 143,933 25,150	4,550 2,000	133,347 153,076 475
163,942 108,061 87,904	16,348 7,350 4,200	502 500 2,200	1,080	142,702 91,206 75,004	6,610 5,950 6,100		1,700 3,055

¹Includes 100,000 circulation for 4 weeklies, 13 monthlies, and 12 quarterlies, not separately returned.
²Includes 1 semiannual.
³Indian Territory and Oklahoma were reported as Indian Territory in 1880. Average circulation, all classes, 2,030; weekly, 2,030. Aggregate circulation, all classes, 4,060; weekly, 4,060.

MANUFACTURES.

TABLE 35.—COMPARATIVE STATEMENT OF NEWSPAPERS AND PERIODICALS, AVERAGE AND AGGREGATE CIRCULA-

STATES AND TERRITORIES.	Year.	AVERAGE CIRCULATION PER ISSUE.							
		All classes.	Daily.	Triweekly.	Semi-weekly.	Weekly.	Monthly.	Quarterly.	All other classes.
26 Missouri	1900	5,847	3,810	200	23,511	2,680	13,649	63,932	9,542
	1890	2,699	5,285	1,305	4,100	2,610	8,558	15,056	2,566
	1880	2,041	3,223	1,265	1,100	1,750	3,418	800	2,823
27 Montana	1900	1,429	3,333	.....	2,345	887	2,165	7,000	.....
	1890	1,327	2,130	960	1,250	1,209	617	.....	1,090
	1880	1,388	304	.....	.....	1,660	.....	.....	.....
28 Nebraska	1900	2,036	3,825	1,200	3,313	1,433	9,141	983	2,421
	1890	1,425	2,732	.....	450	1,134	7,623	.....	2,614
	1880	888	1,553	.....	500	791	2,173	.....	600
29 Nevada	1900	519	581	160	583	501	500	.....	.....
	1890	969	1,450	.....	.....	648	.....	.....	.....
	1880	841	1,225	.....	.....	561	500	.....	.....
80 New Hampshire	1900	2,407	3,030	2,625	.....	2,372	1,050	.....	.....
	1890	2,352	2,369	.....	725	2,431	1,994	.....	.....
	1880	2,296	907	.....	.....	1,800	5,614	.....	7,400
31 New Jersey	1900	10,098	4,556	.....	950	1,631	1,703	34,125	2,251,500
	1890	5,563	3,420	650	2,200	1,499	49,348	1,042	1,433
	1880	1,306	2,116	750	900	1,112	1,811	6,000	5,478
32 New Mexico	1900	772	1,273	.....	.....	714	503	800	1,150
	1890	681	1,284	.....	.....	604	.....	.....	500
	1880	530	677	.....	.....	484	.....	.....	.....
33 New York	1900	25,475	18,326	18,272	8,863	14,458	62,232	65,046	42,300
	1890	11,033	13,031	3,633	3,258	6,848	17,697	34,943	12,649
	1880	7,222	9,059	1,123	4,371	5,265	11,040	19,736	5,840
34 North Carolina	1900	1,440	1,716	.....	1,633	1,392	1,205	700	1,392
	1890	1,319	1,156	.....	667	1,371	1,810	500	1,275
	1880	804	703	375	700	878	1,125	.....	1,308
35 North Dakota	1900	999	2,002	.....	3,550	843	3,775	.....	.....
	1890	903	1,317	.....	1,000	897	2,200	.....	.....
	1880	.....	.....	.....	.....	.....	.....	.....	.....
36 Ohio	1900	7,137	7,204	1,663	3,984	3,484	15,783	119,707	35,536
	1890	6,051	4,130	1,404	2,328	3,144	9,024	53,720	41,534
	1880	4,345	4,507	833	1,563	2,450	7,880	51,109	17,539
37 Oklahoma	1900	1,092	1,630	.....	800	1,041	1,333	.....	500
	1890	698	575	.....	.....	722	1,100	.....	.....
	1880	.....	.....	.....	.....	.....	.....	.....	.....
38 Oregon	1900	1,659	2,438	.....	1,058	1,343	2,779	.....	2,200
	1890	1,658	2,045	.....	1,400	1,542	2,500	.....	600
	1880	1,320	1,581	.....	.....	1,133	2,555	1,600	.....
39 Pennsylvania	1900	8,264	9,733	1,641	6,003	4,131	18,240	47,424	10,146
	1890	7,462	8,632	1,900	5,006	4,067	10,390	43,912	16,726
	1880	5,628	6,285	1,500	4,600	3,265	10,926	29,180	20,036
40 Rhode Island	1900	4,265	9,904	100	2,251	1,794	2,112	3,000	.....
	1890	2,767	7,551	.....	425	1,939	1,574	350	.....
	1880	2,490	5,175	.....	700	1,934	1,013	.....	400
41 South Carolina	1900	1,334	2,693	200	1,555	1,327	800	.....	1,500
	1890	1,448	2,354	200	463	1,341	.....	3,500	2,000
	1880	971	1,937	450	500	969	555	700	.....
42 South Dakota	1900	1,065	1,029	.....	1,600	801	3,322	.....	9,422
	1890	818	727	.....	800	745	1,715	.....	4,000
	1880	.....	.....	.....	.....	.....	.....	.....	.....
43 Tennessee	1900	12,474	10,357	.....	1,233	6,076	9,648	154,090	2,538
	1890	6,622	4,608	.....	2,070	4,474	4,929	82,533	8,213
	1880	1,322	3,099	.....	850	1,714	2,335	2,450	1,223
44 Texas	1900	1,461	1,778	.....	4,609	1,266	1,861	1,250	2,563
	1890	1,506	2,074	480	1,207	1,358	2,331	1,000	10,000
	1880	1,145	1,262	600	725	938	5,504	.....	650
45 Utah	1900	1,712	4,027	2,000	4,376	735	3,450	75	5,500
	1890	2,429	2,231	.....	2,368	1,367	3,000	.....	3,000
	1880	1,904	1,937	.....	2,050	1,707	1,525	.....	3,500
46 Vermont	1900	2,338	2,967	.....	4,200	2,030	3,525	300	2,600
	1890	2,965	2,140	.....	.....	1,729	18,800	.....	.....
	1880	2,245	1,050	.....	.....	1,492	17,137	1,100	285
47 Virginia	1900	3,075	2,496	1,033	2,172	2,315	4,213	20,033	3,233
	1890	1,371	2,243	192	620	1,632	3,127	5,333	1,250
	1880	1,449	1,392	740	699	1,073	2,363	1,767	6,303
48 Washington	1900	1,543	5,633	500	2,617	1,052	1,972	2,650	1,333
	1890	1,420	2,720	.....	.....	1,179	2,279	.....	450
	1880	698	367	.....	.....	745	.....	.....	.....
49 West Virginia	1900	1,234	2,294	.....	1,225	1,205	532	.....	1,200
	1890	1,164	2,511	.....	250	1,065	1,100	.....	425
	1880	868	2,050	500	625	832	961	1,000	150
50 Wisconsin	1900	2,397	3,565	1,000	7,714	1,666	4,523	13,920	6,167
	1890	2,310	2,239	.....	44,368	1,762	2,536	6,375	3,305
	1880	1,404	1,356	1,257	700	1,230	1,314	.....	4,133
51 Wyoming	1900	773	825	500	493	653	2,333	.....	.....
	1890	975	924	.....	.....	938	.....	.....	.....
	1880	632	662	.....	.....	617	.....	.....	.....

¹ Includes 3 semiannals.

² North Dakota and South Dakota were reported as Dakota in 1880. Average circulation, all classes, 616; daily, 562; weekly, 612. Aggregate circulation all classes, 33,943; dailies, 4,500; weeklies, 32,443.

PRINTING AND PUBLISHING.

TION PER ISSUE, CLASSIFIED ACCORDING TO PERIOD OF ISSUE, BY STATES AND TERRITORIES, 1880 TO 1900—Cont'd.

AGGREGATE CIRCULATION PER ISSUE.							
All classes.	Daily.	Triweekly.	Semiweekly.	Weekly.	Monthly.	Quarterly.	All other classes.
5,495,802	810,492	200	329,153	1,862,856	1,378,586	895,050	219,465
2,615,135	428,094	2,610	28,700	1,346,714	624,767	135,500	48,750
965,285	122,660	10,120	1,100	645,747	163,809	800	31,058
127,148	42,164	.....	9,380	62,109	6,495	7,000	.....
68,980	19,170	960	1,250	44,750	1,850	.....	1,000
20,827	912	.....	.....	19,915	.....	.....	.....
1,095,538	122,414	1,200	58,008	650,349	255,935	2,950	9,682
635,505	54,698	.....	900	447,757	33,850	.....	18,300
164,570	18,630	.....	500	121,800	13,040	.....	600
18,153	5,225	160	1,750	10,517	500	.....	.....
14,530	8,700	.....	.....	5,830	.....	.....	.....
27,745	17,155	.....	.....	10,030	500	.....	.....
211,819	42,419	5,250	.....	158,900	5,250	.....	.....
261,040	87,900	.....	1,450	201,752	19,838	.....	.....
185,958	9,070	.....	.....	107,938	39,300	.....	29,600
3,009,104	223,238	.....	1,900	367,021	28,950	136,500	2,251,500
1,486,777	160,748	1,800	2,200	278,731	1,036,315	3,125	4,900
249,478	50,776	750	8,600	164,502	16,300	12,000	1,650
32,420	3,820	.....	.....	25,000	500	800	2,300
23,157	5,134	.....	.....	17,523	.....	.....	500
6,355	2,000	.....	.....	4,855	.....	.....	.....
37,626,095	3,896,967	146,175	460,867	12,607,099	16,927,062	2,276,625	1,311,300
18,931,891	2,119,101	14,550	100,998	6,347,827	6,990,400	1,712,200	746,315
9,374,134	996,561	4,510	100,544	4,259,908	2,908,527	1,823,913	280,171
287,916	44,620	.....	24,490	197,706	12,050	700	8,350
173,077	23,110	.....	2,000	139,807	9,050	1,500	2,650
105,501	7,934	750	1,400	83,437	6,750	.....	5,230
138,890	18,021	.....	7,100	106,219	7,550	.....	.....
86,425	9,220	.....	2,000	66,405	8,800	.....	.....
7,467,358	1,224,715	13,800	211,161	2,411,172	1,420,501	1,795,609	390,900
5,639,781	499,712	9,825	44,230	1,936,400	959,522	1,842,997	790,095
3,093,931	216,336	6,700	6,250	1,328,133	622,531	562,200	351,781
120,077	14,674	.....	800	99,953	4,150	.....	500
14,654	3,450	.....	.....	10,104	1,100	.....	.....
311,950	51,191	.....	14,810	166,511	75,083	.....	4,400
203,855	32,712	.....	1,400	154,248	20,000	.....	500
85,786	11,070	.....	.....	67,786	15,330	1,600	.....
11,280,367	1,917,426	8,206	282,142	3,691,954	8,246,779	1,991,819	142,041
9,472,033	1,241,514	5,700	65,078	3,135,664	2,763,798	1,624,741	635,588
5,031,061	578,227	6,000	13,800	1,993,340	1,606,073	465,386	361,735
170,594	118,844	100	6,754	87,671	4,225	3,000	.....
143,368	67,959	.....	425	59,666	20,468	350	.....
97,121	41,402	.....	700	51,679	3,040	.....	400
161,988	18,850	200	23,327	110,111	8,000	.....	1,500
121,672	17,125	200	925	97,922	.....	3,500	2,000
69,902	7,750	1,350	500	58,492	1,110	700	.....
232,166	16,468	.....	1,600	151,488	34,400	.....	28,265
142,362	13,312	.....	2,400	105,000	17,150	.....	4,000
8,131,017	165,718	.....	7,700	1,136,199	270,150	1,540,900	10,350
1,450,118	32,941	.....	4,140	756,105	15,330	495,500	12,850
293,288	30,995	.....	1,700	224,503	23,850	4,900	7,340
1,054,761	147,602	.....	101,392	732,867	61,400	1,250	10,250
653,133	87,123	480	7,240	493,557	53,783	1,000	10,000
263,289	30,297	600	1,450	180,102	49,540	.....	1,300
123,279	24,163	2,000	30,630	36,036	13,800	150	16,500
63,000	20,525	.....	20,075	8,200	12,000	.....	7,200
86,175	7,950	.....	8,200	11,950	4,575	.....	3,500
188,646	26,699	.....	8,400	107,597	85,250	300	10,400
207,565	10,700	.....	.....	100,265	96,600	.....	.....
130,192	4,200	.....	.....	73,107	51,500	1,100	285
627,280	92,370	3,100	13,030	291,690	96,390	120,500	9,700
346,056	47,106	192	3,720	213,743	56,290	17,500	2,500
256,471	32,172	3,700	4,191	121,281	70,902	5,300	18,925
307,128	84,570	500	7,850	161,990	41,418	5,300	5,500
204,488	43,954	.....	.....	139,134	15,950	.....	450
16,751	1,100	.....	.....	15,651	.....	.....	.....
226,013	43,577	.....	4,900	169,936	6,400	.....	1,200
130,323	22,600	.....	250	101,123	5,500	.....	850
85,958	4,100	500	1,250	74,152	4,306	1,000	150
1,426,499	213,832	1,000	161,995	771,574	189,948	69,600	18,500
1,053,339	107,594	.....	133,105	657,300	51,715	20,625	83,050
436,576	33,400	3,300	1,400	316,179	36,232	.....	45,515
32,637	3,300	500	985	20,902	7,000	.....	.....
24,370	4,620	.....	.....	10,750	.....	.....	.....
5,636	1,986	.....	.....	3,700	.....	.....	.....

³ Indian Territory and Oklahoma were reported as Indian Territory in 1880. Average circulation, all classes, 2,030; weekly, 2,030. Aggregate circulation, all classes, 4,060; weekly, 4,060.
⁴ Includes 1 semiannual.

Consideration of Tables 33, 34, and 35 permits a significant grouping of facts relating to aggregate circulation and to the circulation of daily, weekly, and monthly publications. Of a total of 114,299,334 aggregate circulation per issue for all newspapers and periodicals, 10 states—New York, Pennsylvania, Illinois, Ohio, Maine, Massachusetts, Missouri, Tennessee, New Jersey, and Michigan, ranking in the order given—supplied 79.5 per cent in 1880, 79.8 per cent in 1890, and 81.8 per cent in 1900. Of a total of 15,102,156 aggregate circulation per issue for all daily newspapers, 10 states—New York, Pennsylvania, Illinois, Ohio, Massachusetts, Missouri, California, Indiana, Michigan, and Minnesota, ranking in the foregoing order—supplied 78.1 per cent in 1880, 77.1 per cent in 1890, and 78.9 per cent in 1900. Of a total of 39,852,052 aggregate circulation per issue for all weekly newspapers and periodicals, 10 states—New York, Illinois, Pennsylvania, Ohio, Massachusetts, Missouri, Tennessee, Iowa, Minnesota, and Indiana, ranking in the order given—supplied 75.1 per cent in 1880, 71.9 per cent in 1890, and 76.6 per cent in 1900. Of a total of 39,519,897 aggregate circulation per issue of monthly newspapers and periodicals, 10 states—New York, Maine, Pennsylvania, Illinois, Massachusetts, Ohio, Missouri, Michigan, Indiana, and Minnesota, ranking in the order named—supplied 91 per cent in 1880, 87.4 per cent in 1890, and 92.5 per cent in 1900. These facts are shown in Tables 36, 37, 38, and 39.

TABLE 36.—Aggregate circulation per issue of all classes in 10 states, and per cent that aggregate circulation in each forms of the total, 1880 to 1900.

STATES.	AGGREGATE CIRCULATION PER ISSUE.			PER CENT AGGREGATE CIRCULATION IN EACH STATE FORMS OF TOTAL FOR THE UNITED STATES.		
	1900	1890	1880	1900	1890	1880
Total.....	93,446,706	55,202,624	25,276,815	81.8	79.8	79.5
New York.....	37,626,095	18,031,891	9,374,184	32.9	26.1	29.5
Pennsylvania.....	11,280,867	9,472,088	5,081,061	9.9	13.7	15.8
Illinois.....	10,429,868	7,891,219	2,421,275	9.1	11.4	7.6
Ohio.....	7,467,858	5,689,781	3,093,931	6.5	8.2	9.7
Maine.....	6,484,065	2,442,046	1,214,460	5.6	3.5	3.8
Massachusetts.....	6,199,127	4,662,169	2,012,929	5.4	6.7	6.3
Missouri.....	5,495,802	2,615,135	965,285	4.8	3.8	3.0
Tennessee.....	3,181,017	1,450,118	293,288	2.7	2.1	0.9
New Jersey.....	3,009,104	1,486,777	249,478	2.6	2.2	0.8
Michigan.....	2,374,403	1,511,915	620,974	2.1	2.2	2.0

TABLE 37.—Aggregate circulation per issue of daily newspapers in 10 states, and per cent that aggregate circulation in each forms of the total, 1880 to 1900.

STATES.	AGGREGATE CIRCULATION PER ISSUE.			PER CENT AGGREGATE CIRCULATION IN EACH STATE FORMS OF TOTAL FOR THE UNITED STATES.		
	1900	1890	1880	1900	1890	1880
Total.....	11,921,621	6,467,601	2,786,950	78.9	77.1	78.1
New York.....	3,896,967	2,119,101	996,561	25.8	25.3	27.9
Pennsylvania.....	1,917,426	1,241,514	578,227	12.7	14.8	16.2
Illinois.....	1,449,087	774,486	270,928	9.6	9.2	7.6
Ohio.....	1,224,715	499,712	216,396	8.1	6.0	6.1
Massachusetts.....	1,180,820	445,781	280,399	7.5	5.3	7.9
Missouri.....	810,492	428,094	122,660	5.4	5.1	4.4
California.....	475,596	399,454	157,814	3.1	4.8	3.4
Indiana.....	345,404	166,051	72,698	2.8	2.0	2.0
Michigan.....	370,848	212,975	62,839	2.5	2.5	1.8
Minnesota.....	300,266	180,483	28,493	2.0	2.2	0.8

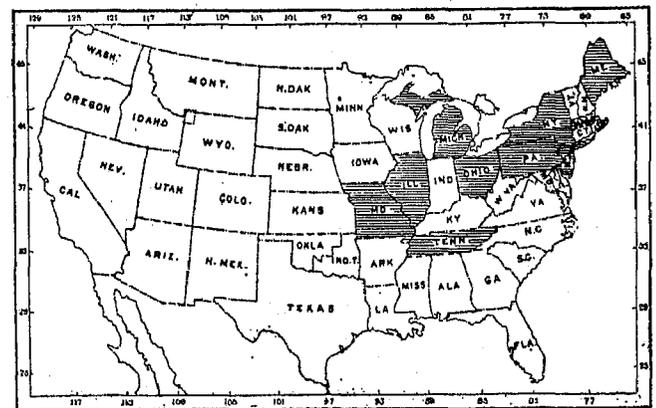
TABLE 38.—Aggregate circulation per issue of weekly newspapers and periodicals in 10 states, and per cent that aggregate circulation in each forms of the total, 1880 to 1900.

STATES.	AGGREGATE CIRCULATION PER ISSUE.			PER CENT AGGREGATE CIRCULATION IN EACH STATE FORMS OF TOTAL FOR THE UNITED STATES.		
	1900	1890	1880	1900	1890	1880
Total.....	80,515,200	20,809,936	12,202,266	76.6	71.9	75.1
New York.....	12,607,099	6,347,827	4,253,908	31.6	21.9	26.2
Illinois.....	3,856,988	3,437,663	1,527,042	9.7	11.9	9.4
Pennsylvania.....	3,691,954	3,136,664	1,998,340	9.3	10.8	12.3
Ohio.....	2,411,172	1,996,400	1,328,133	6.1	6.9	8.2
Massachusetts.....	2,066,869	1,802,125	1,089,515	5.2	6.2	6.7
Missouri.....	1,862,856	1,346,714	645,747	4.7	4.7	4.0
Tennessee.....	1,136,199	756,105	224,603	2.9	2.6	1.4
Iowa.....	1,105,666	795,077	449,550	2.8	2.7	2.8
Minnesota.....	908,478	518,563	187,206	2.3	1.8	1.0
Indiana.....	858,424	673,798	518,322	2.2	2.3	3.2

TABLE 39.—Aggregate circulation per issue of monthly publications in 10 states, and per cent that aggregate circulation in each forms of the total, 1880 to 1900.

STATES.	AGGREGATE CIRCULATION PER ISSUE.			PER CENT AGGREGATE CIRCULATION IN EACH STATE FORMS OF TOTAL FOR THE UNITED STATES.		
	1900	1890	1880	1900	1890	1880
Total.....	36,575,138	17,153,712	7,417,008	92.5	87.4	91.0
New York.....	16,927,062	6,990,400	2,903,527	42.8	35.6	35.7
Maine.....	6,120,490	1,964,659	1,036,200	15.5	10.0	12.7
Pennsylvania.....	3,246,779	2,763,798	1,608,078	8.2	14.1	10.7
Illinois.....	3,072,932	1,627,250	401,646	7.8	8.3	4.9
Massachusetts.....	2,257,142	1,327,740	574,538	5.7	6.8	7.1
Ohio.....	1,420,501	956,522	622,581	3.6	4.9	7.6
Missouri.....	1,378,586	624,767	153,890	3.5	3.2	1.9
Michigan.....	984,025	877,784	33,293	2.5	1.9	0.4
Indiana.....	715,292	371,909	60,250	1.8	1.9	0.7
Minnesota.....	452,329	148,933	25,150	1.1	0.8	0.3

CARTOGRAM 1.—Ten states possessing 81.8 per cent of aggregate circulation per issue of all publications, 1900.



By reference to cartogram 1, the geographic relation of the preponderance exerted by the 10 leading states is clearly perceived. The 10 states which possess 81.8 per cent of the aggregate circulation of all publications form a belt beginning at the eastern border of Kansas, and extending—with a break at Indiana—through Massachusetts, Maine, New York, and New Jersey to the Atlantic Ocean. From this belt Michigan is an offshoot northward and Tennessee southward. The 10 states leading in circulation of dailies form almost the same belt, made more marked by the addition

of Indiana; California and Minnesota, also, are added, and Maine, New Jersey, and Tennessee omitted. The 10 states possessing the largest weekly and monthly circulation per issue are similar in general location, showing a band which extends from the Kansas border to Maine—Maine and Minnesota being isolated in the monthly class.

The tabular statements relating to this subject show that the production of monthlies is centralized in a few states to a greater degree than that of any other class of periodicals, 10 states possessing 92.5 per cent of the aggregate circulation. The production of weekly periodicals is most decentralized, perhaps because the weekly is the publication of the average community, and as a class is less the particular product of any state, or group of states, than any other class of publications.

While the figures presented in the foregoing comparisons indicate clearly the great importance of a small number of states in the aggregate circulation per issue, as well as in the circulation per issue for different classes, the fact is important that in number of establishments, capital, and value of products this preponderance is not so clearly maintained. The states already shown to possess more than four-fifths of the aggregate circulation of all newspapers and periodicals, reported but 45.4 per cent of all establishments, namely, 8,279 out of a total of 18,226. Moreover, these states showed a steady and considerable decrease in the proportionate number of establishments, having 54.2 per cent of the total in 1880, 50.7 per cent in 1890, and 45.4 per cent in 1900. They were not the 10 states having the largest numbers of establishments. The 10 states having the largest number of establishments reported but 60.4 per cent of the whole number in the United States in 1880, 59.2 per cent in 1890, and 56.8 per cent in 1900. Thus the relation which the number of establishments in the states selected bore to the whole number in 1880, 1890, and 1900 was also a declining one. It is clear, therefore, that in the last two decades the number of establishments has increased more rapidly in some states with a comparatively small number of establishments than in those possessing the largest number. In the latter class of states there appears to have been an actual decrease in number of establishments, though, as previously shown, not in actual circulation—an evidence, possibly, of consolidation.

Of the total capital, the 10 states possessing the largest circulation per issue of all publications, reported 65.6 per cent in 1890 and 68.9 per cent in 1900. Of the total value of products, they reported 69.8 per cent in 1880, 69.6 per cent in 1890, and 71.1 per cent in 1900.

THE RELATION OF CIRCULATION TO POPULATION.

It has been pointed out, in connection with Tables 29, 30, and 33, that the circulation of newspapers and periodicals reported by each state and by each large city,

is in reality a product not governed by local consumption, but intended for distribution regardless of state lines, distances being limited only by the ability and energy of the producers in securing patronage. While the circulation reported by each state is of great importance as representing a product, it is difficult to dissociate this product from the state's own requirement, and to remember that of the total circulation reported, the state itself may use but a fraction. In some respects the number of publications forms a more reliable basis of comparison than circulation—the latter being often so exceptional as to make the standing of the state or territory appear very different from what it really is. In Table 40 the number of publications has been used as a basis, except in the last two columns, which are inserted because they furnish several interesting conclusions.

TABLE 40.—Number of publications to each 1,000 inhabitants, by states, per cent that number of publications in each state forms of total number, and per cent of increase in aggregate circulation per issue, 1890 and 1900.

STATES.	NUMBER OF PUBLICATIONS TO EACH 1,000 INHABITANTS.		PER CENT THAT NUMBER OF PUBLICATIONS IN EACH STATE FORMS OF TOTAL NUMBER.		PER CENT OF INCREASE IN AGGREGATE CIRCULATION PER ISSUE.	
	1890	1900	1890	1900	1890 to 1900	1880 to 1890
Alabama	0.10	0.09	1.0	0.9	16.8	165.2
Arizona	0.85	0.49	0.2	0.2	52.6	64.6
Arkansas	0.18	0.15	1.3	1.1	86.4	86.2
California	0.42	0.38	3.4	3.1	25.8	79.9
Colorado	0.46	0.45	1.4	1.2	128.9	139.9
Connecticut	0.17	0.21	0.8	1.0	17.8	108.7
Delaware	0.16	0.19	0.2	0.2	54.5	61.5
District of Columbia	0.25	0.07	0.4	0.1	155.6	50.1
Florida	0.18	0.25	0.5	0.7	4.7	292.4
Georgia	0.12	0.13	1.5	1.5	125.1	172.5
Idaho	0.45	0.39	0.4	0.2	129.4	276.5
Illinois	0.82	0.32	8.5	3.3	82.2	225.9
Indiana	0.83	0.28	4.6	4.2	62.8	96.6
Indian Territory	0.16	0.05	0.3	0.1	457.4	(²)
Iowa	0.47	0.37	5.7	4.7	73.2	98.8
Kansas	0.47	0.49	3.8	4.7	51.2	169.6
Kentucky	0.13	0.12	1.5	1.5	51.0	83.1
Louisiana	0.12	0.12	0.9	0.9	116.2	172.1
Maine	0.25	0.22	1.0	1.0	168.5	101.1
Maryland	0.14	0.12	0.9	0.8	73.4	15.6
Massachusetts	0.17	0.25	2.7	3.8	33.0	131.6
Michigan	0.29	0.28	3.8	4.0	57.0	148.5
Minnesota	0.86	0.30	3.4	2.6	90.6	360.7
Mississippi	0.11	0.09	1.0	0.8	56.8	22.9
Missouri	0.30	0.26	5.2	4.7	110.2	170.9
Montana	0.37	0.39	0.5	0.3	84.3	231.2
Nebraska	0.60	0.42	2.9	3.0	72.4	311.1
Nevada	0.83	0.33	0.2	0.1	24.9	147.6
New Hampshire	0.21	0.29	0.5	0.7	118.9	40.4
New Jersey	0.16	0.18	1.6	1.8	102.4	496.0
New Mexico	0.22	0.22	0.2	0.2	40.0	264.4
New York	0.20	0.27	8.1	10.9	108.7	92.4
North Carolina	0.11	0.08	1.1	0.9	61.7	68.3
North Dakota	0.44	0.48	0.8	0.6	60.7	(³)
Ohio	0.25	0.25	5.7	6.3	32.4	82.3
Oklahoma	0.28	0.34	0.6	0.1	719.4	(³)
Oregon	0.45	0.40	1.0	0.8	49.4	143.5
Pennsylvania	0.22	0.24	7.5	8.5	19.1	88.3
Rhode Island	0.09	0.16	0.2	0.4	14.6	53.3
South Carolina	0.09	0.07	0.6	0.6	33.1	74.1
South Dakota	0.54	0.53	1.2	1.2	63.1	(³)
Tennessee	0.12	0.12	1.4	1.5	115.9	394.4
Texas	0.24	0.20	4.0	2.9	60.3	150.0
Utah	0.26	0.13	0.4	0.2	81.3	88.0
Vermont	0.23	0.21	0.4	0.5	19.1	59.4
Virginia	0.11	0.11	1.1	1.2	81.3	84.9
Washington	0.38	0.41	1.1	1.0	50.2	1,120.3
West Virginia	0.18	0.15	1.0	0.8	73.4	51.6
Wisconsin	0.29	0.27	3.3	3.1	35.4	141.3
Wyoming	0.45	0.41	0.2	0.2	34.1	328.6

¹ Decrease.
² See note 6, page 25.
³ See note 2, page 26.

All but 16 states and territories showed an increase, during the past decade, in the number of publications to each 1,000 inhabitants, but in the majority of cases the increase was slight.

The number of publications to each 1,000 inhabitants was greatest in Nevada, where there was a marked decline in population—showing that the decreasing communities in that state retained local publications already in existence.

The states and territories showing, in 1900, an increase of more than 100 per cent in aggregate circulation per issue, were Colorado, the District of Columbia, Idaho, Indian Territory, Maine, Missouri, New Jersey, New York, Oklahoma, and Tennessee. Of these, Colorado, Idaho, Indian Territory, and Oklahoma doubtless owed their increase to the influx of population during the decade, and Maine and New Jersey to special publications producing a condition which is to some extent misleading for comparative purposes. The decline in the per cent of increase in aggregate circulation per issue, as compared with that shown in 1890, is very marked, appearing in no less than 39 states and territories. Upon this fact, however, the greater accuracy of enumeration in 1890, as compared with 1880, has an important bearing.

Table 41 presents the figures for the 16 states and territories showing a decrease in the number of publications to each 1,000 inhabitants.

TABLE 41.—Comparison of increase in aggregate circulation per issue with increase in population, for the 16 states and territories showing decrease in number of publications per 1,000 inhabitants, 1900.

STATES AND TERRITORIES.	Per cent of increase in aggregate circulation per issue.	Per cent of increase in population.
Arizona	52.6	68.0
Connecticut	17.8	21.7
Delaware	54.5	9.6
Florida	4.7	35.0
Georgia	125.1	20.6
Kansas	90.0	2.9
Massachusetts	83.0	25.3
Montana	84.3	75.2
New Hampshire	118.9	9.3
New Jersey	102.4	30.4
New York	108.7	21.1
North Dakota	60.7	70.9
Oklahoma	719.4	518.2
Pennsylvania	19.1	19.0
Rhode Island	14.6	24.0
Washington	50.2	46.5

¹ Decrease.

It appears that in 8 of these 16 states and territories in which the number of publications per 1,000 inhabitants decreased, the circulation of existing publications nevertheless increased more rapidly than the population. These were Delaware, Kansas, Massachusetts, Montana, New Jersey, New York, Oklahoma, and Washington. This fact indicates clearly an extension of the circulation of existing publications, rather than the establishment of new ones. This tendency is not confined to the 7 states and the territory mentioned, but is characteristic of many of the states, especially the older ones.

Table 42 shows the total number of publications classified according to period of issue and character, by states and territories, from 1880 to 1900.

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MANUFACTURES.

TABLE 42.—COMPARATIVE STATEMENT OF NEWSPAPERS AND PERIODICALS, NUMBER OF PUBLICATIONS

STATES AND TERRITORIES.	Year.	Total number.	PERIOD OF ISSUE.								
			Daily.			Triweekly.	Semi-weekly.	Weekly.	Monthly.	Quarterly.	All other classes.
			Total.	Morning.	Evening.						
1 United States.....	1900 1890 1880	18,226 14,901 11,814	2,226 1,610 971	595 559 488	1,631 1,051 583	62 84 73	687 194 133	12,979 10,814 8,683	1,817 1,734 1,167	287 225 116	268 290 221
2 Alabama.....	1900 1890 1880	175 136 125	19 14 6	8 8 3	11 6 3	1 1 1	2 1 1	143 108 109	4 9 7	2 2 2	6 2 2
3 Arizona.....	1900 1890 1880	43 29 17	10 8 6	4 6 3	6 2 3			32 21 11	1		
4 Arkansas.....	1900 1890 1880	236 164 117	20 14 6	4 4 2	16 10 4	1	4 1	199 142 104	8 7 2	1	3 1 4
5 California.....	1900 1890 1880	622 455 361	117 87 58	47 42 30	70 45 28	1 2 2	22 11 11	397 311 250	71 87 32	6 1 2	8 6 6
6 Colorado.....	1900 1890 1880	248 186 87	42 23 19	13 11 12	29 12 7	1 1	3 3 1	179 163 68	19 6 4	1	3
7 Connecticut.....	1900 1890 1880	155 156 139	44 34 17	13 12 7	31 22 10		22 2 2	74 95 99	9 20 15	2 1 2	4 4 4
8 Delaware.....	1900 1890 1880	30 32 26	6 5 5	2 2 2	4 3 3		1	21 23 20	2 4 1		
9 District of Columbia.....	1900 1890 1880	69 17 44	8 4 5	3 2 3	5 2 2		1	31 11 23	22 2 15	2	5
10 Florida.....	1900 1890 1880	97 97 45	11 12 3	4 4 3	7 8	1 2	1	76 80 40	8 1		2
11 Georgia.....	1900 1890 1880	265 230 200	27 19 16	15 11 11	12 8 5		9 1 3	205 177 163	17 29 11	1	6 3 3
12 Idaho.....	1900 1890 1880	72 33 10	5 3 1	3 2	2		5 2 2	59 28 7	1		2
13 Illinois.....	1900 1890 1880	1,548 1,241 1,017	197 121 74	44 44 30	158 77 44	4 2 6	72 20 17	1,000 858 758	219 182 118	23 29 21	38 29 23
14 Indiana.....	1900 1890 1880	841 620 467	166 92 49	26 17 12	180 75 28		41 2 1	561 448 390	64 61 27	10 6	9 11 6
15 Indian Territory.....	1900 1890 1880	64 9	6 1	1	5			56 8	2		
16 Iowa.....	1900 1890 1880	1,045 703 569	65 46 30	16 18 12	49 28 18	7 2 1	58 14 3	881 593 500	64 39 31	8 4 1	12 5 8
17 Kansas.....	1900 1890 1880	684 693 347	53 43 20	7 12 8	46 31 12	1	3 3 1	563 621 310	51 22 15	5 1	8 3 1
18 Kentucky.....	1900 1890 1880	282 213 205	27 25 11	10 12 7	17 18 4	1 1 2	24 7 7	190 165 180	32 13 23	3	5 7 2
19 Louisiana.....	1900 1890 1880	160 129 112	23 12 13	8 6 8	15 6 5	2	6 1 1	112 99 94	15 13 2		2 3 1
20 Maine.....	1900 1890 1880	177 146 123	15 15 12	5 6 4	10 10 8		5 1 1	100 88 90	45 36 18	2 1	4 4 1
21 Maryland.....	1900 1890 1880	166 124 143	18 11 15	8 9 10	10 2 5		2	127 102 111	15 6 12	1 2 1	3 3 4
22 Massachusetts.....	1900 1890 1880	486 568 427	98 56 39	25 12 16	73 44 28		7 7 13	273 336 279	85 123 80	15 31 7	8 15 8
23 Michigan.....	1900 1890 1880	698 589 464	70 52 33	14 12 18	56 40 20	5 1 3	23 5 3	522 472 397	65 49 19	5 1 1	8 9 8
24 Minnesota.....	1900 1890 1880	622 392 223	44 30 10	12 11 4	32 19 6	1	9 1	493 311 205	60 42 6	2 2	13 6 1

¹ Includes 173 Sunday publications, not connected with daily newspapers.

² Includes publications for Dakota and Indian Territory.

³ Includes 1,182 publications not reporting operations, as they can not be excluded from the classification.

PRINTING AND PUBLISHING.

1069

BY PERIOD OF ISSUE AND CHARACTER OF PUBLICATION, BY STATES AND TERRITORIES, 1880 TO 1900.

CHARACTER OF PUBLICATION.														
News, politics, and family reading.	Religion.	Agriculture, horticulture, dairying, and stock raising.	Commerce, finance, insurance, and railroads.	Trade journals.	General literature, including magazines.	Sunday newspapers.	Medicine and surgery.	Law.	Science and mechanics.	Fraternal organizations.	Education and history.	Society, art, music, and fashion.	College and school periodicals.	Miscellaneous.
14,867 11,326 8,863	952 1,025 558	807 263 178	190 239 4868	520 482 (4)	239 291 189	72 143 (4)	111 123 114	62 47 45	66 88 68	200 216 149	120 119 4248	88 152 72	139 137 (4)	298 1,905 4,477
160 110 114	7 14 5	2 4 2	4	1	1	2	1		2	1				1
41 26 17		1 3											1	
214 150 106	6 6 5	1 1 2			1 1	3	1 1 1		1 1 1	6 8	2	1	2	1
467 356 270	40 15 12	17 11 7	12 10 27	21 22	10 7 4	2 3	4 8 3	4 1 3	3 2 3	13 6 7	6 3 6	2 2 3	2	19 14 16
199 174 78	4 3 2	9 2 1	3 1 1	7 1		1 1	1	2	2 1 2	6 1 1	2	1 1	1	10 1 1
130 119 110	6 11 3	2 5 4	4 1	1 3		3 3	2 1 1		1 1	4 1 5	3 2 11		3	1 2
28 24 24	2 1 1	1				1					1	1	1	2
82 10 20	4 1 1	1	3 2	2	5 2	2 1	1	1 2	5 1	2 3	1 2	1	2	7 2 11
86 83 41	7 4 4	2 4 2	1 1	3 1	2							1		1
236 185 177	10 13 7	2 2 4	1 2	5 3	2 2 2	1	4 5 8	1	2	1 1	5	2 1	1 5	3 2 5
69 32 10		1		1 1						1				
1,141 862 786	85 102 49	35 30 15	17 27 66	101 72	28 18 9	4 6	12 12 8	3 5 5	9 17 5	18 18 13	17 7 19	24 19 7	10 3	39 44 35
780 508 422	36 27 18	16 20 7	3 5 3	14 13	3 1	5 10	4 6 2		1 1 2	13 9 6	3 2 9	1 2	8 7	5 9 3
62 7	1 1										1			1
942 930 619	39 26 15	14 7 4	2 5	4 1	2 3 2	1		1	1	13 9 7	5 4 15	3 2 1	9 8 4	9 8 4
608 647 822	16 9 4	16 8 5	2 1	6 1	2		1			11 5 3	6 4 3	1 4	7 6	9 7 7
220 177 162	22 15 13	8 4 6	2 4	10 6	1 3	1 4	3 1 4	1 1		3 1 2	1 1 5		8 3	5 2 6
134 88 98	6 10 7	4 5 1	1 6 1	3 2	3	1	2 1		1	1 1		1	3 3	3 12 4
128 97 91	9 6 9	1 5 4	4 1	1	21 21 8	2	1		1	3 4 2	1 4 3	3	4 3	3 1 5
130 108 105	12 5 10	8 2 5	2 1 5	6 2	1 3	1	1 2 2	2 1	4	1 3		1	1	5 1 4
312 326 281	48 77 50	6 14 6	8 12 19	27 13	27 20	8 5	2 2 2	1 1 2	5 11 5	7 15 6	8 13 15	7 12 10	5 8	16 27 31
615 495 413	28 36 11	7 8 5	8 2 3	18 3	8 6 1	1 7	5 4 7	1	1 1 2	5 9 5	4 4 9	2 3	3 6	4 6 5
516 316 207	20 19 3	11 5 3	5 5 2	21 6	6 3	4	4 1	4 2	2 3	12 5 2	6 3 2	1 3	5 5	9 7 4

⁴In 1880 "trade journals" were included with "commerce, finance, insurance, and railroads," "Sunday newspapers" with "miscellaneous," and "college and school periodicals" with "education and history."

⁵Includes 217 children's publications and Sunday school papers.

⁶Indian Territory and Oklahoma reported as Indian Territory in 1880.

MANUFACTURES.

TABLE 42.—COMPARATIVE STATEMENT OF NEWSPAPERS AND PERIODICALS, NUMBER OF PUBLICATIONS BY

STATES AND TERRITORIES.	Year.	Total number.	PERIOD OF ISSUE.								
			Daily.			Triweekly.	Semi-weekly.	Weekly.	Monthly.	Quarterly.	All other classes.
			Total.	Morning.	Evening.						
25 Mississippi.....	1900	178	18	8	10	1	2	156	4		2
	1890	119	6	2	4	1		102	7		3
	1880	123	5	3	2	5	1	109	3		
26 Missouri.....	1900	940	92	24	68	1	14	695	101	14	23
	1890	707	81	27	54	2	7	516	73	9	10
	1880	530	43	22	21	8	2	415	60	1	11
27 Montana.....	1900	89	11	5	6		4	70	3		
	1890	52	9	3	6	1	1	37	3	1	1
	1880	18	4	4				14			
28 Nebraska.....	1900	533	32	7	25	1	16	454	28	3	4
	1890	446	31	6	25		2	395	11		7
	1880	189	15	5	10		1	165	7		1
29 Nevada.....	1900	85	9	3	6	1	3	21	1		
	1890	15	6	3	3			9			
	1880	37	14	5	9			22	1		
30 New Hampshire.....	1900	88	14	2	12	2		67	5		
	1890	111	16	3	13		2	83	10		
	1880	87	10	2	8			66	7		4
31 New Jersey.....	1900	298	49	7	42		2	225	17	4	1
	1890	263	47	15	32	2	1	186	21	3	8
	1880	215	27	8	19	1	6	163	13	2	8
32 New Mexico.....	1900	42	3		3			35	1	1	2
	1890	34	4	1	3			29			1
	1880	18	3	2	1			15			
33 New York.....	1900	1,477	207	63	144	8	52	872	272	85	31
	1890	1,627	162	64	98	4	31	927	395	49	59
	1880	1,411	115	46	69	5	24	892	282	40	53
34 North Carolina.....	1900	200	26	8	18		15	142	10	1	6
	1890	135	20	9	11		3	102	5	3	2
	1880	142	13	7	6	2	3	113	7		4
35 North Dakota.....	1900	139	9	4	5		2	126	2		
	1890	87	7	3	4		2	74	4		
	1880										
36 Ohio.....	1900	1,039	170	24	146	8	53	692	90	15	11
	1890	932	121	27	94	7	19	635	106	25	19
	1880	774	56	22	34	8	4	584	90	11	21
37 Oklahoma.....	1900	110	9	2	7		1	96	3		1
	1890	21	6	3	3			14	1		
	1880										
38 Oregon.....	1900	188	21	9	12		14	124	27		2
	1890	126	16	7	9		1	100	8		1
	1880	74	7	4	3			59	6	1	1
39 Pennsylvania.....	1900	1,365	196	52	144	5	47	838	178	42	14
	1890	1,271	143	45	98	3	13	771	266	37	38
	1880	973	98	42	56	4	3	674	159	16	19
40 Rhode Island.....	1900	40	12	3	9	1	3	21	2	1	
	1890	54	9	3	6		1	30	13	1	
	1880	44	8	2	6		1	31	8		1
41 South Carolina.....	1900	117	7	3	4	1	15	83	10		1
	1890	84	6	4	2	1	2	73	7	1	1
	1880	81	4	3	1	3	1	69	8	1	1
42 South Dakota.....	1900	218	16	4	12		1	189	9		3
	1890	174	19	7	12		3	141	10		1
	1880										
43 Tennessee.....	1900	251	16	9	7		6	187	23	10	4
	1890	219	18	8	10		2	169	20	6	4
	1880	198	12	7	5		2	154	16	2	7
44 Texas.....	1900	722	88	22	61		22	579	33	1	4
	1890	497	42	13	29	1	6	367	19	1	1
	1880	230	30	14	16	1	2	231	14		2
45 Utah.....	1900	72	6	2	4	1	7	49	4	2	3
	1890	28	9	4	5		7	6	4		2
	1880	22	5	2	3		4	8	4		1
46 Vermont.....	1900	79	9	2	7		2	58	10	1	4
	1890	70	5	2	3			58	7		
	1880	82	5	2	3			72	3	1	1
47 Virginia.....	1900	204	37	15	22	3	6	126	23	6	3
	1890	135	21	11	10	1	6	134	13	3	2
	1880	194	20	15	5	5	6	124	33	3	3
48 Washington.....	1900	199	15	8	7	1	3	154	21	2	3
	1890	144	18	6	12			118	7		1
	1880	29	4	4				23	2		

¹North Dakota and South Dakota reported as Dakota in 1880.

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PERIOD OF ISSUE AND CHARACTER OF PUBLICATION, BY STATES AND TERRITORIES, 1880 TO 1900—Continued.

CHARACTER OF PUBLICATION.														
News, politics, and family reading.	Religion.	Agriculture, horticulture, dairying and stock raising.	Commerce, finance, insurance, and railroads.	Trade journals.	General literature, including magazines.	Sunday newspapers.	Medicine and surgery.	Law.	Science and mechanics.	Fratern- al organiza- tions.	Educa- tion and history.	Society, art, music, and fashion.	College and school periodicals.	Miscel- laneous.
169	5	1											2	1
105	7	8			1					1	2			
115	4	3									1			
789	45	22	11	36	12	2	18	7	7	7	5	5	8	16
526	58	15	20	30	5	2	11	4	4	5	6	7	8	11
425	28	7	17		5		8	8	2	9	11	2		13
79	2	5								1				2
45	2	3		1										1
17	1	1												
481	14	9	2	9	3			1	1	7		1	3	7
414	3	8	2	5	2	1				2	1	2	3	2
178	2	3	1		2						2			1
34										1				
15														
35									2					
80	2	2		1	1									2
97	5			1	5					1		1		1
74	3	1			5					1	1			1
274	6	1	1	5	1					1	2	1	1	5
218	10	1		1	5	5		2	1	9	2	3	3	3
194	3	1	2		3		1	1	1	4	4			1
36	4	1											1	
82	1					1								
17	1													
1,004	79	25	56	111	51	8	19	9	15	12	16	18	5	49
862	155	23	81	147	98	24	27	12	24	34	26	52	11	51
816	97	29	125		77		38	6	28	16	35	28		116
168	22	4	2	1		2							1	
114	12	3	1				1						2	2
118	12	4	2		2		1			2	1			
138													1	
81	1	1								1	1		1	1
880	55	8	10	29	9	3	5	6	1	7	3	5	9	9
694	101	8	8	14	15	18	9	3	2	16	6	6	11	21
576	57	12	24		2		11	4	4	12	19	7		46
106	2				1		1							
20	1													
137	11	7	3	7	2		1	1		10	3	1	2	3
108	6	2	2	1		1				1	1		1	3
60	5	1	2		2		1				2			1
1,008	164	14	20	45	22	15	11	6	7	12	4	9	6	22
784	175	15	28	50	85	20	23	12	8	35	13	19	15	39
675	75	13	41		18		13	18	3	15	23	5		79
80	3	1		3	1								1	1
83	4		2	2	3	3				3	1		3	
39										3	2			
100	9	3		1									4	
75	7	1				1					1			
68	10									2				
208		3	1	2	1				1	3	4			
162	4	1		1	1						2		3	
198	32	5		3	1		3			3	2		3	1
169	26	2	3	3	1	1	3		1	1	1	1	5	2
147	14	4			5		3			4	9		7	7
648	25	12		9	1	6	1	1			3	2	6	8
382	8	9	1	6	3	5	3			3	1	2	3	11
254	14	2	2		2			1		2	1	1		1
55	6	3						3		2			2	1
17	3	2		2	3									1
15	4	1												2
63	3	4		1	2		1						3	2
61	3			1	3		1				1			
74	3	2			1						2			
153	32	4		3		2	2	1		1	1		5	2
144	17	4	4	1	1		2	1		2	1	2	4	1
135	11	6	3		2		2	2	1	4	16	9		22
152	8	5	9	1	2		1	1		9	3	1	3	4
127	2	3	4	2		1					1		1	3
28	1													8

² Indian Territory and Oklahoma reported as Indian Territory in 1880.

MANUFACTURES.

TABLE 42.—COMPARATIVE STATEMENT OF NEWSPAPERS AND PERIODICALS, NUMBER OF PUBLICATIONS BY

STATES AND TERRITORIES.	Year.	Total number.	PERIOD OF ISSUE.								
			Daily.			Triweekly.	Semi-weekly.	Weekly.	Monthly.	Quarterly.	All other classes.
			Total.	Morning.	Evening.						
49 West Virginia	1900	176	19	6	13	.....	4	141	11	.....	1
	1890	112	9	4	5	.....	1	95	5	.....	2
	1880	109	2	2	.....	1	2	96	6	1	1
50 Wisconsin	1900	595	60	15	45	1	21	463	42	5	3
	1890	456	47	14	33	.....	3	373	20	3	10
	1880	340	21	9	12	3	2	283	20	11
51 Wyoming	1900	42	4	1	3	1	2	32	3
	1890	25	5	2	3	20
	1880	11	3	2	1	8

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PERIOD OF ISSUE AND CHARACTER OF PUBLICATION, BY STATES AND TERRITORIES, 1880 TO 1900—Continued.

CHARACTER OF PUBLICATION.														
News, politics, and family reading.	Religion.	Agriculture, horticulture, dairying, and stock raising.	Commerce, finance, insurance, and railroads.	Trade journals.	General literature, including magazines.	Sunday newspapers.	Medicine and surgery.	Law.	Science and mechanics.	Frater-nal organiza-tions.	Educa-tion and history.	Society, art, music, and fashion.	College and school periodicals.	Miscel-laneous.
165	5	3								2			1	
99	2	1		3	1	2				3			1	
100	3				1					1	2			2
527	17	5	1	5	7	3	2	1		3	7	2	3	12
892	10	16	2	3	8	7			1	3	1	2	3	3
301	7	4	5		2				1	7	8	1		4
40		1			1									
24		1												
11														

} 49
} 50
} 51

MANUFACTURES.

RELATION OF WEEKLY AND DAILY NEWSPAPERS TO POPULATION.

From Table 42 may be derived a comparison of the relation of weekly and daily newspapers to population, by states and territories, as follows:

TABLE 43.—COMPARISON OF THE NUMBER OF INHABITANTS TO EACH WEEKLY AND DAILY PUBLICATION, BY STATES AND TERRITORIES, 1890 AND 1900.

STATES AND TERRITORIES.	POPULATION.		WEEKLY PUBLICATIONS.				DAILY PUBLICATIONS.					
	1900	1890	Number.		Population to each.		Number.		Population to each.			
			1900	1890	1900	1890	1900	1890	1900	1890		
United States.....												
Alabama.....	1,828,697	1,518,017	143	108	12,788	14,009	19	14	96,247	108,078		
Arizona.....	122,981	59,620	32	21	3,842	2,889	10	8	12,293	7,462		
Arkansas.....	1,311,564	1,128,179	199	142	6,591	7,945	20	14	65,578	80,554		
California.....	1,455,058	1,208,130	397	311	3,741	3,885	117	87	12,693	13,837		
Colorado.....	539,700	412,193	179	153	3,015	2,694	42	23	12,850	17,922		
Connecticut.....	908,420	746,258	74	95	12,276	7,855	44	34	20,646	21,949		
Delaware.....	184,785	168,493	21	23	3,737	7,820	6	5	30,739	33,699		
District of Columbia.....	278,713	230,392	31	11	8,981	20,945	8	4	34,840	67,598		
Florida.....	528,542	391,422	76	80	6,955	4,893	11	12	48,049	32,618		
Georgia.....	2,216,331	1,837,353	205	177	10,811	10,381	27	19	82,086	96,703		
Idaho.....	161,772	84,385	59	28	2,742	3,014	5	3	32,354	28,128		
Illinois.....	4,821,550	3,826,351	1,600	858	4,822	4,460	197	121	24,475	31,623		
Indiana.....	2,516,462	2,192,404	561	448	4,483	4,894	156	92	16,131	23,630		
Indian Territory.....	392,060		56	8	7,001		6	1	65,343			
Iowa.....	2,231,853	1,911,896	831	593	2,636	3,224	65	46	34,339	41,563		
Kansas.....	1,470,495	1,427,068	563	621	2,612	2,298	53	43	27,745	33,188		
Kentucky.....	2,147,174	1,858,635	190	165	11,301	11,264	27	25	79,525	74,345		
Louisiana.....	1,881,625	1,118,537	112	99	12,336	11,299	23	12	60,071	93,210		
Maine.....	694,466	661,086	100	88	6,945	7,512	15	15	46,298	44,072		
Maryland.....	1,188,044	1,042,390	127	102	9,355	10,220	18	11	66,002	54,763		
Massachusetts.....	2,805,846	2,238,943	273	336	10,276	6,664	98	56	28,625	39,931		
Michigan.....	2,420,932	2,093,839	522	472	4,633	4,436	70	52	34,585	40,267		
Minnesota.....	1,751,394	1,301,326	493	311	3,553	4,136	44	30	39,804	43,394		
Mississippi.....	1,551,270	1,239,600	156	102	9,944	12,643	13	6	119,328	214,933		
Missouri.....	3,106,695	2,679,184	695	516	4,470	5,192	92	81	38,768	38,076		
Montana.....	243,329	132,159	70	37	3,476	3,572	11	9	22,121	14,634		
Nebraska.....	1,066,300	1,053,910	454	395	2,349	2,681	32	31	33,322	34,153		
Nevada.....	42,385	45,761	21	9	2,016	5,085	9	6	4,704	7,027		
New Hampshire.....	411,538	376,530	67	33	6,143	4,537	14	16	29,399	23,533		
New Jersey.....	1,833,669	1,444,933	225	136	8,372	7,768	40	47	35,442	30,713		
New Mexico.....	195,310	153,593	85	29	5,580	5,298	3	4	65,108	38,393		
New York.....	7,268,894	5,997,853	372	927	3,336	6,470	207	162	35,115	37,024		
North Carolina.....	1,893,810	1,617,947	142	102	13,337	15,862	26	20	72,839	80,897		
North Dakota.....	319,146	182,719	126	74	2,533	2,469	9	7	35,461	26,103		
Ohio.....	4,157,545	3,672,316	692	635	6,003	5,788	170	121	24,456	30,350		
Oklahoma.....	398,331	61,834	96	14	4,149	4,417	9	5	44,259	10,308		
Oregon.....	413,536	313,767	124	100	3,335	3,138	21	16	19,692	19,610		
Pennsylvania.....	6,802,115	5,258,014	833	771	7,137	6,320	196	143	32,154	36,769		
Rhode Island.....	428,556	345,506	21	30	20,407	11,517	12	9	35,713	33,390		
South Carolina.....	1,340,316	1,151,149	83	73	16,148	15,769	7	6	191,474	191,353		
South Dakota.....	401,570	623,803	139	141	2,125	2,332	16	19	25,093	17,306		
Tennessee.....	2,020,616	1,767,518	187	169	10,805	10,459	16	18	126,238	93,195		
Texas.....	3,043,710	2,235,523	579	367	5,265	6,001	33	42	36,731	53,227		
Utah.....	276,749	207,905	49	6	5,648	34,651	6	9	46,125	23,101		
Vermont.....	343,641	332,422	53	58	6,484	5,731	9	5	38,182	66,434		
Virginia.....	1,854,134	1,655,980	126	134	14,716	12,958	37	21	50,113	78,556		
Washington.....	513,103	349,390	154	118	3,364	2,961	15	18	34,540	19,411		
West Virginia.....	953,800	762,794	141	95	6,800	3,020	19	9	50,463	34,755		
Wisconsin.....	2,069,042	1,636,830	463	373	4,469	4,522	60	47	34,434	35,591		
Wyoming.....	92,531	60,705	32	20	2,392	3,035	4	5	23,133	12,141		

Upon rearranging the states and territories in the order of increasing number of inhabitants to each publication in 1900, the following comparisons result:

TABLE 44.—States and territories arranged in order of number of inhabitants to each weekly publication, 1900.

Nevada.....	2,016	New Hampshire.....	6,148
South Dakota.....	2,124	Vermont.....	6,484
Nebraska.....	2,349	Arkansas.....	6,591
North Dakota.....	2,533	West Virginia.....	6,800
Kansas.....	2,612	Maine.....	6,945
Iowa.....	2,686	Florida.....	6,954
Idaho.....	2,742	Indian Territory.....	7,001
Wyoming.....	2,892	Pennsylvania.....	7,187
Colorado.....	3,015	New York.....	8,386
Oregon.....	3,385	New Jersey.....	8,372
Washington.....	3,864	Delaware.....	8,797
Montana.....	3,476	District of Columbia.....	8,991
Minnesota.....	3,558	Maryland.....	9,355
California.....	3,741	Mississippi.....	9,944
Arizona.....	3,842	Massachusetts.....	10,276
Oklahoma.....	4,149	Tennessee.....	10,305
Wisconsin.....	4,469	Georgia.....	10,811
Missouri.....	4,470	Kentucky.....	11,301
Indiana.....	4,486	Connecticut.....	12,276
Michigan.....	4,638	Louisiana.....	12,336
Illinois.....	4,822	Alabama.....	12,788
Texas.....	5,265	North Carolina.....	13,337
New Mexico.....	5,580	Virginia.....	14,716
Utah.....	5,648	South Carolina.....	16,148
Ohio.....	6,008	Rhode Island.....	20,407

TABLE 45.—States and territories arranged in order of number of inhabitants to each daily publication, 1900.

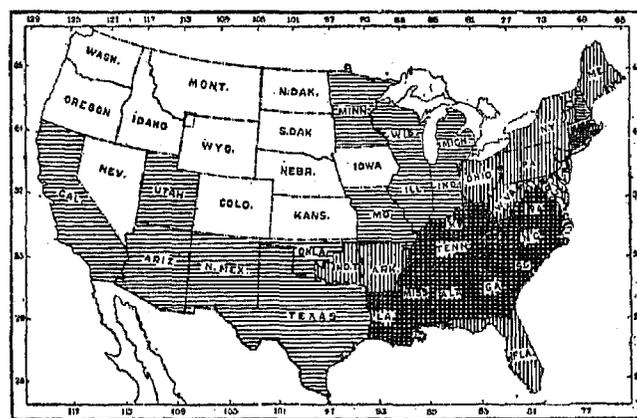
Nevada.....	4,704	New York.....	85,115
Arizona.....	12,293	North Dakota.....	35,461
California.....	12,093	Rhode Island.....	35,713
Colorado.....	12,850	Texas.....	36,731
Indiana.....	16,131	Vermont.....	38,182
Oregon.....	19,692	New Jersey.....	38,442
Connecticut.....	20,646	Minnesota.....	39,804
Montana.....	22,121	Oklahoma.....	44,259
Wyoming.....	23,133	Utah.....	46,125
Ohio.....	24,466	Maine.....	46,298
Illinois.....	24,475	Florida.....	48,049
South Dakota.....	25,098	Virginia.....	50,113
Kansas.....	27,746	West Virginia.....	50,463
Massachusetts.....	28,626	Louisiana.....	60,071
New Hampshire.....	29,399	New Mexico.....	65,103
Delaware.....	30,789	Indian Territory.....	65,343
Pennsylvania.....	32,164	Arkansas.....	65,573
Idaho.....	32,354	Maryland.....	66,002
Nebraska.....	33,822	North Carolina.....	72,330
Missouri.....	33,768	Kentucky.....	79,525
Iowa.....	34,336	Georgia.....	82,086
Wisconsin.....	34,484	Alabama.....	96,247
Washington.....	34,540	Mississippi.....	119,323
Michigan.....	34,585	Tennessee.....	126,283
District of Columbia.....	34,840	South Carolina.....	191,474

From the rearrangement of states and territories given in Tables 44 and 45, it will be observed that in 1900 the proportion of inhabitants to each weekly publication was far more uniform than that to each daily. The range of number of inhabitants to each weekly publication is shown to be between 2,016, for Nevada, and 20,407, for Rhode Island.

On dividing the entire list of states and territories, arranged by rank according to the number of inhabitants to each weekly publication, into four groups, it appears that the first group is composed of the states and territories having from 2,000 to 3,500 inhabitants to each weekly publication; the second, from 3,500 to 6,000; the third, from 6,000 to 9,500; and the fourth, from 9,500 upward. The geographic relations of the states and territories composing these groups are clearly illustrated in cartogram 2, in which the United States is divided into irregular but practically contiguous sections. The smallest numbers of inhabitants to each weekly publication are shown in the middle West and Northwest. The next class forms an irregular section beginning with California, and extending, with practi-

cally no break, through Texas, Oklahoma, and Missouri to Lake Michigan and Minnesota. It is clear that the inhabitants of the states shown in this class depend less

CARTOGRAM 2.—Number of inhabitants to each weekly publication, by states and territories, 1900.



2000 to 3500 6000 to 9500
 3500 to 6000 9500 AND OVER.

upon weekly publications than do those of the preceding class. The third class appears principally in the group of populous states beginning with Ohio and extending northeast to Maine. The fourth class is composed of Massachusetts, Rhode Island, Connecticut, Kentucky, Tennessee, and all the Southern states except Florida.

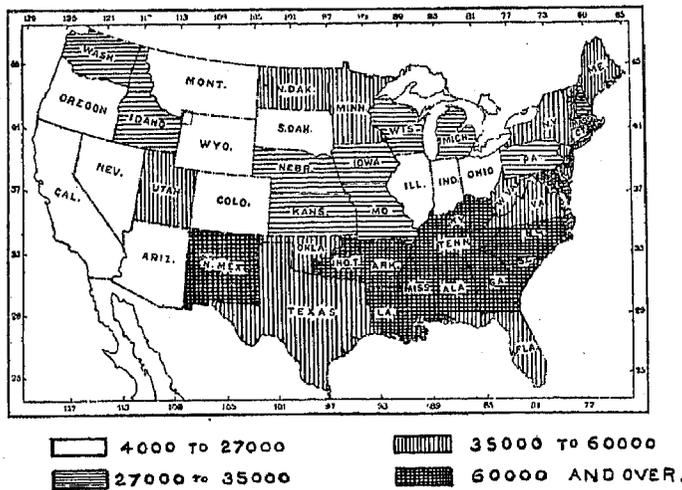
It is evident that the high ratio of inhabitants to weekly periodicals indicates either a low percentage of publications, in general, to number of inhabitants, or else the substitution, for weekly newspapers, of publications issued more frequently. In the case of the three New England states above mentioned it appears, by reference, in the comparative table, to the column relating to the number of inhabitants to each daily publication, that Massachusetts and Connecticut are shown in the two classes having the largest proportion of daily publications to inhabitants. In the case of Rhode Island, 81.2 per cent of the population resides in cities of over 8,000 inhabitants. Considering this exceptional rate and the small area, there is little probability of success in the publication of weekly newspapers in Rhode Island. The proportion of dailies to population is higher than that of weeklies, but proximity to New York and to the large cities of Massachusetts and Connecticut, has led to considerable dependence on those centers for daily newspapers, thus producing a comparatively low rank for dailies also.

By referring to page 68 it will be observed that the sections which are the most liberal patrons of the "patent insides" method of publishing weekly newspapers are the Eastern and Western North Central groups of states. Of the "patent insides" used in the United States, over 60 per cent were sent to these states. It will be noted by cartogram 2 that this section is the chief stronghold of the weekly.

When the number of inhabitants to each daily newspaper is made the basis of classification, the proportion varies from 4,704, for Nevada, to 191,474, for South Carolina. In the populous states the proportion of population to each daily publication varies from 20,000 to 40,000. On dividing the states and territories, as in the case of weekly publications, into 4 groups or classes, it appears that the proportion of population to each daily newspaper ranges, in the first class, from 4,000 to 27,000; in the second, from 27,000 to 35,000; in the third, from 35,000 to 60,000; and in the fourth, from 60,000 upward.

The conditions which surround the publication of daily newspapers are so complex—depending largely upon locality, character of the population, ambition of the community, proximity to large cities, and especially upon ability to be an active producer of circulation rather than a receiver of it from elsewhere—that it is not surprising to find that the comparison is less significant than that for weeklies. The proportions of inhabitants to daily publications are shown geographically in cartogram 3.

CARTOGRAM 3.—Number of inhabitants to each daily publication, by states and territories, 1900.



In general, the far Western states, which showed high averages in the proportion of population to weekly publications, showed a similar proportion for daily publications. Obviously, this is due to the ambition and energy of isolated communities, which by reason of distance must produce their own daily publication or go without one.

The region in which, with respect to population, both daily and weekly papers are least numerous, is in general the group of states east of the Mississippi and south of the Ohio and Potomac, where there is less than 1 daily to every 60,000 people, and less than 1 weekly to every 9,500. The region in which they are most numerous is in general the states of the Western division, in most of which there is more than 1 daily to every 35,000 people, and more than 1 weekly to every 3,500. In other words, publications of this character are most numerous in the western and northwestern

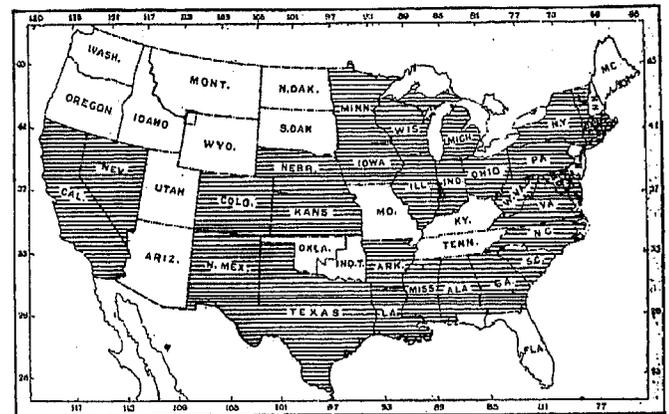
parts of the country, and least numerous in the southeastern part.

The fact that the New England states with largest population are in the highest or next to the highest class in number of inhabitants to each daily newspaper, but rank low in number of inhabitants to each weekly publication suggests that in that densely peopled region, with highly developed facilities for rapid distribution to a numerous public, the daily has in some measure supplanted the weekly.

During the last decade the number of inhabitants to each weekly publication increased in 26 out of 49 states and territories, from which fact it appears that in more than half the states and territories the increase in the number of weekly publications failed to keep pace with the increase in population.

In the case of the daily newspaper the changes wrought during the decade from 1890 to 1900 are more striking. Out of 49 states and territories it appears that in 31 the proportion of inhabitants to each daily publication decreased, while in the other 18 the increase in number of publications failed to keep pace with the increase in population. The marked advance of the daily in proportion to population, shown in a majority of the states, is represented in cartogram 4.

CARTOGRAM 4.—States and territories in which there was a gain in number of daily newspapers in proportion to population.



It will be observed that those states and territories which showed a gain in the number of inhabitants to each daily newspaper were, for the most part, those containing large cities, which acted as purveyors of news to adjacent states or territories. Massachusetts, for example, supplied portions of New England; New York and Pennsylvania supplied New Jersey; Ohio supplied Kentucky; the large cities of Minnesota formed centers of distribution for North Dakota and South Dakota; and on the Pacific coast California was the center for publications of the daily class. All the states bordering upon the Great Lakes, and 15 out of 21 seaboard states, showed an increase in the proportionate number of daily newspapers to inhabitants. In this group are found all but 9 of the states and territories showing an increase in the number of daily publications to inhabitants. In general, the states in which the daily

lost ground during the decade ending in 1900 were those in the far Northwest, and in that section were recorded the most marked gains made by the weekly.

DISTRIBUTION, BY GEOGRAPHIC DIVISIONS, OF CIRCULATION, NUMBER OF ESTABLISHMENTS, CAPITAL, AND VALUE OF PRODUCTS.

The consideration of the geographic distribution of circulation, number of establishments, capital, and value of products which follows, employs the following grouping of the states and territories by minor geographic divisions:

NORTH ATLANTIC DIVISION.

New England.—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

Southern North Atlantic.—New York, New Jersey, Pennsylvania.

SOUTH ATLANTIC DIVISION.

Northern South Atlantic.—Delaware, Maryland, District of Columbia, Virginia, West Virginia.

Southern South Atlantic.—North Carolina, South Carolina, Georgia, Florida.

NORTH CENTRAL DIVISION.

Eastern North Central.—Ohio, Indiana, Illinois, Michigan, Wisconsin.

Western North Central.—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

SOUTH CENTRAL DIVISION.

Eastern South Central.—Kentucky, Tennessee, Alabama, Mississippi.

Western South Central.—Louisiana, Arkansas, Indian Territory, Oklahoma, Texas.

WESTERN DIVISION.

Rocky Mountain.—Montana, Idaho, Wyoming, Colorado, New Mexico.

Basin and Plateau.—Arizona, Utah, Nevada.

Pacific.—Washington, Oregon, California.

Circulation.—The preponderance of certain states in circulation, before noted, is again indicated upon examining aggregate circulation by geographic divisions.

TABLE 46.—Aggregate circulation per issue of all classes of publications, by main geographic divisions, with per cent which circulation in each division forms of total, 1890 and 1900.

DIVISION.	AGGREGATE CIRCULATION FOR ALL CLASSES.		PER CENT OF TOTAL.		Per cent of increase, 1890 to 1900.
	1900	1890	1900	1890	
United States	114,299,834	69,138,934	100.0	100.0	65.3
North Atlantic.....	65,577,489	37,208,018	57.4	53.9	76.2
South Atlantic.....	3,551,594	2,385,414	3.1	3.5	48.9
North Central.....	35,747,654	23,742,919	31.3	34.3	50.6
South Central.....	8,417,164	3,765,571	5.6	5.4	70.4
Western.....	3,006,483	2,087,017	2.6	2.9	47.5

The North Atlantic and North Central divisions combined possessed 88.2 per cent of the aggregate circulation per issue in 1890, and 88.7 per cent in 1900. The North Atlantic division advanced 3.5 per cent, while the North Central declined 3 per cent, during the decade.

In Table 47 the circulation per issue of all classes, and of dailies, weeklies, and monthlies, in 1890 and 1900, with the per cent of increase, is shown by minor geographic divisions, together with the per cent of the total circulation for the United States, in 1890 and in 1900, reported for each division.

TABLE 47.—Aggregate circulation per issue of all classes, by minor geographic divisions, with per cent which circulation for each division forms of total, 1890 and 1900.

DIVISION.	Per cent which population of each division forms of total, 1900.	AGGREGATE CIRCULATION OF ALL CLASSES.			PER CENT WHICH CIRCULATION IN EACH DIVISION FORMS OF TOTAL.	
		1900	1890	Per cent of increase.	1900	1890
United States ...	100.0	114,299,834	69,138,934	65.3	100.0	100.0
New England.....	7.4	18,661,873	8,217,762	66.2	12.0	11.9
Southern North Atlantic.....	20.3	51,915,566	28,990,251	79.1	45.4	41.9
Northern South Atlantic.....	5.9	2,439,895	1,245,185	95.9	2.1	1.8
Southern South Atlantic.....	7.9	1,111,699	1,140,229	12.5	1.0	1.6
Eastern North Central.....	21.0	23,806,433	17,395,722	86.9	20.8	25.2
Western North Central.....	13.6	11,941,221	6,347,197	88.1	10.4	9.2
Eastern South Central.....	9.9	4,629,210	2,532,807	82.8	4.0	3.7
Western South Central.....	8.6	1,787,954	1,282,764	45.0	1.6	1.8
Rocky Mountain.....	1.6	762,263	367,446	107.4	0.7	0.5
Basin and Plateau.....	0.6	175,486	104,839	67.4	0.2	0.1
Pacific.....	3.2	2,087,734	1,664,732	82.1	1.8	2.3

¹ Decrease.

A.—DAILIES.

DIVISION.	Per cent which population of each division forms of total, 1900.	AGGREGATE DAILY CIRCULATION.			PER CENT WHICH CIRCULATION IN EACH DIVISION FORMS OF TOTAL.	
		1900	1890	Per cent of increase.	1900	1890
United States ...	100.0	15,102,156	8,387,188	80.1	100.0	100.0
New England.....	7.4	1,587,435	721,131	120.1	10.5	8.6
Southern North Atlantic.....	20.3	6,037,626	3,621,861	71.5	40.0	42.0
Northern South Atlantic.....	5.9	513,624	289,892	78.9	3.4	3.5
Southern South Atlantic.....	7.9	194,249	127,386	52.5	1.3	1.5
Eastern North Central.....	21.0	3,603,936	1,760,313	104.7	23.9	21.0
Western North Central.....	13.6	1,590,593	909,088	75.0	10.5	10.8
Eastern South Central.....	9.9	395,385	257,695	58.5	2.6	3.1
Western South Central.....	8.6	810,755	185,590	67.4	2.1	2.2
Rocky Mountain.....	1.6	211,400	98,774	114.0	1.4	1.2
Basin and Plateau.....	0.6	40,845	34,435	18.6	0.3	0.4
Pacific.....	3.2	611,357	481,120	27.1	4.0	5.7

TABLE 47.—Aggregate circulation per issue of all classes, by minor geographic divisions, with per cent which circulation for each division forms of total, 1890 and 1900—Continued.

B.—WEEKLIES.

DIVISION.	Per cent which population of each division forms of total, 1900.	AGGREGATE WEEKLY CIRCULATION.			PER CENT WHICH CIRCULATION IN EACH DIVISION FORMS OF TOTAL.	
		1900	1890	Per cent of increase.	1900	1890
United States ...	100.0	39,852,052	28,954,515	37.6	100.0	100.0
New England.....	7.4	2,746,803	2,576,922	6.6	6.9	8.9
Southern North Atlantic.....	20.3	16,666,074	9,762,282	70.7	41.8	33.7
Northern South Atlantic.....	5.9	1,125,941	803,818	40.1	2.8	2.8
Southern South Atlantic.....	7.9	706,017	767,091	18.0	1.8	2.6
Eastern North Central.....	21.0	8,660,185	7,634,925	13.4	21.7	26.4
Western North Central.....	13.6	5,438,518	3,875,605	40.3	13.6	13.4
Eastern South Central.....	9.9	1,859,468	1,466,273	26.8	4.7	5.1
Western South Central.....	8.6	1,203,723	909,521	32.3	3.0	3.1
Rocky Mountain.....	1.6	429,736	229,522	87.2	1.1	0.8
Basin and Plateau.....	0.6	68,945	31,129	121.5	0.2	0.1
Pacific.....	3.2	946,647	897,427	5.5	2.4	3.1

¹ Decrease.

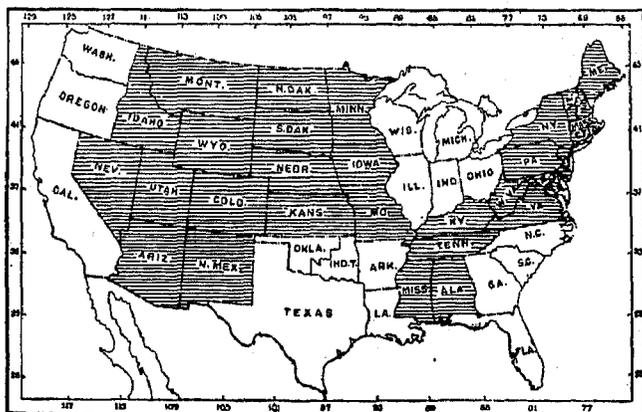
C.—MONTHLIES.

DIVISION.	Per cent which population of each division forms of total, 1900.	AGGREGATE MONTHLY CIRCULATION.			PER CENT WHICH CIRCULATION IN EACH DIVISION FORMS OF TOTAL.	
		1900	1890	Per cent of increase.	1900	1890
United States ...	100.0	39,519,877	19,624,038	101.3	100.0	100.0
New England.....	7.4	8,466,732	3,614,681	134.2	21.4	18.4
Southern North Atlantic.....	20.3	20,202,791	10,790,513	87.2	51.1	55.0
Northern South Atlantic.....	5.9	556,740	108,865	436.0	1.3	0.5
Southern South Atlantic.....	7.9	99,575	189,877	147.6	0.3	1.0
Eastern North Central.....	21.0	6,882,698	3,385,130	88.6	16.2	17.2
Western North Central.....	13.6	2,751,055	1,089,516	152.5	7.0	5.6
Eastern South Central.....	9.9	546,010	142,749	282.5	1.4	0.7
Western South Central.....	8.6	100,100	105,233	14.9	0.8	0.5
Rocky Mountain.....	1.6	88,422	31,100	184.4	0.2	0.2
Basin and Plateau.....	0.6	14,506	12,000	20.9	(²)	0.1
Pacific.....	3.2	311,248	159,375	95.3	0.8	0.8

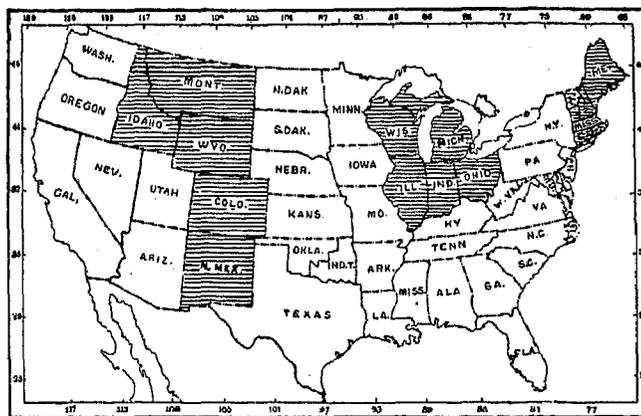
¹ Decrease.

² Less than one-tenth of 1 per cent.

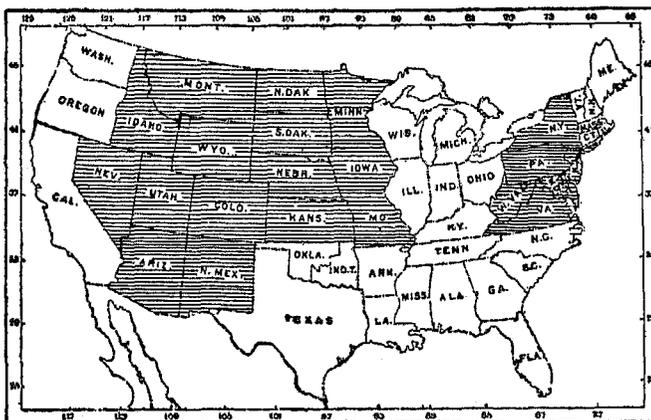
CARTOGRAM 5.—Minor geographic divisions in which the rate of increase in circulation per issue of all classes was more rapid than the rate of increase for the United States, 1900.



CARTOGRAM 6.—Minor geographic divisions in which the rate of increase in circulation per issue of dailies was more rapid than the rate of increase for the United States, 1900.



CARTOGRAM 7.—Minor geographic divisions in which the rate of increase in circulation per issue of weeklies was more rapid than the rate of increase for the United States, 1900.



CARTOGRAM 8.—Minor geographic divisions in which the rate of increase in circulation per issue of monthlies was more rapid than the rate of increase for the United States, 1900.

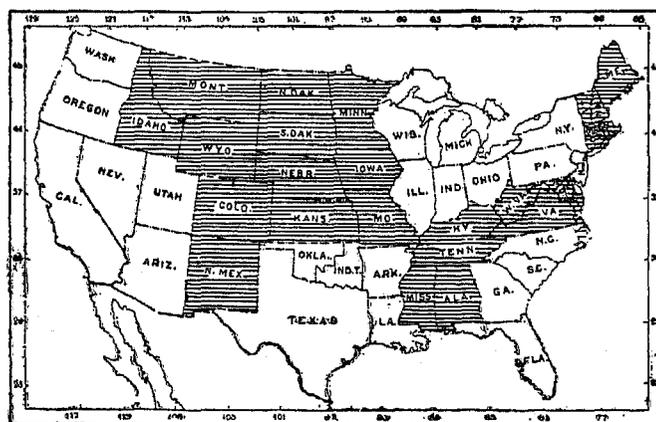


Table 47, in connection with cartograms 5, 6, 7, and 8, shows that in circulation of all classes there was a large increase in each division except the Southern South Atlantic. The most striking advance in the proportion of the total circulation reported was in the Southern North Atlantic group—New York, Pennsylvania,

and New Jersey. The Western North Central group—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas—also showed a decided advance. In daily circulation all divisions showed a large increase, though but three showed a greater proportion of the total circulation of daily newspapers for the United States than in 1890; of these the New England states and the Eastern North Central group—Ohio, Indiana, Illinois, Michigan, and Wisconsin—showed the most decided advance. In the circulation of weekly newspapers and periodicals the Southern South Atlantic group showed a slight decrease, while the remaining groups all showed a moderate increase. The most striking advance in the proportion of the total circulation of weekly publications reported was in the Southern North Atlantic group. In monthly circulation a decrease was shown in the Southern South Atlantic and Western South Central groups. In the other divisions a large increase was shown. The greatest advance in the proportion of the total circulation of monthly publications reported was shown for New England and the Western North Central group.

In Table 48 is presented a comparison of the aggregate number of copies issued during the census years 1890 and 1900, by main geographic divisions, with the per cent which the number of copies for each

division forms of the total. The proportions in 1900 agree substantially with those for the circulation per issue of all publications for the same geographic divisions, the greatest difference being 6.6 per cent in the North Atlantic division.

TABLE 48.—Aggregate number of copies issued during the census year, by main geographic divisions, with per cent which number for each division forms of total, 1890 and 1900.

DIVISION.	AGGREGATE NUMBER OF COPIES ISSUED DURING THE CENSUS YEAR.		PER CENT WHICH NUMBER OF COPIES FOR EACH DIVISION FORMS OF TOTAL.		Per cent of increase, 1890 to 1900.
	1900	1890	1900	1890	
United States	8,168,148,749	4,681,113,580	100.0	100.0	74.5
North Atlantic.....	4,150,978,811	2,805,650,459	50.8	49.3	80.0
South Atlantic.....	361,278,033	221,901,227	4.4	4.7	62.8
North Central.....	2,810,281,262	1,604,549,714	34.4	34.3	75.1
South Central.....	449,933,789	281,679,126	5.5	6.0	59.7
Western.....	895,676,854	267,833,004	4.9	5.7	48.0

Table 49 is of interest principally as showing the relation between the distribution of aggregate circulation per issue and that of the aggregate number of copies issued during the census year.

MANUFACTURES.

TABLE 49.—CIRCULATION OF NEWSPAPERS AND PERIODICALS CLASSIFIED

STATES AND TERRITORIES.	Total number of publications.	AGGREGATE CIRCULATION PER ISSUE.								
		All classes.	Daily.		Triweekly.	Semi-weekly.	Weekly.	Monthly.	Quarterly.	All other classes.
			Including Sunday.	Except Sunday.						
1 United States.....	18,226	114,209,334	8,645,536	6,456,620	228,610	2,832,868	39,852,052	39,519,897	11,217,422	5,546,829
2 Alabama.....	175	230,079	30,450	18,195	700	4,340	155,244	6,800	.....	14,350
3 Arizona.....	43	34,054	7,856	3,600	.....	.....	22,392	206	.....	.....
4 Arkansas.....	236	262,903	34,340	3,800	1,000	11,285	187,578	18,900	5,000	1,000
5 California.....	622	1,448,656	367,280	108,316	480	23,342	618,146	194,792	112,500	23,800
6 Colorado.....	248	521,213	125,477	31,539	500	2,000	285,425	72,947	1,250	2,075
7 Connecticut.....	155	457,622	39,400	169,415	.....	29,325	155,507	44,375	1,800	17,800
8 Delaware.....	30	85,900	34,277	.....	.....	1,700	43,778	6,150	.....	.....
9 District of Columbia.....	69	820,835	69,606	31,242	.....	1,000	304,037	354,050	2,760	58,140
10 Florida.....	97	112,302	27,907	.....	1,000	5,000	66,295	12,100	.....	.....
11 Georgia.....	265	549,403	55,841	47,031	.....	33,941	331,905	67,425	1,000	12,350
12 Idaho.....	72	48,795	3,000	2,100	.....	4,645	36,300	1,500	.....	1,250
13 Illinois.....	1,543	10,429,363	500,673	943,414	5,338	170,720	3,366,983	3,072,932	1,683,434	180,874
14 Indiana.....	341	2,103,305	96,599	243,805	.....	77,135	853,424	715,292	77,700	34,800
15 Indian Territory.....	64	50,141	2,100	1,250	.....	.....	45,891	900	.....	.....
16 Iowa.....	1,045	1,884,875	125,473	92,116	19,224	168,672	1,105,666	301,205	27,529	44,990
17 Kansas.....	684	1,144,320	36,619	63,729	800	20,040	653,507	321,050	21,800	21,775
18 Kentucky.....	232	1,099,172	77,124	37,500	1,800	125,575	425,323	262,450	6,500	112,900
19 Louisiana.....	160	300,072	38,900	18,090	2,400	32,693	137,434	14,750	.....	5,800
20 Maine.....	177	6,434,065	14,298	45,540	.....	17,723	220,759	6,120,490	7,050	8,200
21 Maryland.....	166	679,367	39,172	203,330	.....	17,360	316,505	93,250	3,000	2,200
22 Massachusetts.....	486	6,199,127	581,097	549,723	.....	32,350	2,066,369	2,257,142	363,006	349,350
23 Michigan.....	693	2,374,403	224,798	146,050	7,975	192,098	752,082	984,025	50,400	17,025
24 Minnesota.....	622	1,949,630	144,119	156,147	5,000	95,660	903,478	452,329	4,550	133,347
25 Mississippi.....	178	168,942	5,586	10,762	502	1,030	142,702	6,610	.....	1,700
26 Missouri.....	940	5,405,802	713,004	97,488	200	329,153	1,362,856	1,378,536	395,050	219,465
27 Montana.....	89	127,148	28,922	18,242	.....	9,330	62,109	6,495	7,000	.....
28 Nebraska.....	533	1,095,533	92,615	29,799	1,200	63,003	650,349	255,935	2,950	9,632
29 Nevada.....	35	18,153	.....	5,226	100	1,750	10,517	500	.....	.....
30 New Hampshire.....	88	211,310	42,419	5,250	.....	.....	153,900	5,250	.....	.....
31 New Jersey.....	293	3,009,104	6,545	216,688	.....	1,900	367,021	28,950	136,500	2,251,500
32 New Mexico.....	42	32,420	.....	3,820	.....	.....	25,000	500	800	2,300
33 New York.....	1,477	37,623,095	3,006,426	890,541	146,175	430,867	12,607,099	16,927,062	2,276,625	1,311,300
34 North Carolina.....	200	237,916	18,150	26,470	.....	24,490	197,706	12,050	700	8,360
35 North Dakota.....	139	133,890	10,600	7,421	.....	7,100	106,219	7,550	.....	.....
36 Ohio.....	1,039	7,467,353	494,512	730,203	13,300	211,161	2,411,172	1,420,501	1,795,609	390,900
37 Oklahoma.....	110	120,077	14,674	.....	.....	800	99,953	4,150	.....	500
38 Oregon.....	183	311,950	42,433	3,753	.....	14,310	166,511	75,033	.....	4,400
39 Pennsylvania.....	1,365	11,230,367	987,931	929,495	8,206	232,142	3,691,954	3,246,779	1,991,319	142,041
40 Rhode Island.....	40	170,594	72,200	46,644	100	6,754	37,671	4,225	3,000	.....
41 South Carolina.....	117	161,933	13,600	5,250	200	23,327	110,111	8,000	.....	1,500
42 South Dakota.....	213	232,166	6,000	10,463	.....	1,600	151,488	34,400	.....	28,265
43 Tennessee.....	251	3,131,017	53,163	107,550	.....	7,700	1,136,199	270,150	1,540,900	10,350
44 Texas.....	722	1,054,761	96,939	50,613	.....	101,392	732,367	61,400	1,250	10,250
45 Utah.....	72	123,279	15,533	3,625	2,000	30,630	36,036	13,800	150	16,500
46 Vermont.....	79	* 133,646	.....	26,699	.....	3,400	107,697	35,250	300	10,400
47 Virginia.....	204	627,280	67,995	24,375	3,100	13,030	291,690	96,390	120,500	9,700
48 Washington.....	199	307,123	35,250	49,320	500	7,350	161,990	41,413	5,300	5,500
49 West Virginia.....	176	226,013	26,200	17,377	.....	4,900	169,336	6,400	.....	1,200
50 Wisconsin.....	595	1,423,499	164,592	109,290	1,000	161,995	771,574	139,943	69,600	13,500
51 Wyoming.....	42	32,637	1,200	2,100	500	985	20,902	7,000	.....	.....

PRINTING AND PUBLISHING.

1081

ACCORDING TO PERIOD OF ISSUE, BY STATES AND TERRITORIES: 1900.

AGGREGATE NUMBER OF COPIES ISSUED DURING THE CENSUS YEAR

All classes.	Daily.		Triweekly.	Semtweekly.	Weekly.	Monthly.	Quarterly.	All other classes.	
	Including Sunday.	Except Sunday.							
8,168,148,749	8,155,620,640	2,020,922,060	85,663,160	294,618,272	2,072,806,704	474,238,764	44,869,688	69,909,461	1
25,758,633	11,114,250	5,695,085	109,200	451,360	8,072,688	81,600		234,500	2
5,161,096	2,807,440	1,126,800			1,164,384	2,472			3
25,077,996	12,534,100	1,189,400	156,000	1,173,640	9,754,056	226,800	20,000	24,000	4
205,739,752	134,057,200	33,902,908	74,880	2,427,568	32,143,592	2,337,504	450,000	396,100	5
71,702,076	45,799,105	9,871,707	78,000	208,000	14,842,100	875,364	5,000	22,800	6
79,306,409	14,381,000	58,026,895		3,049,800	8,086,864	532,500	7,200	282,650	7
15,037,901	12,511,105			176,800	2,276,196	78,800			8
56,720,890	25,406,190	9,778,746		104,000	15,809,924	4,248,600	11,040	1,362,360	9
14,454,595	10,186,055		156,000	520,000	3,447,340	145,200			10
57,001,092	20,881,965	14,720,703		3,529,864	17,259,060	809,100	4,000	296,400	11
4,170,980	1,095,000	657,800		483,080	1,837,600	18,000		30,000	12
746,890,247	182,745,645	296,853,582	832,728	17,754,880	201,033,116	36,875,184	6,733,736	4,001,376	13
175,432,092	85,258,635	77,875,965		8,027,240	44,638,048	8,533,504	810,800	737,900	14
3,554,882	766,500	391,250		2,886,382	10,800				15
158,895,153	45,797,645	28,832,308	2,998,944	17,541,888	57,494,632	3,614,460	110,116	2,505,160	16
75,387,961	18,365,935	21,512,177	124,800	2,084,160	33,932,364	3,852,600	87,200	378,725	17
96,802,153	28,150,260	27,337,500	280,800	13,059,800	22,116,796	3,149,400	26,000	2,691,600	18
49,348,430	32,448,500	5,662,170	374,400	3,400,592	7,146,568	177,000		139,200	19
106,420,850	5,218,770	14,254,020		1,843,712	11,479,468	73,445,880	28,200	150,800	20
98,959,220	14,297,780	65,222,940		1,805,440	16,458,260	1,119,000	12,000	43,800	21
581,739,780	212,100,405	172,063,299		3,364,400	107,451,188	27,085,704	1,452,384	8,222,400	22
200,457,376	82,051,270	45,713,650	1,244,100	19,978,192	39,105,664	11,808,300	201,600	854,600	23
169,257,418	52,603,435	48,874,011	780,000	9,948,640	47,240,856	5,427,948	18,200	4,364,328	24
13,398,752	2,038,890	3,368,506	78,312	112,320	7,420,504	79,320		300,900	25
446,832,700	260,246,460	30,513,744	81,200	84,281,912	96,868,512	16,543,032	3,580,200	4,817,700	26
19,012,404	10,556,530	4,144,746		975,520	3,229,668	77,940	28,000		27
85,959,730	33,804,475	9,327,087	187,200	5,512,332	33,818,148	3,071,220	11,800	226,968	28
2,395,582		1,635,788	24,960	182,000	546,884	6,000			29
22,421,947		13,277,147	819,000		8,262,800	63,000			30
103,924,361	2,388,925	67,823,844		197,000	19,035,092	347,400	546,000	13,536,000	31
3,020,460		1,195,660			1,300,000	6,000	3,200	515,600	32
2,324,952,933	1,097,345,490	278,739,333	22,803,300	47,930,168	655,569,148	203,124,744	9,106,500	10,334,300	33
28,081,732	6,624,750	8,285,110		2,546,960	10,280,712	144,600	2,800	196,800	34
12,544,161	3,889,000	2,322,773		788,400	5,528,388	90,600			35
591,526,165	180,496,880	223,553,539	2,074,800	21,960,744	125,380,944	17,046,012	7,182,436	8,330,800	36
10,698,566	5,356,010			83,200	5,197,556	49,800		12,000	37
29,434,167	15,488,045	2,741,254		1,540,240	8,658,572	900,456		105,600	38
923,178,870	360,594,815	290,931,935	1,280,136	29,342,768	191,981,608	38,961,348	7,967,276	2,118,984	39
43,692,130	26,353,000	14,599,572	15,600	702,416	1,958,892	50,700	12,000		40
15,355,730	4,964,000	1,643,250	31,200	2,426,008	5,725,772	96,000		469,500	41
14,597,255	2,190,000	3,274,919		166,400	7,374,776	412,800		673,360	42
124,423,368	21,231,320	33,663,150		800,800	59,082,348	3,241,800	6,163,600	240,350	43
100,811,006	35,400,985	15,841,869		10,544,768	33,109,084	736,800	5,000	172,500	44
14,304,587	5,671,370	2,699,625	312,000	3,185,520	1,873,372	165,600	600	396,000	45
15,281,431		8,356,787		873,600	5,595,044	423,000	1,200	31,800	46
51,213,030	24,818,175	7,629,375	433,600	1,355,120	15,167,880	1,162,680	482,000	114,200	47
33,239,106	12,866,250	15,437,160	78,000	316,400	8,423,480	497,016	21,200	99,600	48
24,453,873	9,563,000	5,439,001		509,600	8,836,672	76,800		23,800	49
132,510,954	38,176,030	34,207,770	156,000	16,847,480	40,121,848	2,279,376	278,400	444,000	50
2,446,644	435,000	657,300	78,000	102,440	1,086,904	84,000			51

Number of establishments.—It has already appeared that the circulation of newspapers and periodicals is largely centralized in certain states. Table 50 indicates that if the industry be measured by number of establishments, rather than by output, no such centralization exists.

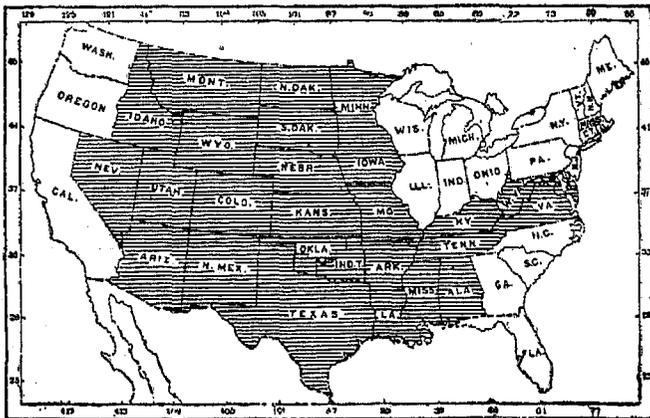
TABLE 50.—Number of establishments, by minor geographic divisions, with per cent which number in each forms of total, 1890 and 1900.

DIVISION.	NUMBER OF ESTABLISHMENTS.		PER CENT WHICH NUMBER IN EACH DIVISION FORMS OF TOTAL.		Per cent of increase, 1890 to 1900.
	1900	1890	1900	1890	
United States	15,305	12,302	100.0	100.0	23.8
New England.....	800	815	5.2	6.6	11.8
Southern North Atlantic.....	2,509	2,479	16.4	20.1	1.2
Northern South Atlantic.....	536	412	3.5	3.3	30.1
Southern South Atlantic.....	582	468	3.8	3.9	20.5
Eastern North Central.....	3,820	3,110	25.0	25.2	22.8
Western North Central.....	3,700	2,846	24.2	23.0	30.0
Eastern South Central.....	786	597	5.1	4.8	31.7
Western South Central.....	1,161	674	7.6	5.5	27.8
Rocky Mountain.....	429	281	2.8	2.3	52.7
Basin and Plateau.....	123	63	0.8	0.4	132.1
Pacific.....	359	848	5.6	6.9	1.3

1 Decrease.

From Table 50 it appears that of the total number of establishments in 1900, New England—already shown to be an important factor in the publishing industry—possessed only 5.2 per cent, and that the Southern North Atlantic states—a group immensely influential in the production of periodicals—showed only 16.4 per cent. Thus, these two groups combined represented but 21.6 per cent of the total number of establishments. The changes in relative importance from 1890 to 1900 were not marked; 5 divisions showed declines, and in but 2 was the advance sufficiently great to be worthy of notice. Cartogram 9 presents those

CARTOGRAM 9.—Minor geographic divisions in which the rate of increase in the number of establishments was greater than the rate of increase for the United States, 1900.



minor geographic divisions showing a per cent of increase in number of establishments exceeding the per cent of increase for the United States. From this cartogram it appears that in all of the states bordering on the Atlantic and Pacific oceans, except Delaware, Maryland, and Virginia, and in all of the states bordering on

the Great Lakes, except Minnesota, the per cent of increase in number of establishments is less than that for the United States. The states showing these relatively low percentages of increase contain most of the large cities, and are the ones in which consolidation of establishments is most likely to occur.

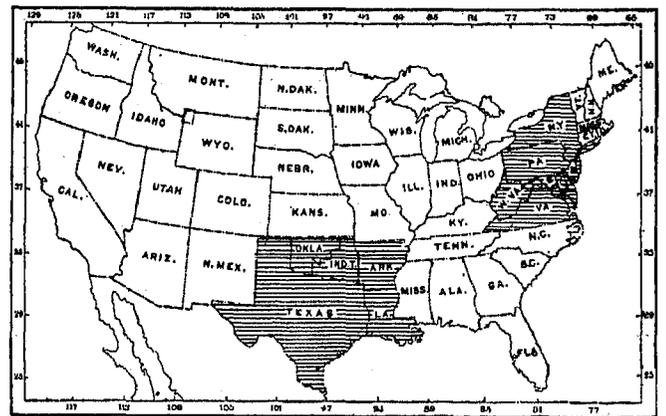
Capital.—The distribution of capital by minor geographic divisions is shown, in Table 51 and by reference to cartogram 10, to vary in a marked degree from the distribution of the number of establishments.

TABLE 51.—Capital, by minor geographic divisions, with per cent which capital in each forms of total, 1890 and 1900.

DIVISION.	CAPITAL.		PER CENT WHICH CAPITAL IN EACH DIVISION FORMS OF TOTAL CAPITAL.		Per cent of increase, 1890 to 1900.
	1900	1890	1900	1890	
United States	\$192,443,708	\$126,269,885	100.0	100.0	52.4
New England.....	16,800,780	11,827,874	8.7	9.4	42.0
Southern North Atlantic.....	83,648,876	48,159,589	43.5	38.1	78.7
Northern South Atlantic.....	7,159,175	9,358,169	3.7	7.7	113.2
Southern South Atlantic.....	3,332,721	2,580,365	1.7	2.0	29.2
Eastern North Central.....	36,885,821	26,041,005	19.2	20.6	41.6
Western North Central.....	22,957,056	17,301,266	11.9	13.7	32.7
Eastern South Central.....	6,332,991	5,079,293	3.3	4.0	24.9
Western South Central.....	4,764,265	3,056,304	2.5	2.4	55.9
Rocky Mountain.....	3,055,318	2,129,833	1.6	1.7	48.5
Basin and Plateau.....	958,226	710,986	0.5	0.6	34.8
Pacific.....	6,548,979	6,034,201	3.4	4.8	8.5

In 8 out of the 11 divisions the per cent which the capital invested formed of the total capital was less in

CARTOGRAM 10.—Minor geographic divisions in which the rate of increase in capital was more rapid than the rate of increase for the United States, 1900.



1900 than in 1890. The only marked advance was made in the Southern North Atlantic group—New York, Pennsylvania, and New Jersey—which increased its lead at the expense of nearly all of the other divisions. In other words, during the decade just ended, the centralization of this industry, as measured by capital invested therein, has made most rapid progress in the Southern North Atlantic group, and this in spite of the fact that in each division the absolute increase in capital was large. The very high per cent of increase for the United States was of course due, to some extent, to the enormous advance shown in the group

mentioned. The per cent of increase for the remainder of the United States was only 39.3 per cent.

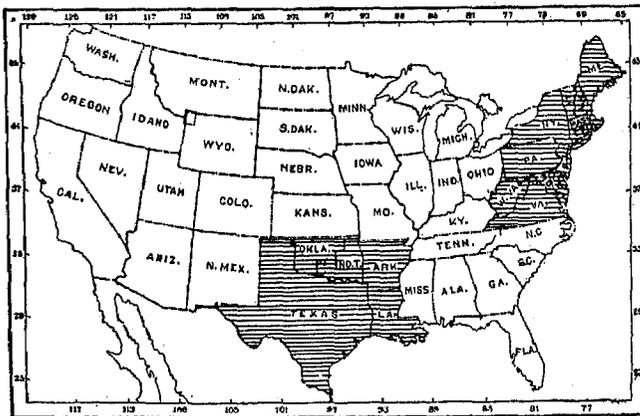
Value of newspaper and periodical products.—In Table 52 is presented, by geographic divisions the combined value of advertising, and subscriptions and sales. These figures show greater uniformity in relative importance than any other figures for this industry. The advance is greatest in New England, and there it is but 1.5 per cent; in 3 divisions it is fractional; 1 presents the same proportion as in 1890; and 6 show declines, all of which are insignificant. In every division except the Southern South Atlantic there was an increase in the value of such products.

TABLE 52.—Value of products, by minor geographic divisions, with per cent which value of products for each forms of total, 1890 and 1900.

DIVISION.	VALUE OF PRODUCTS.		PER CENT WHICH VALUE OF PRODUCTS IN EACH DIVISION FORMS OF TOTAL.		Per cent of increase, 1890 to 1900.
	1900	1890	1900	1890	
United States	\$175,789,610	\$143,586,547	100.0	100.0	24.0
New England.....	18,548,042	18,089,168	10.6	9.1	42.2
Southern North Atlantic.....	70,244,584	56,457,695	40.0	39.8	24.4
Northern South Atlantic.....	5,612,482	4,258,464	3.2	3.0	31.9
Southern South Atlantic.....	2,867,574	2,898,545	1.6	2.0	10.9
Eastern North Central.....	36,668,299	80,298,789	20.9	21.1	21.0
Western North Central.....	20,386,282	17,297,468	11.6	12.0	17.9
Eastern South Central.....	4,684,427	4,288,301	2.6	3.0	8.1
Western South Central.....	5,059,181	4,019,041	2.9	2.8	25.9
Rocky Mountain.....	3,248,759	2,650,785	1.8	1.8	22.6
Basin and Plateau.....	719,288	691,498	0.4	0.5	4.0
Pacific.....	7,805,897	7,606,717	4.4	5.4	1.4

¹ Decrease.

CARTOGRAM 11.—Minor geographic divisions in which the rate of increase in value of product was more rapid than the rate of increase for the United States, 1900.



In cartogram 11 are indicated the minor geographic divisions showing a per cent of increase in value of

products greater than the per cent for the United States.

It will be observed, from cartograms 9, 10, and 11, that the Western South Central group has exceeded the percentage for the United States in all three particulars—number of establishments, capital, and value of products—doubtless because of the influence of Texas.

Consideration of the proportions which each minor geographic division contributed to the totals for number of establishments, capital, and value of products, shows that 8 divisions ranked higher in number of establishments than in capital or value of products; that 1, the Southern North Atlantic, ranked highest in capital; and 1, New England, ranked highest in value of products. It is shown by Table 53 that the North Atlantic division, comprising New England, New York, New Jersey, and Pennsylvania, although having only 21.6 per cent of all establishments, possessed 52.2 per cent of all the capital, and produced 50.6 per cent of the total value of products; that 6 divisions possessed substantially the same proportion of each item, and that 3 possessed a decidedly greater proportion of the total number of establishments than of capital or value of products.

TABLE 53.—Per cent of number of establishments, capital, and value of products in each minor geographic division, 1900.

DIVISION.	Number of establishments.	Capital.	Value of products.
United States	100.0	100.0	100.0
New England.....	5.2	8.7	10.6
Southern North Atlantic.....	16.4	43.5	40.0
Northern South Atlantic.....	3.5	3.7	3.2
Southern South Atlantic.....	3.8	1.7	1.6
Eastern North Central.....	25.0	19.2	20.9
Western North Central.....	24.2	11.9	11.6
Eastern South Central.....	5.1	3.3	2.6
Western South Central.....	7.6	2.5	2.9
Rocky Mountain.....	2.8	1.6	1.8
Basin and Plateau.....	0.8	0.5	0.4
Pacific.....	5.6	3.4	4.4

The detailed statistics for newspapers and periodicals are given in Table 58, which appears at the end of this report

BOOK AND JOB PRINTING.

Table 54 presents the number of establishments, capital, value of products, and wage statistics for this branch of the industry in 1890 and 1900, for cities containing 20,000 inhabitants and over.

TABLE 54.—SUMMARY OF BOOK AND JOB PRINTING FOR CITIES HAVING A POPULATION OF 20,000 OR OVER, 1900.

CITIES.	Population.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Number.	Salaries.	Average number.	Total wages.			
New York, N. Y.	3,487,202	996	\$19,107,954	1,552	\$1,689,166	12,857	\$7,730,447	\$4,404,740	\$7,206,921	\$26,484,933
Chicago, Ill.	1,698,575	594	12,540,430	1,816	1,750,818	9,531	4,674,796	2,947,234	4,955,114	18,536,364
Philadelphia, Pa.	1,293,697	401	11,589,833	844	775,094	5,827	2,508,317	1,626,292	2,948,999	10,066,740
St. Louis, Mo.	575,286	173	3,560,128	524	481,141	2,329	1,129,767	648,823	2,016,560	4,420,147
Boston, Mass.	560,892	280	5,370,499	708	532,807	3,077	1,668,282	1,723,336	1,752,274	8,183,215
Baltimore, Md.	508,957	142	1,285,980	148	133,600	1,178	505,903	196,111	690,446	2,037,037
Cleveland, Ohio	381,768	69	1,107,419	150	141,306	981	496,819	117,084	700,052	1,737,106
Buffalo, N. Y.	352,387	87	1,517,903	101	92,661	1,071	522,369	137,789	475,302	1,455,933
San Francisco, Cal.	342,782	105	1,370,577	104	109,514	1,133	667,566	137,092	656,344	2,022,649
Cincinnati, Ohio.	325,902	115	1,630,554	127	127,762	1,617	784,122	177,234	866,618	2,513,458
Pittsburg, Pa.	321,616	67	100,015	90	75,076	886	434,481	116,728	513,223	1,396,292
New Orleans, La.	287,104	51	507,670	61	57,218	452	183,062	48,889	150,577	573,987
Detroit, Mich.	285,704	91	927,283	426	165,476	831	394,301	128,950	383,633	1,417,275
Milwaukee, Wis.	285,315	58	746,478	59	57,924	562	225,622	65,785	242,234	750,896
Washington, D. C.	278,718	76	3,139,406	104	211,277	4,101	3,236,730	113,580	1,867,668	5,107,905
Newark, N. J.	246,070	54	624,712	104	89,403	493	203,380	37,570	185,153	674,321
Jersey City, N. J.	206,433	18	454,023	27	29,004	442	176,166	22,195	206,977	483,797
Louisville, Ky.	204,731	45	631,577	60	60,257	601	235,585	59,249	819,988	854,545
Minneapolis, Minn.	202,718	73	474,357	63	57,296	548	253,200	63,706	209,474	770,339
Providence, R. I.	175,597	47	421,297	48	53,539	446	201,182	62,091	250,706	667,829
Indianapolis, Ind.	169,164	47	911,693	159	119,842	746	351,393	472,194	385,885	1,536,652
Kansas City, Mo.	163,752	63	720,010	166	114,805	804	419,784	102,335	333,089	1,187,253
St. Paul, Minn.	163,065	47	577,999	195	127,902	395	188,808	163,324	289,164	923,260
Rochester, N. Y.	162,608	52	495,819	47	23,828	362	130,402	80,006	137,846	524,296
Denver, Colo.	133,859	52	604,486	56	59,274	390	251,561	92,675	183,266	808,395
Toledo, Ohio	131,822	24	248,690	36	23,257	208	96,746	30,551	100,109	337,239
Allegheny, Pa.	129,896	16	79,566	7	4,728	87	40,394	10,300	42,482	129,289
Columbus, Ohio.	125,560	22	172,060	29	22,082	206	97,045	17,874	91,188	282,915
Worcester, Mass.	118,421	31	195,851	7	13,018	148	84,552	35,514	84,629	271,625
Syracuse, N. Y.	108,374	29	346,280	24	17,672	212	94,890	26,816	136,567	336,634
New Haven, Conn.	108,027	35	513,982	47	81,474	285	127,832	132,459	184,999	538,889
Paterson, N. J.	105,171	12	45,796	2	1,018	29	11,756	6,321	11,147	43,465
Fall River, Mass.	104,838	9	50,938	2	1,018	37	18,669	5,110	22,815	66,584
St. Joseph, Mo.	102,979	9	169,150	20	14,420	240	121,529	12,374	96,359	302,060
Omaha, Nebr.	102,555	38	459,714	59	55,737	395	196,739	65,326	223,717	668,567
Los Angeles, Cal.	102,479	47	182,626	18	18,168	230	114,143	30,807	106,470	391,370
Memphis, Tenn.	102,320	17	225,750	15	23,529	215	92,370	16,589	118,849	354,647
Scranton, Pa.	102,026	13	74,898	3	1,280	50	22,715	5,716	21,464	60,717
Lowell, Mass.	94,969	16	64,932	8	2,811	53	28,592	7,872	29,436	85,790
Albany, N. Y.	94,151	29	1,253,446	77	68,202	685	347,876	131,163	332,316	1,244,810
Cambridge, Mass.	91,886	17	961,932	34	54,371	373	468,527	97,649	455,284	1,242,492
Portland, Oreg.	90,426	32	235,972	25	26,515	140	76,753	25,945	105,600	315,506
Atlanta, Ga.	89,872	17	365,985	31	28,160	409	150,562	26,613	143,149	405,964
Grand Rapids, Mich.	87,565	22	1,199,437	20	21,530	244	88,739	26,651	84,609	278,431
Dayton, Ohio	85,333	18	277,477	59	39,899	186	85,600	55,415	173,335	431,840
Richmond, Va.	85,050	18	1,048,768	64	55,223	291	142,035	95,913	147,000	538,682
Nashville, Tenn.	80,865	13	695,143	55	57,616	371	186,294	34,393	224,391	613,439
Seattle, Wash.	80,671	22	164,738	23	20,149	23	98,230	23,231	81,969	285,638
Hartford, Conn.	79,850	38	1,028,315	49	55,293	442	236,111	151,533	252,420	876,354
Reading, Pa.	78,961	17	121,607	.....	.....	63	27,485	7,062	35,020	99,447
Wilmington, Del.	76,508	12	134,875	12	8,644	85	39,589	7,475	27,905	106,245
Cumden, N. J.	75,935	14	68,357	5	2,866	37	13,696	3,544	19,195	58,252
Trenton, N. J.	73,307	10	155,338	6	4,016	75	38,401	7,127	31,422	109,744
Bridgeport, Conn.	70,996	11	72,672	10	8,180	56	24,902	6,318	25,036	87,282
Lynn, Mass.	68,513	14	104,141	8	6,050	83	41,751	7,381	44,329	143,452
Oakland, Cal.	66,960	16	47,295	5	3,800	43	17,339	5,200	19,454	69,009
Lawrence, Mass.	62,559	6	20,470	1	750	14	5,625	1,673	8,719	22,199
New Bedford, Mass.	62,442	3	29,613	4	1,928	26	11,658	2,279	15,456	46,550
Des Moines, Iowa	62,139	22	313,060	40	36,164	357	155,160	27,516	170,413	468,934
Springfield, Mass.	62,059	22	565,986	121	120,686	189	108,890	214,166	132,968	750,710
Somerville, Mass.	61,643	5	7,200	.....	.....	3	2,514	820	2,882	12,765
Troy, N. Y.	60,651	14	123,073	10	6,630	84	39,045	10,612	26,556	127,467
Hoboken, N. J.	59,364	10	26,740	.....	.....	20	11,669	2,249	13,341	44,799
Evansville, Ind.	59,007	7	81,627	10	7,721	94	34,666	7,064	44,147	109,315
Manchester, N. H.	56,937	13	29,126	.....	.....	30	14,100	2,951	11,489	38,639
Utica, N. Y.	56,383	16	123,000	16	8,958	116	49,468	14,295	59,608	179,169
Peoria, Ill.	56,100	12	143,340	14	12,016	169	72,506	9,244	88,758	226,576
Charleston, S. C.	55,807	7	182,417	22	15,990	121	49,542	11,145	72,390	203,082
Savannah, Ga.	54,244	5	72,320	3	3,696	75	32,961	6,896	34,800	91,430
Salt Lake City, Utah	53,531	10	117,273	16	14,082	96	44,689	13,082	52,795	144,644
San Antonio, Tex.	53,321	11	123,757	11	13,390	191	107,548	8,665	90,116	290,900
Duluth, Minn.	52,969	10	82,292	9	7,317	93	49,193	10,376	31,057	133,614
Erie, Pa.	52,733	10	106,512	2	6,624	71	33,652	3,644	28,180	103,904
Elizabeth, N. J.	52,130	5	291,850	15	17,835	195	98,150	18,096	92,344	312,766
Wilkesbarre, Pa.	51,721	11	147,857	8	5,604	80	40,594	6,031	31,554	103,182
Kansas City, Kans.	51,418	5	12,400	.....	.....	12	5,443	1,171	6,170	18,300
Harrisburg, Pa.	50,167	14	219,321	9	8,009	188	89,891	24,047	67,336	210,155
Portland, Me.	50,145	22	138,830	20	14,884	159	78,727	19,711	79,218	244,789
Yonkers, N. Y.	47,931	6	10,060	.....	.....	9	4,452	1,493	3,437	14,500
Norfolk, Va.	46,624	15	75,618	7	4,010	73	32,884	11,693	33,242	103,331
Waterbury, Conn.	45,859	7	58,077	13	7,834	37	20,655	6,681	23,551	65,202
Holyoke, Mass.	45,712	12	139,944	29	27,642	153	62,716	31,553	30,087	237,646
Fort Wayne, Ind.	45,115	4	80,432	8	8,432	59	23,435	3,762	54,550	85,880
Houngstown, Ohio.	44,885	4	44,685	5	4,700	16	8,180	3,996	6,761	44,160
Houston, Tex.	44,633	16	153,733	14	9,860	103	53,781	15,143	48,315	167,059

¹ By clerical error this figure is given as \$1,062,657 in Vol. VIII, Manufactures, Part II, p. 430.

TABLE 54.—SUMMARY OF BOOK AND JOB PRINTING FOR CITIES HAVING A POPULATION OF 20,000 OR OVER, 1900—Continued.

CITIES.	Population.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Number.	Salaries.	Average number.	Total wages.			
Covington, Ky	42,938	6	\$16,825			13	\$5,527	\$1,682	\$7,178	\$19,145
Akron, Ohio	42,728	13	2,195,040	111	\$98,611	908	481,768	375,444	535,907	1,821,296
Dallas, Tex.	42,638	20	207,207	21	16,080	145	78,226	27,370	74,247	284,178
Saginaw, Mich	42,345	11	106,717	2	1,100	57	23,527	0,237	27,096	81,078
Lancaster, Pa	41,459	9	149,110	3	3,500	71	31,265	5,914	17,546	78,075
Lincoln, Neb	40,169	10	94,270	10	7,610	42	935	11,197	10,958	143,920
Brockton, Mass.	40,063	9	100,140	8	6,750	78	44,707	18,427	51,243	180,390
Binghamton, N. Y.	39,647	11	32,400	1	1,000	18	5,656	2,090	9,195	28,582
Augusta, Ga.	39,441	6	82,500	2	2,560	212	28,427	3,595	19,186	70,132
Pawtucket, R. I.	39,231	8	151,100	18	18,500	89	35,354	7,303	74,810	151,550
Wheeling, W. Va.	38,878	6	21,721	1	960	22	7,280	1,669	10,958	24,767
Mobile, Ala.	38,469	9	54,205			66	24,948	4,941	20,949	71,730
Birmingham, Ala.	38,415	5	87,643	14	14,544	99	52,685	6,094	63,410	148,699
Little Rock, Ark.	38,307	5	30,510	11	10,332	59	35,810	0,945	47,230	129,000
Springfield, Ohio.	38,253	8	87,140	6	6,250	106	44,691	4,608	61,571	130,239
Galveston, Tex.	37,789	7	48,725	7	6,810	36	16,510	3,954	8,189	44,225
Tacoma, Wash.	37,714	12	56,053	3	3,380	48	22,916	5,135	17,886	78,487
Haverhill, Mass.	37,175	12	44,625	4	2,680	49	26,251	3,444	14,457	71,550
Spokane, Wash.	36,848	11	36,961	9	10,630	72	49,122	8,956	28,989	128,541
Terre Haute, Ind.	36,673	9	54,960	19	7,900	85	32,301	7,601	34,188	114,600
Dubuque, Iowa.	36,297	5	44,883	5	3,280	46	21,006	3,606	22,127	70,395
Quincy, Ill.	36,252	12	103,004	11	10,876	122	41,958	6,508	51,681	135,461
South Bend, Ind.	35,999	7	30,800	2	1,561	39	15,878	3,423	19,315	55,561
Salem, Mass.	35,956	7	23,300	3	900	32	12,057	3,966	18,707	41,330
Johnstown, Pa	35,936	5	14,500			16	3,327	1,123	7,117	19,497
Elmira, N. Y.	35,672	11	44,635	2	660	27	8,344	2,335	19,652	43,876
Allentown, Pa.	35,416	8	66,048	3	1,118	30	11,303	5,116	15,195	44,885
Davenport, Iowa	35,254	11	104,828	12	12,503	87	39,378	11,654	40,683	138,573
Springfield, Ill.	34,159	9	124,625	14	11,030	118	50,647	10,646	31,076	129,002
Chelsea, Mass.	34,072	6	17,545			21	8,022	2,011	5,678	23,296
Chester, Pa.	33,988	4	14,250			5	1,800	746	3,548	15,900
York, Pa.	33,708	11	39,040			14	6,195	1,870	8,949	27,675
Malden, Mass.	33,664	7	21,845			23	9,966	3,191	8,447	28,957
Topeka, Kans.	33,608	13	372,594	24	23,140	204	109,550	30,578	162,178	869,131
Newton, Mass.	33,587	3	8,940			17	8,300	525	8,844	18,100
Sioux City, Iowa	33,111	9	179,421	12	12,420	78	28,148	15,119	40,532	118,232
Knoxville, Tenn.	32,637	6	79,690	7	7,450	108	37,493	5,459	32,535	110,301
Schenectady, N. Y.	31,682	6	31,150	1	150	6	3,518	2,483	3,706	13,250
Fitchburg, Mass.	31,531	6	13,275			11	6,770	1,254	5,893	19,338
Rockford, Ill.	31,051	7	53,533	5	4,835	66	25,246	3,956	26,942	72,356
Canton, Ohio.	30,667	7	31,875			23	10,329	1,544	7,111	26,382
Butte, Mont.	30,470	8	5,625	1	1,500	2	1,096	627	1,651	6,800
Montgomery, Ala.	30,346	6	39,401	2	2,400	56	14,287	3,258	16,066	48,929
Auburn, N. Y.	30,345	6	23,350	1	800	21	6,333	1,361	8,099	25,325
Chattanooga, Tenn.	30,154	10	51,060	19	13,250	100	37,310	5,645	48,064	129,425
Joliet, Ill.	29,353	5	14,438	3	1,680	14	4,092	1,550	5,903	16,466
Sacramento, Cal.	29,282	5	62,062	3	3,000	27	22,247	5,083	12,721	54,391
Racine, Wis.	29,102	3	16,209	1	672	21	8,500	1,071	9,116	22,550
La Crosse, Wis.	28,895	4	10,550	1	400	8	2,600	964	4,768	12,250
Williamsport, Pa	28,757	6	29,955	2	1,880	27	12,186	2,043	19,160	44,277
Jacksonville, Fla.	28,429	9	96,392	6	5,050	36	36,962	5,613	25,850	95,342
Newcastle, Pa.	28,339	3	18,950	1	150	8	3,150	887	5,172	17,929
Oshkosh, Wis.	28,284	6	30,067			31	12,003	2,337	12,239	33,325
Woonsocket, R. I.	28,204	4	36,850	2	1,050	25	12,180	1,864	13,024	33,380
Pueblo, Colo.	28,157	4	24,000	3	3,520	21	11,354	2,241	13,359	42,100
Bay City, Mich.	27,628	6	37,950	5	3,484	25	12,155	3,712	10,858	42,917
Fort Worth, Tex.	26,688	7	60,793	11	10,339	50	23,993	9,330	29,087	85,224
Lexington, Ky.	26,369	10	41,550	7	2,168	54	18,531	4,523	23,409	63,300
New Britain, Conn.	25,998	3	18,794	2	1,214	13	5,759	1,277	7,044	19,317
Council Bluffs, Iowa.	25,802	4	10,950			11	4,854	1,226	4,240	15,560
Cedar Rapids, Iowa	25,650	5	42,614	3	3,028	54	21,593	4,417	23,563	71,803
Jackson, Mich.	25,180	3	14,286			15	7,997	1,091	5,677	21,935
Wichita, Kans.	24,671	10	68,817	7	5,915	54	25,537	4,958	39,846	96,237
Kingston, N. Y.	24,535	4	9,200			7	2,554	436	1,738	9,400
Kalamazoo, Mich.	24,404	10	203,239	26	14,114	168	55,733	15,125	75,055	194,448
Meriden, Conn.	24,236	5	69,559	8	6,364	38	20,243	1,871	14,114	51,955
North Adams, Mass.	24,200	4	24,460	1	600	24	12,182	1,865	5,590	25,868
Aurora, Ill.	24,147	4	22,150			31	11,200	1,428	13,199	38,200
Poughkeepsie, N. Y.	24,029	7	61,360	2	2,100	60	25,496	3,809	16,057	75,449
Hamilton, Ohio.	23,914	3	11,535			15	4,806	1,074	7,475	20,950
Cohoes, N. Y.	23,910	3	35,985			29	12,480	1,322	8,797	35,242
Nashua, N. H.	23,898	4	8,100			9	3,525	863	3,743	13,000
Lewiston, Me.	23,761	7	26,227			18	8,574	1,722	6,657	22,960
Zanesville, Ohio.	23,533	6	9,700			10	3,106	1,040	2,821	19,940
Waltham, Mass.	23,481	6	14,625			10	5,162	1,400	9,195	25,421
Bloomington, Ill.	23,286	7	90,400	18	15,516	122	44,830	5,744	61,946	147,333
Macon, Ga.	23,272	6	32,225	4	2,400	35	11,523	3,967	14,535	43,350
Springfield, Mo.	23,267	8	27,150			17	6,846	5,030	10,063	41,600
Burlington, Iowa.	23,201	5	63,362	20	14,694	60	16,791	4,645	22,248	71,100
West Hoboken, N. J.	23,094	3	4,415			2	1,710	935	1,909	7,534

TABLE 54.—SUMMARY OF BOOK AND JOB PRINTING FOR CITIES HAVING A POPULATION OF 20,000 OR OVER, 1900—Continued.

CITIES.	Population.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Number.	Salaries.	Average number.	Total wages.			
Jamestown, N. Y.	22,892	8	\$25,080	.....	.....	15	\$6,166	\$1,796	\$10,100	\$30,648
Clinton, Iowa	22,698	3	25,300	3	\$4,475	15	4,968	1,022	7,327	21,820
Elgin, Ill.	22,433	3	98,546	6	4,000	39	15,329	22,742	30,536	87,100
Austin, Tex.	22,258	5	82,200	.....	.....	94	60,275	6,006	29,854	115,880
Oswego, N. Y.	22,199	5	98,188	3	2,782	36	16,750	3,280	16,698	46,117
Bangor, Me.	21,850	9	46,875	1	364	39	15,283	3,215	20,612	59,208
Petersburg, Va.	21,810	4	85,590	2	1,200	27	6,160	1,761	17,852	48,486
Pittsfield, Mass.	21,766	4	7,964	.....	.....	6	1,926	1,448	1,297	8,620
Lima, Ohio.	21,723	8	8,200	.....	.....	4	1,186	1,153	4,535	12,450
Watertown, N. Y.	21,696	8	88,704	7	6,229	54	15,616	2,491	28,192	55,970
San Jose, Cal.	21,500	15	98,895	4	5,020	50	22,482	8,073	20,869	77,500
Roanoke, Va.	21,495	3	94,694	9	6,608	74	32,439	7,428	40,958	96,064
Columbia, S. C.	21,108	6	17,190	5	3,100	61	20,550	1,808	9,178	44,580
Wilmington, N. C.	20,976	6	15,970	.....	.....	17	4,004	1,335	6,663	20,150
Muncie, Ind.	20,942	6	18,315	5	2,200	32	12,236	2,887	19,148	48,567
Amsterdam, N. Y.	20,929	3	7,300	.....	.....	9	3,068	609	2,662	12,400
Decatur, Ill.	20,754	5	19,075	6	2,209	16	6,696	2,303	9,244	27,310
Leavenworth, Kans.	20,735	4	62,675	5	4,800	38	19,250	7,314	23,776	70,500
Waco, Tex.	20,686	10	42,665	.....	.....	47	23,855	4,887	17,354	59,208
New Albany, Ind.	20,623	4	2,275	.....	.....	3	535	482	1,937	5,645
Anderson, Ind.	20,178	5	8,800	8	1,600	7	3,100	1,815	10,472	28,300
New Brunswick, N. J.	20,006	5	26,100	.....	.....	18	8,550	1,707	9,081	25,778
All other cities ¹	.....	31	131,431	7	4,328	119	60,699	10,051	50,628	175,992

¹Includes Bayonne, N. J., 2; Easton, Pa., 2; East St. Louis, Ill., 2; Everett, Mass., 1; Gloucester, Mass., 2; Joplin, Mo., 2; McKeesport, Pa., 2; Muskegon, Mich., 2; Newburg, N. Y., 2; Newport, Ky., 2; Norristown, Pa., 1; Orange, N. J., 2; Passaic, N. J., 1; Quincy, Mass., 2; Sheboygan, Wis., 1; South Omaha, Nebr., 1; Superior, Wis., 2; Taunton, Mass., 2.

In 1900, cities of 20,000 inhabitants and over contained 79.0 per cent of the separate job printing establishments of the country, with 95.8 per cent of the capital invested in such establishments, and 97.7 per cent of the value of products.

Table 55 compares the totals for cities of 20,000 and over with those for all other localities.

TABLE 55.—Number of establishments, capital, and total and average value of products shown for cities of 20,000 or more inhabitants, and for other localities, 1890 and 1900.

LOCALITY.	Year.	Number of establishments.	Capital.	Value of products.	Average value of products per establishment.
Cities of 20,000 or over..	1900	5,466	\$92,850,506	\$118,943,242	\$21,761
	1890	3,491	64,053,816	90,034,844	25,791
Other localities	1900	1,454	4,045,672	2,855,854	1,964
	1890	607	3,092,629	3,505,987	5,776

Between 1890 and 1900 the number of establishments in cities increased 56.6 per cent, but the value of prod-

ucts increased only 32.1 per cent, showing a decrease in the average value of products per establishment.

While the per cent of increase, between 1890 and 1900, in number of establishments outside of the cities was very large, in the value of products a decrease was shown, resulting in a much lower value of products per establishment in 1900 than in 1890. To some extent this change may be due to a more careful enumeration in 1900, by which were included certain small establishments that escaped notice in 1890.

Table 54 shows wide variations in number of establishments, capital, and value of products, in relation both to one another and to population. Large job printing establishments are often attracted to a given city by special causes quite distinct from population, as in the case of a state capital, in which a large amount of official printing is required. Of this class Albany, N. Y., Richmond, Va., and Hartford, Conn., are examples.

II. PROGRESS IN THE PRINTING AND PUBLISHING INDUSTRY.

When judged by modern ideas of progress, the art of printing was nearly stationary for four hundred years. Printing has been the most generous contributor to human progress, the handmaiden of all the arts and industries, and perhaps the most powerful factor in making the Nineteenth century the leader of all centuries in genius and invention; but it has been reserved for the last two decades to record the most substantial advances in the many and exacting details connected with the satisfactory production of a printed

page. The invention of the 10-cylinder press, by Robert Hoe, in 1853, was declared by the lords of the privy council of England to be "one of the greatest steps ever made in printing." But in the far more difficult field of machine composition, inventors made no appreciable progress during the greater portion of the Nineteenth century; as late as 1880 the extended report of the Tenth Census upon this industry, after presenting evidence of the activity and progress of the period, declared: "While all these improvements have

been following each other in the printing and delivery of newspapers, the ingenuity of man has not yet invented a substitute for the setting of type by hand, the method of composition remaining precisely the same as it was when printing was first invented."¹

The first step toward the solution of this problem was taken in 1886, by Ottmar Mergenthaler, who invented the linotype machine, which shortly afterwards came into general use, and has been followed by several ingenious and successful inventions similar in purpose. Although only beginning to be felt, the effect of these inventions is already significant, and in them doubtless may be found the cause of many of the abrupt changes which are shown on contrasting the figures given for 1890 and 1900 in the tables for newspapers and periodicals. These remarkable inventions can not fail to affect more and more the future progress of the industry.

Types have no existence in the product of the linotype machine; the unit is the line, which is known as a "slug." By pressing keys the operator assembles brass matrices, and upon the completion of a line these are pressed forward against a bar of molten type metal, casting the line, or slug, in condition for printing. By continuation of this process the matrices return automatically to their receptacles.

Other inventors also attacked the problem of mechanical composition, and there have been placed upon the market the Lanston monotype, a combination of a keyboard by which a strip of paper is punched, and a machine casting individual types from matrices indicated by the passage of compressed air through the holes in the punched paper strip; the Goodson graphotype, also a combination of two machines, operated by electricity, and casting individual types; and the Scudder monoline, a Canadian machine somewhat like the linotype, except that the matrices are located upon a disk. The monoline machine has not been placed upon the American market.

Mechanical composition and distribution of foundry type are accomplished successfully by the Dow, Simplex, Empire, and other machines.

The question of wages has been somewhat affected by the introduction of these radical departures in composition. In 1850 a compositor in New York city received \$1.50 per day, or \$9 per week. Ordinary job compositors now receive \$18, and operators upon machines receive considerably more. It is the opinion of many large employers of labor in this industry, that the invention of labor-saving machines has merely served to increase the demand for labor in new channels, so that the number of wage-earners employed has actually increased rather than diminished. The introduction of machine composition has been of decided benefit to the employee, offering a new field of employment at high wages. This fact is illustrated by the experience of the Typographical Union of New York city, in 1900; when called

upon hastily to supply 150 men for a special piece of work in connection with city printing. Every effort was made to secure them, but in that great center of population and labor it was impossible to obtain, at short notice, more than 100 men fitted for the work.

During the decade type founding made marked progress in several of its branches. The Benton punch cutter and the Barth type-casting machine enabled the founder to dispense with much of the laborious and expensive detail connected with his calling, and to reduce materially the cost of type to the printer. To some extent the use of these machines offset the inroads which the use of machine composition made into the business of the type founder, and permitted him to increase greatly the output of special faces and artistic display type.

In the measurement of type bodies a revolution was effected. A uniform series of sizes, known as the "point system," was introduced about 1890, supplanting everywhere the earlier method, by which each foundry used a different size of "body." This radical change permitted the use of the type of one foundry with that of any other, and meant as much to the printer as the change from local to national currency meant to the nation.

In stereotyping, a device known as the autoplate was invented in 1900, by means of which the time required for casting plates was considerably reduced, and in electrotyping the value and efficiency of the foundry were enormously increased by the use of a strong current of electricity to hasten the deposit of copper, so that the time required by the process may now be controlled by the electrotyper to suit his customer.

The greatest advances in press building since 1880 have been made in perfecting presses. These machines are now constructed of such enormous size and with such great capacity that it is possible to obtain, at short notice, a newspaper press which will produce 100,000 impressions per hour, printed in 12 colors. The greatest advance in printing presses, however, was the construction of perfecting presses capable of producing the finest type and cut work as rapidly as though printing newspapers. Such machines, which were an impossibility in 1880, and an experiment in 1890, are now in general use, and are necessary to the production of the large number of inexpensive magazines and newspaper special supplements, profusely illustrated, which have become an important feature of current literature.

The great advance in the direction of printing in colors from plates, by means of which the printer has invaded the business of the lithographer, created a demand which the press maker met with a machine capable of printing the three primary colors and producing several more by combination at one impression, so that a complete picture in many colors may be the product of one impression.

In the field of illustration the decade has witnessed advances second only to the invention and commercial

¹Tenth Census: The Newspaper and Periodical Press, by S. N. D. North, page 102.

success of composing machines. The art of steel engraving, carried to great perfection about the middle of the century, has become practically a lost art, and by 1900 wood engraving was neglected and unprofitable, being replaced by the "line cut" and the "half tone."

These two classes of illustration are obtained by a combination of photography and etching. In producing the line cut the drawing is photographed and the negative printed upon a zinc plate. The lines of the photograph are then protected and acid is permitted to eat away the exposed portions, producing a relief. The mechanical details of the half tone resemble to some extent those of the line cut, but the process is much more delicate, and the element of individual skill plays a more important part. The relief upon the plate is secured by small dots obtained by photographing the drawing through two glass plates which have been closely ruled. The negative is then printed upon a copper plate, which is subsequently etched.

The effect of the extraordinary activity in invention and improvement, sketched above as characteristic of this great industry since 1880, has been twofold: To the printer himself it has been injurious rather than helpful; to the public it has been of incalculable advantage—a potent factor in elevating the standards of good taste.

It has already been pointed out that by the introduction of labor-saving devices in this industry, the wage-earner has doubtless benefited both in employment and in higher wages. As a matter of fact, the employing printer and not the wage-earner, suffered from new inventions and improvements in machinery. The type founder and the press maker secure protection from the ills of competition by consolidation, but no such relief is afforded to the printer. Indeed, from the nature of his calling, no effective combination could be organized. Extraordinary activity in mechanical invention and improvement, added to increasing competition, forced the printer to sacrifice to the interests of his business a large share of his narrow margin of profit. It is unlikely that there is any other industry in which there is so small a financial return for so much labor and uncertainty. Printers have seldom grown rich from their calling; their recompense has been generally in the character of their product. So far as wealth from his occupation is concerned, the printer of to-day, like his predecessor of centuries ago, lives entirely in the future.

Of far greater consequence, however, is the consideration of the quality of the product. There has been a remarkable advance, since 1880, in artistic composition and in artistic results in all classes of printing. The styles of printing employed during the last two or three decades may be divided into three general periods. The first period was that in which a great number of type faces were employed in all display work and title pages, apparently with the idea that several kinds of

shaded and display type were necessary for effective presentation. This style of composition was accompanied by elaborate ornamentation, such as rule work, scroll work, impossible cranes, birds, frogs, and conventional designs. Such work was not artistic in any sense, and could be regarded as interesting and commendable only from the standpoint of ingenuity.

The second period was marked by the imitation of alleged ancient designs and type faces. In the Seventeenth century printing was placed under very great restrictions in England. In consequence of this, a large number of small printing shops sprang up in obscure places, being generally known as "holes." These shops often used secondhand and worn-out dresses of type, and, operating secretly, produced pamphlets and small books of a very poor grade. Where ornamentation or special letters were necessary, the printer himself cut them, generally in crude and barbarous fashion. Thus there was a distinct decline in the printing of that period, due to the product of this multitude of interdicted shops. Certain artists of the present day, coming across this class of work, endeavored to imitate what was not really a subject for imitation, for it did not represent the best work of the period. Advertisers seized upon these oddities with avidity, and for a time there was a considerable movement toward such extreme results; but this fashion appears to be already on the wane. It obtained little foothold on the title pages or in the ornamentation of standard books.¹

The third period was one of better taste, the simplest types being used in the preparation of titles and display. At no period in the history of the industry has more beautiful work been produced in the combination of types and paper than during the decade which has just ended. Indeed, in the progress of this industry paper is a factor which should not be overlooked.

In 1862 the kind of news paper ordinarily used was made of cotton rags. It was imperfect, poor in color, and manufactured in the crudest manner. The price was 24 cents per pound. In 1900 stock of the same quality could not have been marketed for 2 cents per pound. The extensive use of wood pulp, and the great variety of qualities, weights, and surfaces made possible by increased skill and by improved paper-making machinery, are factors which must not be neglected in any careful survey of the advance of printing.

The volume of advertising circulars and pamphlet literature was never before so large or of such mechanical excellence as during the last decade. The educational effect upon the public at large of presenting in the most attractive and artistic form the ordinary details concerning commercial wares, can not be overestimated.

The underlying cause of this advance, however, is the fact that the untiring search for improvement

¹Theodore L. DeVinne, to the writer.

has not been confined to the printing industry; other lines of commercial activity, scoring their triumphs, turned to the printer for exploitation by combinations of types, cuts, and paper so original and artistic as to compel attention and merit preservation. To this demand the printer was quick to respond. He became in many cases a designer, and firms were organized, with and without plants, to make a specialty of designing artistic combinations of types and material. This class of designing printers was practically a product of the last decade.

Leaping beyond the narrow limits of the modest and ugly circulars, leaflets, and handbills of two generations ago, the business community thus educated itself, through the activity of the period, to demand, for advertising purposes, the most beautiful products of the press.

In the realm of bookmaking no striking changes were recorded, but the advance in good taste and in artistic beauty of product was a marked characteristic of this branch of the industry. Fashions in bindings changed annually, but a widening range of materials and patterns, more daring use of designs and inks, and the invention and general use of automatic binding machinery supplemented improvements in printing, permitting lower prices for books and promoting phenomenal sales. It is a significant coincidence that the decade which witnessed extraordinary advance in all details of mechanical production in this industry, should be characterized also by the most noteworthy advance in the good taste and appreciation of the general public.

In connection with daily newspapers the beneficial results of the use of composing machines and of improvements in plate making, in presses, and in methods of illustration, are so obvious that they need not be discussed in detail. Many of the advances in mechanical construction, which already have been sketched, profoundly affected this class of publications.

The growth of the Sunday edition of the daily newspaper is worthy of notice. In 1900, 7 morning daily newspapers in New York published Sunday editions, aggregating nearly 400 pages. These enormous publications were composed of sections of 8, 12, or 16 pages devoted to news, literature, advertising, and comic illustrations in colors. The last-mentioned feature—made possible by the advance in color printing on perfecting presses—though carried to extremes, showed no sign of reaction.

There was no radical change in the gathering of news or in the management and scope of daily papers. One characteristic of the decade, however, was the great increase in the quantity of news published. Partly

because of the ambitious and progressive spirit of the period, and partly because of the lavish expenditures of capital made by reorganized or newly established publications in order to break into the patronage of prosperous competitors and secure a foothold, the dailies of the great cities became the purveyors of the news of the world to an extent never before attempted. In many cases—especially in New York city, where the daily newspapers are of national repute—it was freely admitted that this expenditure was carried beyond the bounds of business prudence.

In 1886 the *New York World* reported the battle of Majuba Hill in six lines, but so rapid was the extension of news gathering that, fourteen years later, events in the same quarter of the globe were reported to the great American dailies by cable as fully as though close at hand. The destruction of St. Pierre, Martinique, in 1902, by an eruption of Mont Pelee, may be mentioned as an illustration of this tendency. Cablegrams concerning that great disaster reached American newspapers by way of Brazil, the Azores, and Great Britain, costing the recipients from \$2 to \$4 per word, with fees for precedence.

To some extent this outlay for increased news service has been met by organizing groups of newspapers in different cities to receive and publish duplicates of expensive cables or dispatches, but in few cases has this arrangement lifted more than half the burden. During the greater part of the decade the most stirring current events occurred on the other side of the globe; the war between China and Japan, the fighting in the Philippines, the war in South Africa, and the campaign of the Allies in the Far East required in turn costly presentation, while the operations of the Spanish War off Cuba, followed with wonderful efficiency by the American newspapers, involved immense expenditure. Many of the larger dailies maintained special yacht service between the scene of the conflict and Jamaica or Key West.

Upon the public the effect of such extensive news gathering was very marked; there was a decided increase in human interest; the world became a great neighborhood.

In the revenues of newspapers, however, there was no corresponding increase to offset the drain of increased expenditures for news.

The recent public sale of the Philadelphia Record, which may be regarded as representative of large and prosperous publications, adds confirmation to the foregoing statements. An accurate analysis of the business of the Record for most of the decade under consideration shows the following:

TABLE 56.—SUMMARY OF RECEIPTS AND EXPENDITURES OF THE PHILADELPHIA RECORD, WITH INCOME PER COLUMN FROM ADVERTISING: 1893 TO 1900.¹

YEAR.	RECEIPTS.			EXPENDITURES.				PER CENT OF TOTAL EXPENDITURES.			Income per column from advertising.
	Total.	Advertising.	Subscriptions, sales, and miscellaneous.	Total.	News-gathering and wages.	Paper.	All other.	News-gathering and wages.	Paper.	All other.	
1893	\$815,474	\$487,360	\$328,114	\$817,542	\$302,907	\$227,489	\$87,146	49.1	36.8	14.1	\$59
1894	797,285	477,225	320,060	871,344	265,366	231,547	74,431	46.4	40.5	13.0	62
1895	848,478	552,587	295,892	598,869	281,303	239,266	77,800	47.0	40.0	13.0	60
1896	964,904	630,751	334,153	661,429	305,948	275,520	79,961	46.3	41.7	12.1	60
1897	885,934	594,337	291,597	668,328	332,325	266,195	69,808	49.7	39.8	10.4	59
1898	980,742	645,426	335,316	757,908	389,878	292,287	75,743	51.4	38.6	10.0	58
1899	1,073,917	722,205	351,712	769,019	411,931	291,693	65,395	53.6	37.9	8.5	57
1900	1,209,445	855,810	353,635	921,561	490,852	352,137	79,072	53.2	33.2	8.6	55

¹ Prospectus of the sale of the Philadelphia Record, Exhibit I.

It will be observed from this summary that the proportion of expenditure for news gathering rose from 46.4 per cent in 1894 to 53.2 per cent in 1900, a difference of 6.8 per cent, and the earning power of a column of advertising fell from \$62 to \$55, a difference of \$7 per column, or more than 10 per cent.

In connection with increase in expenditures it should be noted that toward the close of the decade there appeared a perceptible hardening in the price of paper. Urgency of demand had made such inroads into the supply of lumber available for wood pulp, that it was clear that unless more liberal laws were enacted the price of paper was likely to rise rather than become lower.

Because of competition, many newspapers cut the price of their issue to 1 cent per copy, and in spite of increasing circulation, there was thus an actual decrease in revenue from sales.

In the meantime, advertising, the other source of newspaper income, showed no marked increase. The department store, though a liberal advertiser, did not compensate for the multitude of smaller retailers whom it supplanted. Taking advantage of the concentration effected in advertising, as elsewhere, the department store advertising agent offered contracts for as much as a thousand columns at a time, and these huge figures extorted from the publisher the lowest possible price.

By 1900 it had become customary for large advertisers to form combinations; it is said that the patronage of fewer than twenty advertisers forms more than half the total quantity of advertising appearing in the daily newspapers of New York city. The only new source of income in the field of advertising was found in newcomers—principally tobaccos, whiskies, cereals, and books. Of these interests the publisher, formerly the most conservative advertiser, became the most daring. The professional advertising agent might be termed another cause of loss to the daily paper, to the amount of the commissions exacted. Between the opposing perplexities of competition and combinations of the advertisers there has been a decline in the advertising earning power of leading newspapers.

After passing 300,000 circulation, the value of advertising becomes a race between the receipts from that

source and the cost of white paper. The advertising in one of the New York evening papers with circulation much exceeding 300,000 was recently declared to entail a cost of 21 cents per line for white paper. Evidently the publisher who secures a circulation of huge proportions confronts the necessity of securing from his advertising patrons a return of the cost of the paper space which they occupy, with a margin of profit. For reasons already noted, the profit is in many cases uncertain, and, as the decade drew to a close, for certain newspapers in the great cities a new problem arose.

The population had become so vast, and means of communication with surrounding territory so easy, that systematic search for circulation had been rewarded by enormous sales, the penalty for which was reduction or complete wiping out of profit on advertising. The circulation ball, once in motion, is not easy to stop, and the serious nature of this problem appeared when the cost of white paper occupied threatened to exceed the return from the advertiser. At the close of the decade such a possibility confronted several American daily newspapers. Overcirculation necessitated also an increase in capital invested in plant, with the added burden of interest which it represented. It may be said, therefore, that at the close of the decade from 1890 to 1900 the daily newspaper was more of a public institution than ever before, because it sacrificed an increased share of its revenue for the public benefit, obtaining no compensating financial return from either purchaser or advertiser. This was a condition very much to the advantage of the public, but one which tended to periods of reduced dividends in those establishments appearing to be most prosperous. Daily publications suffered from the rage for enlarged business and narrow profits so characteristic of all industries during the decade, but the relief which other callings found in combinations was not open to the publishers of daily newspapers, because the inequalities of circulation forever make combinations of newspapers impossible. Prosperity for the daily newspaper clearly lies in a middle course, if conditions permit, with respect to both news and circulation.

The changes which occurred in weekly publications

during the last decade were not such as to merit more than passing consideration.

In weekly publications of general circulation devoted primarily to news, a distinct decline set in, doubtless as a result of circumstances which have been referred to in connection with the tables. Many such publications were discontinued; for example, the *New York Times* and the *New York Sun* abandoned the weekly editions long published by those papers, and the widely-known *New York Weekly Tribune* was saved from the same fate only by being made an agricultural paper. It should be mentioned, also, as indicating the tendency of the period, that the semiweekly *Tribune* was made a tri-weekly.

Notable additions to the class of important weeklies, devoted to literary subjects or illustrated matter, and possessing large national circulation, were the *Saturday Evening Post*, of Philadelphia, and *Collier's Weekly*, of New York. Other publications, devoted to the subjects mentioned, and national in scope, maintained a prosperous circulation.

In the field of monthly magazines the most notable change which occurred during the decade was the creation of the 10-cent magazine. The leading publications in this class were *Munsey's Magazine*, established as a 25-cent publication in October, 1891, and reduced to 10 cents in October, 1893; and *McClure's Magazine*, established as a 15-cent magazine in June, 1893, and reduced to 10 cents in July, 1895. The *Cosmopolitan*, which had long existed as a 25-cent publication, varied its price to 12½ cents and 15 cents, reducing to 10 cents in 1895.

The immediate effect of the reduction in price of *Munsey's Magazine* to 10 cents was to increase the circulation to such an extent that it was difficult to supply the orders, and the production of the first edition at the reduced rate was stopped in order to begin work upon the next issue. In the case of *McClure's Magazine*, reduction to 10 cents caused the circulation to double, and before the end of the first year it had reached about 150,000.

When the reduction of price to 10 cents was made, it was generally regarded as a foolhardy proceeding. The opposition of the news companies made it necessary to handle independently the distribution of *Munsey's Magazine*. It was not realized by many well-informed publishers that the time was ripe for such a change. Improvements in mechanical production had progressed so far that it was at length possible for a daring manager to produce an excellent magazine at a trifling cost per copy. Moreover, the public, accustomed to cuts in prices in other directions, were in a frame of mind to welcome such a change. It should be remarked that advances in machine composition and in making illustrations, while of much importance, represented but a part of the initial cost, and were, moreover, a fixed figure, regardless of the size of the edition. These items,

therefore, were not of much consequence in producing a great number of copies. The principal factors were the improvements in presses and in machines for stitching and covering, which greatly reduced the cost per copy.

Publications of this class may be regarded as a variation of the old-established and more expensive magazine. They at once supplied an evident want, and have attained to an enormous aggregate circulation. Possessing different characteristics, they reached a different class of readers, circulating not only in the United States, but in Canada as well.

Munsey's Magazine is noted for the large number of illustrations employed, and for the use of material that deals with people and timely topics, avoiding descriptions. This magazine averages 160 pages of reading matter and 80 pages of advertising, or a total of about 240 pages and cover.

The leading characteristic of *McClure's Magazine*, in addition to articles by well-known writers, is the presentation of subjects of current interest, completely worked out in all their details as soon as the topic has actually been completed. In character of material used, the *Cosmopolitan* follows a little more closely the policy of the older magazines. In all magazines of this class, except the *Argosy*, illustrations are freely used. There is unquestionably an evolution of daily newspapers, through their Sunday publications, toward the field occupied by the inexpensive magazine, which, before the completion of another decade, may have some decisive result. Meantime the importance of the inexpensive magazine, and its educating force in the community, must be given due weight. The combined circulation of the monthlies published by F. A. Munsey, the *Ladies' Home Journal*, *McClure's Magazine*, and the *Cosmopolitan*; in 1900, was 2,483,000 copies per issue.

TYPE FOUNDING.

There has been no material change during the past two decades in the manner of designing types, but the process of executing the design is different from that formerly employed.

For the laborious and delicate task of punch cutting, a machine known as the Benton punch cutter came into general use about 1885. This consists of a light framework a little over 5 feet high, occupying a floor space of 22 by 28 inches. About three feet from the floor a table is set in the machine. The preparation of a model for the Benton punch cutter begins with a pencil sketch, on paper, of letters 12 inches high. The drawing is reproduced by a pantograph, in the form of a model letter 3 inches high, with raised outline. An electrotype of this letter is then prepared, and is fixed firmly upon the platform or table of the machine, beneath a tracing needle or index. To the head plate of this index are attached the four rods holding the cut-

ting mechanism, which is at the top of the machine, and consists of a rapidly revolving borer, fixed in a stationary position and in a movable framework, in which is set the bar of steel or other metal which is to be cut. The leverage of the machine is capable of various adjustments, so that from the same model letter any body of type, from 2-point to 72-point, can be cut with equal facility and exactness.

The operator moves the index over the model letter on the platform, bearing down upon the lower parts and pressing against the sides of parts in high relief. The direction given to the index, at the will of the operator, upon the outlines of the model letter, is faithfully repeated by the tools cutting the punch. The cutting tools, of which two or three kinds are used in succession, are made with the utmost care. Being very highly tempered and being operated at very high speed, by steam power, they cut into the steel along the lines indicated by the movement of the guide over the model letter. The punches which are produced by this machine are finished in all points, requiring no hand work. Besides being produced more rapidly than those made by hand, these punches are more accurate, the counters are deeper, and the bevels are truer and always of uniform slope. This machine may be arranged to reproduce model letters in either direct or reverse order.

Where the punch is to be employed in making matrices by the driving process, as is necessary for small characters, hard steel is used. The matrices for the larger characters are made from soft metal by the electrolysis process.

The automatic type-casting machine was invented by Mr. Henry Barth, of Cincinnati, and patented in 1886. The machine is now in general use in type foundries, both in the United States and in England, and has been largely instrumental in reducing the price of type. It delivers completely cast type, perfect in all respects and ready for use. In the office of the *London Times* a new dress of type is cast daily by an automatic type-casting machine, which, though seemingly deliberate in its operation, casts 1,000 types a minute. The old dress of the *Times* goes daily into the melting pot, and a new one takes its place. In that office this system is preferred to the use of the linotype or other composing machine.

The first practical attempt at uniformity in type bodies was made in France, by the type founder Fournier, in 1737. His system, which was quite complicated, did not come into general use, but after his death it was improved by Didot, a type founder of Paris. The systems of Fournier and Didot are still followed to some extent by French type founders.

In America the first practical attempt to establish correct proportions between different types was made by George Bruce, a New York type founder, in 1822, but his method was not adopted by other American founders. After the Chicago fire a firm of type found-

ers in that city—Marder, Luse & Co.—planned a system of bodies based on 6 picas to the inch. Later they took as their standard the pica made by the MacKellar, Smiths & Jordan Company, as the one which the majority of American founders and printers would prefer, and regraded the other sizes according to the methods of Fournier. In 1878 they placed on sale type made on what they called the American system of interchangeable type bodies.

At a meeting of the American Type Founders' Association, in 1886, a committee was appointed to examine into and report upon the new system. There was some objection to the pica as a standard, but the majority of founders finally agreed to accept it as the basis of the point system. The twelfth part of a pica, called a point, was taken as a unit, and all bodies of type were placed on multiples of this point and called by numerical names: pica became 12-point; long primer, 10-point; brevier, 8-point; nonpareil, 6-point, etc.

The American system follows the system of Fournier and Didot, except in the unit of measure employed. The following statement shows the names of the principal bodies or sizes of type in use in England and in America, with the names of these sizes under the point system:

Names of type bodies.¹

AMERICAN.		English.
New name.	Old name.	
60-point	Five-line pica	Five-line pica.
48-point	Canon, or four-line	Canon, or four-line.
44-point	Meridian	Two-line double pica.
40-point	Double paragon	Two-line great primer
36-point	Double great primer	
32-point	Four-line brevier	Two-line english. Two-line pica. Double pica. Paragon. Great primer. Two-line brevier. English. Pica. Small pica. Long primer. Bourgeois. Brevier. Minion. Emerald. Nonpareil. Ruby. Pearl. Diamond. Brilliant.
30-point	Five-line nonpareil	
28-point	Double english	
24-point	Double pica	
22-point	Double small pica	
20-point	Paragon	
18-point	Great primer	
16-point	Columbian	
14-point	English	
12-point	Pica	
11-point	Small pica	Small pica.
10-point	Long primer	Long primer.
9-point	Bourgeois	Bourgeois.
8-point	Brevier	Brevier.
7-point	Minion	Minion.
6½-point	Minionette	Emerald.
6-point	Nonpareil	Nonpareil.
5½-point	Agate	Ruby.
5-point	Pearl	Pearl.
4½-point	Diamond	Diamond.
4-point	Brilliant	Brilliant.
3½-point		
3-point	Excelsior	Minikin.

¹ From Theodore L. De Vinne's *Practice of Typography; Plain Printing Types*, page 64.

In the autumn of 1892 the American Type Founders' Company was established. The majority of the type foundries of the United States became branches of this organization, which now practically controls this branch of the industry.

COMPOSING AND TYPESETTING MACHINES.

The Mergenthaler Linotype.—The linotype machine, invented by Ottmar Mergenthaler, of Baltimore, Md., became commercially successful during the early part

of the decade. This machine is less than 5 feet square, and weighs about 2,000 pounds. It consists of a bank of keys connected with a magazine containing about 1,500 brass matrices—small plates about an inch high and half an inch wide, the thickness varying with the type character. On one edge is the die from which is cast the letter, and at the upper end are a series of nicks or teeth for distributing purposes, every character possessing a different combination. Each magazine contains a number of matrices for each letter, and all the usual characters required by a complete font of type, together with spaces, quads, etc., of varying thicknesses. In addition there are also flat, elongated, wedge-shaped spaces which are inserted between words and employed for justifying each line as it is cast. The magazine containing the matrices is an inclined receptacle 2 feet 6 inches high, the top being about 6 feet from the floor. Within this magazine are channels in which the matrices for the different letters are stored, and through which they pass. The machine is so adjusted that as the keyboard is manipulated the matrices are selected in the order in which they are to appear in the slug or casting. When a key is depressed, the matrix to which it corresponds emerges from its channel, is caught upon an inclined traveling belt, and is then carried to the assembler, or stick. As each word is completed, a stroke of the space key inserts the wedge-shaped space used between each two words. When the line is completed the operator can correct errors by extracting matrices or substituting others for those which are in the line. The wedge-shaped spaces are now pushed up through the line, securing instantaneous and complete justification. The completed line is then transferred automatically to the front of a mold extending through a mold wheel at the left. Behind the mold is a melting pot, heated by gas or gasoline, and containing molten metal. Within the pot is a pump plunger leading to a perforated mouth arranged to close the rear of the mold. When the matrix line is in position the automatic operation of the plunger forces the metal into the mold and against the line of matrix letters, where it instantly solidifies in the form of a slug. The mold wheel then makes a partial revolution, bringing the mold in front of a blade which pushes the slug into a receiving galley, ready for the proof press.

In order to insure accuracy in height and thickness of the slugs, knives are arranged to act upon them during their progress to the galley. The slugs thus prepared are type-high, and when arranged in order look exactly like a type-high, metal-backed stereotyped plate cut into slices one line deep.

Having served their purpose in front of the mold, the matrices are returned to the magazine to be utilized in new combinations. The distribution is accomplished automatically. The line is lifted from the mold by a long arm, and shifted laterally until the teeth at the tops of the matrices engage the teeth of a bar which is

lowered to receive them. This bar then rises, lifting the matrices to the distributor at the top of the machine, but leaving the wedge-shaped spaces behind to be shifted to their magazine, which is to the left of the matrix magazine, and about on a line with its foot. The matrices, having been lifted to the top of their magazine, are pushed along a distributor bar by continually-moving longitudinal screws beneath. The distributor bar, which is made in a single piece, is fixed horizontally over the upper end of the magazine, and is supplied with longitudinal ribs or teeth adapted to engage the teeth of the matrices and to hold the latter in suspension as they are carried along the bar. The teeth of the bar are cut away to produce a different number or arrangement over each of the channels. Each matrix remains engaged and travels over the mouths of the channels until it arrives at the point where its teeth bear such relation to those of the bar that it is permitted to disengage itself and fall into its own channel. It is thus clear that the operation of the machine permits the composition of one line, the casting of a second, and the distribution of a third to be carried on simultaneously. The casting operation can also be arranged to work independently of the rest of the machine. It is said that this machine is capable of a speed greater than that at which the most skillful expert can operate the keys. The average product of a good operator is 4,000 ems per hour. Many operators, however, can produce from 5,000 to 6,000 per hour, and a speed of 13,000 is on record. There are three styles of mold—the first from 30 ems to 19 ems pica, the second for any measure between 24 and 13 ems pica, and the third for measures from 14 ems to 5 ems pica, inclusive. Each magazine contains matrices for any face of type, and the usual range of type faces is now from ruby to pica, or 12-point, though some matrices have been made for 14-point. Various faces of letters, and the alphabets of different languages, can be supplied with this machine. There are also combinations such as casting a 6-point face on a 7-point body, or a 7-point face on an 8-point body, in order to secure the effect of leading. The machines are equipped to permit an exchange of matrices or molds, and they can now be adapted to produce any practical face or any desired body, provided the line does not exceed 5 inches in width.

The Linotype company makes all the matrices required for its machines, employing the Benton punch cutter extensively in the preparation of the characters. Until 1899 it was impossible to employ in this machine more than one face of type at a time—the use of italics, for example, was impossible with body letters; but in the year mentioned one of the officers of the linotype company invented a two-letter matrix. The principal letter is a body character, and is placed above the other, which is italic, small capital, or bold face. To utilize the two-letter device, a special finger key is provided, which moves a small slide into or out of the assembler.

When the slide is drawn forward, the matrices entering the assembler assume the customary height and are delivered to the mold in position to produce the upper or body characters. If italics or small capitals are desired, it is necessary only to draw out the lower end of the finger key, causing the slide to move inward, so that the matrices added to the line will be arrested and sustained at a higher level than the others, causing their lower or secondary characters to be presented in casting position. By the operation of the finger key the line may be made to consist wholly of body face, italics, or small capitals, or of any combination of these faces required. The field of operation of the linotype machine has been much extended by the introduction of the two-letter device. It is stated that about 8,000 machines are in use in the United States, perhaps half that number in Great Britain, and a large number in Germany, France, and other parts of Europe. About one thousand new machines are put in operation each year. They are now in general use in the large newspaper offices in the United States. In addition to greatly cheapening the cost of composition, they possess the added advantage of supplying what is in effect a new font of type with every issue, the slugs being returned to the melting pot after each use. Another advantage is the ease with which the slugs can be handled. As they represent lines instead of individual letters, they can be manipulated with great rapidity.

The Scudder Monoline.—The Scudder monoline machine manufactures a solid line of type, or type bar. It is automatic in all of its functions, and is operated by one man, by the manipulation of a keyboard. The different parts of the working mechanism are attached to a solid, three-legged cast frame, and are in full view and within easy reach of the operator. The machine is 3 feet 6 inches high, 4 feet long, and 3 feet 6 inches wide, occupying about as much floor space as a printer's three-quarter case frame.

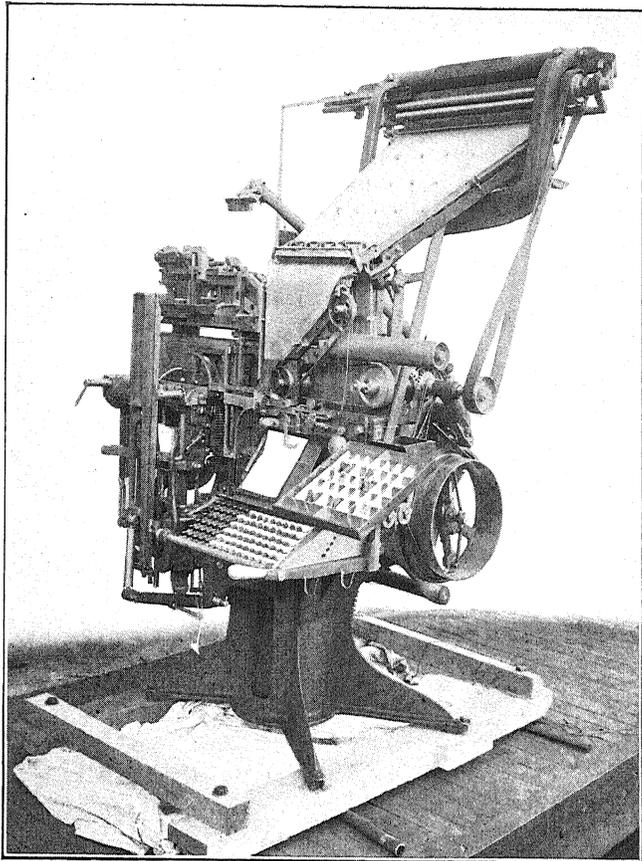
The principle governing the operations of the monoline is much the same as for the linotype, the main difference being in the construction of the matrix bars; those for the linotype carry a single intaglio, while the monoline uses matrix bars, each having 12 characters indented on the front edge. These matrix bars, of which there are 500, are stored one behind another in a magazine about the size of an ordinary photographic camera. As the keys are struck on the keyboard the matrices and spacers descend into the assembling box, traveling a distance of about four inches, and the bars are dropped more or less, according to the position of the letter to be brought in line to be cast. When the line has been completed to approximately its full length, the operator strikes a lever at the right of the keyboard and begins the composition of the second line, while at the same time the machine automatically justifies the first line, carries it to the casting pot, delivers it upon

the galley, and returns the matrices and spacers to their respective receptacles in the magazine. The machine will not cast a line which has not been properly justified. After being once brought into use, a matrix bar or spacer is not employed again until all others of the same kind stored in the magazine have been used in turn.

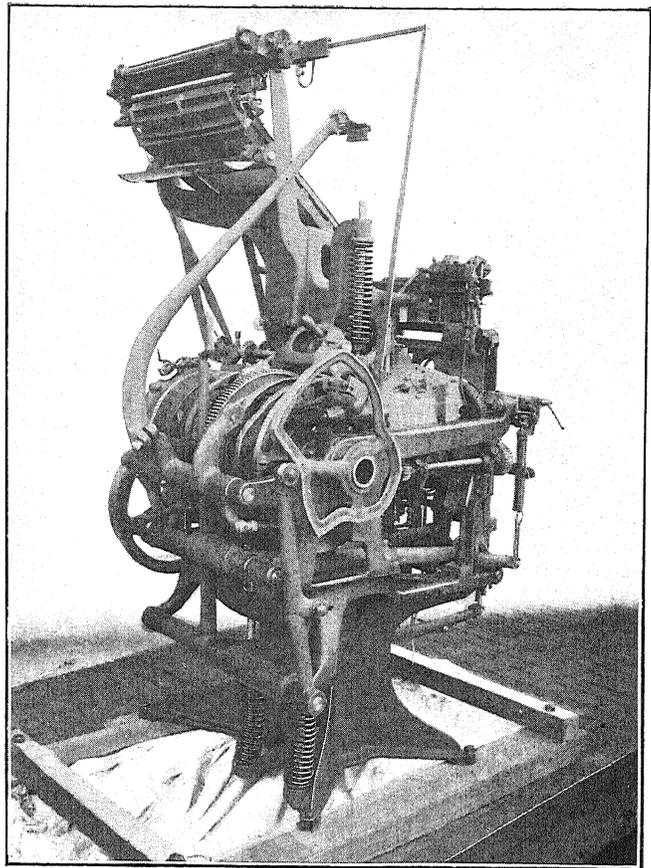
The Lanston Monotype Machine.—The Lanston monotype machine was invented by Tolbert Lanston, in 1886, but was not placed upon the market until the latter part of the last decade. The principle upon which it is constructed differs radically from that of the linotype. The monotype produces single types cast in the order of their use, and set in automatically justified lines. It consists of two machines—a perforating device operated by a keyboard, and a casting machine. The keyboard differs from that of the typewriter only in the much greater number of characters, of which there are 225, comprising a complete font, including italics and small capitals. The keys are arranged in 15 columns of 15 rows each, with 2 extra rows at the top to secure justification. For each series of characters in the font a different color is used, so as to distinguish italic from roman, etc. The keyboard is between 3 and 4 feet from the floor and is supported by an iron bar upon a base 1 foot square. At the top of the machine is a roll of paper which unwinds from one spool and winds on another as the keys are struck, and also a paper scale for registering the body size of the type.

Before beginning his task, the keyboard operator sets an index of the number of ems required per line. Each stroke of a key perforates the paper ribbon in such a combination as to control the matrix of the proper letter in the casting machine, and causes the registering scale to charge to the line an amount equal to the body width of the type just selected. In this way a line of matter is progressively perforated and charged until, as the end is approached, the line scale shows that the next word or syllable can not go into that line, while another portion of the registering scale indicates the amount of unfilled space in the line just perforated if it should be cast with its spaces of normal body size. Still another portion of the scale has been keeping account of the number of spaces used between words of the line which may be varied in the process of justification. The machine thus mechanically notes for the operator the amount of space to be added and the number of space types among which the variation from the normal body width may be apportioned. At the completion of each line the operator, by merely noticing the figures shown by the pointer on the justifying scale, knows at once what additional holes to perforate in the record in order to secure perfect justification. When he has touched the justifying keys the registering scale recedes to zero, advancing again as the new line progresses. These operations are all automatic.

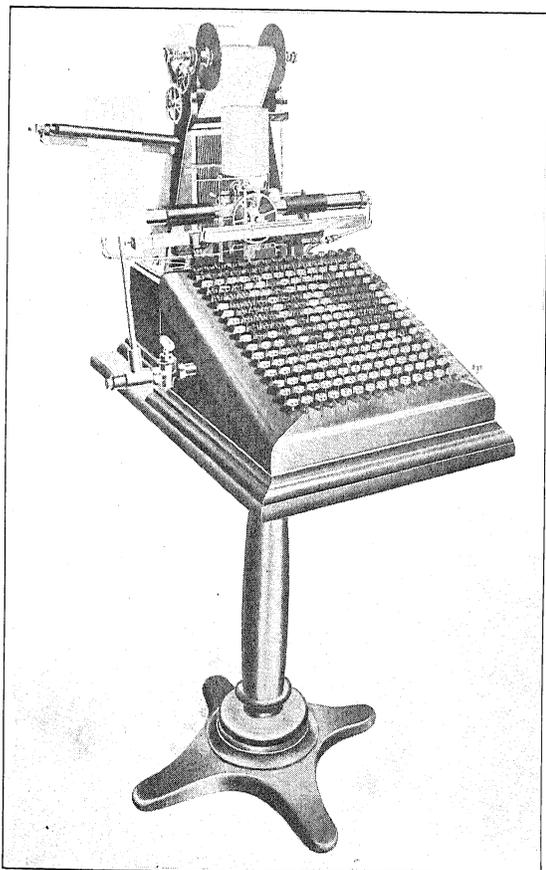
From the perforator the spool passes to the casting



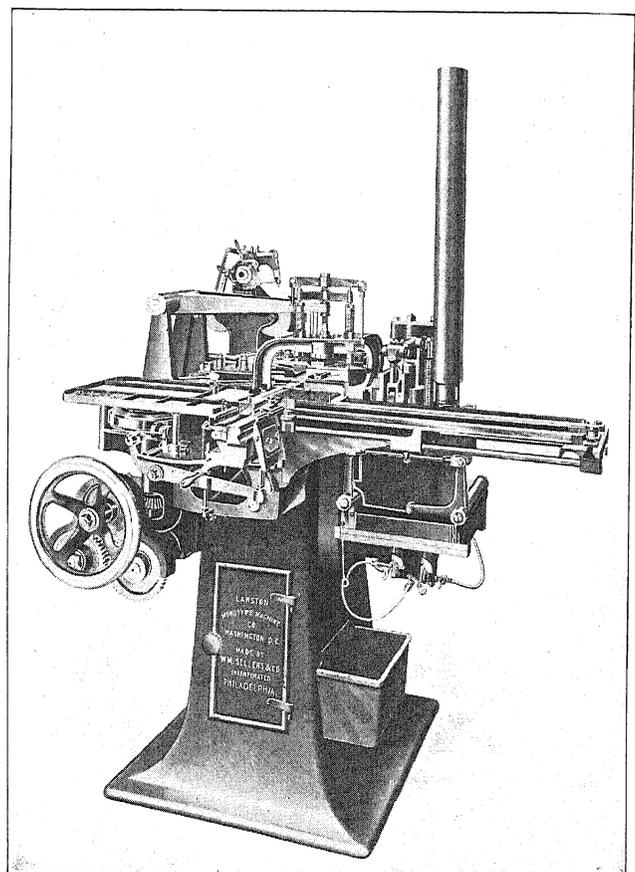
MERGENTHALER LINOTYPE—FRONT VIEW.



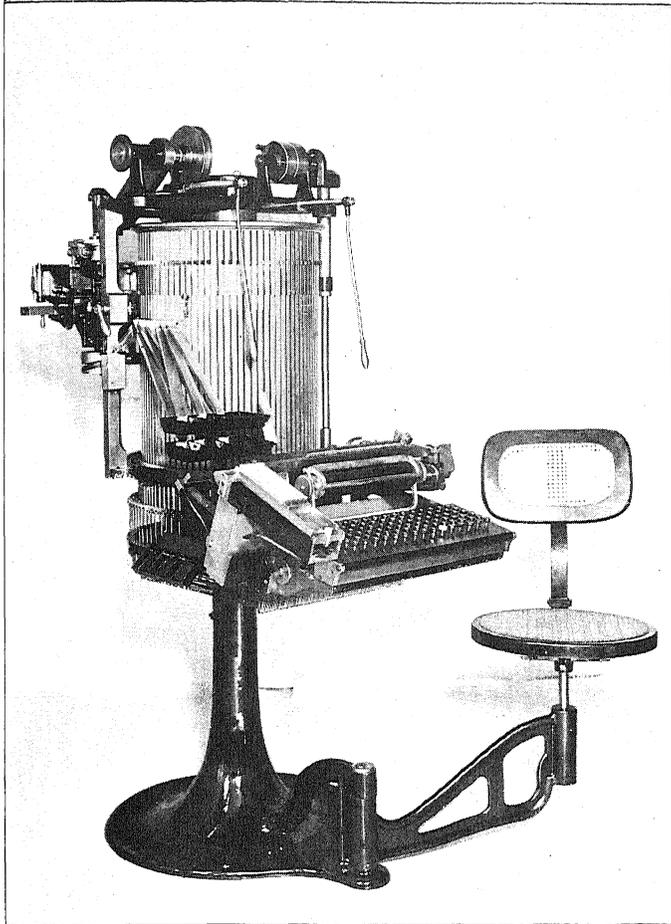
MERGENTHALER LINOTYPE—SIDE AND REAR VIEW.



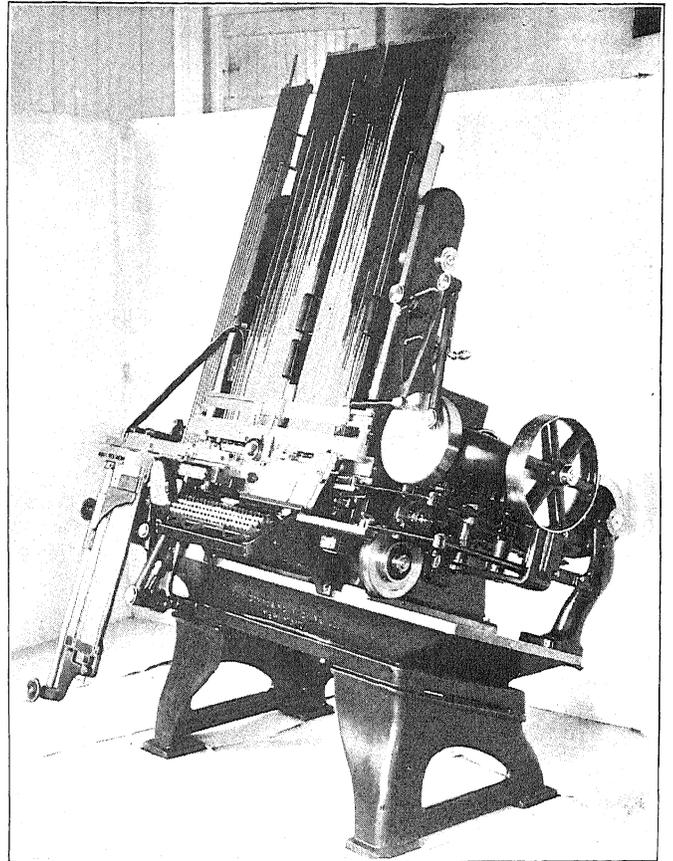
LANSTON MONOTYPE—KEYBOARD.



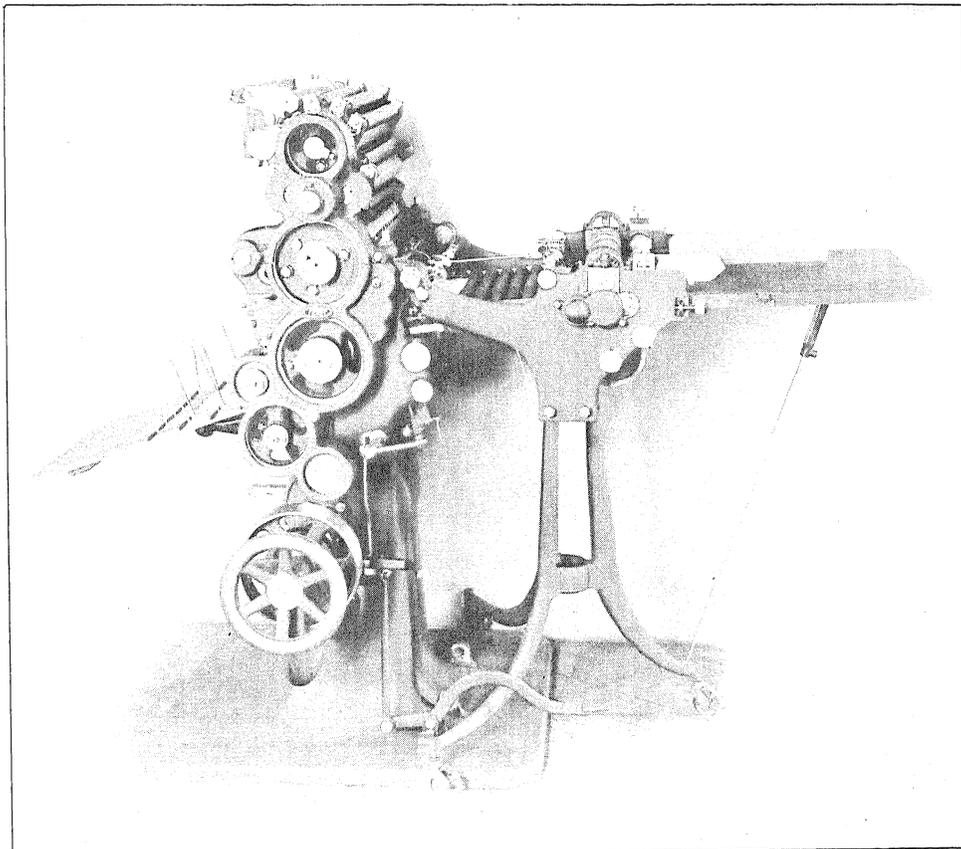
LANSTON MONOTYPE—CASTING MACHINE.



SIMPLEX ONE-MAN TYPESETTING MACHINE.



DOW COMPOSING MACHINE.



HARRIS ROTARY JOB PRESS.

and setting machine, an intricate piece of mechanism about 4 feet high and slightly less in width, weighing about 1,200 pounds. On being placed in the casting machine the ribbon is unwound in reverse order, the operation of casting and setting proceeding in like manner. The control of the casting machine by the perforations in the ribbon is effected by the pressure of air passing through the holes as the ribbon moves over a rounded plate. Within this plate are 32 air tubes, and, as different perforations appear, different connections are made through these tubes with the working parts of the casting machine, a pressure of 8 pounds being maintained. The 225 matrices are contained in a die case measuring about 3 inches square. The matrix case shifts its position according to the combination of perforations passing over the air tubes. The perforations for justification regulate the casting of space types between words, causing the mold to be opened in the degree indicated by the justifying holes, in order that the space types may be cast of the proper size. Thus, from the record ribbon made at the keyboard, the casting machines cast type and insert mathematically correct spaces at constant speed, which may be kept up to the limit of cooling metal. It is the work of only a few moments to remove one matrix case and substitute another. Moreover, the molds in which the bodies of the types are cast, also, may be exchanged at short notice. At one side of the casting machine is a melting pot, in which an automatic plunger forces the hot metal into a nozzle leading directly to the mold upon which the matrix rests. The metal is forced against the matrix, which is filled first, and then instantly occupies the body of the mold under pressure, insuring a good cast. When chilled the types are ejected through the mold into the carrier, which carries them to the line in the galley. As each line is completed, it is advanced automatically to make room for the next. The correction of matter set on the Lanston machine is the same as in hand composition; it is not necessary to recast a line, as in the slug machines. In the operation of the Lanston machine it is customary first to cast a font of type to be used in making alterations by hand.

It should be observed that the keyboard and casting machine have no connection whatever, and that each part can be operated independently. A keyboard operator can set matter as rapidly as he can read the copy and strike the keys, a speed of 5,000 ems per hour being regarded as a moderate average. The type-casting machine casts and produces, according to the body size, from 75 to 125 ems per minute, or from 4,000 to 5,000 per hour. It can be adjusted to cast type on bodies ranging from 5½-point to 12-point, with various faces.

The advantages claimed for this machine are perfect justification, the convenience of being able to operate the two parts separately, the employment of matter set from single types, and therefore easily and quickly cor-

rected, and the ability to produce a font of type at every operation. Although they have not been long in practical operation, many of these machines are in commercial use.

The Goodson Graphotype.—The Goodson graphotype machine was first placed upon the market in 1899, by J. H. Goodson, and depends upon electricity for its successful operation. It is composed of two parts: a small table about the size of a typewriter desk, containing an ordinary typewriter, a perforating machine, and a small dial similar to a clock; and a caster and setter. The typewriter is in all respects unaffected as far as facility in writing is concerned. The operator is required, in addition to the execution of ordinary typewriting, to notice, when the end of the line is reached, the dial which controls the spacing, and to touch the key indicated by the dial, thus automatically spacing and justifying the line.

Each time a key is touched, not only is the proper letter written on paper, but an electrical communication is made with the perforator, which perforates a narrow paper ribbon in series of round holes so arranged that when the ribbon is placed in the casting and setting machine a similar electrical connection is made through this perforation, by indicating the letter or space to be cast and set. The advantage of a visible, typewritten sheet is obvious. It is accessible to the operator for reference, and it may be read by the proof reader instead of the first proof, as the type and the typewritten page are identical so far as the orthography is concerned. The ribbon, together with the corrected typewritten sheets, may be put away indefinitely for reprint or for possible use in the future, without expense for retaining metal. The same perforated ribbon and corrected first proof can be used in the casting machine to set from 5½ to 12 point type, the size or style of type required being determined at the caster, not the perforator.

The caster and setter resembles a sewing machine, being but little larger. It is operated automatically, and controlled by the perforated ribbon already mentioned. It casts and sets type continuously at a speed of 5,500 ems per hour, and has reached a speed of 8,000 ems per hour. The metal pot is more than a foot from the mold, making it possible to cool the types rapidly, thus overcoming a difficulty which has heretofore limited the efficiency of casting machines. It is possible, therefore, to maintain the maximum speed mentioned. The molten metal is conveyed to the mold by means of an electrically heated tube insuring uniform temperature for type casting. The mold is also water-jacketed, to counteract the heat which the small jet of metal gives out in casting type. By this means the mold is kept at a temperature at which the type is immediately chilled throughout an indefinite run, insuring a perfect and well-cut face. The type itself is in all respects

equal to foundry type, and can be distributed into the case and reset with the same facility. The size or style of type and the measure can be changed as rapidly as this could be done by hand. It is claimed that the advantages of this machine for setting tabular matter are very great—that it can be set at the same speed as straight matter, the rules being put in by hand.

The Dow Composing Machine.—The Dow system of composition, patented November 28, 1899, requires the use of two machines—a composing machine, which sets individual foundry types and delivers them automatically justified on the galley; and a distributing machine.

The composing machine is a little over 6 feet high, weighs 2,000 pounds, and occupies about 17 feet of floor space. It is operated by means of a keyboard similar to that of a typewriter, but with 90 characters. The keys descend only three thirty-seconds of an inch, and are used simply to release certain parts, the driving power of the machine accomplishing the rest of the work. For greater ease in handling, the main type magazine is divided into two parts. In the type channels, which are 4 feet in length, the types lie with their faces in sight, resting on their sides in order that a large number may be placed in one channel. For further increase of capacity, additional channels are devoted to letters in frequent use.

At each touch of the keyboard a single type is pushed from the magazine and advanced to a type raceway in front of and parallel with the magazine. This raceway, which is in a continuous horizontal line, widens at one end, so that as the type enters and is pushed along by a rapidly reciprocating type driver it is stopped at the center by the narrowing of the raceway. From this position it is conveyed, by a blade operating in harmony with the type drivers, into an upright channel or "stick," each type forcing down the preceding one. To set a line of quads the operator simply keeps his finger on the quad key, and the quads are set in the stick at the rate of 10 per second until the line is filled. As the types enter the stick their faces are presented directly in view of the operator, who can read and correct them at will. A bell gives warning when a line is approaching completion, and a gauge at the side of the channel in which the line of type is formed, shows how much the line is short or how far the operator has overrun the standard measure he is setting. When the line is full the operator touches the line key, and then, without further attention on his part, and without delaying the composition of the next succeeding line, the stick of type turns halfway round and the line of characters is thrust by a blade to a point on the raceway called the "bridge," where the process of justification begins.

During the process of composition plain, type-high, rectangular bits of brass are used temporarily to separate the words; at the bridge each word is removed from the forward end of the line and carried to the

galley, where the temporary space is extracted and returned to the setting case, the proper justifying space being substituted. The justification is accomplished by means of an automatic calculating device placed at the back of the machine. This calculator registers the shortage in the line and the number of spaces among which this must be divided, divides the shortage as equally as possible among the number of spaces indicated, and sets in motion another mechanism which ejects the required spaces and places them between the words as they pass in succession along the raceway to the galley.

Safety devices are provided to protect the machine from accident or carelessness. Should anything get into the raceway at the foot of the channels, the sliding shoe on the type driver unlatches from the driving mechanism, so that the reciprocating parts go on working, clear of stoppage. If by any chance the stick becomes choked, so that it can not turn at the proper time, the ejector blade is stopped, thus preventing injury to the stick. All movements of the machine are positive, there being no dependence whatever on gravity, centrifugal force, magnetism, air pressure, or the like, and the operative force used is only one-half horsepower.

When one of the sorts is exhausted, if it be one of the duplicated channels the next channel is brought into action by means of one of a series of levers over the keyboard; if the type sort be entirely exhausted it is replenished from the distributor. When the magazine requires refilling, it is let down by a hand crank, lifted out by the handles, and taken to the distributor.

The Dow distributor is entirely separate from the composing machine, but its mechanism is of the same positive character. The operation by which it distributes the various types in their respective channels is automatic, and allows a normal speed sufficient to supply three composing machines with type. For purposes of distribution the body of each type character has a special identifying nick. The distributor, which lies flat, consists of a central disk joined to a set of channels radiating like a fan. Upon the periphery of the disk are supported 36 type carriers, and as these are rotated past the galley channel on one side, each receives a single type, which is carried round until it is opposite the proper channel, when it is pushed out of the carrier into the channel, the distributor continuing its rotation.

The Simplex One-man Type Setter.—The simplex machine is a combination of the Cox typesetting machine and the Thorne machine. It performs the two operations of composition and distribution, either simultaneously or one at a time, as the operator chooses. It occupies less space than a printer's stand, weighs 800 pounds, and requires less than one-fourth horse-

power to drive it. The body of the machine is formed of two cylinders about $1\frac{1}{2}$ feet in diameter, one directly above the other. The lower, which is about 2 feet high, is stationary, but the upper, whose height is about 9 inches, rotates in the common axis. In each cylinder, extending vertically their full length, there are 90 parallel channels, slightly wider than the body of the type which the machine is made to set; those of the lower form a magazine into which type is distributed from the channels of the upper cylinder, to be stored for resetting.

Each key on the keyboard is connected by levers and wires with a small plunger at the bottom of its particular channel. When the key is depressed the plunger is moved forward and ejects one type on to the flat surface of a rapidly moving disk encircling the bottom of the cylinder. The type is conveyed quickly to the right-hand side of the machine, collisions of type on the way being prevented by the scimitar-shaped guards between each two channels, which prevent the types from interfering with one another and guide them as they start on their run on the disk. A switch deflects the type from the disk to a flat traveling belt which runs parallel with the disk at this point, and which conveys the type to the "separator"—two rolls with just enough space between to permit the passage of a single type, so that if the operator has played two types which are traveling side by side they are separated before proceeding farther. The types are now guided, one by one, to the packer, where they run on a cam, are lifted, and are then carried forward to proper position. Types succeed each other in the packer with 3-em space between the words, until a continuous line is formed extending across the back of the keyboard, with the face in view. At this point the operator, who is on a seat attached to the body of the machine, swings himself to a place at the left, where the justifying mechanism is situated, separates from the long line about enough matter to fill a line of the width of the column being set, and justifies and corrects it by hand; he then touches a thumb lever beside the galley, releasing a pawl which engages with a ratchet on a rotating wheel under the keyboard. In one revolution of this wheel, the rule which stands behind the type line is drawn down below it, while a line pusher comes up in front of the line and carries it into the galley which rests on a support behind the rule. For "leading" matter automatically there is a receptacle—which the operator can easily keep supplied with leads—out of which, by the action of a small lever, a lead can be delivered behind each line as the line pusher carries it into the galley; if more than one lead is desired, the thumb lever is held out until the needed number of leads has been supplied.

The distributing mechanism is at the rear of the upper cylinder. The galley of dead type to be dis-

tributed is placed sidewise (the lines of type being vertical) on a bracket, upon a solid upright fastened to the body of the machine. In each channel of the distributing cylinder there is a weight which rests on top of the column of type. When an empty channel, in its revolution, reaches the loading point, its weight, being low, trips a trigger attached to the releasing mechanism and the vertical lifter and plunger cam shaft is started, making a complete revolution. The lifter arm carries up the weight, thus leaving the channel clear while the "plunger" is moved forward and a line is pushed from the galley into the channel. After one line has been extracted from the galley, a spring moves the column forward so that the next line is in position to be loaded into the distributing cylinder. As the shaft continues its revolution, the lifter arm is dropped and the weight is lowered upon the line of type where it rests, aiding the force of gravity in making each type drop into its proper channel in the magazine cylinder. For this system of distribution each type character in a font is given a combination of nicks, and the channels are so grooved that they are closed to all type not fitted, by the combination of nicks, to pass.

All the channels in the upper cylinder are filled in turn. The cylinder revolves with a step-by-step motion, each of its channels being brought in turn over each channel in the stationary magazine cylinder below and held rigidly a moment to permit the dropping of each type as it comes to its proper channel.

In the practical operation of this machine it is not necessary to keep the distributor working without interruption, since it supplies type faster than the operator can set it up. With every channel in the upper cylinder empty, the replenishing can be done in three-quarters of a minute.

The sorts in the different channels distribute in about the proportion required by the operator, but provision is made for removing quickly any sorts which distribute faster than is required, and for replenishing the supply of sorts which do not distribute rapidly enough.

STEREOTYPING AND ELECTROTYPING.

The process of duplicating type surfaces by stereotyping has remained practically unchanged since its application to the requirements of newspapers in 1861. This process has been a necessary adjunct to the perfecting press, which prints from curved stereotype or electrotype plates. Advances in this form of press construction created a necessity for the rapid casting of stereotypes, and for many recent models, the duplication of pages. This demand led to considerable improvement in the direction of rapidity of production and ease of handling in stereotype plate casting.

The most notable improvements in the stereotyping process during the last two decades have been a matrix-rolling machine, constructed for making a specially

prepared matrix, which is ready for the casting box when it leaves the press; improved drying tables; automatic casting boxes; combined sawers and trimmers; combined planers and shavers; improved machines for routing and beveling; and an improved half-tone beveling machine.

The autoplate, an invention of Henry A. Wise Wood, is a mechanical device for stereotyping. It is a solidly constructed mechanism, 4 feet high, 7 feet long, and 3 feet wide. The matrix is placed, face up, in a concave receiver, which slides forward into the casting box when the machine is set in motion. The bottom of the box rises and lifts the matrix close to a fluted cylinder, while at the same time a pump begins to draw molten metal from a caldron and force it into the casting chamber, under an elastic pressure, which follows the shrinkage of the plate with fresh metal. Sprays of water are used to cool rapidly the casting box and the cylinder. When the plate is completed the casting box falls, stripping off the matrix, and the plate is brought by the cylinder to the top of the machine, where a metal arm seizes it and carries it along toward the back, trimming and finishing it automatically on the way. Then the plate moves out upon a long arm, where a workman gives it the final preparation for the press.

The great advantage of the use of the autoplate over other methods of stereotyping is that much less time is required. At highest speed, hand work will produce but one plate per minute; the autoplate will produce three or four in the same time, and the quality of its work is pronounced superior to that of hand work. Another consideration of advantage to the printer is that fewer workmen are required to attend to the working of the autoplate than are necessary for hand work.

Stereotyping is still in general use in newspaper offices, because of speed. With respect to fineness and finish, electrotyping is far in advance of stereotyping, and is now used almost exclusively for book, magazine, and job printing.

In electrotyping the principal improvements are these: An important invention to stimulate the action of electro-deposition by the use of a dynamo; a black-leading machine which utilizes a blast of air; a combined metal kettle, wax-heating table, and case-filling table; a power wax-shaving machine; a hydraulic molding press; and improved saw and routing machines, including curved routing machines for use on both electrotype and stereotype plates. Process engraving, or the half tone, has developed new possibilities for the electrotyping process. The Muller patent half-softening hammers and punchers, and the Richards improved ruling machine, are inventions used in this work.

PRESSES.

Prior to 1870 printing presses were largely of two types: the platen or job press, in which the impression was made by direct pressure; and the cylinder

press, consisting of a flat bed which held the type form in a horizontal position, and oscillated beneath a large revolving drum or cylinder carrying upon a segment of its surface the sheet to be printed.

Attempts had been made to construct a press which would permit the type to be placed upon a cylinder, utilizing the rotary principle that has been brought to a high degree of perfection in the modern web press. In 1846-47 Hoe & Co. produced a machine of this class. The type was locked on the surface of the cylinder, the curvature being assisted by V-shaped column rules. The sheets were fed separately to impression cylinders, and delivered by a sheet flier. This form of press was soon found incapable of meeting the demands of the larger newspapers.

The discovery, about this time, of the possibility of casting stereotype plates on a curve, from papier-maché matrices, was the key that opened the way to the ingenious and complicated printing presses of the period.

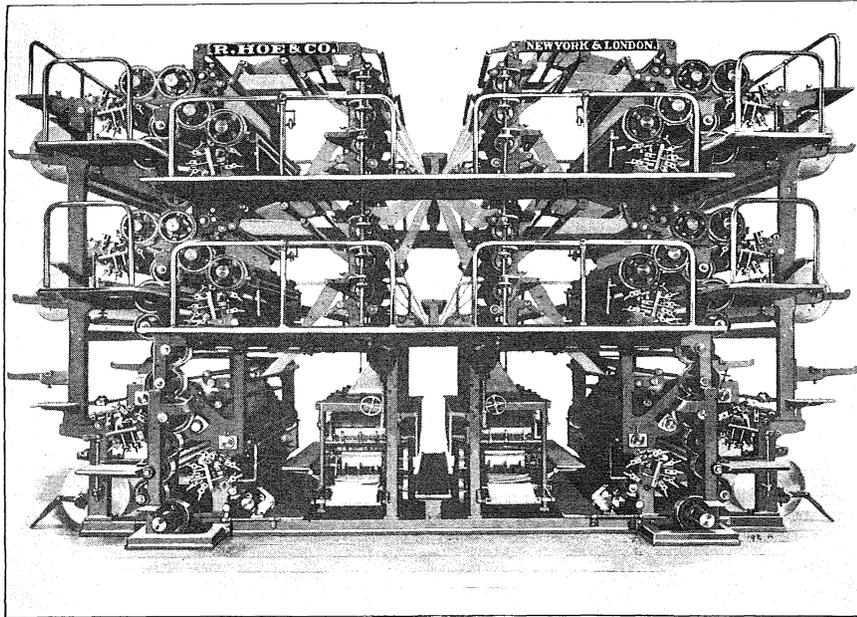
Job Presses.—The improvements in job presses consist largely in details relating to the various classes of work for which they are intended. In the general construction of this class of presses few radical changes have been made, and standard patterns long in use need not be described here. The most radical departure within the last few years has been the employment of the rotary principle, as exemplified in the Harris automatic press. In this press the printing surface is a curved electrotype plate, though separate types can be fitted into a type box adjusted to the printing cylinder. The press prints upon separate sheets which can be fed either by hand or by an automatic arrangement; the automatic feeder carries several thousand sheets of paper, which are fed from the bottom by an ingenious device permitting the renewal of the pile without stopping the press. The speed of this press is from 5,000 to 14,000 impressions per hour, according to the class of work.

The Kidder Press Company manufactures job presses which feed automatically from a roll.

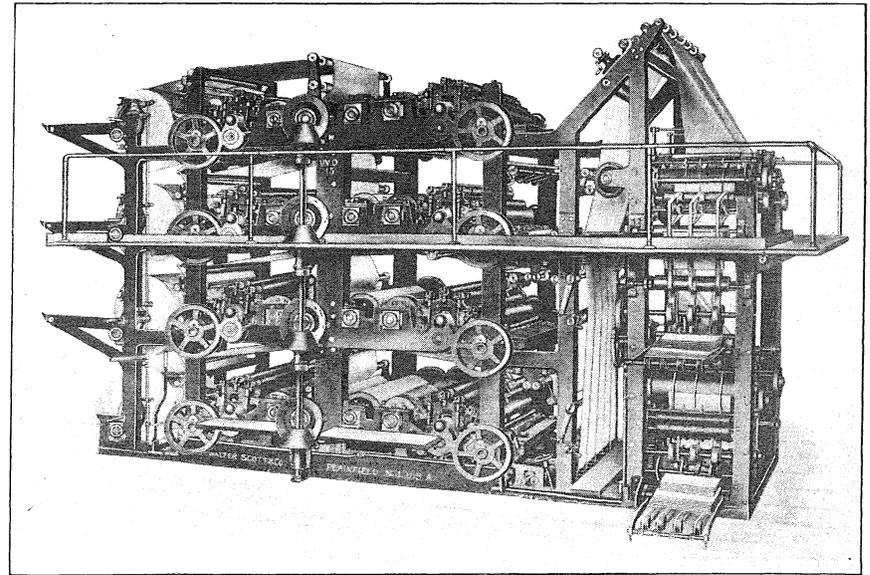
Cylinder Presses.—Until the close of the last decade the cylinder press was the main reliance of publishers for larger work, such as books, posters, and all large forms. It was in general use also for papers of small circulation and for all high-class work. Improvement in perfecting presses has to some extent caused the displacement of the cylinder press, but it is still generally used.

There are four kinds of cylinder presses in use—the drum cylinder, the double cylinder, the stop cylinder, and the two-revolution cylinder. Of these, the last named is now regarded with the greatest favor.

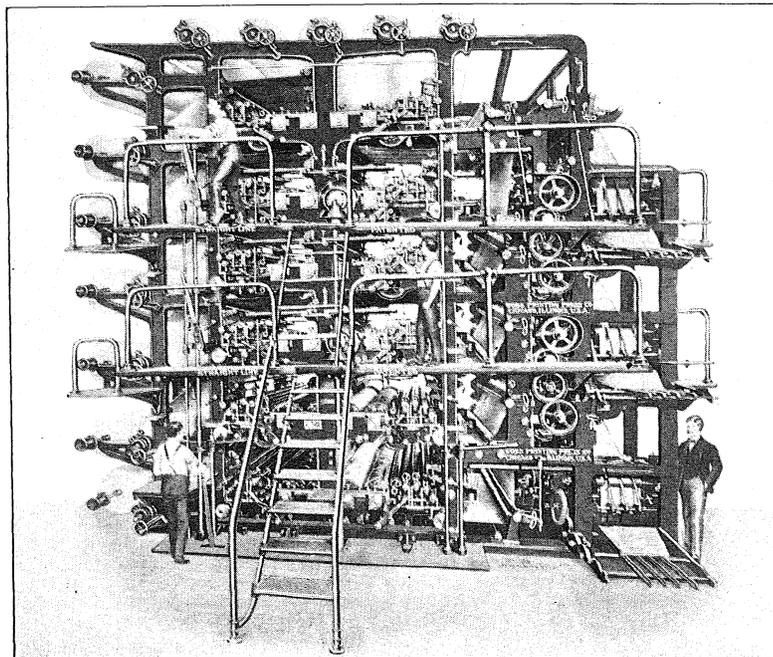
The past twenty years have witnessed numerous improvements in the three styles of presses last mentioned. From the old, cumbersome drum cylinder, still in operation in many country newspaper offices, with a speed



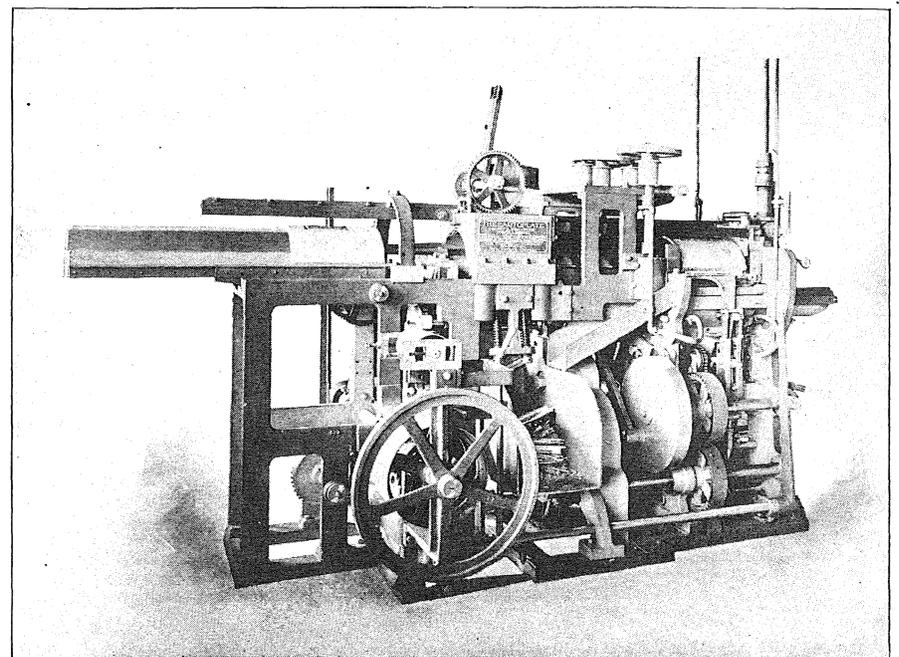
HOE ROTARY NEWSPAPER PERFECTING PRESS.



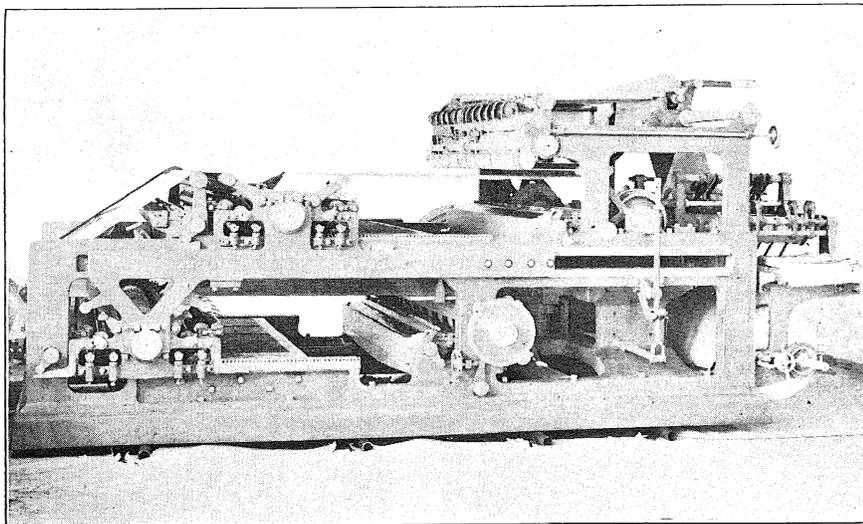
SCOTT OCTUPLE PERFECTING PRESS.



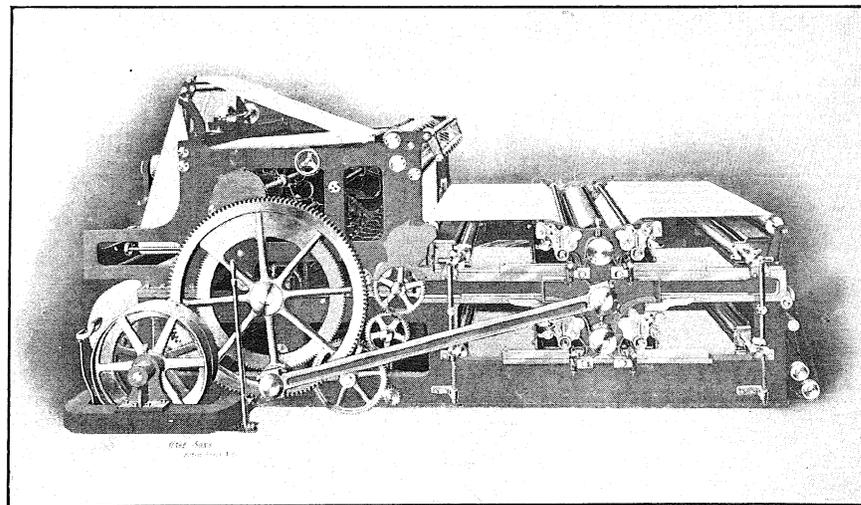
GOSS STRAIGHTLINE PERFECTING PRESS.



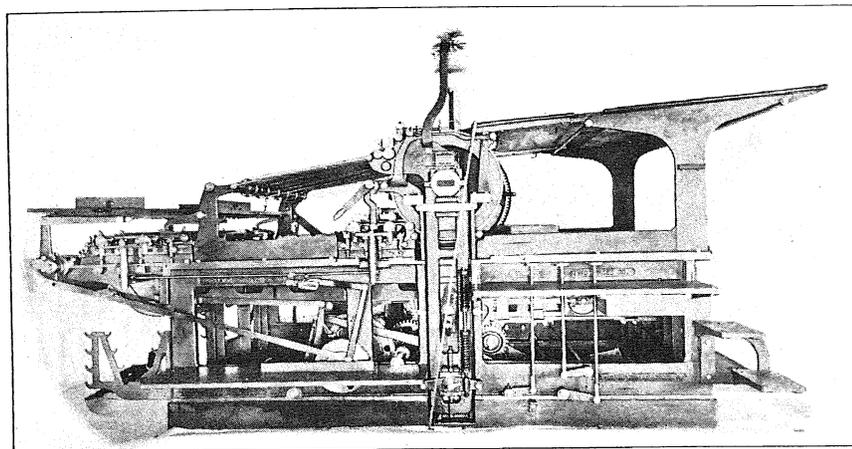
THE WOOD "AUTOPLATE."



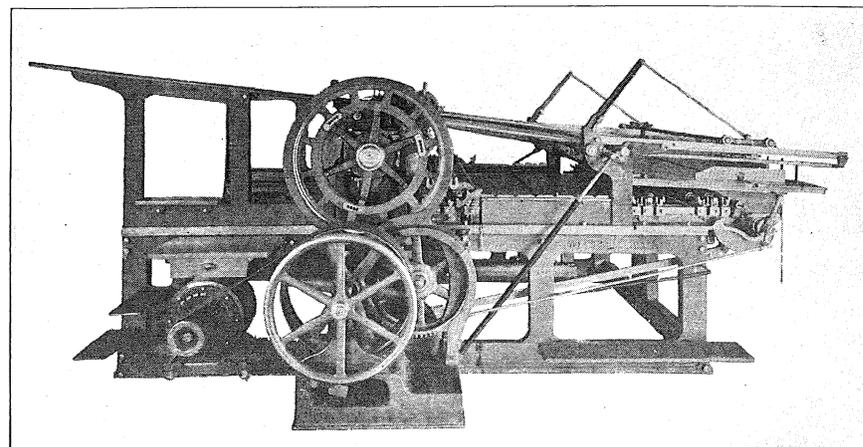
CAMPBELL "MULTIPRESS" FOR PRINTING FLAT FORMS WITHOUT STEREOTYPING.



COX DUPLEX PERFECTING PRESS FOR PRINTING FLAT FORMS WITHOUT STEREOTYPING.



HUBER HIGH-SPEED 2-REVOLUTION BOOK AND JOB PRESS.



MIEHLE BOOK AND JOB PRESS WITH MOTOR ATTACHMENT.

of 1,200 to 1,500 per hour, to the modern, rapid two-revolution press, with all its delicate adjustments and labor-saving devices, is a very great advance.

From the old-fashioned drum-cylinder press was evolved the double cylinder, a duplication of the cylinder, by which the capacity of the press was doubled. The cylinders were fed alternately. The stop-cylinder press was so named because the cylinder stops at a certain point in its revolution, thus permitting greater accuracy in feeding. Owing to the exactness with which the sheet was printed—technically called “register”—this press was used where fine grades of work, such as half-tone or color work, were required. It attained great popularity, but has been supplanted by the two-revolution press, because the latter possesses much greater speed and nearly equal accuracy. In this press the cylinder is smaller, and revolves twice at each impression, once in contact with the type and again in a slightly elevated position while the sheet is being released and the form returned to its former position.

In 1885 Robert Miehle made a number of improvements in the two-revolution press, which increased its capacity and brought it into more general use. Since then this type of press has been subject to continuous improvement. The Century two-revolution press is one of the most perfect machines of this class. The constant aim of improvements in this field has been to increase speed and accuracy, and to give the utmost facility in adjustment and operation. Among recent improvements in the two-revolution press are the substitution, for cam gears, of a crank movement of the bed; an adaptation of the stop-cylinder principle; and perfected methods of ink distribution.

Perfecting Presses.—In the web perfecting press occurred the most noteworthy development of the past two or three decades. While modern presses of this class possess remarkable capacity, they are the result of improvement, rather than a radical departure from the earlier form of rotary presses. Various mechanical problems, resulting from high speed, were met and solved; among these were the questions of combining the printed sheets, cutting, folding, and preventing the offsetting of ink. Although attempts were made before 1870, in this country as well as in England and France, to build presses embodying this principle, the machine constructed, in 1871, by Hoe & Co., of New York, may be said to be the first successful perfecting press. This press printed 15,000 papers per hour from one set of plates. In 1876 this firm brought out the rotary folder. The development of folding mechanisms has naturally kept pace with that of the press proper, until at the present time papers consisting of any even number of pages from 4 to 32 are turned out, cut, pasted, folded, and counted, in lots of 25 or 50, at rates of speed varying from 12,000 to 150,000 per hour.

The term “web perfecting” exactly describes the process employed; a roll, or “web,” of paper passes

into the press and is printed, or “perfected,” on both sides before being cut and folded. The early form of rotary press was the “single.” Then the length of the cylinder was doubled, thus doubling the capacity of the press—that is, printing a paper of the same size at twice the speed, or a paper double the size at the same speed, as the “single rotary.” Then came the double-supplement press, with a set of single cylinders at one side, permitting the printing of 10-page and 12-page papers. The next step was to double the supplementary press, forming the quadruple press—a style in common use to-day—with a capacity of from 48,000 4-page papers to 12,000 24-page papers per hour. Instead of being arranged side by side, the presses were often constructed with the supplementary press on top, making a “double decker.” The quadruple press was then converted into a sextuple press by the addition of a supplementary double press placed at one side. It was a simple matter to convert this into an octuple, a type of press now in use on such papers as the *New York Journal* and the *Chicago Tribune*. The octuple is sometimes constructed by piling four double presses one above another. One style of press, designed for the *New York Journal*, consists of two sextuples working side by side. This is a three-decker machine, equivalent to six double presses. In these presses each double-cylinder machine is fed from a separate roll of paper. The folding and cutting mechanism can be adjusted to assemble the pages in any desired combination within the limits of the press.

The illustrated colored supplements of the large city journals have been made possible by the adaptation of these presses to color printing, permitting the use of one, two, or three colors besides black. This principle has been carried still further in a rotary multicolor and half-tone machine, which prints in as many as eleven colors, and has a capacity 48,000 full-sized 8-page papers per hour.

Two general classes of the web press are made. In one, what is called the “angle bar” is utilized to turn the sheets in order to assemble them from the different webs. The other is designated the “straight line,” the sheet being run through the press without being diverted from a straight course, and was invented by Joseph L. Firm, of Jersey City, N. J., who associated himself with the Goss Company, of Chicago, in 1890. By means of this invention greater accuracy in register was obtained, with less danger of tearing the running sheet in rapid work.

The Scott Company has produced an “all-size” rotary web press, by which pages of different sizes can be printed, the adjustment being graduated to quarter inches.

Another type of perfecting press is shown in the flat-bed “multipress” of the Campbell Company, and the Cox duplex press, in which the type beds are stationary, the cylinders rolling back and forth upon them. These are adapted to small country dailies.

Many variations in the perfecting press are made to order to satisfy individual requirements. Some of these even place colored covers upon their products and stitch or staple them. The colored supplements of newspapers are often printed in colors on one side and black on the other, and half-tones often occur on the same page in different colors. Music is printed on heavier paper and folded in with the supplement. All this is accomplished without marring the product. A space is often reserved also for a type column of late news, to avoid stereotyping another set of plates.

The presses of the Goss Company are fitted with an ingenious arrangement to prevent offsetting. Rollers made of molasses and glue pass over the freshly printed paper, absorbing the excess of ink, which is then transferred to a polished metal cylinder, from which it is removed by a cylindrical cotton wiper.

Toward the latter part of the last decade the product of the perfecting press was greatly improved, so that it became a competitor for the finer grades of magazine work, for which it is being utilized more and more.

Lithographic Presses.—Few changes of consequence were recorded in this branch of the industry during the decade. Aluminum plates have been employed with considerable success as a substitute for stones, but the notable feature in their employment is that they permit the use of the rotary principle. Special presses, constructed with great care to meet the exacting requirements of lithographic work, are manufactured for this process, and have attained some success.

PATENT BLANKETS AND MECHANICAL OVERLAYS.

There were many attempts to substitute mechanical processes for the laborious task of "making ready" by hand. Among the inventions of this class were the Savary, Dittman, De Vinne-Bierstadt, and Humphrey and Upham methods, all of which must be regarded, so far as general use is concerned, as still more or less in the experimental stage.

The Savary device is a blanket composed of a collection of very short wires. This blanket is mounted on a cylinder, and by equalizing the pressure serves to correct irregularities in the height of type and cuts. Another invention substituted a blanket of woven wire for that of pointed wires.

The Dittman process utilizes the expansion which occurs in wheat flour when dusted onto a fully inked impression.

The De Vinne-Bierstadt process utilizes the action of light upon gelatin in combination with other substances. A print taken on a thin sheet of transparent celluloid is dusted with plumbago to thicken the lines, and exposed in a photographer's printing frame over a film of gelatin. This film is afterwards swelled in those parts not made insoluble by the action of light, and from it a plaster of paris mold is made. From the latter a flexible reverse in gutta-percha is formed, and the

gutta-percha, backed, becomes the overlay, being thickest in the darkest parts of the illustration.

The Humphrey and Upham process is of use only for duplicating overlays. This duplication is made by rubber or gutta-percha impressions of a reversed overlay.

ILLUSTRATING AND ENGRAVING.

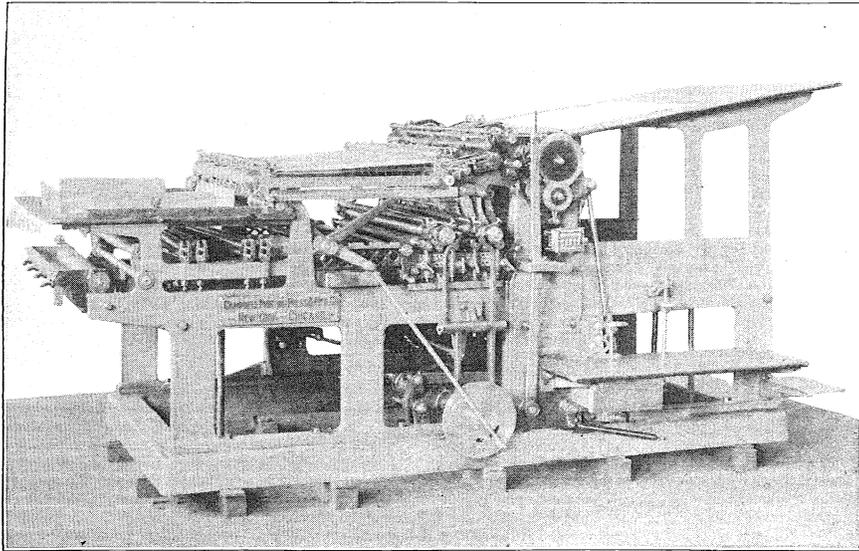
The introduction of photoengraving, about the year 1875, marked a new era in the history of illustrating and engraving.

Wood and steel engraving were unable to fulfill the increasing demand of the public for large quantities of good, inexpensive pictorial work. Proper production of this work by hand was impossible, save by an artist of no mean ability. Accordingly, if illustration was cheap, it was poor; if good, it was expensive.

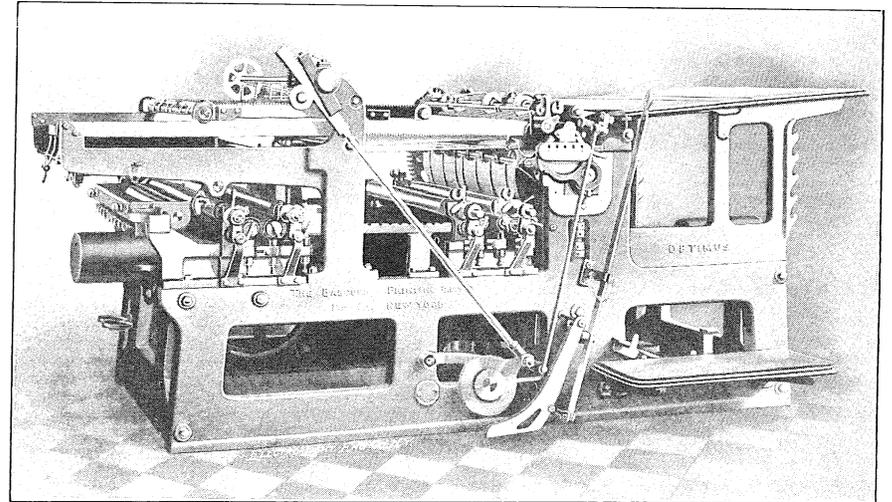
Half-tone Engraving and Zinc Etching.—The half-tone process is a method of making cuts suitable for use upon ordinary printing presses. The first step is the taking of a photograph on a wet sensitive plate, in front of which, in the camera, a fine screen is placed. These screens are an essential feature of the process, as they permit the accurate reproduction of the half tones in the object. They are made by mechanically cutting or scratching lines on two glass plates; these lines are then filled with some opaque substance, and the two plates are placed together, face to face, with the lines of one plate crossing those of the other. They are made in varying degrees of fineness, the lines ranging from 40 to 400 to the inch. The coarser screens are placed farther from the sensitive plate than the finer ones. The finer screens cut off about nine-tenths of the light; therefore, the negative is often exposed for eight or ten minutes.

After the negative is developed the film is stripped from the plate, reversed, and placed on another, called a turning glass, thus becoming a positive. This is placed in contact with a copper plate coated with a sensitized solution, and exposed to the light for about two minutes. After being developed, this plate is enameled and "burned in" over a flame. It is then etched with a solution of perchloride of iron. In this process the portions of the coated copper plate which have been exposed to the light in the printing process—in other words, the lines that were formed by the screen in the original negative—are etched away, producing a printing surface composed of dots which vary in size according to the lights and shadows of the object. Further processes pertain mainly to finishing and mounting. A certain amount of expert hand work is required for the finishing of the half-tone plate and its final preparation for the press. In this field many artists who were formerly engravers have found work.

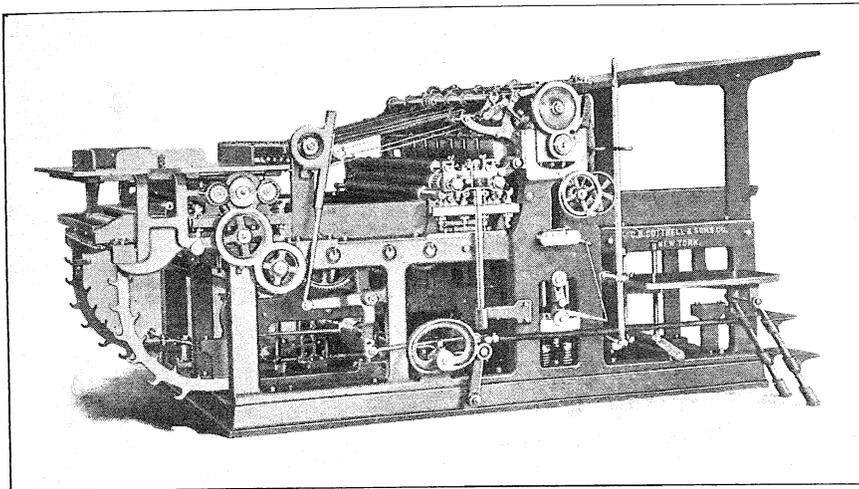
Half tones are of three classes, considered according to the treatment of their background—the silhouette, the square-etched, and the vignette. The silhouette is an effect of sharply defined edges; the square-etched is



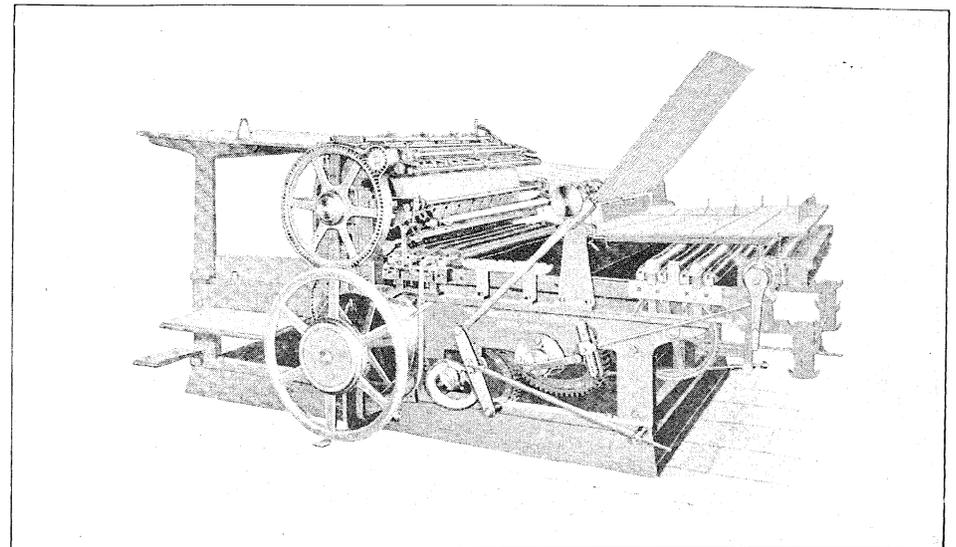
CAMPBELL "CENTURY" 2-REVOLUTION BOOK AND JOB PRESS.



BABCOCK "OPTIMUS" BOOK AND JOB PRESS.



COTTRELL 2-REVOLUTION BOOK AND JOB PRESS.



WHITLOCK BOOK AND JOB PRESS.

an exact reproduction as to background, of the original picture; and the vignette is a production of softened, gradually-fading background, without definite termination.

Zinc etching is practically the same process, except that the copy must be a pen-and-ink or line drawing, and no screen is used. In the etching process, in place of perchloride of iron, muriatic acid is employed. This gives a plate which is cut deeper, but is less durable than the copper half-tone plate.

Three-color Process.—The attempt to print in colors from half-tone plates by means of photographic processes was partially solved by Frederick Ives, of Philadelphia, in 1888. Since that date the process has been improved with gratifying results. The principle upon which it is based is that by a combination of the three primary colors—red, yellow, and blue—almost any shade of color can be produced. Photographic plates that are specially sensitive to color are used. As in the half-tone process, a glass screen is placed in the camera. Three photographic negatives, each of which is to produce a separate printing plate, are made of the object. In each case a colored glass screen, excluding certain color rays of light, is used in front of the lens. In the production of the plate which is to print the blue ink, a red color screen is employed; to produce the plate for yellow ink, a blue-violet screen is used; and to produce the plate which is to print red ink, a green screen is used.

In printing from these plates great exactness, technically called "register," is required, in order that the colors may be laid on in proper place as the three impressions are consecutively made.

One serious problem which confronted the inventor was the difficulty experienced in so arranging the line screens that the diagonal lines would not form geometric patterns in the finished picture. This was solved by the discovery that by varying in certain ways the directions of the lines used for the three negatives, the pattern effect could be avoided.

Lithographic Color Printing.—A widespread but unsuccessful attempt was made, about 1880, to substitute zinc for stone in lithographic work. After this failure, zinc was generally abandoned as a factor in the lithographic problem, but one firm has continued to make experiments along this line with considerable success.

In 1898 the great superiority of aluminum over lithographic stone was demonstrated. Aluminum is far lighter, requires less space for storage, is cheaper, is almost noncorrosive, can be used in sheets upon rotary presses, can be used for longer runs without reproduction of the design, and after some manipulation possesses all the desirable qualities of stone.

The methods of manipulation are two. By the first, the surface of a sheet of fine-rolled aluminum is ground off, producing a porous surface. The second method is the formation of an aluminum surface by electro-deposition.

To prevent the ink from spreading over the limits of the design, phosphoric acid is used; this is removed from the plate by the application of nitric acid.

About four-fifths of present-day lithographic work is done on stone, but the number of printing machines constructed to use aluminum is rapidly increasing.

BOOKBINDING.

Recent advances in the bookbinding department of the printing and publishing business have been numerous, but not revolutionary.

Automatic feeding devices for folding machines, as well as for printing presses, are a product of the last decade. Of these there are many variations, but as the problem which they solve is comparatively simple they need not be described in detail. Three-fourths of the folding machines of the present day are supplied with automatic feeders. Folding machines have been greatly improved also by parallel-fold arrangements and by automatic pointing.

Many improvements have been made in wire-stitching machines. One of these machines will stitch anything from two sheets to a book 2 inches thick, and with several of them either round or flat wire may be used. There has been introduced recently a noteworthy combination folding and wire-stitching machine, which by a continuous and automatic operation takes the sheets from the feeders, and folds, gathers, collates, covers, and wire-stitches copies of magazines and pamphlets, delivering them ready for distribution.

Paper-cutting machines have been improved by the introduction of automatic clamps, indicators, and gauges.

The invention of a steam rounding and backing machine, increasing a capacity of from 500 to 1,000 books per day to a capacity of from 5,000 to 6,000 in the same time, should be noted. The latest case-making machine feeds itself from a roll of cloth which it automatically cuts into pieces of proper size for use. The cloth is first covered with glue by contact with a cylinder revolving in a pot of glue. It is then cut by the machine and nicked in corner sections; boards are supplied from a holder and a back lining from a roll, both receptacles forming parts of the machine. This process completed, the nearly finished product drops a little, the cloth is folded over the boards and back lining, and the binding, after passing through a case smoother, is delivered in a finished state. This automatic process is very satisfactory. Another interesting invention in this line is a machine for covering paper books and magazines, which has been known to cover 22,000 books in a day.

Among late inventions are a casting-in machine, for putting the body of a book into its cover, and a gathering machine.

During the next ten years the principal advance in bookbinding doubtless will be in those branches of the industry which are concerned with casting-in, gathering, smashing, folding, and sewing.

NEWS-GATHERING ORGANIZATIONS.

The only changes in news gathering since 1880 have been those of detail.

In 1880 the leading news-gathering association was the body then known as the Associated Press, which was furnishing news to 30 per cent of the dailies of the United States. This organization, composed of New York papers, gathered news for its own members on the cooperative plan, but exchanged news with other associations on terms that made the exchange practically a sale, a large cash bonus being asked from associations receiving their news.

These methods caused much dissatisfaction among the tributary associations. The claim was made that the parent organization, having absolute control of the news gathered, was selling it at a price covering the entire cost of collection, giving the news to its members practically for nothing.

The principal complaints came from the Western Associated Press, which in 1882 was paying a bonus amounting to \$3,000 per month. The outcome of this controversy was an amalgamation of the Associated Press and the Western Associated Press into one organization, under the former title.

The next great conflict was that between the new Associated Press and the organization afterwards known as the United Press, which was founded in 1882. In 1884 the Associated Press and the United Press made a secret agreement for an exchange of services, by which a practical union of the two organizations was effected. It was claimed that the exchange was most unequal, the United Press getting the benefit of the wide field covered by the stronger organization, and giving poor and inadequate service in return. In 1891 the arrangement was discontinued; but in 1892 the eastern branch of the Associated Press—the original New York organization—transferred its affairs to the United Press, while the western branch—the former Western Associated Press—continued in business, with headquarters in Chicago, as the Associated Press. The new Associated Press, like the United Press and other proprietary bodies, followed the plan of selling its news to papers whose proprietors were not stockholders or members of the organization.

At the time of its organization the western association had contract relations with the eastern one. In 1893 the contract expired; the western association refused to renew it, and there followed a bitter war between the two associations, which was very disturbing and expensive to the newspapers of the country, some being compelled to receive news from both associations to insure a complete service. Strong efforts were made to bring about an agreement between the two organizations, but all failed because of fundamental differences in their plan of organization. In 1897 the United Press made an assignment, with large liabilities and no assets.

The victory of the Associated Press was not, however, the end of newspaper difficulties. This organization could not, under its regulations, admit to membership all the newspapers which were left without service by the failure of the United Press. Moreover, the associations which were organized to supply the needs of the papers not provided with a news service were declared to be antagonistic, and members of the Associated Press were forbidden to make contracts with them.

The *Chicago Inter-Ocean*, having received news from a bureau thus proscribed, and being threatened with suspension of the Associated Press service, applied for an injunction to restrain such action.

The circuit court and appellate court successively dismissed the bill, but the supreme court of the state (184 Illinois Reports, 438-455) reversed the previous decision on the ground that the corporation had a virtual monopoly of a commodity of vast importance to the public, had used its franchise in such a manner as to injure the public interests, and could not be allowed to deprive the public of the services of a newspaper.

This decision did not, however, break up the monopoly held by the Associated Press, but merely caused removal of that organization to New York state, where it was reincorporated on May 22, 1900, with practically all of its former 600 members and subscribers.

Under its new charter the Associated Press is simply a mutual and cooperative organization of newspaper proprietors. A distinction existing in the old organization between voting stockholders and ordinary members was abrogated in the new charter, and all newspaper owners who receive the news service of the Associated Press are now members of the organization on equal terms.

The certificate of membership designates in detail the name of the newspaper entitled to receive the news of the Associated Press, the language in which it is printed, its place of publication, whether it is a morning or an evening newspaper, and whether the member is to receive a day or a night report. A certificate of membership in the Associated Press is not transferable except in special cases.

Each and every member of the Associated Press is entitled to receive a service of news for the purpose of publication in the newspaper specified in his certificate of membership, and for that purpose only. Special regulations forbid, in detail, publishing news in any other newspaper than that specified, furnishing it in advance of publication to any person not a member, or anticipating the publication of documents of public concern confided to the corporation for use on a stipulated date, however the document may have been secured.

The Associated Press, as now organized, has four divisions—Eastern, Central, Southern, and Western—with headquarters at New York, Chicago, Washington, and San Francisco, respectively.

Domestic news is collected from all parts of these four divisions at the division offices, and exchanged between the several divisions, items being enlarged or condensed according to the territory in which they are to be circulated.

For gathering foreign news the Associated Press has contract relations with various news agencies, with which it exchanges news. Of these the most important are the Reuter agency, covering Great Britain and her colonies; the Agence Havas, covering France, Belgium, Switzerland, Portugal, and some parts of South America; and the Wolf agency, of Berlin, covering Germany, Hungary, Austria, and to some extent northern Europe and Russia. In the New York office of the Associated Press the Reuter agency has a representative who looks over the dispatches and sends abroad whatever American news may be of interest to Europeans. For Canadian news the Associated Press has exchange arrangements with the Canadian Pacific Railway, by which that company gathers all the news on its line and delivers it at Bangor, Buffalo, Detroit, and Seattle, receiving at those points the news of the United States, for use in Canada. Other agencies supplying news to the Associated Press are the Steffanie, covering Italy; the Nordischer Telegram Bureau, covering Russia; the Norsky Telegram Bureau, covering Norway; the Svenska Telegram Bureau, covering Sweden; and the Agence de Constantinople, covering Turkey.

While, as has been noted, each newspaper connected with the Associated Press contributes its quota of news to the general fund, the organization has regular correspondents of its own at places where it has no member. It also sends out its own reporters, when the occasion is of sufficient importance, to cover specific events, and employs special men to cover special classes of news—as, for instance, the Wall street market reports, and the arrival and departure of steamers at principal ports. It also has emergency men whose names are kept on file, and who can be called on at any time to gather news for the organization. At important points are stationed representatives whose duty it is to put the news into shape and file it for circulation throughout the country.

Besides the full reports delivered to large papers, the Associated Press distributes what are called “pony” reports—condensations of the full reports, sold at a cheaper rate. It also sells news to an organization known as the American Press Association, for distribution to papers not members of the Associated Press, with the proviso that the news thus sold is not to be printed for twelve hours after it has been sent over the wires to newspapers receiving the regular service of the Associated Press.

The Associated Press now has about 700 members, more than half of which are afternoon dailies, and serves, under the arrangement with the American Press Association described above, about 2,500 daily and

weekly papers in addition. Most of the papers served are in the United States, but there are 50 or more in Canada, Mexico, Cuba, and Porto Rico. In its regular news service the Associated Press now uses 9,345 miles of leased wire by day and 20,467 miles by night.

The annual revenues derived from assessments levied on the newspapers served exceed \$1,900,000, and the number of words daily received and transmitted at each of the more important offices is now over 50,000, or the equivalent of 35 columns of an average newspaper.

Among other news-gathering associations now in the field are the Publishers' Press, and the Scripps-McRae Press Association, which work together, the former operating principally in the eastern part of the country, the latter in the western.

The Publishers' Press was started April 8, 1897, the day after the failure of the United Press, to fill the gap left by that association. Unlike the Associated Press, it is not a cooperative organization, but a stock company whose business it is to buy news and sell it again; nor is it, like the Associated Press, under limitations as to the number of papers it may serve in one place. Again, unlike the Associated Press, the Publishers' Press does not receive news from the papers it serves, but has its own correspondents at the various centers where news can be collected. The foreign news of the Publishers' Press is gathered through a main office in London and branch offices in Paris, Berlin, Rome, and other European news centers.

The Publishers' Press controls several thousand miles of wire in the United States—one, which carries news to a Seattle paper, being 3,260 miles long.

Another news-gathering organization, which may be regarded as simply the news-gathering department of the *New York Sun*, is the Laffan News Bureau. This organization has regular correspondents at all news centers, foreign as well as domestic, maintaining, besides, “sleeping correspondents” who are paid in accordance with the news they send in; serves 30 or 40 newspapers in different parts of the country; and maintains, like the other bureaus, a system of leased wires.

Besides the regular press bureaus, some leading newspapers engage in the business of selling news. Among these are the *New York Herald*, the *Chicago Record*, and the Hearst papers. Such arrangements as these can hardly be said, however, to compete with the news service of the Associated Press, which is far in the lead of the news-gathering organizations of the United States.

Newspaper Syndicates.—An extension of the scope of the newspaper, during the last twenty years, to include subjects of more lasting interest, led to the creation and extension of the so-called “syndicate,” which furnishes papers with miscellaneous reading matter, as the news-gathering association furnishes them with news. The syndicate was introduced about 1884, for the purchase

and sale of stories, but has since extended its field to all sorts of reading matter. While the news-gathering associations are largely cooperative, the syndicate is purely a proprietary affair, buying articles from authors and selling them outright to the different newspapers on their list of customers.

Some syndicate matter is sent out in matrix form, but most of it is supplied in the shape of galley proof, to be set up in the office of the newspaper purchasing it, in the general style of the paper.

Most of the syndicate material is prepared especially for the Sunday supplement or magazine part of a newspaper, but the syndicates will furnish almost any class of articles found in daily papers. In making sales, the syndicate has a fixed price for articles, and although it disposes of the same stories or other matter to a number of papers, only one in each city or field of publication may receive a given story or article.

The syndicate is enabled, by its sales of the same article to many customers, to purchase matter quite out of the reach of the individual newspaper, and to sell it on terms that each can afford. The scheme is found to be so advantageous that to-day practically all the newspapers of the country, except some in a few of the largest cities, use syndicate matter to a considerable extent.

Besides the firms engaged primarily in the syndicate business, certain leading metropolitan newspapers dispose of their own matter to papers published elsewhere.

In the last decade no important changes have taken place in the syndicate field. The material now supplied may be rather better in quality than that supplied at first, but the business arrangements and the extent of syndicate operations have remained about the same for several years.

THE COOPERATIVE PLAN OF PRINTING PAPERS.

There has been little development, for several decades, of the "patent insides" system described in the special report of the Tenth Census on the Newspaper and Periodical Press. The general advance in printing has led to some progress in methods, and the number of papers served has increased with the growth of the newspaper industry in general, but growth in this line has been relatively slow.

The following table shows, by states and territories arranged geographically, the number of newspapers printed on the cooperative plan:

TABLE 57.—Newspapers printed on the cooperative plan, by states and territories: 1900.

STATE OR TERRITORY.	Number of newspapers.
United States	7,749
North Atlantic division	728
New England	177
Maine	13
New Hampshire	80
Vermont	10
Massachusetts	90
Rhode Island	18
Connecticut	18

TABLE 57.—Newspapers printed on the cooperative plan, by states and territories: 1900—Continued.

STATE OR TERRITORY.	Number of newspapers.
North Atlantic division—Continued.	
Southern North Atlantic	551
New York	196
New Jersey	79
Pennsylvania	376
South Atlantic division	511
Northern South Atlantic	185
Delaware	4
Maryland	49
District of Columbia	6
Virginia	62
West Virginia	64
Southern South Atlantic	326
North Carolina	81
South Carolina	51
Georgia	135
Florida	59
North Central division	4,725
Eastern North Central	2,110
Ohio	337
Indiana	358
Illinois	708
Michigan	365
Wisconsin	347
Western North Central	2,615
Minnesota	499
Iowa	619
Missouri	376
North Dakota	122
South Dakota	224
Nebraska	462
Kansas	403
South Central division	1,179
Eastern South Central	476
Kentucky	59
Tennessee	114
Alabama	184
Mississippi	169
Western South Central	703
Louisiana	94
Arkansas	143
Indian Territory	62
Oklahoma	163
Texas	251
Western division	606
Rocky Mountain	285
Montana	32
Idaho	40
Wyoming	20
Colorado	177
New Mexico	16
Basin and Plateau	43
Arizona	4
Utah	35
Nevada	4
Pacific	278
Washington	95
Oregon	65
California	118

It will be seen from this statement that over 60 per cent of the papers printed on the cooperative plan are found in the North Central division. The number in Illinois alone (the highest number for any single state) nearly equals the number shown for the entire North Atlantic division, and Iowa (next in rank) surpasses both the Western and South Atlantic divisions.

Many of the newspapers of this class are the only ones in their respective towns—this being the case with 60 per cent of those sent out by one concern. At the present time most of the newspapers printed in this way are weeklies, and these form about half of the total number of weeklies in the United States. Many semiweeklies and triweeklies, also, are issued in this way, and some dailies adopt the method. These dailies are

printed at a distributing center, sent out by express in the morning, and finished at the local office in the afternoon.

Some concerns endeavor to avoid the sameness of appearance in "patent insides" by issuing the material in the form of stereotyped plates ready for printing, instead of in printed sheets. They first send out proof sheets, showing what articles they have on hand, and from these the local editor selects what he chooses. On receiving the plates he cuts them up as he likes, for arrangement in his page, even cutting off the headings and supplying headlines of his own, to secure greater individuality.

The American Press Association, of New York, organized about 1880, controls much of the business in plate matter, and has already been referred to as the association supplied by the Associated Press with telegraphic news for use twelve hours after the regular service. The news received by this association in the morning is set up in plate form, and distributed to some 2,500 dailies for use the same afternoon. This organization serves a large number of newspapers, including many dailies, with electrotype or stereotype plates of miscellaneous matter, and also sells type uniform with that used in making the plates, so that the papers supplied may be made to appear the same throughout.

There appears to be a growing tendency toward the use of plate matter in preference to the half-printed sheets. Country journals are beginning to demand telegraphic

news, and this the plate-matter concerns can supply fresher than the "patent insides."

Newspaper Combinations.—By the close of the last decade there was noted a slight tendency toward consolidation, under one ownership or management, of newspapers published in different places. This plan has thus far been adopted only among certain large metropolitan dailies. Examples of common ownership of this general character are shown in the *Galveston News* and the *Dallas News*, essentially the same paper in both cities; the *New York Herald*, the *Evening Telegram* (New York), and the European edition of the *Herald*; the *New York Times* and the *Philadelphia Times*; the *Washington Times* and the *New York Daily News*; and the group of papers owned and published by William R. Hearst—the *San Francisco Examiner*, the *Journal and American* (formerly the *New York Journal*), the *Evening Journal* (New York), and the *Chicago American*. In small places the newspapers are in such close contact with the people they serve that it is a distinct advantage for the proprietor to be personally known to his subscribers, and to be identified exclusively with his locality. In small places not only the reading public but the advertisers seem to prefer newspapers owned and published in the place of circulation. Furthermore, it is only in large cities that the opportunities for economy through combination are great enough to warrant the attempt, practically the same results being secured more easily in country districts by making use of the syndicate and the "patent insides."

TABLE 58.—NEWSPAPERS AND PERIODICALS

	United States.	Alabama.	Arizona.	Arkansas.	California.	Colorado.
1 Number of establishments.....	15,305	156	32	217	512	212
2 Character of organization:						
3 Individual.....	9,686	109	22	154	328	118
4 Firm and limited partnership.....	3,016	29	3	44	91	34
5 Incorporated company.....	2,420	16	7	19	86	60
6 Miscellaneous.....	183	2			7	
7 Capital:						
8 Total.....	\$192,443,708	\$621,852	\$186,573	\$648,888	\$4,440,602	\$1,751,437
9 Land.....	\$13,861,249	\$13,945	\$7,050	\$13,510	\$161,215	\$51,155
10 Buildings.....	\$19,497,604	\$37,580	\$12,475	\$29,343	\$239,835	\$93,070
11 Machinery, tools, and implements.....	\$77,862,342	\$362,741	\$118,602	\$395,698	\$2,464,724	\$1,009,797
12 Cash and sundries.....	\$82,222,513	\$207,586	\$48,446	\$210,337	\$1,574,828	\$597,415
13 Proprietors and firm members.....	15,976	178	28	248	538	186
14 Salaried officials, clerks, etc.:						
15 Total number.....	27,579	80	15	59	857	280
16 Total salaries.....	\$27,015,791	\$79,809	\$17,727	\$44,905	\$840,050	\$262,974
17 Officers of corporations—						
18 Number.....	2,626	22	4	9	58	37
19 Salaries.....	\$4,990,705	\$41,220	\$6,350	\$10,600	\$94,664	\$56,130
20 General superintendents, managers, clerks, etc.—						
21 Total number.....	24,953	58	11	50	799	249
22 Total salaries.....	\$22,025,086	\$38,589	\$11,377	\$34,805	\$745,986	\$206,844
23 Men—						
24 Number.....	19,814	54	9	46	702	225
25 Salaries.....	\$19,892,882	\$37,140	\$9,477	\$38,145	\$701,520	\$195,378
26 Women—						
27 Number.....	5,139	4	2	4	97	24
28 Salaries.....	\$2,182,204	\$1,449	\$1,900	\$1,160	\$44,466	\$11,466
29 Wage-earners, including pieceworkers, and total wages:						
30 Greatest number employed at any one time during the year.....	107,128	641	160	748	3,173	1,508
31 Least number employed at any one time during the year.....	89,074	518	128	560	2,618	1,196
32 Average number.....	94,604	548	139	600	2,683	1,303
33 Wages.....	\$50,333,051	\$241,525	\$78,640	\$215,410	\$1,804,619	\$770,382
34 Men, 16 years and over—						
35 Average number.....	73,653	459	109	384	2,168	1,163
36 Wages.....	\$44,961,533	\$229,549	\$66,807	\$179,932	\$1,650,777	\$780,362
37 Women, 16 years and over—						
38 Average number.....	14,815	21	17	69	344	95
39 Wages.....	\$4,628,221	\$5,368	\$6,685	\$17,855	\$128,979	\$33,884
40 Children, under 16 years—						
41 Average number.....	6,136	63	13	147	181	40
42 Wages.....	\$743,297	\$6,608	\$1,148	\$17,623	\$24,863	\$6,130
43 Average number of wage-earners, including pieceworkers, employed during each month:						
44 Men, 16 years and over—						
45 January.....	74,702	459	114	400	2,191	1,164
46 February.....	74,148	458	114	399	2,171	1,159
47 March.....	74,559	474	111	394	2,181	1,153
48 April.....	74,287	472	109	387	2,170	1,158
49 May.....	74,103	467	109	378	2,199	1,165
50 June.....	72,566	446	108	360	2,124	1,162
51 July.....	71,167	436	104	353	2,102	1,127
52 August.....	71,106	427	102	347	2,091	1,131
53 September.....	72,445	442	100	370	2,128	1,166
54 October.....	74,110	464	110	404	2,160	1,195
55 November.....	74,905	481	116	408	2,174	1,216
56 December.....	75,738	478	116	405	2,210	1,223
57 Women, 16 years and over—						
58 January.....	15,218	20	18	72	353	89
59 February.....	15,250	19	17	72	351	88
60 March.....	15,375	20	17	69	344	93
61 April.....	15,196	21	16	71	348	94
62 May.....	14,944	21	17	72	344	105
63 June.....	14,471	20	17	68	335	93
64 July.....	13,827	20	17	63	331	94
65 August.....	14,019	21	16	67	327	94
66 September.....	14,296	22	16	70	338	97
67 October.....	14,865	23	18	69	349	97
68 November.....	15,068	22	18	67	352	99
69 December.....	15,251	23	18	67	354	98
70 Children, under 16 years—						
71 January.....	6,264	69	13	157	187	43
72 February.....	6,256	67	13	156	185	42
73 March.....	6,272	68	13	156	188	41
74 April.....	6,281	66	13	156	189	39
75 May.....	6,245	63	13	161	185	42
76 June.....	6,042	59	13	142	178	38
77 July.....	5,934	59	13	132	170	38
78 August.....	5,888	61	13	133	168	36
79 September.....	5,978	63	13	135	174	40
80 October.....	6,112	59	13	142	179	36
81 November.....	6,141	56	9	146	178	39
82 December.....	6,219	61	13	149	187	41
83 Compositors (included in wage-earners)—						
84 Men, 16 years and over.....	39,599	276	57	256	1,176	595
85 Women, 16 years and over.....	7,608	20	11	34	241	53
86 Children, under 16 years.....	2,104	10		118	16	4
87 Compositors operating type-casting or typesetting machines—						
88 Men.....	4,940	37	9	5	199	88
89 Women.....	857	1		3	70	2
90 Type-casting and typesetting machines used, number.....	3,988	32	6	1	150	63
91 Miscellaneous expenses:						
92 Total.....	\$38,544,642	\$34,881	\$17,968	\$79,261	\$637,302	\$323,599
93 Rent of works.....	\$4,134,995	\$16,498	\$5,373	\$19,725	\$147,847	\$68,555
94 Taxes.....	\$961,248	\$4,313	\$1,314	\$3,974	\$26,246	\$10,475
95 Newspaper and periodical postage.....	\$4,200,681	\$9,847	\$1,199	\$5,991	\$80,624	\$45,149
96 Rent of offices, interest, insurance, and all sundry expenses not hitherto included.....	\$18,121,131	\$41,300	\$9,082	\$43,211	\$255,452	\$151,565
97 Contract work.....	\$11,066,587	\$12,833		\$6,360	\$127,133	\$62,855

PRINTING AND PUBLISHING.

BY STATES AND TERRITORIES: 1900.

Connecticut.	Delaware.	District of Columbia.	Florida.	Georgia.	Idaho.	Illinois.	Indiana.	Indian Territory.	Iowa.	Kansas.	
116	26	60	86	233	66	1,269	698	58	910	505	1
57	12	21	58	185	47	764	492	86	593	436	2
15	2	14	17	48	14	232	123	15	243	130	3
44	12	21	11	48	5	249	71	7	72	23	4
		4		2		14	12		2	6	5
\$2,280,658	\$275,298	\$2,233,897	\$400,221	\$1,852,813	\$280,804	\$12,259,569	\$4,792,139	\$115,003	\$4,703,049	\$1,920,636	6
\$199,600	\$20,650	\$290,300	\$11,110	\$118,035	\$22,865	\$863,231	\$207,450	\$3,920	\$239,560	\$63,700	7
\$309,243	\$30,550	\$576,312	\$28,250	\$165,112	\$25,375	\$1,524,023	\$358,068	\$7,855	\$405,376	\$222,375	8
\$1,098,895	\$153,705	\$343,029	\$252,538	\$1,249,133	\$154,123	\$4,847,495	\$2,670,216	\$78,325	\$2,451,255	\$1,131,089	9
\$681,920	\$70,893	\$523,756	\$103,323	\$324,933	\$78,441	\$4,994,320	\$1,856,405	\$25,403	\$1,606,258	\$502,572	10
85	15	51	99	234	73	1,239	680	69	1,033	701	11
238	45	301	55	196	17	2,894	665	5	523	169	12
\$235,655	\$29,658	\$289,566	\$49,096	\$177,325	\$11,600	\$2,420,322	\$315,036	\$1,900	\$393,965	\$107,369	13
63	5	32	4	32	6	285	110	4	69	24	14
\$88,892	\$7,100	\$94,040	\$7,100	\$49,123	\$3,300	\$488,489	\$176,298	\$1,300	\$88,372	\$23,329	15
175	40	209	51	164	11	2,609	555	1	454	145	16
\$151,763	\$22,556	\$195,526	\$41,996	\$128,202	\$8,300	\$1,931,833	\$438,738	\$900	\$310,093	\$84,040	17
147	37	193	43	145	11	1,841	431	1	370	120	18
\$136,261	\$20,996	\$172,285	\$39,691	\$120,930	\$3,300	\$1,639,933	\$384,937	\$900	\$275,957	\$76,310	19
28	8	71	8	19		768	124		84	25	20
\$15,502	\$1,660	\$23,241	\$2,305	\$7,272		\$291,850	\$58,751		\$34,136	\$7,730	21
1,208	248	678	384	1,149	246	8,449	4,708	190	4,046	2,194	22
1,123	204	550	294	996	173	6,999	3,888	121	3,264	1,700	23
1,151	220	600	305	1,050	187	7,478	4,084	138	3,393	1,766	24
\$703,587	\$83,208	\$393,220	\$134,366	\$450,878	\$92,810	\$3,704,341	\$1,784,059	\$48,389	\$1,311,179	\$623,783	25
958	174	477	256	774	150	6,071	2,793	116	2,324	1,144	26
\$640,227	\$78,560	\$363,083	\$126,043	\$406,365	\$35,696	\$3,317,615	\$1,490,847	\$44,419	\$1,107,349	\$502,408	27
162	25	105	16	110	19	972	933	14	593	361	28
\$60,393	\$5,816	\$27,229	\$5,084	\$27,190	\$5,574	\$333,076	\$256,180	\$3,221	\$148,477	\$89,439	29
31	21	18	33	166	18	435	303	3	473	253	30
\$2,967	\$1,832	\$2,908	\$3,239	\$17,323	\$1,549	\$53,650	\$37,032	\$749	\$55,353	\$31,936	31
907	178	493	278	774	147	6,101	2,900	113	2,378	1,152	32
963	173	492	272	780	144	6,072	2,888	119	2,354	1,125	33
962	177	486	264	787	145	6,119	2,910	110	2,354	1,157	34
961	180	492	258	803	151	6,108	2,888	113	2,322	1,170	35
953	179	489	254	800	151	6,036	2,878	116	2,303	1,159	36
949	184	461	237	753	146	5,966	2,671	106	2,263	1,117	37
950	171	458	233	745	140	5,842	2,626	107	2,215	1,110	38
950	165	461	235	752	143	5,843	2,631	112	2,225	1,106	39
965	166	479	236	763	148	5,990	2,694	117	2,281	1,138	40
959	171	471	267	771	155	6,170	2,725	124	2,364	1,152	41
955	174	482	266	775	159	6,239	2,740	121	2,407	1,166	42
968	175	485	271	782	167	6,313	2,959	132	2,419	1,176	43
163	23	116	16	109	20	963	995	14	611	370	44
167	23	114	14	109	20	966	992	14	616	356	45
162	22	113	16	118	18	988	1,000	14	618	357	46
166	24	120	17	116	18	962	985	14	606	373	47
167	25	95	16	117	18	977	984	14	607	361	48
157	29	94	18	105	19	958	965	14	580	357	49
152	25	87	15	106	19	926	956	12	568	345	50
158	26	91	15	109	19	921	953	12	567	344	51
159	25	103	15	107	19	965	933	14	573	362	52
165	25	105	17	108	23	996	997	13	590	375	53
162	25	113	17	107	20	1,038	1,014	14	607	379	54
160	26	114	15	107	20	1,014	1,030	14	611	393	55
32	22	18	37	172	18	440	308	9	484	277	56
32	22	18	33	172	18	439	310	9	488	261	57
32	23	18	34	175	18	446	307	8	483	261	58
31	22	18	33	178	18	442	306	9	485	270	59
31	23	18	33	176	18	438	306	9	482	270	60
31	22	18	33	170	18	433	298	8	456	253	61
31	21	18	31	158	18	422	294	3	456	260	62
31	20	18	30	156	18	424	291	3	455	248	63
31	19	18	30	157	18	424	296	7	464	251	64
31	21	18	32	161	18	432	301	8	473	259	65
29	18	13	36	161	13	436	308	9	472	243	66
31	20	18	37	162	13	442	314	8	476	239	67
471	113	229	161	405	119	3,002	1,393	92	1,605	790	68
93	20	13	11	29	16	554	400	14	446	299	69
5		3	3	26	3	151	140	1	11	214	70
112	13	60	22	69	5	108	146		121	37	71
31	2	2				245	14		16	2	72
110	11		10	39	2	267	115		94	24	73
\$294,604	\$17,201	\$411,596	\$31,775	\$243,417	\$19,254	\$3,668,045	\$577,187	\$10,467	\$444,690	\$195,520	74
\$33,094	\$3,370	\$23,526	\$11,013	\$23,483	\$5,057	\$397,302	\$97,512	\$5,023	\$101,133	\$50,562	75
\$12,216	\$768	\$3,751	\$2,053	\$13,364	\$2,198	\$68,972	\$27,720	\$774	\$22,154	\$12,714	76
\$16,057	\$1,704	\$32,999	\$6,341	\$33,435	\$1,662	\$545,022	\$63,973	\$695	\$37,113	\$30,420	77
\$194,473	\$10,859	\$234,553	\$11,197	\$129,134	\$9,037	\$1,534,394	\$229,995	\$3,950	\$199,316	\$33,039	78
\$88,764		\$66,767	\$1,160	\$33,901	\$1,300	\$1,122,855	\$157,937	\$20	\$34,972	\$18,745	79

TABLE 58.—NEWSPAPERS AND PERIODICALS.

	United States.	Alabama.	Arizona.	Arkansas.	California.	Colorado.
80 Materials used:						
81 Aggregate cost	\$50,214,904	\$158,677	\$46,898	\$171,979	\$1,420,243	\$507,889
82 Paper—						
83 Total pounds	1,233,142,248	2,050,889	548,651	2,455,256	35,113,672	12,083,992
84 Total cost	\$37,823,856	\$116,715	\$29,807	\$124,501	\$1,140,424	\$405,822
85 News, pounds	956,385,321	2,508,884	351,851	1,476,893	\$1,725,454	10,855,076
86 Cost	\$22,197,000	\$74,187	\$12,921	\$52,888	\$895,324	\$296,551
87 Periodical, pounds	121,901,749	39,824	600	112,486	840,893	238,220
88 Cost	\$5,504,573	\$2,010	\$30	\$7,808	\$45,500	\$12,605
89 Book and periodical, pounds	80,894,614	20,731	46,000	194,001	459,316	74,455
90 Cost	\$9,851,912	\$1,715	\$4,530	\$9,437	\$33,059	\$4,581
91 Job printing, pounds	74,510,004	375,450	150,200	671,876	2,088,009	816,235
92 Cost	\$6,270,306	\$38,803	\$12,086	\$54,868	\$166,481	\$91,785
93 Ink, pounds	13,430,459	43,688	9,099	29,426	384,797	111,079
94 Cost	\$1,374,287	\$5,478	\$2,597	\$6,102	\$37,232	\$13,252
95 Fuel	\$1,276,837	\$4,321	\$1,444	\$5,800	\$32,332	\$14,584
96 Rent of power and heat	\$395,206	\$5,314	\$995	\$2,727	\$44,683	\$10,630
97 Office supplies	\$2,001,699	\$7,016	\$2,017	\$7,085	\$53,324	\$12,814
98 All other materials	\$5,005,086	\$7,595	\$3,036	\$14,763	\$79,901	\$31,862
99 Freight	\$835,534	\$12,238	\$6,787	\$10,996	\$32,232	\$18,555
100 Products:						
101 Total value	\$222,983,569	\$841,036	\$236,975	\$889,787	\$6,858,192	\$2,525,438
102 Newspaper products	\$175,789,610	\$704,767	\$170,083	\$532,869	\$5,801,721	\$2,105,892
103 Advertising	\$95,861,127	\$410,090	\$110,143	\$268,424	\$3,437,976	\$1,239,888
104 Subscriptions and sales	\$79,928,483	\$294,677	\$59,940	\$204,445	\$2,368,745	\$816,004
105 Book and job printing products	\$44,859,226	\$131,534	\$64,040	\$301,839	\$970,770	\$390,884
106 Book and pamphlet publications	\$15,407,523	\$8,679	\$6,750	\$9,137	\$109,108	\$34,006
107 Sheet music and books of music	\$544,802	\$150		\$3,050	\$4,000	
108 Job printing	\$22,793,322	\$116,805	\$51,204	\$220,850	\$774,329	\$325,750
109 Bookbinding	\$2,067,450	\$3,175	\$4,550	\$12,765	\$71,758	\$23,556
Blank books	\$554,557	\$1,275	\$1,176	\$55,735	\$4,275	\$3,115
Electrotyping, engraving, etc	\$491,567	\$1,450		\$302	\$7,300	\$4,427
All other products	\$2,334,733	\$4,735	\$2,852	\$5,029	\$35,701	\$25,662
110 Aggregate circulation per issue:						
111 Daily	15,102,156	48,645	11,456	38,140	475,596	157,016
112 Including Sunday	3,645,536	30,450	7,856	34,340	367,280	125,477
113 Except Sunday	6,456,620	18,195	3,600	3,800	108,316	31,539
114 Triweekly	228,610	700		1,000	480	500
115 Semiweekly	2,332,858	4,340		1,285	23,342	2,000
116 Weekly	39,852,052	155,244	22,392	137,573	618,146	235,425
117 Monthly	39,519,897	6,800	206	18,900	194,792	72,947
118 Quarterly	11,217,422			5,000	112,500	1,250
119 All other classes	5,546,329	14,350		1,000	23,800	2,075
120 Number of publications:						
121 Total	18,226	175	43	236	622	248
122 By period of issue—						
123 Daily	2,226	19	10	20	117	42
124 Including Sunday	567	11	4	10	34	17
125 Morning	359	7	8	4	30	11
126 Evening	208	4	1	6	6	6
127 Except Sunday	1,659	8	6	10	83	25
128 Morning	236	1	1	1	17	2
129 Evening	1,423	7	5	10	66	23
130 Triweekly	62	1		1	1	1
131 Semiweekly	637	2		4	22	3
132 Weekly	12,979	143	32	199	397	179
133 Monthly	1,817	4	1	8	71	19
134 Quarterly	287			1	6	1
135 All other classes	268	6		3	8	3
136 By character—						
137 News, politics, and family reading	14,867	160	41	214	467	199
138 Religion	952	7		6	40	4
139 Agriculture, horticulture, dairying, and stock raising	307	2	1	1	17	9
140 Commerce, finance, insurance, and railroads	190	4			12	3
141 Trade journals	520				21	7
142 General literature, including magazines	239				10	
143 Sunday newspapers	29				3	2
144 Medicine and surgery	111	1		1	4	2
145 Law	62				4	2
146 Science and mechanics	66				3	2
147 Fraternal organizations	200			6	13	6
148 Education and history	120			2	6	2
149 Society, art, music, and fashion	88			1	2	1
150 College and school periodicals	139		1	1	2	1
151 Miscellaneous	293	1		1	19	10
152 By language—						
153 Bohemian	28					
154 Bohemian and English	1					
155 Chinese	5				5	
156 Dutch	12					
157 English	17,194	174	42	236	572	233
158 Finnish	7					
159 French	27				3	
160 French and English	4					
161 Gaelic and English	3					
162 German	613	1			18	3
163 German and English	20					
164 German and Hebrew	3					
165 Hebrew	13					
166 Hungarian	2					
167 Indian and English	3					
168 Italian	35				9	2
169 Lithuanian	9					
170 Polish	33				1	
171 Portuguese	2				2	
172 Scandinavian	115					
173 Slavonic, not specified	4					
174 Spanish	39		1		4	3
175 Spanish and English	1					
176 Welsh and English	1					
177 All other	52				8	2
178 Comparison of products:						
179 Number of establishments reporting for both years	11,002	111	20	144	373	144
180 Value for census year	\$195,575,301	\$669,965	\$179,855	\$693,563	\$5,390,238	\$2,132,244
181 Value for preceding business year	\$177,563,659	\$596,962	\$147,410	\$610,411	\$4,988,975	\$1,945,560

PRINTING AND PUBLISHING.

BY STATES AND TERRITORIES: 1900—Continued.

Connecticut.	Delaware.	District of Columbia.	Florida.	Georgia.	Idaho.	Illinois.	Indiana.	Indian Territory.	Iowa.	Kansas.	
\$482,772	\$56,047	\$288,491	\$120,627	\$370,920	\$67,022	\$4,188,184	\$1,442,214	\$81,872	\$1,082,549	\$593,452	80
10,693,278	1,299,582	8,787,933	1,706,343	7,689,963	617,790	114,853,669	25,546,899	396,180	20,716,211	3,512,671	81
\$311,939	\$44,143	\$227,287	\$76,318	\$254,880	\$44,888	\$3,263,149	\$903,517	\$23,603	\$823,192	\$391,252	82
9,400,729	1,143,268	7,523,221	1,307,823	6,824,393	\$25,769	92,016,473	18,304,963	283,639	17,097,376	6,008,311	83
\$213,034	\$31,918	\$163,988	\$41,392	\$178,889	\$15,299	\$2,076,780	\$471,067	\$9,219	\$516,638	\$203,502	84
34,412	9,955	457,240	18,920	102,680	14,221	12,330,987	1,975,468	6,050	341,150	608,469	85
\$2,403	\$611	\$22,521	\$378	\$4,757	\$396	\$530,728	\$63,287	\$946	\$14,905	\$21,930	86
606,710	20,084	553,548	114,400	42,970	19,500	4,145,642	2,386,327	30,251	326,278	272,410	87
\$59,021	\$1,034	\$17,312	\$6,991	\$3,341	\$1,413	\$204,936	\$92,167	\$1,486	\$18,532	\$12,574	88
652,427	126,275	253,324	270,200	719,915	258,300	6,361,067	2,830,141	129,349	2,951,302	1,028,491	89
\$56,881	\$10,680	\$23,466	\$27,057	\$67,893	\$27,240	\$451,755	\$276,999	\$12,452	\$273,217	\$163,246	90
126,319	12,710	92,055	19,344	113,400	7,430	1,017,503	263,565	5,650	207,731	\$1,801	91
\$11,082	\$979	\$7,421	\$3,380	\$10,282	\$1,480	\$111,011	\$52,303	\$1,239	\$29,490	\$16,933	92
\$20,711	\$2,311	\$6,147	\$2,150	\$11,724	\$3,445	\$91,353	\$36,346	\$39,180	\$49,180	\$23,763	93
\$13,863	\$2,959	\$5,510	\$2,322	\$9,908	\$1,453	\$64,637	\$21,005	\$67	\$18,542	\$6,670	94
\$9,010	\$2,276	\$15,400	\$5,386	\$9,984	\$3,691	\$200,273	\$49,221	\$1,601	\$32,490	\$18,543	95
\$57,277	\$2,746	\$24,786	\$24,456	\$62,923	\$4,266	\$351,786	\$338,554	\$1,552	\$70,544	\$36,590	96
\$7,990	\$1,283	\$1,984	\$6,165	\$11,219	\$7,894	\$55,976	\$38,268	\$2,644	\$59,114	\$39,696	97
\$2,120,073	\$219,184	\$1,846,535	\$480,368	\$1,637,049	\$299,805	\$19,404,955	\$6,093,191	\$174,069	\$4,935,453	\$2,348,453	98
\$1,765,779	\$174,933	\$1,690,643	\$398,594	\$1,441,968	\$199,948	\$16,886,952	\$3,912,514	\$110,916	\$2,777,690	\$1,093,656	99
\$1,068,998	\$116,116	\$1,069,480	\$228,352	\$808,284	\$110,010	\$9,029,291	\$2,070,644	\$60,894	\$1,939,852	\$393,780	100
\$686,781	\$58,817	\$621,103	\$170,242	\$638,684	\$39,988	\$7,357,661	\$1,841,970	\$50,522	\$1,337,335	\$304,576	101
\$333,368	\$43,289	\$131,378	\$31,349	\$230,168	\$96,622	\$2,865,530	\$2,131,508	\$62,143	\$1,086,718	\$628,008	102
\$43,980	\$450	\$38,103	\$3,750	\$4,593	\$75	\$974,821	\$514,070	\$4,404	\$57,578	\$29,575	103
\$273,707	\$41,947	\$76,475	\$72,324	\$5,000	\$2,800	\$153,175	\$4,765	\$1,050	\$1,050	\$13,888	104
\$5,678	\$842	\$186,477	\$200	\$186,477	\$91,307	\$1,647,454	\$940,985	\$37,554	\$949,687	\$534,924	105
\$1,105	\$50	\$11,185	\$75	\$11,185	\$1,400	\$54,827	\$621,568	\$110	\$21,052	\$17,126	106
\$3,898		\$13,908		\$13,908	\$1,040	\$31,977	\$15,771	\$75	\$49,792	\$26,365	107
\$30,926	\$962	\$12,000	\$10,000	\$10,000		\$3,276	\$34,394		\$7,279	\$6,180	108
		\$24,514	\$425	\$14,918	\$3,235	\$152,473	\$49,174	\$1,010	\$71,050	\$21,789	109
208,815	34,277	100,848	27,907	102,872	5,100	1,449,087	345,404	3,350	217,589	105,343	110
39,400	34,277	69,606	27,907	55,841	3,000	500,673	98,599	2,100	125,473	86,619	111
169,415		31,242		948,414	2,100	948,414	243,805	1,250	92,116	68,729	112
			1,000			5,338			19,224	800	113
29,325	1,700	1,000	5,000	33,941	4,645	170,720	77,185		168,672	20,040	114
155,507	43,778	304,037	66,295	331,905	36,300	3,866,983	853,424	45,891	1,105,666	653,507	115
44,375	6,150	354,050	12,100	67,425	1,500	3,072,932	715,292	900	301,205	321,050	116
1,800		2,760		1,000		1,633,434	77,700		27,929	21,800	117
17,800		58,140		12,350	1,250	180,874	34,800		44,990	21,775	118
155	30	69	97	265	72	1,548	841	04	1,045	684	119
44	6	8	11	27	5	197	156	6	65	53	120
3	2	7	11	13	1	43	23	4	39	8	121
1	6	3	4	12	25	25	22	1	14	6	122
2	4	4	7	1	18	18	1	3	25	2	123
41	1	1	14	14	4	154	133	2	26	45	124
12			3	3	2	19	4		2	1	125
29		1	11	11	2	185	129	2	24	44	126
			1	1	4	4			7	1	127
22	1	1	9	9	5	72	41		58	3	128
74	21	31	205	205	59	1,000	561	56	831	563	129
9	2	22	17	17	1	219	64	2	64	51	130
2		2	1	1	2	23	10		8	5	131
4		5	6	6	2	33	9		12	8	132
180	28	82	86	236	69	1,141	730	62	942	608	133
6		4	7	10		85	36	1	39	16	134
2		1	2	2	1	35	16		14	16	135
4		3		1		17	8		2	2	136
1		2		5	1	14	14		4	6	137
		5	2	2		28	3		2	2	138
3		2		4		4	5		1		139
2		1		4		12	4				140
		1		1		8			1		141
		5		1		9			1		142
4	1	2		18	1	18	13		13	11	143
3	1	1		17		17	3	1	3	6	144
		1		24		24	1		1	1	145
		2		10		10	8		7	7	146
		7		8		89	5		9	9	147
						11			3		148
											149
						3			5		150
											151
145	29	67	96	264	72	1,415	314	64	970	668	152
						1					153
											154
											155
											156
											157
5	1	2		1		68	24		46	12	158
							2			3	159
											160
1											161
											162
1						5					163
						2					164
						10	1				165
											166
2						30			15	1	167
											168
											169
											170
											171
1			1								172
103	15	51	40	158	42	943	501	23	653	413	173
\$2,037,255	\$142,259	\$1,819,560	\$363,726	\$1,162,212	\$217,900	\$16,371,047	\$4,063,399	\$83,279	\$4,067,777	\$1,933,313	174
\$1,857,312	\$180,049	\$1,612,374	\$366,947	\$1,074,676	\$199,631	\$14,608,718	\$3,648,787	\$65,716	\$3,594,407	\$1,591,326	175

TABLE 58.—NEWSPAPERS AND PERIODICALS,

	United States.	Alabama.	Arizona.	Arkansas.	California.	Colorado.
176	Power:					
177	Number of establishments reporting	6,515	30	12	27	72
	Total horsepower	76,264	341	70	169	1,769
	Owned—					
	Engines—					
178	Steam, number	2,080	4	1	6	20
179	Horsepower	34,607	149	20	91	242
180	Gas or gasoline, number	2,836	13	10	16	99
181	Horsepower	10,508	40	36	52	334
182	Water wheels, number	420	3	1	1	9
183	Horsepower	1,912	16	2	2	30
184	Electric motors, number	534	1	2	5	6
185	Horsepower	6,175	1	2	2	28
186	Other power, number	367	2	1	1	6
187	Horsepower	1,163	2	1	1	28
	Rented—					
188	Electric, horsepower	18,292	14	19	1,054	214
189	Other kind, horsepower	3,607	184		36	5
190	Furnished to other establishments, horsepower	869			1	
	Establishments classified by number of persons employed, not including proprietors and firm members:					
191	Total number of establishments	15,305	156	32	217	512
192	No employees	1,174	9	20	12	43
193	Under 5	8,764	110	11	159	290
194	5 to 20	4,309	33	1	43	144
195	21 to 50	673	4		3	21
196	51 to 100	204				8
197	101 to 250	133				5
198	251 to 500	36				1
199	501 to 1,000	9				
200	1,001 to 5,000	3				

	Kentucky.	Louisiana.	Maine.	Maryland.	Massachusetts.	Michigan.
1	Number of establishments	248	184	120	141	396
	Character of organization:					
2	Individual	151	92	62	72	191
3	Firm and limited partnership	36	15	23	33	73
4	Incorporated company	55	27	31	36	121
5	Miscellaneous	6		4		11
	Capital:					
6	Total	\$2,683,855	\$1,132,148	\$1,068,820	\$2,473,094	\$10,392,258
7	Land	\$294,025	\$85,700	\$36,225	\$259,265	\$793,085
8	Buildings	\$290,240	\$85,205	\$118,550	\$391,888	\$618,784
9	Machinery, tools, and implements	\$929,157	\$542,297	\$716,944	\$1,023,707	\$4,074,133
10	Cash and sundries	\$1,170,433	\$417,946	\$802,101	\$793,236	\$4,906,250
11	Proprietors and firm members	123	101	101	145	346
	Salaried officials, clerks, etc.:					
12	Total number	367	127	219	388	2,141
13	Total salaries	\$325,851	\$120,937	\$182,099	\$383,027	\$2,027,034
	Officers of corporations—					
14	Number	62	15	27	16	181
15	Salaries	\$96,918	\$23,040	\$51,402	\$40,560	\$310,136
	General superintendents, managers, clerks, etc.—					
16	Total number	305	112	192	372	2,010
17	Total salaries	\$228,393	\$106,897	\$130,697	\$342,467	\$1,716,898
	Men—					
18	Number	248	101	139	316	1,573
19	Salaries	\$208,487	\$104,212	\$109,427	\$326,937	\$1,513,395
	Women—					
20	Number	57	11	53	56	487
21	Salaries	\$20,466	\$2,635	\$21,270	\$15,530	\$208,503
	Wage-earners, including pieceworkers, and total wages:					
22	Greatest number employed at any one time during the year	1,393	973	1,524	1,635	5,954
23	Least number employed at any one time during the year	1,009	839	1,108	1,473	5,142
24	Average number	1,154	873	1,309	1,529	5,482
25	Wages	\$521,789	\$532,395	\$473,026	\$753,335	\$3,769,204
	Men, 16 years and over—					
26	Average number	1,015	766	664	1,427	4,066
27	Wages	\$491,715	\$503,231	\$331,651	\$735,469	\$3,220,702
	Women, 16 years and over—					
28	Average number	102	52	615	43	1,278
29	Wages	\$26,260	\$18,262	\$187,137	\$16,488	\$532,912
	Children, under 16 years—					
30	Average number	37	55	30	59	88
31	Wages	\$3,764	\$6,352	\$4,233	\$6,373	\$15,590
	Average number of wage-earners, including pieceworkers, employed during each month:					
	Men, 16 years and over—					
32	January	1,023	776	671	1,449	4,116
33	February	1,026	732	677	1,440	4,115
34	March	1,043	783	692	1,417	4,157
35	April	1,045	765	679	1,415	4,105
36	May	1,053	767	666	1,418	4,114
37	June	1,004	760	647	1,396	4,043
38	July	966	745	640	1,337	3,894
39	August	960	741	645	1,403	3,937
40	September	1,004	740	656	1,436	4,015
41	October	1,014	737	664	1,461	4,092
42	November	1,005	775	664	1,459	4,086
43	December	1,036	769	666	1,439	4,124
	Women, 16 years and over—					
44	January	103	52	639	45	1,311
45	February	105	53	646	45	1,312
46	March	110	53	662	44	1,322
47	April	110	53	656	45	1,312
48	May	107	53	641	45	1,283
49	June	101	55	588	43	1,245
50	July	91	51	553	41	1,171

PRINTING AND PUBLISHING.

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BY STATES AND TERRITORIES: 1900—Continued.

Connecticut.	Delaware.	District of Columbia.	Florida.	Georgia.	Idaho.	Illinois.	Indiana.	Indian Territory.	Iowa.	Kansas.	
89	17	15	22	41	16	581	325	13	442	173	176
1,841	120	390	149	698	43	5,121	2,095	41	2,283	971	177
56	4	6	4	16	1	121	68	1	88	41	173
750	38	195	39	316	2	2,009	795	8	705	356	179
6	7	5	13	13	3	271	217	12	284	97	180
63	24	45	55	87	8	959	917	33	833	316	181
11	1	1	1	6	10	45	9	1	23	11	182
35	2	1	5	79	27	186	47	1	77	61	183
8		1		45		45	33		1	1	184
28		50		10		427	163		10	3	185
6			2			11	10			18	186
18			6			25	48		5	78	187
457	66	100	44	202	6	1,151	685		564	157	188
48		10	1	4		414	35		34		189
						256	6			4	190
116	26	60	36	233	66	1,259	638	58	910	595	191
4		4	5	35	9	79	30	9	71	68	192
38	13	20	48	131	40	704	365	97	553	332	193
52	7	25	27	55	16	396	210	12	181	181	194
19	6	7	5	5	1	56	24		27	10	195
3		1	1	4		14	5		15	4	196
		3		3		4	3				197
						4					198
						2					199
							1				200

Minnesota.	Mississippi.	Missouri.	Montana.	Nebraska.	Nevada.	New Hampshire.	New Jersey.	New Mexico.	New York.	North Carolina.	
560	165	814	78	492	29	75	261	35	1,206	165	1
379	124	524	45	382	14	43	169	23	682	101	2
116	27	164	11	64	12	16	31	6	186	34	3
60	14	117	22	41	3	16	60	6	323	30	4
5		9		5			1		15		5
\$6,382,125	\$405,042	\$6,507,800	\$715,985	\$2,252,555	\$92,372	\$1,018,753	\$4,210,267	\$168,472	\$55,486,474	\$645,432	6
\$369,400	\$13,055	\$192,115	\$54,885	\$32,770	\$5,396	\$103,179	\$440,915	\$1,050	\$3,977,932	\$35,155	7
\$778,091	\$29,450	\$607,505	\$88,402	\$154,865	\$18,363	\$109,700	\$468,162	\$6,850	\$3,944,294	\$52,675	8
\$1,948,076	\$250,081	\$2,706,241	\$393,111	\$1,118,380	\$45,104	\$467,622	\$2,331,640	\$119,541	\$15,564,120	\$366,493	9
\$3,280,558	\$112,506	\$2,941,879	\$179,587	\$916,531	\$23,509	\$944,252	\$969,540	\$35,431	\$32,000,078	\$191,139	10
617	180	860	68	506	36	74	240	36	1,107	170	11
933	28	1,264	91	277	3	65	354	17	7,415	145	12
\$750,386	\$22,965	\$1,130,285	\$134,788	\$242,814	\$2,400	\$63,084	\$344,461	\$13,790	\$9,096,420	\$87,851	13
62	5	155	15	39		20	54	4	468	22	14
\$99,832	\$6,460	\$271,545	\$23,930	\$59,951		\$26,284	\$30,325	\$5,290	\$1,346,523	\$17,089	15
871	23	1,109	76	233	3	45	300	13	0,957	123	16
\$650,504	\$16,505	\$358,720	\$110,853	\$182,363	\$2,400	\$37,800	\$264,136	\$13,500	\$7,749,397	\$70,762	17
612	21	902	70	202	3	31	257	13	5,578	116	18
\$550,511	\$16,037	\$765,472	\$106,618	\$167,789	\$2,400	\$31,153	\$247,047	\$13,500	\$7,102,814	\$67,375	19
259	2	207	6	36		14	43		1,379	7	20
\$99,993	\$168	\$93,248	\$4,240	\$15,074		\$6,647	\$17,089		\$647,033	\$2,887	21
2,970	551	4,284	499	1,623	80	673	2,359	178	18,071	733	22
2,433	416	3,597	426	1,315	67	520	1,907	124	15,317	627	23
2,714	440	3,753	455	1,334	68	571	2,077	142	16,460	653	24
\$1,304,229	\$164,485	\$2,056,143	\$310,302	\$626,597	\$35,024	\$261,371	\$1,162,033	\$75,477	\$10,924,755	\$230,941	25
2,187	315	2,747	305	947	48	395	1,775	114	13,304	492	26
\$1,195,120	\$144,891	\$1,839,571	\$295,513	\$542,826	\$31,434	\$199,346	\$1,032,939	\$69,416	\$9,861,947	\$210,356	27
313	35	567	27	212	3	170	201	12	2,849	41	28
\$90,564	\$9,066	\$161,523	\$10,625	\$53,721	\$1,303	\$64,543	\$64,633	\$4,025	\$1,018,564	\$3,530	29
214	90	444	33	175	17	6	101	16	307	120	30
\$18,545	\$10,478	\$55,049	\$4,664	\$25,050	\$2,287	\$977	\$14,461	\$2,036	\$44,244	\$12,005	31
2,195	341	2,304	333	957	48	393	1,732	113	18,509	500	32
2,136	337	2,717	390	961	48	391	1,776	116	13,417	494	33
2,247	320	2,835	387	952	48	404	1,814	122	13,332	494	34
2,213	304	2,830	339	947	49	397	1,815	111	13,254	491	35
2,213	310	2,773	332	939	47	401	1,804	113	13,453	487	36
2,173	303	2,727	332	909	47	412	1,763	115	13,230	500	37
2,108	303	2,633	330	904	47	389	1,741	115	12,965	483	38
2,119	297	2,586	333	903	48	389	1,712	102	12,925	487	39
2,155	302	2,676	402	929	46	388	1,707	111	13,043	483	40
2,208	317	2,747	405	933	47	390	1,732	116	13,267	491	41
2,225	323	2,777	417	936	49	389	1,800	117	13,502	494	42
2,193	324	2,864	410	935	47	386	1,800	119	13,669	493	43
306	35	532	27	203	4	166	215	12	3,013	40	44
300	35	573	27	209	4	165	211	13	3,071	39	45
314	33	575	26	214	4	134	219	12	3,041	40	46
316	32	570	26	215	4	171	220	12	2,962	39	47
311	33	561	26	212	4	169	192	12	2,877	45	48
314	29	566	26	203	4	172	182	11	2,820	44	49
310	29	547	27	204	3	167	180	11	2,519	41	50

TABLE 58.—NEWSPAPERS AND PERIODICALS,

	Kentucky.	Louisiana.	Maine.	Maryland.	Massachu- setts.	Michigan.
Average number of wage-earners, including pieceworkers, employed during each month—Continued.						
Women, 16 years and over—Continued.						
51	98	51	545	41	1,190	527
52	95	52	579	40	1,261	527
53	102	52	607	40	1,300	546
54	101	51	636	42	1,313	565
55	105	51	639	41	1,318	577
Children, under 16 years—						
56	33	61	31	58	39	178
57	34	60	29	57	91	177
58	32	61	29	57	88	182
59	34	58	28	55	92	187
60	34	56	28	57	91	178
61	35	58	26	56	86	177
62	36	52	29	58	83	173
63	41	51	29	58	79	172
64	40	52	29	61	85	172
65	41	50	32	62	89	175
66	40	52	32	68	89	178
67	40	48	32	67	94	176
Compositors (included in wage-earners)—						
68	692	332	290	604	1,932	1,251
69	56	31	278	24	634	351
70	6	7	8	11	5	78
Compositors operating type-casting or typesetting machines—						
71	81	72	42	151	362	94
72	2		34		46	101
73	66	10	44	82	291	97
Type-casting and typesetting machines used, number						
Miscellaneous expenses:						
74	\$325,093	\$161,383	\$480,690	\$349,663	\$3,301,822	\$591,407
75	\$50,601	\$19,055	\$27,923	\$52,607	\$315,707	\$80,168
76	\$12,273	\$6,581	\$9,468	\$14,968	\$97,819	\$27,488
77	\$49,841	\$18,406	\$175,039	\$38,827	\$235,966	\$83,605
78	\$139,609	\$37,773	\$215,384	\$171,220	\$1,951,132	\$302,027
79	\$72,769	\$29,568	\$52,876	\$72,041	\$701,148	\$98,119
Materials used:						
80	\$445,000	\$307,421	\$514,384	\$573,563	\$3,921,665	\$1,023,853
Paper—						
81	11,416,789	6,932,114	16,055,803	16,464,816	92,347,453	24,267,484
82	\$336,048	\$241,096	\$332,172	\$420,574	\$2,608,523	\$781,125
83	10,115,952	6,470,564	8,621,379	15,475,305	79,207,152	19,059,894
84	\$243,150	\$201,863	\$189,738	\$347,120	\$1,822,451	\$459,692
85	75,000	181,450	6,446,350	65,785	4,589,032	1,016,814
86	\$4,274	\$9,938	\$117,897	\$3,284	\$187,941	\$43,772
87	585,760	47,000	330,313	146,250	4,067,948	1,783,630
88	\$27,844	\$3,079	\$15,587	\$6,604	\$212,287	\$65,669
89	640,072	283,100	657,761	776,976	4,453,271	2,407,596
90	\$55,774	\$26,166	\$53,390	\$63,550	\$380,849	\$211,992
91	95,720	77,572	169,794	209,025	1,040,069	286,659
92	\$14,001	\$3,409	\$18,457	\$14,766	\$88,134	\$23,778
93	\$15,727	\$7,994	\$14,769	\$16,454	\$65,442	\$45,558
94	\$10,438	\$3,937	\$9,446	\$9,256	\$56,032	\$18,949
95	\$16,748	\$5,848	\$30,332	\$22,207	\$118,912	\$35,521
96	\$38,853	\$19,471	\$59,305	\$36,555	\$976,459	\$37,771
97	\$13,180	\$15,666	\$4,412	\$3,741	\$18,103	\$26,151
Products:						
98	\$2,240,724	\$1,436,738	\$2,190,017	\$2,618,799	\$16,765,100	\$5,119,740
99	\$1,318,706	\$1,300,338	\$1,376,214	\$2,263,338	\$13,170,875	\$3,319,550
100	\$942,010	\$751,304	\$1,044,695	\$1,490,139	\$6,906,320	\$2,137,461
101	\$376,696	\$549,034	\$331,519	\$773,149	\$6,264,555	\$1,682,099
102	\$308,567	\$128,045	\$269,675	\$292,333	\$3,547,927	\$1,153,364
103	\$34,349	\$26,631	\$49,452	\$44,750	\$1,509,622	\$144,393
104	\$1,893			\$2,000	\$173,060	\$2,315
105	\$211,373	\$99,339	\$219,323	\$237,533	\$1,497,491	\$330,619
106	\$4,370		\$300	\$500	\$318,537	\$140,913
107	\$4,634	\$25	\$50		\$1,350	\$3,037
108	\$348	\$2,000	\$50	\$7,500	\$52,817	\$27,062
109	\$113,451	\$3,355	\$44,123	\$63,123	\$46,293	\$146,316
Aggregate circulation per issue:						
110	164,624	105,990	59,838	247,552	1,130,320	370,848
111	77,124	38,900	14,298	39,172	531,097	224,798
112	87,500	13,050	45,540	203,330	549,723	146,050
113	1,800	2,400				7,875
114	125,575	32,633	17,723	17,300	32,350	192,038
115	425,323	137,434	220,759	316,505	2,066,369	752,032
116	262,450	14,750	6,120,490	93,250	2,257,142	984,025
117	6,500		7,050	3,000	369,096	50,400
118	112,900	5,800	8,200	2,200	349,350	17,025
Number of publications:						
119	282	160	177	166	486	698
By period of issue—						
120	27	23	15	18	98	70
121	12	10	2	2	11	8
122	7	6	1	2	3	5
123	5	4	1		3	3
124	15	13	13	16	37	62
125	3	2	4	6	17	9
126	12	11	9	10	70	53
127	1	2			5	5
128	24	6	5	2	7	23
129	190	112	100	127	273	622
130	32	15	45	15	85	65
131	3		8	1	15	5
132	5	2	4	3	8	5
By character—						
133	220	134	128	130	312	615
134	22	6	9	12	48	23
135	8	4	1	6	6	3
136	1	1	4	2	3	3
137	10	3	1	6	27	13
138		3	21	1	27	8
139	1				3	1
140	3		1	1	2	5

TABLE 58.—NEWSPAPERS AND PERIODICALS,

	Kentucky.	Louisiana.	Maine.	Maryland.	Massachu- setts.	Michigan.
Number of publications—Continued.						
Total—Continued.						
By character—Continued.						
141						
142	1			2		1
143		1	1	4	5	1
144	8	1	1		7	6
145	1		3		7	4
146		1			7	
147	8	3	4		6	3
	5	3	3	6	16	4
By language—						
148						
149						
150						
151						
152	276	148	172	156	477	659
153			1			2
154		5	4			2
155		2			2	
156						
157	6	3		8	4	18
158						
159						
160				1		
161						
162						
163		1				
164						
165				1	1	4
166						
167						1
168						
169		1				
170						
171						
172						12
Comparison of products:						
173						
174	164	92	102	86	341	421
175	\$1,820,087	\$1,374,251	\$2,126,834	\$2,313,372	\$14,977,009	\$4,487,583
176	\$1,600,687	\$1,221,237	\$1,929,250	\$2,107,114	\$14,670,010	\$4,014,390
Power:						
176	97	29	84	65	241	317
177	1,147	578	786	1,143	4,199	2,845
Owned—						
Engines—						
178	25	7	39	42	80	110
179	470	172	418	870	1,885	1,580
180	41	15	8	17	37	144
181	132	67	42	68	189	507
182	13	1	6	3	17	11
183	38	6	27	7	74	50
184	12		2	9	20	11
185	154		10	105	478	145
186	2		11	2	3	12
187	3		35	4	6	37
Rented—						
188	350	333	253	85	1,583	441
189				9	84	76
190	18		7	78	18	23
Furnished to other establishments, horsepower						
Establishments classified by number of persons employed, not including proprietors and firm members:						
191	248	194	120	141	396	591
192	16	10	5	4	28	45
193	184	86	42	76	112	367
194	82	29	58	45	187	151
195	12	6	10	11	45	19
196	3	1	4	1	11	4
197	1	1	3	2	9	8
198		1		1	2	2
199				1	2	
200						

	North Dakota.	Ohio.	Oklahoma.	Oregon.	Pennsylvania.	Rhode Island.
1	131	837	98	159	1,042	32
Character of organization:						
2						
3	104	472	61	103	632	15
4	16	186	28	32	246	6
5	1	157	9	24	152	11
6		22			12	
Capital:						
7	\$553,052	\$1,327,865	\$389,158	\$1,312,263	\$23,952,145	\$980,593
8	\$26,680	\$651,865	\$17,980	\$40,485	\$2,366,820	\$191,200
9	\$51,200	\$1,108,821	\$30,875	\$584,975	\$3,297,929	\$39,984
10	\$251,640	\$5,557,691	\$245,445	\$454,129	\$9,333,799	\$429,993
11	\$223,532	\$4,014,488	\$94,858	\$232,674	\$8,953,597	\$219,416
Proprietors and firm members:						
Salaried officials, clerks, etc.:						
12	45	1,456	41	72	3,023	44
13	\$38,195	\$1,277,427	\$30,446	\$86,931	\$2,812,373	\$51,969
Officers of corporations—						
14	15	179	16	14	199	6
15	\$15,541	\$291,325	\$16,440	\$24,000	\$443,910	\$20,700
General superintendents, managers, clerks, etc.—						
16	30	1,277	25	58	2,829	38
17	\$22,654	\$986,102	\$14,006	\$62,931	\$2,368,963	\$31,269
Men—						
18	29	994	21	46	2,235	28
19	\$22,354	\$884,874	\$12,905	\$58,434	\$2,139,354	\$27,905
Women—						
20	1	283	4	12	594	10
21	\$300	\$101,228	\$1,100	\$4,447	\$229,609	\$3,364

PRINTING AND PUBLISHING.

BY STATES AND TERRITORIES: 1900—Continued.

Minnesota.	Mississippi.	Missouri.	Montana.	Nebraska.	Nevada.	New Hamp- shire.	New Jersey.	New Mexico.	New York.	North Caro- lina.
4		7		1					9	141
2		7		1					15	142
12		7	1	7	1				12	143
0		5					1		16	144
1		5							12	145
5	2	8		1			1		18	146
9	1	16	2	3			5	1	5	147
				7					49	148
		1							2	149
										150
564	178	897	86	508	35	86	272	31	1,379	200
1									2	152
1						2			3	153
										154
20		81	3	18			19		48	155
1		1							3	156
		2								157
		1								158
									6	159
									1	160
									3	161
							4		10	162
1		2								163
									2	164
84		1		4					1	165
		4					2	10	5	166
								1		167
					8				10	168
481	105	564	47	814	16	60	192	20	967	173
\$5,864,445	\$376,358	\$7,859,428	\$704,378	\$2,020,841	\$70,064	\$870,037	\$3,239,273	\$160,844	\$58,581,182	\$685,368
\$4,756,581	\$319,788	\$7,038,884	\$702,888	\$1,740,612	\$64,430	\$653,719	\$2,954,946	\$140,991	\$53,522,514	\$596,545
203	21	238	39	144	11	60	181	7	610	40
2,211	111	3,020	299	921	66	515	1,781	45	16,556	250
										176
41	8	60	19	27	5	23	97	2	808	9
896	47	1,546	78	335	29	188	932	16	7,176	72
118	10	152	6	91	3	7	49	4	139	19
310	84	511	18	276	8	23	198	12	686	72
12	2	4	1	4	6	13	9	2	61	182
42	12	9	2	11	29	46	26	9	406	183
17		25		4			6		169	184
157		871		71			33		2,277	185
4		9		5			10		116	186
8		24		10			32		407	187
										188
798	18	556	160	1		229	510		3,937	85
		9	41	218		29		8	1,667	21
79	7	6	5	4					219	189
										190
										191
560	165	814	78	492	29	75	261	35	1,206	165
43	16	69	10	53	2	2	11	2	54	7
889	121	527	47	366	22	33	106	22	521	105
104	24	176	15	62	5	33	115	8	434	45
14	4	28	3	6		4	22	3	100	7
4		6	2	2		3	6		95	1
3		6	1	3			1		37	197
3		2		3					10	198
									3	199
									2	200
South Carolina.	South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	Washington.	West Virginia.	Wisconsin.	Wyoming.
98	198	217	654	62	61	102	188	147	495	38
57	155	128	466	32	37	105	107	99	322	20
22	31	51	146	17	8	27	40	26	98	12
19	11	29	86	13	14	21	31	21	78	6
	1	9	6		2	9	10	1	2	4
\$434,255	\$687,839	\$2,022,242	\$2,479,073	\$679,281	\$500,098	\$1,126,786	\$796,114	\$1,050,150	\$4,390,988	\$143,620
\$22,550	\$33,760	\$119,386	\$110,038	\$52,350	\$25,987	\$34,000	\$16,315	\$60,325	\$371,395	\$3,960
\$37,550	\$75,185	\$411,482	\$266,990	\$63,445	\$52,208	\$75,525	\$23,505	\$77,725	\$814,413	\$7,900
\$226,582	\$338,177	\$1,066,170	\$1,364,515	\$260,144	\$238,029	\$625,534	\$517,523	\$506,580	\$1,847,556	\$91,050
\$147,573	\$195,767	\$1,025,204	\$737,590	\$302,842	\$139,474	\$391,677	\$238,711	\$405,520	\$1,354,624	\$40,710
	215	230	775	63	54	160	192	151	522	40
										11
56	43	403	263	78	71	178	217	92	411	6
\$42,631	\$30,376	\$329,140	\$275,910	\$67,769	\$50,135	\$107,831	\$175,974	\$73,207	\$349,073	\$5,644
										13
17	6	54	31	12	10	22	12	16	79	2
88,885	\$6,110	\$73,552	\$61,125	\$14,060	\$10,461	\$21,798	\$27,080	\$21,330	\$105,145	\$2,500
										15
39	37	349	232	66	61	156	205	76	332	4
\$33,746	\$24,266	\$255,588	\$214,785	\$53,709	\$39,674	\$36,033	\$148,394	\$51,877	\$248,928	\$3,144
										17
34	30	284	199	54	49	133	188	67	267	4
\$31,186	\$21,374	\$230,037	\$197,957	\$50,188	\$35,304	\$80,735	\$138,173	\$47,931	\$223,149	\$3,144
										19
5	7	65	33	12	12	23	17	9	65	20
\$2,560	\$2,392	\$25,551	\$16,328	\$3,526	\$4,370	\$5,243	\$10,716	\$3,896	\$20,779	\$2

TABLE 58.—NEWSPAPERS AND PERIODICALS,

	North Dakota.	Ohio.	Oklahoma.	Oregon.	Pennsylvania.	Rhode Island.
Wage-earners, including pieceworkers, and total wages:						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
Average number of wage-earners, including pieceworkers, employed during each month:						
Men, 16 years and over—						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						
Women, 16 years and over—						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
Children, under 16 years—						
68						
69						
70						
Compositors (included in wage-earners)—						
71						
72						
73						
Miscellaneous expenses:						
74						
75						
76						
77						
78						
79						
Materials used:						
80						
Aggregate cost—						
81						
82						
83						
84						
85						
86						
87						
88						
89						
90						
91						
92						
93						
94						
95						
96						
97						
Products:						
98						
99						
100						
101						
102						
103						
104						
105						
106						
107						
108						
109						

PRINTING AND PUBLISHING.

BY STATES AND TERRITORIES: 1900—Continued.

South Carolina.	South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	Washington.	West Virginia.	Wisconsin.	Wyoming.	
464	511	1,055	2,139	501	509	865	748	797	3,003	110	22
398	414	890	1,802	400	405	773	548	665	2,523	80	23
413	422	951	1,829	431	436	771	626	707	2,679	86	24
\$156,924	\$164,456	\$456,418	\$916,029	\$235,174	\$176,748	\$388,618	\$315,500	\$295,413	\$1,174,242	\$47,840	25
368	276	697	1,453	344	280	635	535	501	1,954	69	26
\$149,400	\$133,544	\$395,188	\$852,564	\$216,994	\$133,532	\$315,928	\$291,216	\$250,106	\$1,018,634	\$42,492	27
27	48	152	99	52	144	48	50	140	519	10	23
\$6,128	\$16,928	\$47,887	\$29,899	\$14,496	\$41,445	\$13,065	\$18,924	\$87,812	\$135,228	\$4,492	29
18	98	102	277	35	12	88	41	66	206	7	30
\$1,396	\$13,984	\$13,343	\$33,566	\$3,684	\$1,771	\$9,625	\$5,360	\$7,495	\$20,380	\$856	31
383	278	704	1,472	347	287	648	539	501	1,969	72	32
376	274	705	1,470	341	290	644	530	508	1,961	69	33
375	274	709	1,463	362	290	648	553	501	1,975	68	34
375	279	709	1,452	336	288	652	550	506	1,999	69	35
372	277	709	1,444	351	286	648	548	507	1,967	69	36
355	279	704	1,375	347	281	612	534	504	1,947	70	37
355	275	689	1,363	320	271	608	523	498	1,901	66	38
356	265	656	1,389	322	267	605	520	493	1,890	65	39
358	272	672	1,445	338	272	620	524	499	1,917	70	40
365	278	705	1,497	348	276	636	519	497	1,945	67	41
369	279	702	1,517	344	280	650	518	499	1,986	69	42
375	284	701	1,550	360	275	662	556	497	1,994	70	43
27	51	150	104	51	144	51	49	139	528	11	44
27	48	100	151	52	151	51	48	136	526	11	45
27	47	155	100	57	149	51	55	137	525	9	46
27	48	160	99	59	152	49	54	142	525	10	47
27	47	160	103	57	149	47	51	145	519	10	48
27	48	159	95	51	144	47	49	146	511	9	49
26	46	161	93	47	137	43	49	137	498	9	50
28	45	146	90	47	139	44	50	136	500	9	51
28	49	142	94	45	140	49	50	137	509	10	52
28	48	154	99	50	137	49	50	139	520	10	53
27	49	147	101	54	138	47	50	142	531	10	54
26	48	145	107	55	148	47	49	142	538	10	55
19	105	101	285	34	12	86	41	65	207	7	56
19	105	102	282	36	13	86	42	66	207	7	57
19	102	101	283	36	13	87	42	66	206	7	58
18	98	101	279	35	12	97	42	66	204	7	59
18	96	98	280	35	13	97	43	66	204	7	60
18	94	96	265	32	12	85	41	67	200	7	61
18	92	96	268	33	12	84	41	64	201	7	62
18	94	96	267	33	12	84	41	64	201	7	63
18	95	104	275	36	12	85	40	65	208	7	64
18	96	107	277	35	12	85	41	67	206	7	65
18	100	109	283	36	12	93	41	69	210	7	66
18	99	112	284	38	13	92	41	66	212	7	67
260	242	539	996	134	176	411	322	276	1,144	51	68
22	39	98	94	28	105	30	38	93	352	10	69
	12	59	136			3	22	13	13		70
		00	90	25	12	63	50	85	119	9	71
		15	3	3	5	1	1	4	7		72
		59	15	24	10	43	33	29	61		73
\$40,867	\$55,504	\$300,890	\$391,325	\$92,129	\$53,113	\$167,462	\$202,906	\$75,561	\$462,784	\$12,806	74
\$9,230	\$13,580	\$26,212	\$37,211	\$11,147	\$9,717	\$23,169	\$52,246	\$16,674	\$72,108	\$5,230	75
\$3,631	\$4,644	\$9,098	\$15,796	\$3,098	\$2,733	\$5,322	\$4,518	\$4,065	\$21,502	\$1,383	76
\$7,101	\$5,851	\$46,941	\$52,484	\$14,126	\$5,374	\$19,723	\$15,376	\$13,128	\$95,210	\$3,833	77
\$17,800	\$26,163	\$131,747	\$190,631	\$57,144	\$25,639	\$75,335	\$95,642	\$40,261	\$205,531	\$3,934	78
\$2,545	\$5,266	\$36,292	\$55,203	\$6,644	\$3,600	\$43,428	\$55,124	\$1,433	\$68,433	\$1,343	79
\$97,776	\$127,066	\$446,540	\$631,332	\$183,290	\$115,285	\$212,821	\$206,540	\$187,513	\$902,588	\$32,808	80
1,849,953	1,569,169	9,786,819	11,075,808	2,424,121	1,943,599	4,531,295	4,505,960	2,916,238	17,383,974	302,462	81
\$74,354	\$33,156	\$351,136	\$469,005	\$93,803	\$35,925	\$170,265	\$156,231	\$146,307	\$333,720	\$20,542	82
1,431,464	1,144,559	7,029,904	9,315,332	2,050,961	1,295,780	3,651,732	4,016,211	2,023,297	12,747,208	173,132	83
\$42,344	\$45,884	\$134,628	\$320,943	\$61,542	\$39,013	\$105,628	\$113,981	\$66,497	\$306,153	\$7,580	84
66,440	43,585	1,442,474	304,531	99,260	6,940	276,250	34,190	93,636	\$27,638	2,630	85
\$2,897	\$2,311	\$33,420	\$15,296	\$6,647	\$350	\$18,051	\$5,447	\$4,954	\$12,172	\$193	86
105,764	32,713	459,580	32,635	78,015	55,334	169,860	37,820	136,725	400,603	20,600	87
\$6,290	\$1,901	\$23,615	\$5,371	\$5,922	\$3,005	\$3,602	\$2,332	\$0,499	\$21,773	\$1,300	88
246,235	348,312	\$54,861	1,373,200	195,335	535,545	433,403	367,739	662,580	3,408,475	106,200	89
\$32,323	\$33,060	\$79,523	\$127,395	\$19,692	\$43,557	\$42,984	\$34,421	\$68,357	\$233,617	\$11,469	90
24,643	18,073	121,603	111,911	22,981	27,520	52,560	49,038	29,513	210,381	3,235	91
\$3,659	\$4,090	\$14,017	\$16,658	\$3,922	\$3,372	\$5,772	\$5,627	\$5,753	\$30,249	\$3,272	92
\$3,594	\$9,462	\$15,733	\$20,037	\$2,727	\$4,043	\$7,350	\$4,808	\$5,471	\$17,717	\$3,175	93
\$2,312	\$2,033	\$5,737	\$11,604	\$5,192	\$3,033	\$6,946	\$11,050	\$1,876	\$21,174	\$248	94
\$3,123	\$5,889	\$14,745	\$37,081	\$4,135	\$3,179	\$9,695	\$9,695	\$5,373	\$25,965	\$1,319	95
\$4,224	\$11,233	\$34,702	\$31,780	\$20,019	\$3,634	\$9,367	\$11,360	\$13,453	\$34,214	\$2,674	96
\$6,010	\$11,198	\$10,370	\$25,217	\$3,492	\$5,099	\$5,707	\$7,769	\$8,811	\$25,549	\$3,523	97
\$510,529	\$633,125	\$2,205,112	\$3,337,410	\$593,562	\$546,991	\$1,145,577	\$1,321,044	\$907,156	\$4,103,415	\$157,789	98
\$416,504	\$475,668	\$1,715,836	\$2,364,337	\$455,498	\$371,110	\$907,025	\$1,178,721	\$576,493	\$2,900,231	\$108,351	99
\$198,422	\$245,737	\$761,785	\$1,000,616	\$234,087	\$200,307	\$510,729	\$772,517	\$282,345	\$1,414,475	\$62,150	100
\$218,172	\$229,931	\$954,101	\$1,263,771	\$221,411	\$170,803	\$396,296	\$406,204	\$293,648	\$1,485,760	\$46,701	101
\$39,392	\$146,437	\$414,473	\$486,172	\$133,233	\$171,554	\$227,975	\$131,737	\$313,122	\$1,116,487	\$48,093	102
\$15,352	\$5,245	\$36,932	\$16,936	\$42,378	\$51,950	\$58,354	\$2,609	\$11,921	\$207,574	\$11,710	103
	\$1,125	\$14,000	\$4,513	\$772	\$600			\$2,350	\$1,637		104
\$72,940	\$130,967	\$245,984	\$462,036	\$72,139	\$118,742	\$163,526	\$123,397	\$276,537	\$370,332	\$36,383	105
\$2,500	\$5,225	\$51,090	\$1,922	\$15,039		\$5,810	\$250	\$19,512	\$29,839		106
\$2,000	\$3,850	\$3,115	\$500	\$2,639	\$40	\$230	\$466	\$7,777	\$6,679		107
\$100	\$3,925	\$13,302	\$165	\$438	\$50	\$85	\$15	\$25	\$426		108
\$548	\$11,020	\$74,733	\$36,351	\$4,731	\$4,327	\$10,577	\$10,536	\$12,541	\$36,697	\$340	109

TABLE 58.—NEWSPAPERS AND PERIODICALS,

	North Dakota.	Ohio.	Oklahoma.	Oregon.	Pennsylvania.	Rhode Island.
Aggregate circulation per issue:						
110 Daily	18,021	1,224,715	14,674	51,191	1,917,426	118,844
111 Including Sunday	10,600	494,512	14,674	42,483	987,981	72,200
112 Except Sunday	7,421	780,203		8,708	929,495	46,644
113 Triweekly		13,300			8,206	100
114 Semiweekly	7,100	211,161	800	14,810	282,142	6,754
115 Weekly	106,219	2,411,172	99,953	166,511	3,691,954	37,671
116 Monthly	7,550	1,420,501	4,150	75,088	3,246,779	4,225
117 Quarterly		1,795,609			1,991,819	3,000
118 All other classes		380,900	500	4,400	142,041	
Number of publications:						
119 Total	139	1,039	110	188	1,365	40
By period of issue—						
120 Daily	9	170	9	21	196	12
121 Including Sunday	4	30		9	21	2
122 Morning	4	17	2	7	14	1
123 Evening		13	7	2	7	1
124 Except Sunday	5	140		12	175	10
125 Morning		7		2	38	2
126 Evening	5	133		10	137	8
127 Triweekly		8			5	1
128 Semiweekly	2	53	1	14	47	3
129 Weekly	126	692	96	124	833	21
130 Monthly	2	90	3	27	178	2
131 Quarterly		15			42	1
132 All other classes		11	1	2	14	
By character—						
133 News, politics, and family reading	138	380	106	137	1,008	30
134 Religion		55	2	11	164	3
135 Agriculture, horticulture, dairying, and stock raising		8		7	14	1
136 Commerce, finance, insurance, and railroads		10		3	20	
137 Trade journals		29		7	45	3
138 General literature, including magazines		9	1	2	22	1
139 Sunday newspapers		3			15	
140 Medicine and surgery		5	1	1	11	
141 Law		6		1	6	
142 Science and mechanics		1			7	
143 Fraternal organizations		7		10	12	
144 Education and history		3		3	4	
145 Society, art, music, and fashion		5		1	9	
146 College and school periodicals	1	9		2	6	1
147 Miscellaneous		9		3	22	1
By language—						
148 Bohemian		5				
149 Bohemian and English						
150 Chinese						
151 Dutch						
152 English	132	945	109	185	1,277	37
153 Finnish				1		
154 French					1	3
155 French and English						
156 Gaelic and English					3	
157 German	3	81	1	1	51	
158 German and English		1			5	
159 German and Hebrew					1	
160 Hebrew					1	
161 Hungarian		1				
162 Indian and English						
163 Italian						3
164 Lithuanian						5
165 Polish		5				7
166 Portuguese						
167 Scandinavian				1		1
168 Slavonic, not specified						3
169 Spanish		1			2	
170 Spanish and English						
171 Welsh and English						
172 All other	4				5	
Comparison of products:						
173 Number of establishments reporting for both years	75	626	61	122	814	28
174 Value for census year	\$355,153	\$10,303,196	\$381,065	\$956,956	\$21,534,388	\$386,436
175 Value for preceding business year	\$306,923	\$9,338,415	\$324,682	\$813,413	\$19,456,718	\$324,350
Power:						
176 Number of establishments reporting	33	509	22	49	654	23
177 Total horsepower	156	5,573	99	342	10,388	639
Owned—						
Engines—						
178 Steam, number	6	133	2	12	324	12
179 Horsepower	33	2,910	15	160	6,150	252
180 Gas or gasoline, number	26	276	21	7	212	
181 Horsepower	80	1,239	84	27	925	
182 Water wheels, number	4	21		15	20	3
183 Horsepower	13	91		43	93	10
184 Electric motors, number	2	56			78	
185 Horsepower	8	310			1,123	
186 Other power, number		23			78	
187 Horsepower		82			178	
Rented—						
188 Electric, horsepower	19	794		108	1,591	156
189 Other kind, horsepower	3	147		4	328	221
190 Furnished to other establishments, horsepower	181	337	98	159	1,042	32
Establishments classified by number of persons employed, not including proprietors and firm members:						
Total number of establishments						
191 No employees	20	35	5	21	10	2
192 Under 5	86	435	67	85	498	9
193 5 to 20	23	277	22	47	387	13
194 21 to 50	2	52	2	5	67	7
195 51 to 100		15	1		17	
196 101 to 250		12	1	1	18	1
197 251 to 500		3			6	
198 501 to 1,000					1	
199 1,001 to 5,000						
200						

PRINTING AND PUBLISHING.

1119

BY STATES AND TERRITORIES: 1900—Continued.

South Carolina.	South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	Washington.	West Virginia.	Wisconsin.	Wyoming.	
18,850	16,468	165,718	147,602	24,163	26,699	92,370	84,570	43,577	213,882	3,300	110
13,600	6,000	58,168	96,989	15,588	15,588	67,995	35,250	26,200	104,592	1,200	111
5,250	10,468	107,550	50,613	8,625	26,699	24,375	49,320	17,377	109,290	2,100	112
200				2,000		3,100	500		1,000	500	113
23,327	1,600	7,700	101,392	80,630	8,400	13,030	7,850	4,900	161,995	985	114
110,111	151,438	1,136,199	782,367	86,086	107,597	231,690	161,990	169,986	771,574	20,802	115
8,000	34,400	270,150	61,400	13,800	33,250	96,890	41,413	6,400	189,948	7,000	116
		1,540,900	1,250	150	300	120,500	5,300		69,600		117
1,500	28,265	10,850	10,250	16,500	10,400	9,700	5,500	1,200	18,500		118
117	218	251	722	72	79	204	199	176	595	42	119
7	16	16	83	6	9	37	15	19	60	4	120
8	3	7	34	2		16	7	6	13	1	121
3	8	7	20	2		13	6	4	11	1	122
			14			8	1	2	4		123
4	13	9	49	4	9	21	3	13	47	8	124
1	1	2	2		2	2	2	2	4		125
4	12	7	47	4	7	19	6	11	48	3	126
1				1		3	1		1	1	127
15	1	6	22	7	2	6	3	4	21	2	128
83	189	187	579	49	53	126	154	141	463	32	129
10	9	28	33	4	10	28	21	11	42	3	130
		10	1	2	1	6	2		5		131
1	3	4	4	3	4	3	3	1	3		132
100	203	198	648	55	63	153	152	165	527	40	133
9		32	25	6	3	32	8	5	17		134
3	3	5	12	3	4	4	5	3	6	1	135
							9		9		136
1	2	3	9		1	3	1		5		137
	1		1		2	8	2		7		138
			6			2			3	1	139
			3		1	2			2		140
			1			1			1		141
	1			3		1			1		142
	3			2		1			3		143
	4		3			1			7		144
			2			1			2		145
4		3	6	2	3	5		1	3		146
		1	8	1	2		4		12		147
			1								148
			1						5		149
											150
116	211	249	692	70	79	201	196	171	486	42	151
											152
											153
											154
											155
											156
											157
1	5	2	19	1		3	2	5	79		158
			2						2		159
											160
											161
											162
											163
											164
											165
											166
	2			1			1		20		167
			6								168
											169
											170
			1								171
											172
59	120	155	402	40	50	116	26	78	378	23	173
\$318,322	\$454,867	\$1,644,398	\$2,742,924	\$545,378	\$491,716	\$967,089	\$1,054,091	\$596,829	\$3,455,364	\$111,786	174
\$262,440	\$387,758	\$1,400,536	\$2,444,512	\$445,510	\$455,106	\$379,850	\$923,466	\$481,712	\$3,103,786	\$90,905	175
27	55	50	157	13	45	61	57	59	269	14	176
137	228	351	1,132	168	263	369	330	407	1,330	57	177
											178
11	11	26	41	5	8	19	8	23	58	1	178
52	55	436	572	60	51	174	47	170	731	6	179
15	35	14	92	1	7	12	12	21	129	10	180
43	103	51	274	3	22	35	33	149	394	31	181
	5	3			6	5	14	14	21		182
	17	11			22	22	69	62	62		183
		11	4				1	1	10		184
		146	44				2	7	38		185
	2	1			11	6	2	5	15	1	186
	4	1			53	11	7	18	29	18	187
											188
37	45	184	242	100	111	127	222	1	526	7	188
	4	22			4						189
									40		190
											191
98	198	217	654	62	61	162	188	147	495	38	191
4	15	28	67	8	6	9	45	8	29	5	192
63	152	143	452	36	18	98	113	99	295	5	193
28	29	31	121	13	30	44	26	35	143	8	194
2	2	6	10	1	5	9	1		15		195
1		7	4	2	2	2	2	5	4		196
		2							3		197
									1		198
											199
											200