01

toll line will pay dividend

1 Consol = buying regionals & estab common stock + mgt.
p 4 ~~buying~~

2 Financial certainty
5 yr capital plan
consol into one stock

~~#~~ p6 can't cut lev

3 Info

4 Competitn hazard to stay 8
deal w/ it
Kill it
control own affiliates (?) 9

p 7 ~~[illegible]~~ monop ⇒ assume obligations & responsibilities

07

toll lines make the whole one syst indivisible

- bought WE
- Most of investment is in op co stock & bonds.
contracts made w/ reg co's

had to pay div's out of surplus.
plans to reduce expense
3/4 share in New Eng.
p 18 reg = cert,
p 16 reg = fair return can + needed for future.
29 avg out co-co fluct; one system.

| 15 ~~p18~~ comp = inefficient
| 18 wasteful duplic
& reg is the answer

public
- reg

1906

ANNUAL REPORT

OF

THE DIRECTORS

OF

AMERICAN TELEPHONE & TELEGRAPH COMPANY

TO THE STOCKHOLDERS

FOR THE

YEAR ENDING DECEMBER 31, 1906.

PRESS OF
ALFRED MUDGE & SON,
BOSTON.
1907.

1906

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American Telephone & Telegraph Company

OFFICERS FOR THE YEAR 1906.

FREDERICK P. FISH,	*President.*
EDWARD J. HALL,	*Vice-President.*
THOMAS SHERWIN,	*Vice-President.*
CHARLES P. WARE,	*Vice-President.*
WILLIAM R. DRIVER,	*Treasurer.*
CHARLES EUSTIS HUBBARD,	*Secretary.*

DIRECTORS

CHARLES W. AMORY.	HENRY S. HOWE.
THOMAS B. BAILEY.	CHARLES EUSTIS HUBBARD.
GEORGE F. BAKER.	CHARLES E. PERKINS.
FRANCIS BLAKE.	WILLIAM LOWELL PUTNAM.
CHARLES P. BOWDITCH.	THOMAS SANDERS.
ALEXANDER COCHRANE.	NATHANIEL THAYER.
J. JEFFERSON COOLIDGE, JR.	THEODORE N. VAIL.
W. MURRAY CRANE.	JOHN I. WATERBURY.
FREDERICK P. FISH.	MOSES WILLIAMS.

5 = 15

REPORT OF THE DIRECTORS

OF

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

NEW YORK, March 26, 1907.

TO THE STOCKHOLDERS:

The results of the business for the year 1906, as shown by the Treasurer's statement appended, were as follows:—

Gross Revenue	$24,526,097.82
Expenses, including interest and taxes	11,555,161.06
Net Revenue	12,970,936.76
*Dividends paid	10,195,233.50
Carried to Reserve	1,773,736.62
Carried to Surplus	1,001,966.64

The following were the corresponding figures for the year 1905:—

Gross Revenue	$21,712,831.29
Expenses, including interest and taxes	8,678,792.90
Net Revenue	13,034,038.39
*Dividends paid	9,866,355.00
Carried to Reserve	1,743,295.16
Carried to Surplus	1,424,388.23

The net output of telephones during the year 1906 was 1,409,578, making the total number in the hands of the operating companies 7,107,836.

* The increase of dividends in 1906 was due to the fact that the last two dividends declared in that year were each two per cent., while the corresponding dividends in 1905 were respectively one and one-half and two and one-quarter per cent.

The number of exchange stations at the end of the year operated by the companies which constitute our system in the United States was 2,727,289, an increase of 485,922. In addition to this number, there were 297,220 exchange and toll stations operated by so-called sub-licensees, namely, independent companies or associations under sub-license or connection contracts and making use of our telephones. Adding also our telephones employed for private-line purposes, our companies had a total of 3,068,833 stations as against 2,528,715 stations at the close of the previous year.

The total mileage of wire in use for exchange and toll service was 7,468,905 miles, of which 1,688,987 were added during the year. These figures do not include the mileage of wire operated by sub-licensees.

Including the traffic over the long distance lines, but excluding sub-licensees, the daily average of toll connections was about 462,000, and of exchange connections about 16,478,000, as against corresponding figures in 1905 of 368,000 and 13,543,000; the total daily average for 1906 reaching 16,940,000, or at the rate of about 5,455,000,000 per year, being 64 telephone calls for each man, woman and child in the United States.

The amount added to construction and real estate by all the companies, excluding sub-licensees, constituting our system in the United States during the year 1906, was:—

For Exchanges	$59,971,094
For Toll Lines	13,585,659
For Land and Buildings	5,810,196
	$79,366,949

The amount added in 1900 was $31,619,100; in 1901, $31,005,400; in 1902, $37,336,500; in 1903, $35,368,700; in 1904, $33,436,700; and in 1905, $50,780,906; making the grand total of expenditure upon these properties during the seven years $298,914,255.

During the year 1906, the amount expended for maintenance and reconstruction, independent of construction, by all the Bell telephone companies in the United States was $32,814,568. This amount came from the earnings of the properties, and was charged into the expenses of the year. As a result of these expenditures for maintenance and reconstruction, the plant of our companies is in a better condition than ever before. That plant could not at the present time be reproduced for a less sum than $70,000,000 in excess of its cost. The scrap value of the lead and copper in the lines and cables alone is not less, at present prices, than $80,000,000. Every year the plant becomes more permanent in character and of longer life. There is no reason to doubt that at the present time it is substantially of a type which need not be replaced until it is worn out.

The amount contributed by the American Telephone and Telegraph Company in 1906 by way of investment in its own long-distance plant ($5,642,000), in telephones ($1,737,000), in real estate ($330,000), and in the purchase of stock and bonds and in loans to its operating companies ($53,432,000), was in all $61,141,000, an addition of almost twenty-six per cent. to its entire investment up to January 1, 1906.

This greatly increased investment was made with the view of lifting the entire business to a distinctly higher plane specifically and as compared with its

competitors. Your Directors believe that the expenditure was wise and that, because of it, the position and business of the Bell companies were never so secure as at the present time. The controlling importance of our companies in the telephone field is even more marked than before, and there is hardly a district of any extent throughout the country in which their business is not supported by a satisfactory plant, a good organization and good service.

While even in these important phases of the business the situation requires constant watching and there still remains much to be done, particularly in some places, the improvement, generally speaking, has been marked and constant.

In the expenditures for construction during the past year, the Bell companies have proceeded more positively than ever before upon a definite theory which is believed to be that required to meet the conditions of the business as now known. They have built for the future as far as was consistent with sound economy. They have laid the foundations for the development that is sure to come and have not limited their construction to the business actually in sight.

In the earlier stages when, as in 1896, there was a gain of only 43,549 stations, or, as in 1900, a gain of only 167,934, it was impossible to realize how rapidly the demand for telephones would increase. It seemed consistent with sound policy to assume a rate of growth not greatly in excess of that then prevailing. If this policy were to be continued, it would be a matter of great difficulty to adjust the plant conditions to the demands of a vastly increased business, and the diffi-

culty would be greater every year. If buildings were erected and central office equipment installed only for the business practically then in sight, it would not be long before those buildings and central office equipments would be inadequate. It is inherent in the nature of the business that when telephone buildings and central office equipment become inadequate, they can be enlarged, in many cases, only at an expense altogether out of proportion to the increased facilities gained by such an enlargement. In fact, it has not unfrequently happened that, because of the unexpected demands for service, it has been found necessary to abandon a building and central office equipment and start again from the beginning, with a new building and new apparatus, as the most economical way of meeting the situation.

The same is true, even to a greater extent, of the line construction, which connects the exchange with the subscribers' stations.

The improvement in cables, made within the past few years, has revolutionized the art of telephone line construction. Not only is it now possible to place in underground ducts, cables containing four hundred or even six hundred circuits, but a pole line the carrying capacity of which would have been exhausted by forty pairs of open wires, can carry six hundred pairs of wires in the form of cables. The old-fashioned exchange pole line rarely carried more than twenty pairs of open wires. When an open wire aerial line has reached the low limit of its carrying capacity, it must be taken down and a larger line built unless there is an opportunity for a new line, which frequently is not the case. In either event, there

is a great waste as compared with a type of construction in which, by the use of cables, a given pole line may have a capacity many times as great. Sound economy has many times in the past year required the scrapping of all the wires on a pole line, cable being substituted for them, as the only way of securing the enlargement of facilities that was required, and not unfrequently it has been necessary to reconstruct the whole line as the cheapest way of securing the opportunity for growth that was required.

In so far as cable construction is concerned, it is not only of great advantage, as a matter of economy and as affording opportunities for growth that are not possible with open wires, but by the use of cables the chances of interruption of service are lessened, and the expense of maintenance is very greatly reduced.

If the very great development of the business could have been foreseen and the engineers and manufacturers had, at an early date, solved the cable problem so that cables of large capacity could have been originally installed instead of open wire, in the places where a large number of circuits would ultimately be required, much money would have been saved.

Now that it is certain that the business will develop on lines of reasonable profit to an extent much greater than even the most enthusiastic telephone man ventured to expect a few years ago, and cables for exchange distribution are made which are in all respects satisfactory vehicles of transmission, it would be the height of folly not to anticipate the certain extension of the business by providing facilities for future growth, when they can be most economically installed.

There will always be a substantial amount of open wire construction where few circuits are likely to be required, but the substitution of cable for open wires as the demands upon the plant increase is a sound practice even though it involves an investment based upon the certain requirements of the future rather than upon what is immediately necessary.

The great extent to which the telephone business was sure to develop became apparent about the year 1901, when the number of new subscribers increased nearly 220,000, as compared with about 167,000, the largest increase in any prior year. The increase was 257,336 in 1902; 247,184 in 1903; 274,466 in 1904; and 441,734 in 1905.

These large increases in the number of subscribers, which were attended by an equally large increase in the demand for toll service, practically exhausted the plant of the Bell companies and involved rebuilding that plant to a large extent. The year 1906 has seen additions to construction which not only enabled the companies to take care of the 2,241,367 subscribers connected with the system on the first of January, 1906, and the nearly 500,000 added during the year 1906, but which resulted in plant conditions, based on scientific study, which will enable the growth of future years to be taken care of with an economy and efficiency due to the application of the most approved methods of work. Constant additions will have to be made to the plant, but they will largely be on predetermined lines, utilizing, extending and rounding out the systematic plant conditions that now exist.

The effort has been made to design buildings and pro-

vide central office equipment that will not be exhausted in a short time. Careful engineering studies have been made of nearly all the large cities in the country, open wires have been displaced to a large extent, and underground construction and aerial and underground cables have been installed that were not merely adequate for the growth then in sight, but for a substantially larger growth. The lines upon which increases of plant should be made have been laid out in advance, so as to fit into the work now done.

The same general engineering plan has characterized the work of our companies in their toll-line equipment. It has been necessary to erect from time to time lines of poles which carried a single circuit, or only a small number of circuits, no larger number being required to do the business between the points connected by the pole line. Every circuit added to such a pole line reduces the cost of the installation per circuit mile, and it is a satisfaction to know that the number of miles of wire per mile of pole line has increased from 5.6 January 1, 1900, to 9.4 January 1, 1907. For the year 1906, the increase in miles of pole lines was 9,334, while the increase in miles of wire was 195.937, the ratio being more than twenty to one.

Another, and by no means the least important, advantage of systematic engineering such as now characterizes our work, lies in the fact that, by reason of it, we shall be much better able to meet promptly and satisfactorily the demands of the public for good service.

It does not seem extravagant to say that, as the result of the work of the past few years, the companies

have started on a new line of development, in so far as plant and business are concerned, which is of the utmost importance and sure to result in better service and more economical operation, and thereby in distinctly better returns on the investment than would otherwise have been the case.

As an indication of the extent to which the companies have built for the future, attention is called to the fact that at the present time not less than $25,000,000 are invested in circuits in cable that are not yet in use, but all of which will soon be in service, and that pole and conduit facilities are now installed which will take care of a very large number of cables over and above those that now exist.

Large expenditures will be required in the future, as in the past, to enable our companies to do the business that is forced upon them by the increasing demand for telephone service. It is the opinion of your Directors that the plant was never in better condition to meet the demand upon our companies, and that the additions to it which are surely necessary will not only result in a proper return, but will create an adequate revenue from a substantial portion of the plant that now exists which in the nature of the case has not yet been utilized.

The extensive building for the future and the very high cost of labor and material during the past year have somewhat increased the cost per station added to the Bell system over the corresponding costs of 1905. The cost per mile of toll wire did not increase.

There is no reason to question the validity of the statement made in the last Annual Report that the

reduction in the cost of construction per unit, which has been so significant during the past few years, will continue to characterize the business as it develops.

As has been the case for many years, there are certain portions of the country in which the return from the business is not satisfactory. These are for the most part localities in which our companies had not been able to cover the field rapidly enough to supply the demand for telephone service, and were, therefore, particularly exposed to competition.

As stated in prior reports, the unintelligent views of our competitors as to what rates for service are possible have created conditions in the portions of the country to which reference is now made, under which neither they nor the Bell companies are getting proper returns for the service rendered. These conditions are sure to correct themselves in time, particularly as almost everywhere, except in some of the comparatively few places in which new promotion schemes are being exploited, our competitors have discovered their mistake and are as anxious to raise their rates as they formerly were to do business at a loss. We have now developed our plant, business and organization in most of these localities to such an extent as to have the situation in hand, and have now only to proceed on sound lines to establish such relations with the public as will enable us to secure a fair return for the service rendered. There are definite indications that the public in these localities appreciates the situation to a greater extent than ever before, and that it will ultimately co-operate to secure the adequate telephone service which it needs, by encouraging our companies to make the readjustment of rates that is

necessary to enable us to give that service under fair conditions.

In by far the greater part of the country, rates are established and maintained with the approbation of the public, which permit the reasonable return required by the Bell companies to enable them to meet the demands of those who use the telephone.

Considering the difficulties in telephone rate making, and the fact that even now there has not been sufficient experience with the constantly changing phases of the business to make it possible to establish rigid theories fitting all conditions, it is a satisfaction to find that the complaints made as to the rates of the Bell companies are comparatively few in number, and are generally based upon some special feature of the system employed in a particular locality, and not upon the scheme of rates as a whole.

The so-called Independent telephone companies which are in competition with the Bell companies throughout the United States have, as far as can be learned, except in a few localities, made no relative gain. It is a matter of common notoriety that many of them recognize that their situation is unstable. Comparatively few new Independent plants have been established in competition with the Bell during the past two years. A number of franchises for competing companies have been granted in various cities, but during the year 1906, and up to the present time in the year 1907, substantially no work has been done under any of the franchises in the more important places. The investors from whom Independent telephone promoters have secured money in the past, are

apparently less inclined than formerly to make the advances required to install telephone exchanges under the very unfavorable conditions, among others the excessive cost of material and labor and the high rates for money, which now prevail. The known financial situation of some of the larger Independent enterprises undoubtedly also operates to check such investment.

In spite of the fact that during the past year a large portion of the time and energy of the executive officers of the Bell companies have been absorbed in construction work and in the extension of the plant and business, the character of the service throughout the country has undoubtedly improved. Effort is everywhere made to keep the service at a proper standard and to improve it. The time and thought of hundreds of engineers and traffic men is devoted, not only to applying the present methods of giving service as efficiently as possible, but to finding out, by careful and intelligent study, methods of operation and of handling the business that will lead constantly to better and more efficient service. Substantial progress has been made in this direction; and while the service in this country is conceded to be the best in the world, there is every reason to believe that it can and will be improved as the result of the comprehensive and intelligent efforts that are being made to that end.

There was during the year 1906 at least the usual amount of destruction of plant by sleet storms, washouts and fire. The San Francisco catastrophe undoubtedly inflicted upon the plant of the Pacific States Company, which operates on the Pacific Coast, a greater injury than any telephone plant ever suffered before.

If it had not been for this disaster, the Pacific States Company would have gained not less than thirty thousand subscribers more than it did in fact gain. The telephone plant in San Francisco has been rebuilt, and the service restored to a surprising extent.

As stated in the last Annual Report, convertible four per cent. bonds of the company, to the amount of $100,000,000, were sold in February, 1906. By the terms of the contract, bonds to the amount of $30,000,000 were taken and paid for during that year. Construction work proceeded so rapidly throughout the country that, during the year, it became necessary for the company to obtain money on short-time notes to secure the funds required, in anticipation of the payments on the bonds. On the first of January, 1907, its short-time obligations amounted to about $21,000,000. It also became evident that if the great commercial development throughout the country which was taxing the resources of practically every public service company, and the telephone companies almost more than any other, was to continue, the proceeds from the bonds would not be sufficient to meet the necessary expenditures of the company to the end of the year 1907, as had been expected.

In January, 1907, therefore, the company sold three-year five per cent. notes to the amount of $25,000,000. These notes were readily placed at a price that was reasonable in view of the abnormal financial conditions that have characterized the past year. From the proceeds of the securities sold, the floating indebtedness of the company will be paid when due, and on May 1, 1907, the $20,000,000 three-year five per cent. notes of the company, due that day, will be paid.

The gross revenue for the year 1906 of all the Bell companies in the United States, taken as a whole and excluding duplications, was over $114,000,000. In spite of the abnormal financial conditions, which involved unusual interest charges, the very great investment in construction, much of which did not become revenue producing during the year, and the high cost of labor and material, the net returns from the business as a whole were not reduced, although there was not the increase which would have been made if the conditions had been more nearly normal. All things considered, the financial results were satisfactory. Your Directors believe that for the year 1907 the financial results of the business of your companies will be substantially better than in the year 1906.

The gross revenue of the companies above given does not include the Bell Company of Canada, nor does it take into account the revenue of the Western Electric Company. The business of that company for the year 1906 was the largest in its history.

Appended hereto, as usual, are a series of comparative statistics showing certain phases of the development of the business of the company and its associated companies; a statement of the ledger balances of the Company as of December 31, 1906; also a comparative statement of the earnings and expenses for the years 1905 and 1906 and copies of the reports of the Committee on Treasurer's Accounts of May 23, September 22, and November 28, 1906, and March 8, 1907.

On the back of the cover of this report is a diagram illustrating graphically the growth in telephone stations

connected with the Bell system throughout the United States, from the beginning to the thirty-first day of December, 1906.

For the Directors,

FREDERICK P. FISH,
President.

INSTRUMENTS IN THE HANDS OF BELL LICENSEES, UNDER RENTAL.

THE FIGURES IN LOWER LINE SHOW INCREASE FROM YEAR TO YEAR.

Dec. 20, 1897.	Dec. 20, 1898.	Dec. 20, 1899.	Dec. 20, 1900.	Dec. 20, 1901.
919,121	1,124,846	1,580,101	1,952,412	2,525,606
146,484	205,725	455,255	372,311	573,194

Dec. 20, 1902.	Dec. 31, 1903.	Dec. 31, 1904.	Dec. 31, 1905.	Dec. 31, 1906.
3,150,320	3,779,517	4,480,564	5,698,258	7,107,836
624,714	629,197	701,047	1,217,694	1,409,578

TOLL LINES IN THE UNITED STATES OF THIS COMPANY AND THE COMPANIES ASSOCIATED WITH IT.

	Jan. 1, 1898.	Jan. 1, 1899.	Jan. 1, 1900.	Jan. 1, 1901.	Jan. 1, 1902.	Jan. 1, 1903.	Jan. 1, 1904.	Jan. 1, 1905.	Jan. 1, 1906.	Jan. 1, 1907.	Increase.
Miles of Pole Lines	67,791	75,718	89,292	101,087	110,459	122,409	130,178	136,547	145,535	154,869	9,334
Miles of Wire....	324,883	385,911	501,832	607,599	716,265	837,912	975,702	1,121,228	1,265,236	1,461,173	195,937

TOLL CONNECTIONS.

The average daily number of toll connections is	461,519
Or a total per year of about	148,609,000

EXCHANGES OF THE BELL COMPANIES IN THE UNITED STATES.

	Jan. 1, 1898.	Jan. 1, 1899.	Jan. 1, 1900.	Jan. 1, 1901.	Jan. 1, 1902.	Jan. 1, 1903.	Jan. 1, 1904.	Jan. 1, 1905.	Jan. 1, 1906.	Jan. 1, 1907.	Increase.
Exchanges .	1,025	1,126	1,239	1,348	1,411	1,514	1,609	4,080	4,532	4,889	357
Branch Offices	937	1,008	1,187	1,427	1,594	1,861	2,131				
Miles of wire on poles and buildings .	341,091	411,832	524,123	644,730	841,140	1,109,017	1,358,140	1,654,379	2,159,567	2,754,571	595,004
Miles of wire underground	282,634	358,184	489,250	705,269	883,679	1,328,685	1,618,691	1,888,760	2,345,742	3,241,471	895,729
Miles of wire submarine .	2,675	2,973	3,404	4,203	4,200	6,048	6,358	6,671	9,373	11,690	2,317
Total miles of wire . . .	626,400	772,989	1,016,777	1,354,202	1,729,019	2,443,750	2,983,189	3,549,810	4,514,682	6,007,732	1,493,050

EXCHANGES OF THE BELL COMPANIES—Continued.

	Jan. 1, 1898.	Jan. 1, 1899.	Jan. 1, 1900.	Jan. 1, 1901.	Jan. 1, 1902.	Jan. 1, 1903.	Jan. 1, 1904.	Jan. 1, 1905.	Jan. 1, 1906.	Jan. 1, 1907.	Increase.
Total Circuits .	295,904	338,293	422,620	508,262	592,467	742,654	798,901	930,251	1,135,449	1,384,175	248,726
Total Employees	16,682	19,668	25,741	32,837	40,864	50,350	58,795	59,451	74,718	90,324	15,606
Total Stations .	384,230	465,180	632,946	800,880	1,020,647	1,277,983	1,525,167	1,799,633	2,241,867	2,727,289	485,922

EXCHANGE CONNECTIONS.

The estimated number of exchange connections daily in the United States, made up from actual count in most of the exchanges, is 16,478,058

Or a total per year of about 5,305,900,000

The number of daily calls per station varies in different exchanges, the average throughout the United States being about 6.

LEDGER BALANCES, DEC. 31, 1906.

DEBTORS.

Construction, Equipment and Supplies	$40,336,776 14
Telephones	10,244,817 39
Real Estate	2,908,098 46
Stocks and Bonds	182,357,238 15
Patent Account	261,384 35
Machinery, Tools and Supplies,	42,299 10
Cash and Deposits	3,018,024 43
Notes and Accounts Receivable,	67,521,977 14
American Bell Telephone Co.,	22,110,400 00
Old Colony Trust Co., Trustee,	25,000,000 00

CREDITORS.

Capital Stock	$158,661,800 00
Surplus	8,027,454 52
Convertible Bonds	30,000,000 00
Collateral Trust Bonds	53,000,000 00
" (Collateral)	25,000,000 00
Five Per Cent. Notes due May 1, 1907	20,000,000 00
Reserves	9,108,138 81
Notes and Accounts Payable	31,358,411 58
Contingent	18,645,210 25
	$353,801,015 16

WM. R. DRIVER, *Treasurer.*

Comparative Statement of Earnings and Expenses.

EARNINGS.

	1905.	1906.
Dividends	$8,897,879 95	$10,281,437 60
Rental of Instruments	3,896,151 27	4,518,990 66
Telephone Traffic	6,529,556 82	7,522,082 31
Real Estate	82,384 46	67,296 29
Interest	2,306,858 79	2,136,290 96
	$21,712,831 29	$24,526,097 82

EXPENSES.

Expenses of Administration	$1,313,586 32	$1,629,802 85
Interest and Taxes	3,578,681 86	5,288,413 95
Telephone Traffic	3,786,524 72	4,636,944 26
	$8,678,792 90	$11,555,161 06
Net Revenue	$13,034,038 39	$12,970,936 76
Dividends Paid	9,866,355 00	10,195,233 50
Balance	$3,167,683 39	$2,775,703 26
Carried to Reserves	$1,743,295 16	$1,773,736 62
Carried to Surplus	1,424,388 23	1,001,966 64
	$3,167,683 39	$2,775,703 26

WM. R. DRIVER, *Treasurer.*

BOSTON, MASSACHUSETTS, 23 MAY, 1906.

FREDERICK P. FISH, Esquire,

President American Telephone and Telegraph Company,

Dear Sir: — Herewith I enclose the report of Mr. Henry A Piper, an expert accountant employed by me to examine the accounts of our Treasurer for the three months ending March 31, 1906.

Respectfully yours,

FRANCIS BLAKE,
Committee on Treasurer's Accounts.

BOSTON, May 22, 1906.

FRANCIS BLAKE, Esq.,

Dear Sir: — I have examined the accounts of the Treasurer of the American Telephone and Telegraph Company in Boston and New York, for the three months ending March 31, 1906, and have to report as follows:

I have determined the cash in hand and in the banks and trust companies, and find the amount, after allowing for outstanding checks, to agree with the balance of cash on that date.

I have seen approved and receipted vouchers for all disbursements, and have verified the record of cash receipts.

I have seen that all notes and stock certificates owned by the company are in hand and correctly entered upon the books.

I have found all Cash book and Journal entries duly posted to the Ledger, and the footings correct, and have proved the Balance Sheet.

I hereby certify that in all my investigations, as above recited, I have found everything correct.

Yours very truly,

HENRY A. PIPER.

BOSTON, MASSACHUSETTS, 22 September, 1906.

FREDERICK P. FISH, Esquire,

President American Telephone and Telegraph Company,

Dear Sir: — Herewith I enclose the report of Mr. Henry A. Piper, an expert accountant employed by me to examine the accounts of our Treasurer for the three months ending June 30, 1906.

Respectfully yours,

FRANCIS BLAKE,

Committee on Treasurer's Accounts.

BOSTON, September 22, 1906.

FRANCIS BLAKE, Esq.,

Dear Sir: — I have examined the accounts of the Treasurer of the American Telephone and Telegraph Company in Boston and New York, for the three months ending June 30, 1906, and have to report as follows:

I have determined the cash in hand and in the banks and trust companies, and find the amount, after allowing for outstanding checks, to agree with the balance of cash on that date.

I have seen approved and receipted vouchers for all disbursements, and have verified the record of cash receipts.

I have seen that all notes and stock certificates owned by the company are in hand and correctly entered upon the books.

I have found all Cash book and Journal entries duly posted to the Ledger, and the footings correct, and have proved the Balance Sheet.

I hereby certify that in all my investigations, as above recited, I have found everything correct.

Yours very truly,

HENRY A. PIPER.

Boston, Massachusetts, 28 November, 1906.

Frederick P. Fish, Esquire,

President American Telephone and Telegraph Company,

Dear Sir : — Herewith I enclose the report of Mr. Henry A. Piper, an expert accountant employed by me to examine the accounts of our Treasurer for the three months ending September 30, 1906.

Respectfully yours,

FRANCIS BLAKE,
Committee on Treasurer's Accounts.

Boston, November 27, 1906.

Francis Blake, Esq.,

Dear Sir : — I have examined the accounts of the Treasurer of the American Telephone and Telegraph Company in Boston and New York, for the three months ending September 30, 1906, and have to report as follows :

I have determined the cash in hand and in the banks and trust companies, and find the amount, after allowing for outstanding checks, to agree with the balance of cash on that date.

I have seen approved and receipted vouchers for all disbursements, and have verified the record of cash receipts.

I have seen that all notes and stock certificates owned by the company are in hand and correctly entered upon the books.

I have found all Cash book and Journal entries duly posted to the Ledger, and the footings correct, and have proved the Balance Sheet.

I hereby certify that in all my investigations, as above recited, I have found everything correct.

Yours very truly,

HENRY A. PIPER.

BOSTON, MASSACHUSETTS, 8 March, 1907.

FREDERICK P. FISH, Esquire,

President American Telephone and Telegraph Company,

Dear Sir: — Herewith I enclose the report of Mr. Henry A. Piper, an expert accountant employed by me to examine the accounts of our Treasurer for the three months ending December 31, 1906.

Respectfully yours,

FRANCIS BLAKE,

Committee on Treasurer's Accounts.

BOSTON, March 8, 1907.

FRANCIS BLAKE, ESQ.,

Dear Sir: — I have examined the accounts of the Treasurer of the American Telephone and Telegraph Company in Boston and New York, for the three months ending December 31, 1906, and have to report as follows:

I have determined the cash in hand and in the banks and trust companies, and find the amount, after allowing for outstanding checks, to agree with the balance of cash on that date.

I have seen approved and receipted vouchers for all disbursements, and have verified the record of cash receipts.

I have seen that all notes and stock certificates owned by the company are in hand and correctly entered upon the books.

I have found all Cash book and Journal entries duly posted to the Ledger, and the footings correct, and have proved the Balance Sheet.

I hereby certify that in all my investigations, as above recited, I have found everything correct.

Yours very truly,

HENRY A. PIPER.

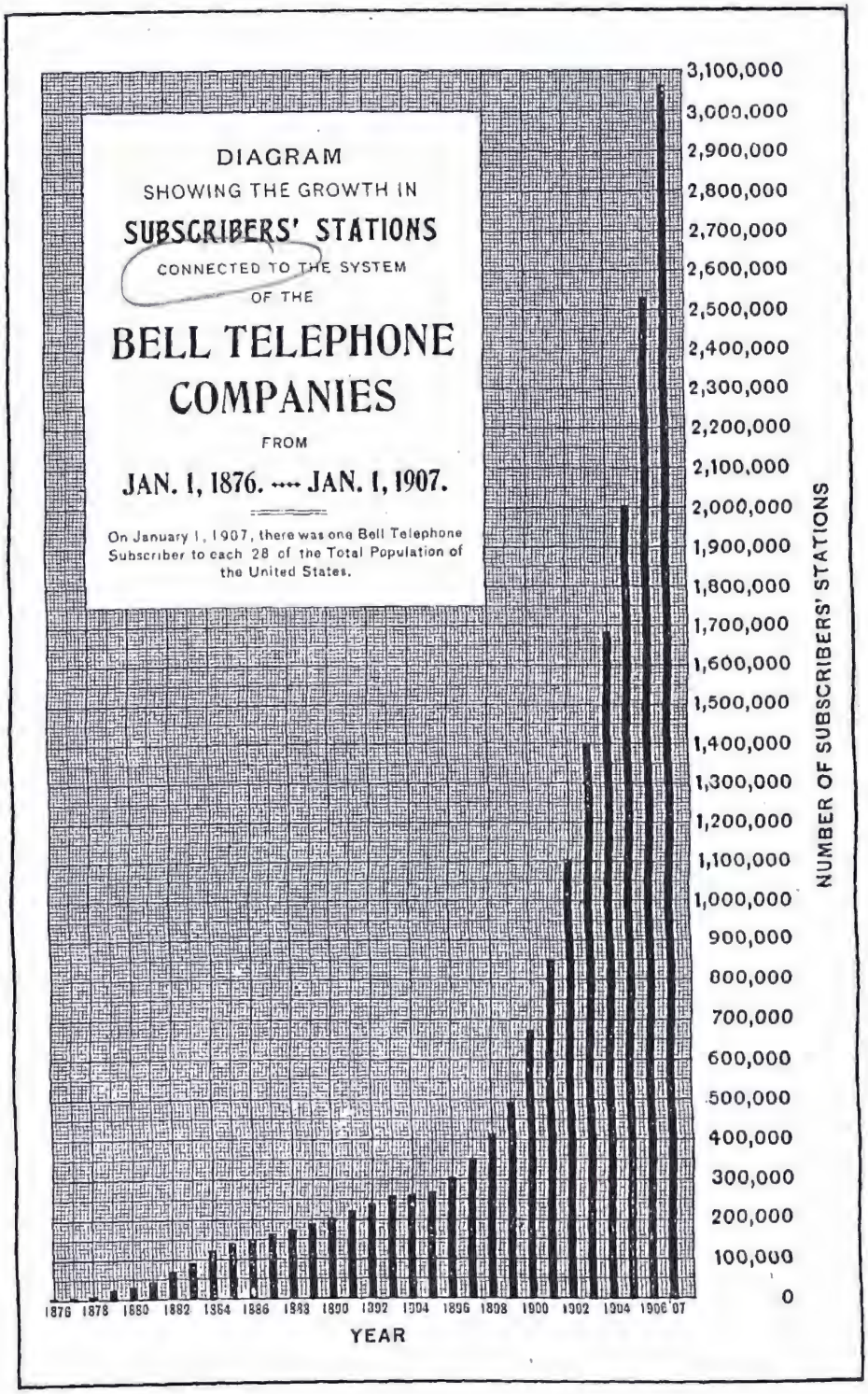
DIAGRAM
SHOWING THE GROWTH IN
SUBSCRIBERS' STATIONS
CONNECTED TO THE SYSTEM
OF THE
BELL TELEPHONE COMPANIES
FROM
JAN. 1, 1876. ---- JAN. 1, 1907.
On January 1, 1907, there was one Bell Telephone Subscriber to each 28 of the Total Population of the United States.
3,100,000
3,000,000
2,900,000
2,800,000
2,700,000
2,600,000
2,500,000
2,400,000
2,300,000
2,200,000
2,100,000
2,000,000
1,900,000
1,800,000
1,700,000
1,600,000
1,500,000
1,400,000
1,300,000
1,200,000
1,100,000
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
NUMBER OF SUBSCRIBERS' STATIONS
1876 1878 1880 1882 1884 1886 1888 1890 1892 1894 1896 1898 1900 1902 1904 1906 '07
YEAR

1907

ANNUAL REPORT

OF

THE DIRECTORS

OF

MERICAN TELEPHONE & TELEGRAPH COMPANY

TO THE STOCKHOLDERS

FOR THE

YEAR ENDING DECEMBER 31, 1907.

PRESS OF
ALFRED MUDGE & SON,
BOSTON.
1908.

1907

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BOSTON.
1908.

American Telephone & Telegraph Company

OFFICERS FOR THE YEAR 1907.

THEODORE N. VAIL,	*President.*
EDWARD J. HALL,	*Vice-President.*
THOMAS SHERWIN,	*Vice-President.*
CHARLES P. WARE,	*Vice-President.*
WILLIAM R. DRIVER,	*Treasurer.*
CHARLES EUSTIS HUBBARD,	*Secretary.*

DIRECTORS

CHARLES W. AMORY.	CHARLES EUSTIS HUBBARD.
THOMAS B. BAILEY.	WILLIAM LOWELL PUTNAM.
GEORGE F. BAKER.	THOMAS SANDERS.
FRANCIS BLAKE.	SYLVANUS L. SCHOONMAKER.
ALEXANDER COCHRANE.	NATHANIEL THAYER.
T. JEFFERSON COOLIDGE, Jr.	THEODORE N. VAIL.
W. MURRAY CRANE.	JOHN I. WATERBURY.
HENRY S. HOWE.	MOSES WILLIAMS.

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REPORT OF THE DIRECTORS

OF

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

NEW YORK, March 10, 1908.

TO THE STOCKHOLDERS:

The results of the business for the year 1907, as shown by the Comptroller's statement appended, were as follows:—

Profits	$23,479,290.10
Interest	7,209,902.16
Balance	16,269,387.94
Dividends paid	10,943,644.00
Carried to Reserve	3,500,000.00
Carried to Surplus	1,825,743.94

The following were the corresponding figures for the year 1906:—

Profits	$17,857,687.37
Interest	4,886,750.61
Balance	12,970,936.76
Dividends paid	10,195,283.50
Carried to Reserve	1,773,786.62
Carried to Surplus	1,001,966.64

SUBSCRIBER STATIONS.

The number of stations at the end of the year operated directly by the associated companies which constitute our system in the United States was 3,035,533,

an increase of 308,244. In addition to this number there were 755,816 exchange and toll stations connected to our system by our toll and long-distance lines, but operated by local, co-operative and rural independent companies or associations having sub-license or connection contracts. Adding also our telephones employed for private-line purposes, there was a total of 3,839,000 stations connected to the Bell system as against 3,070,660 stations at the close of the previous year, an increase of 768,340 stations.

The increase in the number of subscriber stations operated directly by our associated companies was less than last year, due to more rigid collection of bills and more careful scrutiny of applicants. As the average cost of connecting subscribers far exceeds the average annual income per station, permanency is more desirable than numbers. The result has been an improvement in the class of subscribers, so that, notwithstanding this smaller increase in subscriber stations, the increase in gross revenue is fully equal to that of former years.

Wire Mileage.

The total mileage of wire in use for exchange and toll service was 8,610,592 miles, of which 1,141,687 were added during the year. These figures do not include the mileage of wire operated by sub-licensees.

Traffic.

Including the traffic over the long-distance lines, but excluding sub-licensees, the daily average of toll connections was about 494,000, and of exchange connections

about 18,130,000, as against corresponding figures in 1906, of 462,000 and 16,478,000; the total daily average for 1907 reaching 18,624,000, or at the rate of about 5,997,000,000 per year.

Construction.

In the early part of the past year there were signs of a coming change in general business conditions, and steps were taken to stop all construction not necessary either for immediate demand or to put the plant in condition to economically meet future demand. The result of this action has been satisfactory. The construction expenditures during the latter part of the year were largely reduced.

The amount added to construction and real estate by all the companies, excluding sub-licensees, constituting our system in the United States during the year 1907 was:—

For exchanges	$44,184,800
For toll lines	4,426,400
For land and buildings	4,310,200
	$52,921,400

Construction of Previous Years.

The amount added in 1900 was $31,619,100; in 1901, $31,005,400; in 1902, $37,336,500; in 1903, $35,368,700; in 1904, $33,436,700; in 1905, $50,780,906; and in 1906, $79,366,949, making the grand total of expenditure upon these properties during the eight years $351,835,655.

Maintenance and Reconstruction.

During the year $36,626,667 was applied out of revenue to maintenance and reconstruction purposes.

The total amount of maintenance and reconstruction charged against revenue for the last five years was over $147,000,000. This expenditure is reflected in the superior condition of the plant, the theory and practice being that the plant must be kept in standard condition at the expense of revenue.

American Telephone and Telegraph Company Investment.

The amount contributed by the American Telephone and Telegraph Company in 1907 by way of investment in its own long-distance plant ($1,285,000), in real estate ($585,485), and in the purchase of stock and bonds and in advances to its operating companies ($29,952,000), was in all $31,822,485, an addition of about ten per cent. to its entire investment up to January 1, 1907.

Associated Companies.

financial condition.

The associated operating companies of the United States (not including the American Telephone and Telegraph Company) commenced the year with rather an abnormal indebtedness. Measures were at once taken to bring this within the normal limits of current operations. This has been done and the obligations of those

companies to other than the American Telephone and Telegraph Company decreased for the year $21,000,000, while the cash on hand increased at the same time $1,500,000—a net improvement in such liabilities of $22,500,000.

During the year the Western Electric Company decreased its indebtedness $9,400,000 and increased its cash $1,150,000, making a net improvement of $10,550,000 for that company.

The total improvement of our associate operating and manufacturing companies in the United States was $33,050,000, bringing the current and floating indebtedness of all the associated companies well within the limits of current operations.

CONSTRUCTION FOR THE CURRENT YEAR.

Estimates of all the associated operating companies and of the American Telephone and Telegraph Company for all anticipated requirements for 1908 have been prepared, thoroughly studied and considered in connection with available resources. Maximum expenditure in each case has been agreed upon, which is well within the available resources. All who are responsible for the expenditures are working in entire accord with these agreements and understandings, and it is believed that the results will be well within the limits fixed.

WESTERN ELECTRIC COMPANY.

The Western Electric Company desired to extend its relations with our company and the associated companies, and to cover with its operations the entire

telephonic field, whether connected with the Bell system or not. At the same time it was thought that the management, which would remain the same, if brought into closer touch with the general organization of the Bell system, could avoid duplication of effort in electrical and mechanical development and in this way and by the concentration of the purchase and distribution of supplies effect greater efficiency and economy.

To this end contracts have been made with most of the Bell companies, and the contract between our company and the Western Electric Company has been modified in respect to the sale of telephones and telephonic apparatus.

The business of the year 1907, considering the unusual conditions and the large contraction in business, was fairly satisfactory, if taken alone by itself. When taken in connection with the overstock from 1906, and the amount of merchandise and material on hand or in process at the beginning of the year, it shows very small profit.

Marketable goods and merchandise on hand at the end of the year 1907 were inventoried at $2,000,000 less than cost, and concessions in prices to the amount of $335,000 were made.

These items, in addition to the high rates and unusual amount of interest paid, made it necessary to pay substantially all of the dividend of 1907 out of surplus.

At the end of the year cash and cash assets exceeded the payables by about eighteen per cent. The quick assets including merchandise exceeded the payables more than two to one. The plant stands on the books

at about $12,000,000, which is fifty-one per cent. of the actual cost.

During the year an issue of bonds to the amount of $15,000,000 was authorized which will be used when conditions are favorable to provide additional working capital if needed.

A proposition was made by our company to purchase the outstanding share capital of the Western Electric Company at a price agreed upon with some representative shareholders as fair and equitable. Over 30,000 shares have accepted the offer, making the total holdings of our company over 120,000 out of 150,000 shares.

Gross Revenue and Expenses — Operating Companies.

Attention has been given to the operating expenses with a view to bringing them down to the lowest economy consistent with the highest efficiency.

In spite of increase in wages and the continuance of the same high standard of maintenance which has always prevailed, the ratio of expense to gross revenue has decreased so that the net revenue shows a gratifying improvement.

It is expected and believed that the continuation of the present policy through the coming year will produce equally satisfactory results.

The following table shows the year's results of all the telephone operating companies associated with the Bell system, not including the long-distance business and the Bell Telephone Company of Canada, for the year 1907, compared with 1906.

COMPARATIVE CONSOLIDATED STATEMENT OF BELL TELEPHONE COMPANIES IN UNITED STATES. AMERICAN TELEPHONE AND TELEGRAPH COMPANY NOT INCLUDED.

(EXCLUDING DUPLICATIONS.)

	1906.	1907.	Increase.
Gross Earnings .	$105,441,600.	$120,753,200.	$15,311,600.
Expenses:			
Operating and General .	47,206,400.	53,242,300.	6,035,900.
Maintenance .	30,639,200.	34,665,700.	4,026,500.
Total Expenses .	77,845,600.	87,908,000.	10,062,400.
Balance, Net Earnings . .	27,596,000.	32,845,200.	5,249,200.
Deduct Interest .	5,197,800.	7,025,500.	1,827,700.
Balance . .	22,398,200.	25,819,700.	3,421,500.
Dividends Declared	16,682,000.	19,206,100.	2,524,100.
Undivided Profits .	5,716,200.	6,613,600.	897,400.

ISSUE OF NEW SHARE CAPITAL.

Early in the year, anticipating the possibility of an uncertain financial condition, your Directors authorized an offer of 219,252 shares of capital stock to the existing shareholders, at the ratio of one share to each six shares then held. Of this issue all but 9,486 shares were subscribed for and taken. The money realized placed our company in such condition that it was enabled to fully protect all of its associated and allied interests during the exceedingly critical financial period just passed, and left it in a position to meet all an-

ticipated demands of the current year based on a complete discussion of and agreement on the requirements and resources of our company, and of the associated and controlled companies.

With this issue there are now outstanding 1,525,280 shares of capital stock distributed among 23,469 shareholders, an increase of 5,275 over January 1, 1907, being an average of sixty-five shares each.

It will be interesting to note that 1,312,502 of these shares are held by 23,453 shareholders, an average of less than fifty-six each, the balance, 212,778, being held by sixteen shareholders of 5,000 or over shares each —an average of 13,298 each. More than three-quarters of the entire share capital is held in New England.

Selling Telephones.

The policy of our company in the past has been to lease telephones, and to allow the Western Electric Company to sell only apparatus to our licensees. Believing that the best interests of all would be advanced by the general use of standard telephonic apparatus, after consultation with and with the approval of our associated and licensed companies, we authorized the Western Electric Company to sell both telephones and telephonic apparatus to all applicants. While the time has been too short to show positively the effect of this policy, the indications are that the benefits direct and indirect will be large, particularly in the development of unoccupied territory in connection with the Bell system.

Exaggeration of Telephone Profits for Speculative Purposes.

Much of the agitation against legitimate telephone business is founded on false and exaggerated statements of the profits originally made by the early Bell companies.

These statements have been used by the promoters of both good and bad enterprises.

As a matter of fact, the shareholders of The American Bell Telephone Company and its predecessors paid into the treasuries of those companies more actual cash than was represented by the capitalization at par value.

The only shares of The American Bell Telephone Company not issued for cash at par or at a premium were the shares amounting to $5,100,000 issued in exchange for the shares and property of the National Bell Telephone Company. The premiums received by the company on further issues of stock amounted to more than this sum.

The substitution of the American Telephone and Telegraph Company for The American Bell Telephone Company was, in effect, the purchase of the property of The American Bell Telephone Company for cash at somewhat less than the average market price prevailing prior to the purchase. None of the American Telephone and Telegraph shares now stand on any other basis than cash at par value.

In view of the enterprise shown and the risk incurred by the original investors, who received no interest or dividends for years, the return was certainly not large to those who created an enterprise which has probably

done more to bring about a new and advantageous condition in the affairs of mankind than any other industry in the history of the world.

Physical Valuation of Telephone Plants.

For the purpose of determining the relation between the physical plant and the capitalization, a valuation of the exchange, toll and long-distance line plant included in the Bell system was made at the close of the year. The valuation was based on the replacement cost of the existing plant, and does not include any "unearned increment" or allowance for franchises, but assumes a clear field and free franchise. When to this valuation is added the value of rights of way now unobtainable, patents, franchises, and other valuable considerations, it will be conceded that the Bell system is unique. This showing is interesting and should serve to correct some popular but erroneous impressions.

January 1, 1908, all obligations of the American Telephone and Telegraph Company and its associated operating companies in the United States, including capital stock at par, held by the public were $554,939,000.

Cash on hand, quick receivables, working assets, and sundry investments were	$101,074,000.
Balance, Capital representing plants,	$453,865,000.
The plants are carried on the books of the various companies at . .	$492,496,000.
Appraised value by Engineers (copper at 15 cents)	$488,296,000.
Outstanding obligations against plant,	$453,865,000.

Appraised value in excess of outstanding obligations	$34,431,000.
Book value exchange construction only, per exchange station . .	$114.
Book value all plant (toll line and exchange) of Bell operating companies in United States (not including long-distance) per exchange station . .	$149.
Book value all plants in the United States, including long-distance, per exchange station	$162.

Promotion and Competition — Independent Companies.

The unusual production and prices, during the past few years, of those commodities which this country sells to the whole world, with accompanying very general distribution of wealth, resulted in an almost phenomenal financial and industrial activity, stimulating new enterprises and promotions of all kinds, among them independent telephone companies.

The exaggerated stories of the fortunes made by original telephone investors, together with misleading statements of probable profits, made it possible to launch many of these companies pledged to *low rates for exchange service and high dividends to investors.* At these low rates, with "maintenance" and "reconstruction" expenses either intentionally or ignorantly disregarded, these companies for a time had an appearance of prosperity.

The result has been unfortunate in nearly every case.

The promises and pledges as to rates and profits, made as an excuse for their coming, as a basis for their franchise, and as an incentive to attract capital, are now admitted to be impossible. Most, if not all, of these companies, which have had an existence long enough to force attention to the items of "maintenance" or "reconstruction," are now asking for increased rates, and to be absolved from onerous conditions freely accepted and assumed at the beginning. Reorganizations are now in progress.

It would seem, as a whole, that the gain of the public through competition based on low rates has not compensated for the loss of capital invested in these enterprises.

During this period of strife and rush for development and extension, many subscribers were connected to exchange systems with little or no benefit to themselves or advantage to others, and much was done that under ordinary conditions would not have been done.

Rates and Rate Regulation.

The result of these conditions has been to create in the minds of the public, and of public bodies, misleading and mistaken ideas of the telephone business. It has encouraged attempts at regulation of rates and business on lines that if obligatory or persisted in would be ruinous. In controversies as to rates, the policy of our associated companies has been to make a complete and absolute showing of the condition, cost and value of plant, cost and value of service, cost and necessity of proper maintenance, and the broad position is taken

that neither our company nor the associated companies have anything to conceal or anything to apologize for. That the capitalization of all the companies is conservative, far within justifiable limits, and in the relation between the replacement value of the properties and the capitalization of the companies, unique. Fair rates, therefore, should be authorized or acquiesced in, for it is only by fair rates that good service to the public and permanent, healthy conditions can be created or maintained. With a full knowledge of all surrounding circumstances and conditions, it is believed that this would be fully acquiesced in by the public.

Fair rates would insure high-class plant and equipment maintained at a high state of efficiency, and would provide fair wages to employees, the highest paid for similar class of employment. Both of these are necessary to good service.

Fair rates should give fair return on the investment, and promise fair return on new money needed. This is necessary to maintain the interest of the existing shareholders in the proper administration of the business, as well as to provide for the continually increasing public demand.

Any revenue produced over and above such requirements and the proper reserve to provide for contingencies could be used for the benefit of the public, allowing the company to retain a part sufficient to stimulate the most efficient and economical management. It would be difficult, if not impossible, to get effective and economical management, such as would produce the best results for both the public and the shareholders, without recognizing this principle.

It does not seem possible that there can be any question of the justice of this position. That being granted, the facts to be settled are : —

Is the management honest and competent ?

What is the investment?

Is the property represented by that investment maintained at a high standard?

What percentage of return does it show?

Is that a fair return?

Is it obtained by a reasonable distribution of gross charges?

If these questions are answered satisfactorily, there can be no basis for conflict between the company and the public, and the less the working conditions are made inflexible by legislative proscription, the better will be the solution of the constantly changing problems incident to a growing business.

The question of maintenance is of the greatest importance and will be referred to more at length later.

Competition.

The value of any exchange system is measured by the number of the members of any community that are connected with it. If there are two systems, neither of them serving all, important users must be connected with both systems. Connection with only one is of but partial value and cannot be satisfactory. Two exchange systems in the same community, each serving the same members, cannot be conceived of as a permanency, nor can the service in either be furnished at any material reduction because of the competition, if return on

investment and proper maintenance are taken into account. Duplication of plant is a waste to the investor. Duplication of charges is a waste to the user.

The advantages claimed for competition are lower rates and improved service. Exhaustive competition may temporarily produce either or both of these results, but, as before stated, this temporary gain is purchased by an excessive waste. Duplication of plant and operation cannot produce either result without exhaustive competition. Given the same management, the public must pay double rates for service, to meet double charges, on double capital, double operating expenses and double maintenance. In most cases of proposed competition an examination of the prospectus will show that, by some process, it is expected to make good a capitalization equal to at least two or three times the actual cost of the construction. The only benefits are to the promoter.

Public Control.

It is contended that if there is to be no competition, there should be public control.

It is not believed that there is any serious objection to such control, provided it is independent, intelligent, considerate, thorough and just, recognizing, as does the Interstate Commerce Commission in its report recently issued, that capital is entitled to its fair return, and good management or enterprise to its reward.

What is Fair Return on Capital?

With guaranteed or reasonably certain income, money can be obtained for any enterprise at moderate rates.

With uncertainty—owing to competition and oppo-

sition, possible or actual, or possible regulation of rates without proper investigation or consideration — a more or less speculative price must be paid.

Subject to these general rules, "locality" and existing general conditions will establish the rate.

Fair Charges. Upon What Based.
Exchange Service.

An exchange system is made up of circuits (each consisting of two wires) radiating from a central office, or from central offices connected by trunk lines, so arranged that each circuit can be connected directly or through trunk lines with the others. There are in these circuits of the Bell system about 7,000,000 miles of wire — over two miles of wire to each subscriber — one-half in underground conduits. The system of radiating circuits is the most expensive part of the exchange system to build, it is least durable, therefore most expensive to maintain, calls for the largest part of the total investment, and consequently must bear the largest part of the cost of capital.

The real value of a telephone exchange system depends entirely on the distribution and number of other members of the same or other communities connected with the same or connecting systems, with whom any subscriber can have prompt and satisfactory communication.

Any member of a community connected with an exchange system can be reached as well, but not as conveniently, from a central or public office as from a subscriber's station.

To reach any member of a community not connected with any exchange system, whether from public station

or subscriber's station, is too inconvenient and impractical to be considered for ordinary use.

Therefore, the particular circuit connecting any subscriber with the exchange is what might be termed a *convenience to that particular subscriber, but a necessity to all other subscribers.*

It is not merely the maintenance of the individual circuit connecting with the exchange that is paid for by any subscriber; *it is in a greater measure the use from time to time of the circuits, trunks and facilities which make communication possible with all other subscribers.*

It is the ability to communicate with others that makes the exchange valuable; it is the use of other circuits than your own.

The cost and value of the system to any subscriber do not depend so much on the number of communications had as on the number and extent of other circuits and facilities necessary to give the communications desired.

It is plain, therefore, that the character of the circuit connecting any subscriber with the exchange does not determine either the cost or value to that subscriber of the exchange connections.

The many and complicated systems of charges prevailing indicate the struggles experts have had in their efforts to establish consistent and reasonable rates.

As the value of the exchange to the subscriber depends upon the number of subscribers within reach — rates must be so established that the maximum number of subscribers can be obtained, so that the greatest number of those with whom communication may be wanted will be connected with the exchange. The cost of any

circuit, therefore, must be largely distributed between those who may desire to communicate with the particular subscriber connected by that circuit.

The cost or value cannot be exactly distributed — an approximation is reached by measured service charges, or by a classification of service between business houses and residences with a sub-classification of plant between "direct" and "party" line.

Business rates are higher for the reason that presumably the business subscriber connects with the greatest number of other subscribers, and consequently makes use of the greatest number of circuits and operating facilities in an exchange.

Residence rates are lower because the residence subscriber connects with a limited number of other subscribers, and because he makes more limited demands on the central office.

It being established that the measure of value is not in the particular class of line connecting any subscriber to an exchange, but in the use of the exchange system as a whole, and that the value of any exchange depends on the area covered and the maximum number of desired individuals that can be reached, rates must be so adjusted that no rate shall bear unjustly on particular individuals or classes; that, at some rate, connection with the exchange is within reach of anyone who can add to the value, to others, of the exchange, and that, as a whole, the revenue will be sufficient to maintain the plant, pay fair wages, make enough return on capital and enterprise to insure good economical management and sufficient capital to meet the increasing demands of the public.

"Toll" Line and "Long-Distance" Service.

Toll line and long-distance communications require, as in exchange connections, the exclusive use of a circuit, two wires, between two points for an interval of time, varying with the conditions; over the whole system the average "time interval" consumed in the completion of each communication is about seven and one-half minutes.

Direct service between two points with large demands for service is the least complicated; the average "time interval" of each communication lasts about three and one-half to five minutes. Between points of small demand, or between intermediate points on local lines, both complications and cost increase, and the average "time interval" is not less than five minutes each. Between points on side or branch lines, or distant points requiring combinations of circuits, or complicated and delicate auxiliary apparatus with many attendant operators, complications and cost increase rapidly, and the "time interval" taken for each communication varies from five or seven and one-half minutes to an indefinite period.

Cost is determined by the capital and maintenance charges of the plant and operating costs, divided by the average number of communications.

Cheap rates for service depend upon high average use of facilities.

High average is obtained ordinarily in public service by putting on higher pressure — crowding — or in some way rendering more than normal service through or

over any given facilities during the limited periods of great demand.

It is by this means, and by this means only, that cheap service is rendered to the public.

Whatever inconvenience or discomfort there may be caused on one hand is compensated for by the reduced price charged for service.

In this particular, toll line or long-distance service is unique. In whatever way the circuit is made up, a certain "time interval" must be given exclusively to each communication, and to the communicating parties. No other communication can be crowded on that circuit during that "time interval."

Any "time interval" passed without being utilized is lost beyond recovery. A good average cannot be made by crowding two or more communications into the "time interval" of one, nor by putting on higher preseure to get more "time intervals" over the same circuit.

There are only a certain number of five-minute "time intervals" in each hour, or five-minute "spaces" on each clock. If you want more "time intervals" or more "spaces," you must take more hours or more clocks. In toll line business anything above the normal capacity of each circuit must be provided for by additional circuits.

Toll line or long-distance business requires the presence of the communicating parties; for that reason it is confined to the business or working hours of the day; and further, the greater part of this business is not only limited to those few hours when parties are most likely to be located at some particular place, but to that part of those few hours immediately after the

general business of the day has developed. For this reason the greater part of the toll line or long-distance business is crowded into an exceedingly small part of the business day. The periods of great demand are short. The facilities provided are idle a great part of even the business hours.

The diagrams following illustrate this most graphically —one taken at Washington, where the business hours, due to the newspaper correspondence, extend well into the night, the other at a city which shows better than the average.

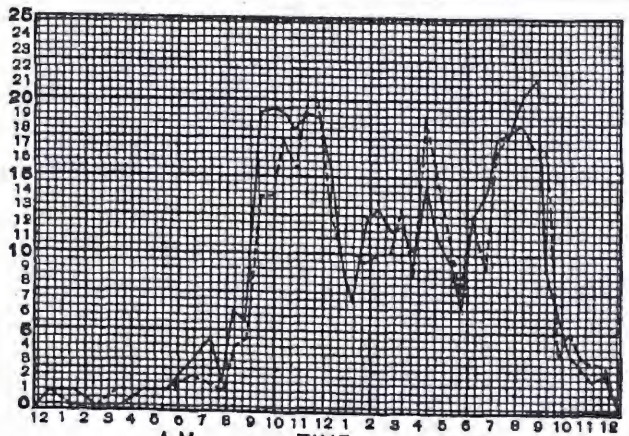
Examination shows that about half the facilities are utilized to a fair part of the capacity during business hours only. All the rest are utilized only to a fractional part of the capacity at any time. If during certain hours the business as shown on these diagrams could be subjected to a half hour's delay, the facilities required could be reduced one-third at least.

Toll line or long-distance business is in the minds of the public similar to telegraphic message business. There is no comparison. Telegraphic circuits between points are at most one wire, on all trunk lines two to four circuits over one wire.

Telegrams are handed in, filed before an operator and despatched in order. In this way the business is distributed more uniformly over working hours, and during the night hours the lines are used for press messages, night messages, or for long-distance messages in transit.

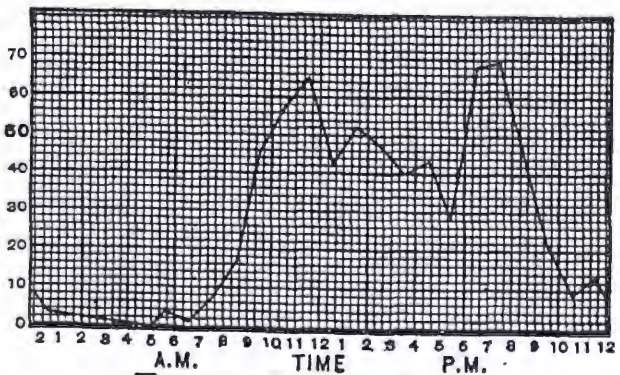
Maintenance.

Utter disregard for repairs and reconstruction, usually comprised under the head of "maintenance," has been



TYPICAL SERVICE CHART
OF
LONG DISTANCE TOLL CALLS

Full Line —— represents Orders received
Dash Line - - - represents Completed Connections



TYPICAL SERVICE CHART
SHOWING VARIATION IN
IN AND OUT LONG DISTANCE TOLL CALLS
HANDLED HOURLY IN
WASHINGTON, D.C.

the cause of more misunderstanding on the part of the public and public bodies having to do with rates, of more self — or selfish — deceit on the part of promoters of telephone enterprises, and of more mistakes on the part of the investing public than any one factor in the telephone business.

With a new plant, "current repair" is at a minimum, and can be for a time disregarded; with a growing plant, it is too easy to lose it in construction; but sooner or later, if not provided out of current revenue, where it belongs, it will be found either in increased construction — that is, capital charges — or in a depreciated plant.

Any company paying dividends and fixed charges, particularly dividends, without first providing for proper maintenance, can have but one end — disaster.

In any consideration of this question the leaning should be towards liberal rather than inadequate maintenance. In any properly administered company any excess would be found in betterments or construction, and consequently in reduced capital investment, while inadequate maintenance would soon show in quality of service and in reconstruction requirements. In other words, surplus maintenance would be offset by decrease of capital charges, while inadequate maintenance requiring new construction in time would increase capital charges.

Attention is called to the facts shown above that during the past five years there has been expended out of revenue for maintenance and reconstruction about $150,000,000 on plant, which now has a replacement value of $488,000,000.

Comparative Statistics and Statements.

Appended hereto, as usual, are a series of comparative statistics showing certain phases of the development of the business of the company and its associated companies; the balance sheet of the company as of January 1, 1908; also a comparative statement of the earnings and expenses for the years 1906 and 1907, and a statement showing the net revenue and the dividends paid 1900-1907.

In connection with the improvement shown in the year's business, it may not be amiss to call attention to the fact that each year in the past has shown an improvement over the previous year, whatever may have been the general business conditions.

Everything indicates that the current year will be no exception to this.

It is only in times like the present that the true economy and value of the telephone service with its varied relations to the dispatch and conduct of business and to social relations can be realized. This only emphasizes the fact that of all services the telephone service is the last to be dispensed with.

General.

The past year completes what may be called the thirtieth year of corporate organized work in the development of the Bell Telephone System. In the mind of Mr. Bell, the invention and its application had simultaneous growth. During the first year, such of the many "imaginations" and ideas as to development as were demonstrably practical were assimilated and the

business was established on the lines now followed which make our company with its associated companies a national system with millions of subscribers connected by millions of miles of circuit with local exchange systems, all bound into one large comprehensive system by the toll and long-distance lines with their 163,000 miles of poles and 1,664,000 miles of wire, the whole inter-dependent and inter-communicating, an aggregation or union impossible to destroy in detail, and impossible to reproduce as a whole.

Each year has seen some progress in annihilating distance and bringing people closer to each other. Thirty years more may bring about results which will be almost as astonishing as those of the past thirty years. To the public, this "Bell System" furnishes facilities, in its "universality" of service and connection, of infinite value to the business world, a service which could not be furnished by disassociated companies.

The strength of the Bell system lies in this "universality." It affords facilities to the public beyond those possible on any other lines. It carries with it also the obligation to occupy and develop the whole field. The urban field was the first to receive attention and the development keeps pace with the demand. The semi-urban and rural demand came later. This has been met both directly by the operating companies and indirectly through local, co-operative and rural combinations, under license from, and connected by toll lines with, our operating companies. The policy adopted during the year, of selling telephones and telephonic apparatus, has given fresh impetus to this line of development, which is now showing most gratifying results.

This position of our company has been reached only by a large expenditure of capital, which is, however, fully represented by plant and property with an earning power that must be considered satisfactory.

If this expenditure is but considered as the financing of thirty-five distinct companies occupying thirty-five distinct territories and is considered as so distributed, rather than as a whole, the aggregate does not seem formidable. In this focussing of capital there are distinct advantages in that the revenue is derived from so many and such varied sources, and that the success of our company lies not in the success of any one company but in the average of all.

For the Directors,

THEODORE N. VAIL,
President.

TOLL LINES IN THE UNITED STATES OF THIS COMPANY AND THE COMPANIES ASSOCIATED WITH IT.

	Jan. 1, 1899.	Jan. 1, 1900.	Jan. 1, 1901.	Jan. 1, 1902.	Jan. 1, 1903.	Jan. 1, 1904.	Jan. 1, 1905.	Jan. 1, 1906.	Jan. 1, 1907.	Jan. 1, 1908.	Increase.
Miles of Pole Lines	75,718	89,292	101,087	110,459	122,409	130,178	136,547	145,585	154,869	163,218	8,349
Miles of Wire....	385,911	501,832	607,599	716,265	837,912	975,702	1,121,228	1,265,236	1,461,173	1,664,081	202,908

TOLL CONNECTIONS.

The average daily number of toll connections is	493,775
Or a total per year of about	158,996,000

EXCHANGES OF THE BELL COMPANIES IN THE UNITED STATES.

	Jan. 1, 1899.	Jan. 1, 1900.	Jan. 1, 1901.	Jan. 1, 1902.	Jan. 1, 1903.	Jan. 1, 1904.	Jan. 1, 1905.	Jan. 1, 1906.	Jan. 1, 1907.	Jan. 1, 1908.	Increase.
Exchanges .	1,126	1,289	1,848	1,411	1,514	1,609	4,080	4,532	4,889	5,108	219
Branch Offices	1,008	1,187	1,427	1,594	1,861	2,131					
Miles of wire on poles and buildings .	411,832	524,128	644,730	841,140	1,109,017	1,358,140	1,654,879	2,159,567	2,754,571	3,057,138	302,567
Miles of wire underground	358,184	489,250	705,269	883,679	1,328,685	1,618,691	1,888,760	2,345,742	3,241,471	3,883,051	641,580
Miles of wire submarine .	2,973	3,404	4,203	4,200	6,048	6,358	6,671	9,373	11,690	6,322	*5,368
Total miles of wire . . .	772,989	1,016,777	1,354,202	1,729,019	2,443,750	2,983,189	3,549,810	4,514,682	6,007,732	6,946,511	938,779

* Decrease by transfer to toll mileage.

EXCHANGES OF THE BELL COMPANIES—Continued.

	Jan. 1, 1899.	Jan. 1, 1900.	Jan. 1, 1901.	Jan. 1, 1902.	Jan. 1, 1903.	Jan. 1, 1904.	Jan. 1, 1905.	Jan. 1, 1906.	Jan. 1, 1907.	Jan. 1, 1908.	Increase.
Total Circuits .	338,293	422,620	508,262	592,467	742,654	798,901	930,251	1,185,449	1,384,175	1,541,727	157,552
Total Employees at Exchanges .	19,668	25,741	32,887	40,864	50,350	53,795	59,451	74,718	90,324	88,274	†2,050
*Total Stations .	465,180	632,946	800,880	1,020,647	1,277,983	1,525,167	1,799,638	2,241,367	2,727,289	3,035,533*	308,244

* Including all companies connected with the Bell system, the number of stations is 3,839,000 against 3,070,660 at January 1, 1907, an increase of 768,340 stations. † Decrease.

EXCHANGE CONNECTIONS.

The estimated number of exchange connections daily in the United States, made up from actual count in most of the exchanges, is 18,130,803

Or a total per year of about 5,888,100,000

The number of daily calls per station varies in different exchanges, the average throughout the United States being about 6.

Balance Sheet, January 1, 1908.

ASSETS.

Stocks of Associated Companies	$202,888,100 95	
Bonds and other obligations of Associated Companies	71,066,696 61	
		$273,404,797 56
Telephones	$10,169,548 52	
Real Estate	8,493,583 25	
Long Distance Telephone Plant	41,621,174 65	
		55,284,306 42
Cash and Deposits	$13,490,602 52	
Temporary Cash Loans	5,285,782 50	
Short Term Notes	11,610,770 02	
		30,387,155 04
Accounts Receivable		9,578,385 84
Patents		277,937 35
Treasury Bonds		320,000 00
Treasury Stock		27,110,400 00
		$396,357,982 21

LIABILITIES.

Capital Stock	$179,595,255 00	
Surplus	12,324,884 89	
		$191,920,139 89
Four Per Cent. Collateral Trust Bonds, 1929	$53,000,000 00	
Four Per Cent. Convertible Bonds, 1936	90,000,000 00	
Four Per Cent. American Bell Bonds, 1908	10,000,000 00	
Five Per Cent. Coupon Notes, 1907	10,000 00	
Five Per Cent. Coupon Notes, 1910	25,000,000 00	
Other Notes Payable	485,000 00	
Dividend Payable January 15,	8,050,560 00	
Interest and Taxes accrued but not due	8,816,160 81	
Accounts Payable	1,162,588 67	
		186,024,308 98
Depreciation Reserve		18,413,533 84
		$396,357,982 21

C. G. DuBOIS, *Comptroller.*

Comparative Statement of Earnings and Expenses.

	1906.	1907.
EARNINGS:		
Dividends	$10,281,437 60	$11,805,166 81
Interest and other revenue from associated and licensed companies	6,477,154 78	9,307,023 72
Telephone Traffic (net)	2,705,138 05	3,901,658 93
Real Estate	67,296 29	162,228 49
Other Sources	178,126 84	433,598 31
	$19,709,153 56	$25,609,671 26
EXPENSES	1,851,466 19	2,130,381 16
NET EARNINGS	$17,857,687 37	$23,479,290 10
Deduct Interest	4,886,750 61	7,209,902 16
	$12,970,936 76	$16,269,387 94
Dividends Paid	10,195,233 50	10,943,644 00
Balance	$2,775,703 26	$5,325,743 94
Carried to Reserves	$1,773,736 62	$3,500,000 00
Carried to Surplus	1,001,966 64	1,825,743 94
	$2,775,703 26	$5,325,743 94

C. G. DuBOIS, *Comptroller.*

Annual Earnings and Dividends.

1900-1907.

Year.	Net Revenue.	Dividends Paid.	Added to Reserves.	Added to Surplus.
1900 . .	$5,486,058.	$4,078,601.	$937,258.	$470,198.
1901 . .	7,398,286.	5,050,024.	1,377,651.	970,611.
1902 . .	7,835,272.	6,584,404.	522,247.	728,622.
1903 . .	10,564,665.	8,619,151.	728,140.	1,217,374.
1904 . .	11,275,702.	9,799,117.	586,149.	890,435.
1905 . .	13,034,038.	9,866,355.	1,743,295.	1,424,388.
1906 . .	12,970,937.	10,195,233.	1,773,787.	1,001,967.
1907 . .	16,269,388.	10,943,644.	3,500,000.	1,825,744.

C. G. DuBOIS, *Comptroller.*

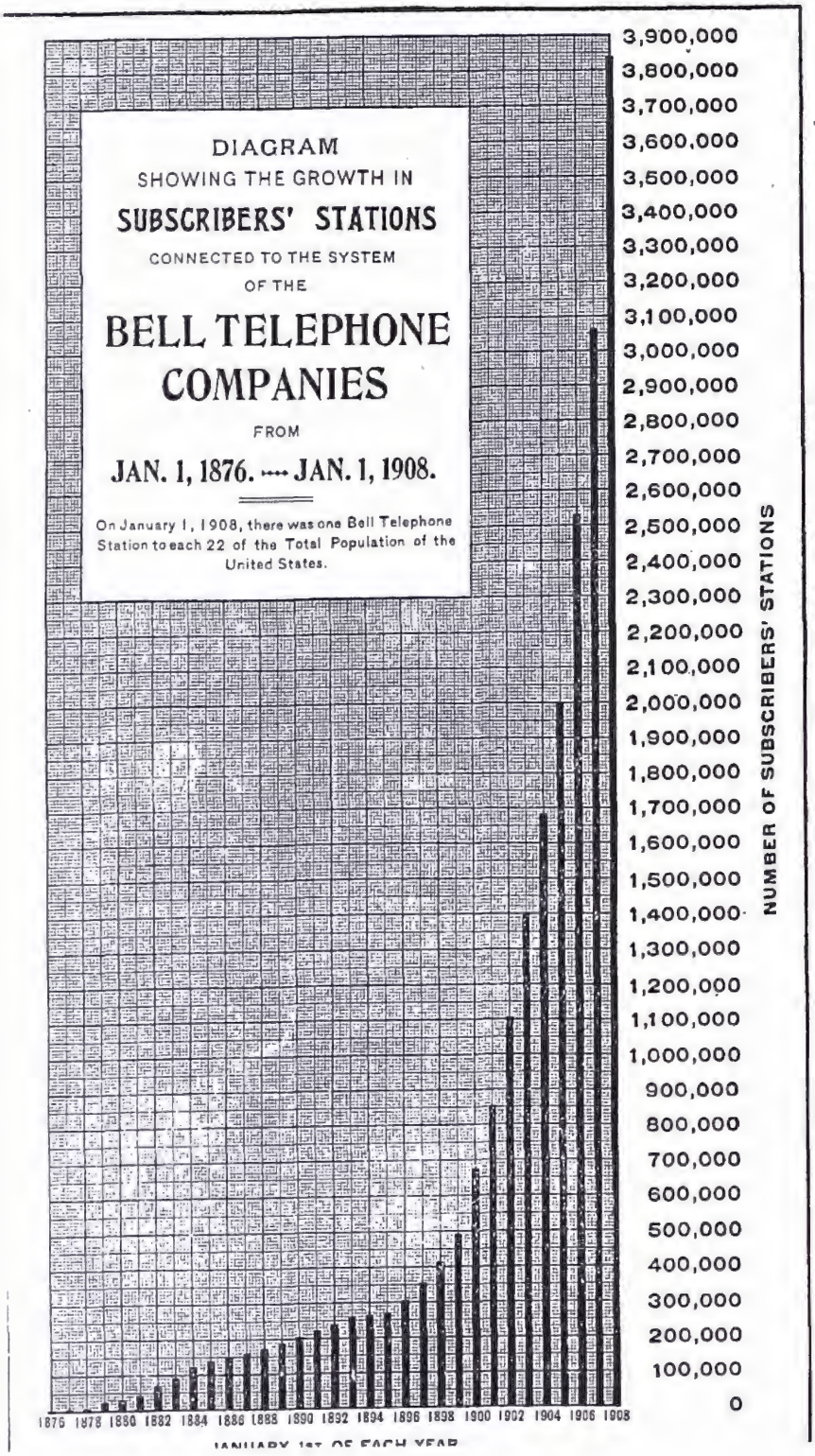


DIAGRAM
SHOWING THE GROWTH IN
SUBSCRIBERS' STATIONS
CONNECTED TO THE SYSTEM
OF THE
BELL TELEPHONE COMPANIES
FROM
JAN. 1, 1876. ---- JAN. 1, 1908.
On January 1, 1908, there was one Bell Telephone Station to each 22 of the Total Population of the United States.
3,900,000
3,800,000
3,700,000
3,600,000
3,500,000
3,400,000
3,300,000
3,200,000
3,100,000
3,000,000
2,900,000
2,800,000
2,700,000
2,600,000
2,500,000
2,400,000
2,300,000
2,200,000
2,100,000
2,000,000
1,900,000
1,800,000
1,700,000
1,600,000
1,500,000
1,400,000
1,300,000
1,200,000
1,100,000
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
NUMBER OF SUBSCRIBERS' STATIONS
1876 1878 1880 1882 1884 1886 1888 1890 1892 1894 1896 1898 1900 1902 1904 1906 1908
JANUARY 1st OF EACH YEAR

1910

ANNUAL REPORT

OF

THE DIRECTORS

OF

AMERICAN TELEPHONE & TELEGRAPH COMPANY

TO THE STOCKHOLDERS

FOR THE

YEAR ENDING DECEMBER 31, 1910

NEW YORK, 1911.

1910

ANNUAL REPORT

OF

THE DIRECTORS

OF

AMERICAN TELEPHONE & TELEGRAPH COMPANY

TO THE STOCKHOLDERS

FOR THE

YEAR ENDING DECEMBER 31, 1910

NEW YORK, 1911.

American Telephone & Telegraph Company

OFFICERS

President
THEODORE N. VAIL

Vice Presidents
EDWARD J. HALL
U. N. BETHELL WILLIAM R. DRIVER N. C. KINGSBURY
B. E. SUNNY H. B. THAYER CHARLES P. WARE

Treasurer
WILLIAM R. DRIVER

Secretary
CHARLES EUSTIS HUBBARD

Comptroller
CHARLES G. DuBOIS

General Counsel
GEORGE V. LEVERETT

Chief Engineer
JOHN J. CARTY

DIRECTORS

CHARLES W. AMORY
THOMAS B. BAILEY
GEORGE F. BAKER
FRANCIS BLAKE
HARRY H. BRIGHAM
ALEXANDER COCHRANE
T. JEFFERSON COOLIDGE, JR.
W. MURRAY CRANE
HENRY P. DAVISON
RUDULPH ELLIS
NORMAN W. HARRIS
HENRY L. HIGGINSON
HENRY S. HOWE
CHARLES EUSTIS HUBBARD
LEWIS CASS LEDYARD
JOHN J. MITCHELL
WILLIAM LOWELL PUTNAM
THOMAS SANDERS
SYLVANUS L. SCHOONMAKER
EUGENE V. R. THAYER
THEODORE N. VAIL
FRANK E. WARNER
JOHN I. WATERBURY
MOSES WILLIAMS
ROBERT WINSOR

REPORT OF THE DIRECTORS OF AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

New York, March 13, 1911.

To the Stockholders:

Herewith is respectfully submitted a general statement covering the business of the Bell system as a whole, followed by the report of the American Telephone and Telegraph Company, for the year 1910.

BELL TELEPHONE SYSTEM IN UNITED STATES.

SUBSCRIBER STATIONS.

At the end of the year the number of stations which constituted our system in the United States was 5,882,719, an increase of 740,027. 1,852,051 of these were operated by local, co-operative and rural independent companies or associations having sub-license or connection contracts, so-called connecting companies.

WIRE MILEAGE.

The total mileage of wire in use for exchange and toll service was 11,642,212 miles, of which 1,162,186 were added during the year. These figures do not include the mileage of wire operated by connecting companies.

TRAFFIC.

Including the traffic over the long-distance lines, but not including connecting companies, the daily average of toll connections was about 602,500, and of exchange connections about 21,681,500, as against corresponding figures in 1909 of 517,000 and 19,925,000; the total daily average for 1910 reaching 22,284,000, or at the rate of about 7,175,448,000 per year.

PLANT ADDITIONS.

The amount added to plant and real estate by all the companies, excluding connecting companies, constituting our system in the United States during the year 1910 was:—

Real Estate	$2,518,133
Equipment	19,628,357
Exchange Lines	13,409,546
Toll Lines	14,959,048
Construction Work in Process	3,067,734
	$53,582,818

PLANT ADDITIONS OF PREVIOUS YEARS.

The amount added in 1900 was $31,619,100; in 1901, $31,005,400; in 1902, $37,336,500; in 1903, $35,368,700; in 1904, $33,436,700; in 1905, $50,780,900; in 1906, $79,366,900; in 1907, $52,921,400; in 1908, $26,637,200; and in 1909, $28,700,100, making the total expenditure for additions to plant during the eleven years $460,755,700.

MAINTENANCE AND RECONSTRUCTION.

During the year $52,028,000 was applied out of revenue to maintenance and reconstruction purposes.

The total provision for maintenance and reconstruction charged against revenue for the last eight years was over $283,500,000.

CONSTRUCTION FOR THE CURRENT YEAR.

Estimates of all the associated operating companies and of the American Telephone and Telegraph Company for all new construction requirements in 1911 have been prepared. It is estimated that about $60,000,000 will be required for current additions to plant in 1911, of which amount some $30,000,000 will be provided by the existing and current resources of the companies. All who are responsible for these expenditures are working in complete understanding of these estimates and the limits set on their expenditures.

DEPRECIATION.

The question of depreciation has been considered very critically and analytically during the past year, by commissions and other bodies, in connection with studies on the rate question. While a depreciation reserve was generally favored, there seemed to be a disposition to apply experience and theories, gleaned from other lines of business, to the telephone business.

The telephone business is unique in that it supplies its own terminals, which are vast in number, are temporary in character, and call for large investment, unique in that a very considerable part of its plant is of a rapidly deteriorating character. Underground conduits and cables and aerial cables are fast changing this, but in the outlying rural and semi-urban districts and for long-distance lines construction will always have to be overhead on poles. There is nothing analogous to it in industrial or public utility service except the telegraph.

The entire disregard or underestimating of depreciation and future replacement, is the cause of nearly all the financial disasters that have occurred in the telephone business, and has been the common failing of newcomers in the telephone field from the beginning to the present time.

Current repairs on new plant, even of the old time temporary character, were small; no surplus or reserve was provided; profits were apparently large, as were dividends.

A false atmosphere of prosperity surrounded the business which was not dispelled until replacements of plant through decay or obsolescence became imperative; until the overhead gave way to the underground, until the individual board gave way to the multiple central office system, until central office energy supplanted the magneto system, until exacting construction requirements of long-distance speaking began, until expansion of business and extension into new fields, some unremunerative, were obligatory; until a condition existed where, to correct mistakes of the past, capital had to be expended without producing any corresponding increase in the revenue.

The inevitable was in some cases postponed by excessive charges to construction account, but came in time, as it is bound to come under such conditions. The apparent profits and dividends had been at the cost of the capital and, at the time of the greatest necessity, resources were at the lowest ebb.

Ignorantly or wilfully, every cause but the right cause was blamed, and although the management had been in the hands of the outside interests, the Bell parent company was given the responsibility, had to carry the burden, and assume the work of reconstruction and rehabilitation.

An illustration may make the necessity of depreciation reserve even clearer. If a carter or local expressman or hackman owning his own carriages, horses or motor cars, should consider as profit all revenue over and above his current expenses and costs of current repairs, and should spend it, saving nothing with which to replace his plant when worn out or damaged beyond repair, he would be called thriftless and improvident. He had enjoyed his capital, and had nothing upon which to raise more.

The present policy of the Bell System is to provide against every probable contingency and to base the amount and extent of such provision on past experience—not on future expectations. It is conjectured that the future will show a decrease in the depreciation or reconstruction due to decay, wear and tear, and obsolescence. Changes—improvements—are going on as rapidly as in the past, but the general character of plant and methods is assuming more permanency. The improvements are being evolved from, and are being grafted on to, the old system and methods. The disturbing and sometimes seemingly destructive conditions following the rapid development of high pressure power and transmission have been to a great measure overcome.

All this has been made possible through the unremitting study and research of the staff of the Engineering and Experimental Departments of the Company, who by close attention, observation and study, anticipate and provide for all such contingencies and conditions as can possibly be anticipated or provided for in advance.

Under these conditions there is small probability that any such causes as those which forced the wholesale reconstruction or rearrangement of plant in the past will again occur; it is, however, for the benefit of the public and of the corporation to have an ample reserve for any contingency which may happen.

Local telephone service up to the present requirements cannot be furnished by isolated or individual companies, and facilities for general service must be co-extensive with speaking limits, so that it is imperative for any system which pretends to be comprehensive to meet, and meet promptly, all demands for service. Its public usefulness as well as corporate existence and prosperity make it imperative to meet the continuing demand for extension which sometimes seems almost overwhelming in its magnitude.

Not only must this increase be met, but to be met economically or efficiently, it must be anticipated; subways cannot be built conduit by conduit, or filled wire by wire—cost would be prohibitive and service impossible. Central office buildings must be located and erected and connected by subway with the general system before switchboards or wires or equipment can be introduced. When built they must be built for the future. To build for present requirements only, and enlarge as demand comes, is impossible in much of this work; and, where possible, impracticable from service standpoint, or prohibitive from that of cost. Advance construction of this kind of the Bell Telephone System, including construction in process, December 31, 1910, was estimated at $180,000,000. Had no plant been built in advance of needs except that which was unavoidable the expenditure would have been reduced by $112,000,000, but the cost of the plant not built at first, if provided later and only as required, would have been $250,000,000 instead of $112,000,000. In other words, not to provide for advance construction doubles the cost of the plant.

The capital for this advance construction must be provided by and at the cost of the present, as was the advance construction of the past provided by and at the cost of the past. To the extent that advance construction reduces the cost of necessary plant and anticipates reconstruction and replacement, to that extent the capital charge to be borne by present and future is reduced and to that extent it immediately puts the depreciation reserve to its intended use. The criticism that any excess of reserve is at the cost of the present for the benefit of the future is true, but only to the extent that it may be found eventually to be in excess of actual requirements. In any case it would be no more than might rightly be considered an insurance against obsolescence which cannot be foreseen.

FIGURES FOR THE YEAR.

The following tables show the business for the year of the Bell Telephone System including the American Telephone and Telegraph Company and its associated holding and operating companies in the United States, but not including connected independent or sub-licensee companies, nor the Western Electric Company and Western Union Telegraph Company except as investments in and dividends from those companies are included respectively in assets and revenue. All inter-company duplications are eliminated in making up these tables so that the figures represent the business of the system as a whole in its relations to the public.

The gross revenue collected from the public in 1910 for telephone service by the Bell System—not including the connected independent companies—was $165,600,000; an increase of nearly $16,000,000 over last year. Of this, operation consumed $54,000,000; taxes, $8,000,000; current maintenance, $25,700,000; and provision for depreciation, $26,200,000.

The surplus available for charges, etc., was $51,000,000, of which $11,550,000 was paid in interest and $25,000,000 was paid in dividends to the public.

The total capitalization, including inter-company items and duplications, of the companies of the Bell System is $1,114,310,979. Of this $502,306,910 is owned and in the treasury of the companies of the Bell System. The capital stock, bonds and notes payable outstanding in the hands of the public at the close of the year were $612,000,000. If to this be added the current accounts payable $21,700,000, the total obligations of every kind were $633,700,000, as against which there were liquid assets, cash and current accounts receivable, of $53,600,000, leaving $580,100,000 as the net permanent capital obligations of the whole system outstanding in the hands of the public.

Against these obligations, the companies had prop-

erty $696,700,000—an excess of $116,600,000, or 20 per cent.

There is a large additional surplus, which is legitimate and proper and which could be properly added to the book Surplus, representing as it does the value of intangible property, such as franchises, contracts, patents, rights of way, both public and private, which are not carried at any valuation in the book accounts.

In every case where the public authorities have appraised the plant of the companies, the valuation has been far in excess of the book valuation. It is within the bounds of conservatism to say that the obligations of all the companies outstanding in the hands of the public are represented by 150 per cent. of property at a fair replacement valuation of the plants and assets, not including public franchises.

In spite of these facts and figures shown from year to year in our annual reports; in spite of reports to the contrary of every public or semi-public body which has examined and reported on the value of the property of the Bell System; in total disregard of information at the disposition of every one, there are many who for some purpose or other—sometimes to induce credulous investors to take some worthless securities in hope of extraordinary and impossible returns; sometimes for political purposes; sometimes for sensation or notoriety—continue to spread the reports of fabulous over-capitalization of the Bell System as a whole and of its component parts, and gross and extortionate charges for service.

Particular attention, therefore, is invited to the tables following, and also to the one showing averages of operating units of associated companies, on page 13.

Bell Telephone System in United States.

COMPARISON OF EARNINGS AND EXPENSES, 1909 AND 1910.

(ALL DUPLICATIONS, INCLUDING INTEREST, DIVIDENDS AND OTHER PAYMENTS TO AMERICAN TELEPHONE AND TELEGRAPH COMPANY BY ASSOCIATED HOLDING AND OPERATING COMPANIES, EXCLUDED.)

	1909.	1910.	Increase.
Gross Earnings	$149,914,708	$165,612,881	$15,698,173
Expenses—Operation	$49,731,941	$54,235,449	$4,503,508
Current Maintenance	23,723,681	25,763,082	2,039,401
Depreciation	21,115,272	26,264,927	5,149,655
Taxes	6,976,306	8,355,015	1,378,709
Total Expenses	$101,547,200	$114,618,473	$13,071,273
Net Earnings	$48,367,508	$50,994,408	$2,626,900
Deduct Interest	10,221,383	11,556,864	1,335,481
Balance Net Profits	$38,146,125	$39,437,544	$1,291,419
Deduct Dividends Paid	23,910,603	25,160,786	1,250,183
Surplus Earnings	$14,235,522	$14,276,758	$41,236

COMBINED BALANCE SHEET, 1909 AND 1910.

(DUPLICATIONS EXCLUDED)

ASSETS:	Dec. 31, 1909.	Dec. 31, 1910.	Increase.
Contracts and Licenses	$7,212,781	$2,943,381	$4,269,400*
Telephone Plant	557,417,146	610,999,964	53,582,818
Supplies, Tools, etc.	17,048,196	20,987,551	3,939,355
Receivables	49,744,919	26,077,802	23,667,117*
Cash	32,055,866	27,548,933	4,506,933*
Stocks and Bonds	38,166,284	64,766,089	26,599,805
Total	$701,645,192	$753,323,720	$51,678,528
LIABILITIES:			
Capital Stock	$352,904,063	$344,645,430	$8,258,633*
Funded Debts	187,685,339	224,791,696	37,106,357
Bills Payable	40,721,625	42,566,943	1,845,318
Accounts Payable	24,633,780	21,721,125	2,912,655*
Total Outstanding obligations	$605,944,807	$633,725,194	$27,780,387
Surplus and Reserves	95,700,385	119,598,526	23,898,141
Total	$701,645,192	$753,323,720	$51,678,528

*Decrease.

AVERAGE OPERATING UNITS OF ASSOCIATED OPERATING COMPANIES.

(*See table on next page.*)

The table on the following page shows average operating revenue and expenses per station, operating ratios, unit plant costs, etc., of the associated operating companies (not including the American Telephone and Telegraph Company's long-distance lines), for the years 1895, 1900, 1905 and 1910.

It will be noted that there has been a steady decrease both in expenses and revenue per subscriber's station, so that now the average subscriber pays for a higher grade, more comprehensive service, less than half what he paid fifteen years ago for the much less useful service that was then possible.

This reduction in cost of service has made it possible for every one who needs a telephone to have one and to get the great advantage of being within reach of everybody by telephone.

The greatly decreased plant investment per station to which attention was called in the previous annual report has been still further reduced during the year to $142, notwithstanding the extensive additions to toll lines shown on page 4.

There is a steady increase in the proportion of wires underground, as shown on page 63, which indicates a greater permanence of plant and decreases the maintenance costs. This low cost of plant and this decreasing maintenance cost are only made possible by the central supervision of engineering and manufacturing of the Bell System and the advance construction referred to at length under the head of Depreciation.

The percentage of net profits to capital stock, although not so good as in the earlier years of the business, shows for 1910 an improvement over recent years.

Average Operating Units of Associated Operating Companies, 1895 to 1910.

(THIS TABLE COVERS THE COMPANIES OWNING ALL THE EXCHANGES AND TOLL LINES OF THE BELL TELEPHONE SYSTEM EXCEPT THE LONG-DISTANCE LINES OF AMERICAN TELEPHONE & TELEGRAPH CO.)

Average per Exchange Station.	1895.	1900.	1905.	1910.
EARNINGS:				
Exchange Service	$69.75	$44.08	$33.31	$31.28
Toll Service	11.35	12.90	9.95	9.47
Total	$81.10	$57.28	$43.26	$40.75
EXPENSES:				
Operation	$20.15	$21.03	$10.00	$15.14
Taxes	2.23	2.37	1.49	2.00
Total	$31.38	$24.00	$18.45	$17.14
Balance	$49.72	$33.28	$24.81	$23.61
Maintenance and Depreciation	20.20	17.08	13.91	13.46
Net Earnings	$29.52	$15.60	$10.90	$10.15
Per Cent. Operation Expense to Tel. Earnings	35.0	37.8	30.2	37.2
Per Cent. Telephone Expense to Tel. Earnings	71.0	72.8	74.8	75.1
Per Cent. Maintenance and Depreciation to Average Plant, Supplies, etc.	9.1	8.4	8.9	9.5
Per Cent. Increase Exchange Stations*	15.7	26.5	24.5	11.8
Per Cent. Increase Miles Exchange Wire*	15.9	33.2	27.2	12.0
Per cent. Increase Miles Toll Wire*.	21.3	25.2	12.4	11.5
Average Plant Cost per Exchange Station (including Exchange and Toll Construction)	$200	$190	$145	$142
Average Cost per Mile of Pole Line (Toll) (Including Wire)	$219	$348	$438	$688
Average Cost per Mile of Wire (Toll) (Including Poles)	$81	$71	$62	$66
Per Cent. Gross Telephone Earnings to Average Plant	33.4	31.7	31.7	29.8
Per Cent. Net Profits to Average Capital Stock	10.11	9.44	8.84	8.48
Per cent. Dividends to Average Capital Stock	5.07	6.19	5.75	6.31

*Increase during year shown, over previous year.

WESTERN ELECTRIC COMPANY.

The Western Electric Company occupies a unique position in the manufacturing business. It is in fact the manufacturing department of the Bell System.

To develop efficiency in service it was necessary to control the evolution of apparatus as well as of methods of operation. To control the quality and style of apparatus, to control the improvements which suggested themselves in the course of, and were the outcome of the experimental work and the development and improvement studies and experiments, it was necessary for the Bell System to control the manufacture of equipment and apparatus.

The present Western Electric Company was the outgrowth of this necessity.

This relation created the business of the Western Electric Company.

This relation of the Western Electric Company with the Bell System not only eliminated the expense which such companies must incur in the establishment of their business, but also largely reduced the operating or continuing expenses. Its business was either for the Bell Companies, or came to it because of its relation to the Bell Companies. Its manufactured products were made upon advance orders or to fill regular and definite continuing demands. A relatively small merchandise stock had to be carried.

There was no selling expense which, in the ordinary manufacturing business, absorbs such a large percentage of the manufacturing profits. There were no bad debts. The capital of the company was small and the floating debt large—at times much larger than the capital.

The growth had been so rapid that there had been no time to adjust the business to the changing conditions. It became apparent that some of these conditions must be changed for the permanent good of the company.

Before instituting any changes an offer was made to the outside shareholders of the Western Electric Company for an exchange or sale of their stock to the American Telephone and Telegraph Company. The offer was considered a liberal one and was accepted by a very large majority of the smaller holders and by a majority of the total shareholdings not held by the American Company.

A definite program of readjustment to new conditions was adopted and has been steadily pushed forward.

Outside lines of manufacture which were not only unprofitable but were absorbing a very large proportion of the capital of the company have been abandoned and the company's energy and efforts concentrated on the manufacture and sale of telephonic apparatus and auxiliary supplies.

The Hawthorne works have been enlarged and the Chicago City Clinton Street and Polk Street properties have been sold at a slight advance over their book values. The company's debt has been funded and it has ample working capital.

The prices charged to the Bell System are lower than the prices charged to other telephone customers. In the year 1910 the rate of gross profit on sales to the Bell System was 7.5% less than on sales to such other customers. This difference was offset by the lower expense in selling to the Bell Companies.

The relation between the Bell System and the Western Electric Company has the advantage of a ready made business, with none of the ordinary drawbacks and expenses and risks that other manufacturing companies have. Because of that relation, however, all investigations made as to the cost and expenses of the telephone business by public bodies include an investigation to ascertain whether or not the Bell System is getting, indirectly, abnormal profits through its manufacturing department by making excessive

charges for apparatus and supplies. While all such investigations have, so far, ended satisfactorily, they bring into the discussion the profits of the company, its relations to public utilities, its profits, and the proportion of these profits which should be divided among the shareholders.

Everything indicates that the company can make satisfactory prices to the telephone companies for its products and maintain a 10 per cent. dividend. This rate has been started and it is not believed that existing conditions or a conservative policy would justify more.

REPORT OF THE AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

The improvement which has marked previous years still continues. The net revenue for the year was $31,933,214.49, out of which were paid interest, $5,077,321.33, and dividends, $20,776,822.12. The balance, $6,079,071.04, shows an increase, notwithstanding the large increase in dividends due to the exchange of convertible bonds for shares.

CONVERTIBLE BONDS.

At the close of business, December 31, 1910, $111,059,000 of the $150,000,000 convertible bonds sold had been handed in for conversion, leaving outstanding at that date $38,941,000.

SHARE CAPITAL.

Due to the conversion of the bonds, there has been an increase of $6,860,300 in the outstanding share capital. This increase has been well distributed. The number of shareholders, 40,381, on December 31, 1910, shows an increase of 4,558 during the year. The distribution is general, there being 40,087 shareholders who hold less than 1,000 shares each, 266 who hold from 1,000 to 5,000 shares each and 28 who each hold 5,000 shares or more. The total holdings in blocks of 5,000 or more are less than 10 per cent. of the stock outstanding. A majority of the company's stockholders are women. Less than 8 per cent. of the stock was at December 31st in the names of brokers.

ISSUES OF CAPITAL STOCK AND BONDS.

There has been no issue of share capital during the year except in exchange for convertible bonds. The amount of these bonds still outstanding at the time of this report is about $30,000,000.

Some of the Collateral 4s have been issued in the course of the year in connection with the program for rearranging the territory, referred to last year, and other similar purposes.

It will be necessary, towards the close of the year, to do some financing, and should conditions remain much as they now are this will probably be done by an issue of share capital to the stockholders. The time and amount of the issue will be determined later in order that any change in conditions may be taken advantage of.

Last year we stated that the premiums received over the par value of capital issues were over $14,000,000. The conversion of bonds into stock during the year has increased this premium account to nearly $17,000,000.

GENERAL.

The business of the American Telephone and Telegraph Company is largely, but by no means entirely that of a holding company. It is an operating company in that it exercises centralized administrative functions over the associated companies and owns and directly operates the long-distance lines, binding this company into one system.

It is a developing and manufacturing company by reason of its control over the manufacturing of the Western Electric Company through the Experimental and Engineering Departments and its contract relations with and stock ownership in that company.

To get a proper comprehension of the business of the company as a whole, the combined balance sheet and earnings statement on page 11 must be considered rather than the balance sheet and earnings statement of the American Telephone and Telegraph Company alone.

The interest of the American Telephone and Telegraph Company in its associated operating companies is over 80 per cent., in addition to which it has its own earnings. The American Telephone and Telegraph Company's share of the surplus earnings of the Bell System is approximately 90 per cent., so that the showing of real interest to the security holders of American Telephone and Telegraph Company lies in the figures of the Bell System as a whole.

The combined statements of the Bell System show that during the year the property of the whole system increased $84,000,000. This includes plant, real estate, supplies, tools, stocks and bonds.

The cash and other liquid assets were reduced by $28,000,000. The intangible assets, such as contracts, patents, franchises, etc., were reduced by $4,270,000, leaving less than $3,000,000 on the books of all the companies against these items.

The net increase in assets, about $52,000,000, was provided by an increase in outstanding obligations of less than $28,000,000.

LEGAL.

The Legal Department reports that throughout the country the relations of this company and its associated companies with the Public Service Commissions of the several states have, on the whole, been of a very satisfactory character. The Commissions have recognized the fundamental correctness of our methods of operating, the soundness of our principles of accounting and the fairness of our dealings with the public.

There has, consequently, been but little difficulty in working harmoniously with these Commissions in solving the problems which, in a growing business, constantly demand attention.

In Oklahoma, where our associated company felt compelled to disagree with the State Commission, the Supreme Court of the State in the so-called Enid case has fully sustained our claims. That Court in its opinion has made a very valuable contribution to the law, recognizing, as it does, that in the telephone business large expenditures must be made in the establishment and development of an efficient telephone service which do not appear in the plant, but which contribute to the value of the business when established. This "going value" must always be added to the value of the physical plant in determining the investment upon which the telephone company is entitled to an income. The Court also recognized the necessity in the telephone business of making a liberal provision for depreciation, not only to provide for the decay and destruction of plant, but also to make the changes required to meet rapidly growing demands and to furnish the public with the improved facilities which the great development of the art has made necessary.

Our associated companies have been quick to respond to the public needs with these improved facilities and advanced methods of operating. In consequence they have had very little litigation with their subscribers and have been uniformly successful in such as has arisen.

In the Western Union case the United States Circuit Court has affirmed the report of the Master and the case will be appealed. Nothing has developed in this case which changes our view that the earlier decisions in this case were correct and that we have fully accounted for all that was due the plaintiffs under the contract of November 10, 1879.

PENSIONS AND SAVINGS.

During the year a great deal of attention has been given to some scheme for Pensions and Savings which would be of the greatest possible benefit and assistance to the employees, and if possible a substantial improvement on any scheme now in force.

The problem is an intricate and complicated one and the solution not easy.

At a conference of all the associated companies it was agreed that any plan adopted by the American Telephone and Telegraph Company would also be adopted by them, making it comprehensive and covering the Bell System as a whole, so that all changes of employees between companies would not affect their Pensions or Savings benefits.

In the meantime all cases which would come under Pensions or Savings plans will be acted upon individually by the company, so that in effect so far as the employees are concerned the delay does not postpone any benefit to them.

INDEPENDENT AND OPPOSITION COMPANIES.

Our policy in respect to the opposition and independent telephone systems has been consistently followed through the year. Wherever it could be legally done, and done with the acquiescence of the public, opposition companies have been acquired and merged into the Bell System.

Independent companies have been added to the System through sub-license or connecting contracts.

There is no question but that the public are tired of dual telephone exchange systems, and that so fast as confidence in protection against the real or imaginary evils of monopoly increases, opposition against mergers will decrease.

This condition can only be brought about by putting before the public the fullest and most detailed information as to the company, its policy and purposes.

PUBLIC RELATIONS.

In all times, in all lands, public opinion has had control at the last word—public opinion is but the concert of individual opinion, and is as much subject to change or to education.

It is based on information and belief. If it is wrong it is wrong because of wrong information, and consequent erroneous belief.

It is not only the right but the obligation of all individuals, or aggregations of individuals, who come before the public, to see that the public have full and correct information.

The Bell System gained 740,027 subscribers last year. Of the total number of subscribers over 1,000,000 were new during the year.

The American Telephone and Telegraph Company gained 4,558 shareholders last year. Of the total number of shareholders many more were new last year.

The excuse for setting forth at great length the policy, facts, beliefs and desires of the Bell System and those administering it, even to the extent of repeating much that has already been said and explaining some things familiar to many, is to inform the new public, the new subscribers, and the new shareholders.

Every fact that is stated is correct.

Every argument or reason is believed to be well founded and based on facts and is intended to be impartial.

The position of the Bell System is well known.

It is believed that the telephone system should be universal, interdependent and intercommunicating, affording opportunity for any subscriber of any ex-

change to communicate with any other subscriber of any other exchange within the limits of speaking distance, giving to every subscriber every possible additional facility for *annihilating time or distance by use of electrical transmission of intelligence or personal communication.* It is believed that some sort of a connection with the telephone system should be within reach of all. It is believed further, that this idea of universality can be broadened and applied to a *universal wire system* for the *electrical transmission of intelligence* (*written or personal communication*), from every one in every place to every one in every other place, a system as universal and as extensive as the highway system of the country which extends from every man's door to every other man's door.

It is not believed that this can be accomplished by separately controlled or distinct systems nor that there can be competition in the accepted sense of competition.

It is believed that all this can be accomplished to the reasonable satisfaction of the public with its acquiescence, under such control and regulation as will afford the public much better service at less cost than any competition or government-owned monopoly could permanently afford and at the same time be self-sustaining.

The Bell System as at present constituted was evolved first through the local exchange.

In the beginning of the business it was impossible to get the necessary capital for development in any large amount. In the place of large capital, small capital and the optimism of individuals had to be utilized. Small capital, large hopes and individual effort brought about a development by limiting the size of the exchange territory given to each individual to his possibilities. In this way the country and smaller cities were largely developed before much

was done in the larger cities. The capital to develop New York was estimated at less than $100,000, yet it was a long time before even that could be raised. Even if it had been possible to raise capital to exploit the whole country through one company, it would have been impossible to use it properly. The business was new. Those who constructed and operated it had to be educated. The policy of small units and individual effort, with concentration, application and resourcefulness brought a more rapid development and education than could have been had in any other way.

In this formative period, when the business was new, before distant speaking possibilities were shown, all communication was local. No two exchanges were either equipped or operated on the same lines or under the same methods, nor did they need to be; service, judged by present standards, was poor, but satisfied the local use; better service was not known. Later development of the toll line, of lines connecting exchanges, and of long-distance service made the deficiencies of the service glaring and the necessity of improvement imperative.

It will be remembered by many when the long-distance service was first introduced special connections had to be built for the users; now every telephone station or line can be equally well used for long-distance speaking.

With the extension of the speaking limits of the telephone over connecting lines came also the necessity for the extension of the territorial limits of the exchange systems, the necessity of standardization, uniformity of apparatus and operating methods, and an effective common control over all. The necessity for system was the beginning of the Bell System. The combination of the separate exchanges and lines into larger aggregations or organizations followed. It was necessary to have more effective organization with more effective administration and management.

and with resources sufficient to make the changes which experiment and experience had found necessary.

It is impossible to define the territorial limitations of a telephone system because from every exchange center communication is wanted up to the talking limits in every direction.

This process of combination will continue until all telephone exchanges and lines will be merged either into one company owning and operating the whole system, or until a number of companies with territories determined by political, business or geographical conditions, each performing all functions pertaining to local management and operation, will be closely associated under the control of one central organization exercising all the functions of centralized general administration. But whatever may be the form of the operating organization, there is bound to be for legal purposes and the holding of franchises, some sort of subordinate state organization which will bring the business and property in each locality under the jurisdiction of the state in which it is situated and operated.

The American Telephone and Telegraph Company, which is the owner of all or part of each company forming the Bell System, is not simply a holding company. It is not a combination that has eliminated competition between the companies controlled by it. There can be no rivalry or competition between local exchanges in adjacent territory. Those desiring the service of exchanges in adjacent territory in addition to their own can get it much better and cheaper through their local exchange. To give direct individual wires from one exchange territory into another would be impractical from the multiplication of lines and prohibitive on account of cost. The American Telephone and Telegraph Company is a centralized general administration for all the

companies. It does the financing for the extension of the business. It furnishes the engineering, operating and other experts. It maintains a productive and protective organization so far as patents are concerned. It defends all the companies against all infringements. It undertakes to bring about improvements by working out the ideas and suggestions of others, both in and out of the business. Its agents keep each company fully informed of all that is going on in the field. It avoids all duplication of efforts, of experiments, of trial of new methods, apparatus, etc. It looks after the public relations of the companies. In other words, it performs all that service which is common to all, leaving to the local companies the local management. The organization is not unlike that of the United States, each local company occupying its own territory and performing all local functions, the American Telephone and Telegraph Company binding them all together with its long-distance lines and looking after all the relations between the local companies and between local companies and other companies. To have developed the telephone industry to its present state of efficiency would have been beyond the ability of any one of the local companies.

All independent systems which have been started have more or less followed the same lines, but within restricted areas, whether built by one company or interest, or by several. First, the local exchange, then the toll line to outlying points, and then the long-distance line connecting with other independent exchanges, tieing them together to form a system affording facilities for communication between the subscribers of one exchange and the subscribers of the other, but limited in scope, and without the community of interest necessary to a common system.

In other words we have the Bell System on the one side, developed on the lines of a universal, intercommunicating and interdependent service. We

have the opposition on the other side, segregated exchanges or limited systems without universality, incomplete and inefficient, neither interdependent nor intercommunicating, except to a limited extent.

Corporate Organization and Combination.

There is nothing of greater common interest, nothing which is exciting more comment and discussion at the present moment, than the questions of state control of corporate organizations and of combinations, especially of those controlling public utilities.

Corporate organization and combination are the necessary and logical solution of the problem of caring for the wonderful development which has been going on all over the world, and particularly in this country, in the recent past.

Combination only can cope with that industrial development of the present time which is far beyond the scope of individual effort or capital. In those good old times, one man, with his own capital, could carry on even the largest operations. The margin of profits due to low wages and large selling prices enabled the owners of such individual establishments to live and enjoy the best to be had in those times, and amass fortunes—fortunes relatively as large as any of the present—from an amount of gross business, the profits from which today would not be sufficient to pay the wages of a shop superintendent.

The development of the arts, the necessity of extensive laboratories and experimental departments, with technical staffs competent to keep abreast of modern progress and find out how to *utilize all of everything*, the large gross production at small margin of profit, the large capital requirements necessary to conduct business on these lines; all these place modern industrial enterprises either beyond the financial ability of any one individual, or far beyond

the amount that any one individual wishes to have in any one venture.

Without attempting to discuss the history or evolution of "Company," "Corporation," or "Monopoly," and similar organizations or combinations of trade, it can be said that the first and oldest step towards corporate organization was partnership. Corporate combination is but a partnership wherein the partners are represented by shares held in various amounts by the various investors.

These corporate organizations and combinations have become a permanent part of our business machinery; the public would not, if it could, abolish them.

Who would ever consent, or would the requirements of business allow, that the railroads between the great sections of our country revert to the independent lines that once existed, with all the consequential delays, inconveniences and disadvantages to traffic and travel? Who would be content if the telegraph business should be carried on by the transfer of messages from one to another of the numerous companies, formerly independent, but now combined and giving direct transit over the whole country?

That there has been in large measure reason or cause for the existing unfavorable public opinion as to corporations, trusts and combinations, is beyond question, but it does not follow that there is reason or cause for the wholesale denunciation and condemnation of all corporations, trusts and combinations. Nor does it follow that all that is bad is centered in or confined to those prominent in the public eye.

Many of the practices most severely condemned are but the amplification or continuance of practices or customs common in the current affairs of business, practices or customs which were not wrong in themselves, but wrong in the abuse of them.

Public utility corporations and other combinations

have too frequently assumed that new laws and regulations were disastrous and ruinous without first giving them a fair trial, and legislators too often have displayed an ignorance or disregard of existing laws, spreading the idea that new legislation was a cure-all for any undesirable condition, while it was often only a political play, and the enforcement of the existing laws was utterly neglected. The results have been bad. While business will adjust itself to any condition if given time and opportunity, sudden change of conditions will result in disaster to some interest, but not as a rule to those at which the change was aimed.

There is too little consideration given to the fact, based on all experience, that no one interest can permanently prosper unless all other interests are in a prosperous condition, and to the fact that any sudden change in existing conditions will always be taken advantage of by some one interest to the detriment of other interests in general.

The proper use of corporate organization or combination under proper regulation or control cannot be objected to.

What is and should be condemned, prevented and punished, is the abuse made of corporate machinery to the detriment of public welfare and such abuse as has been and is being practised so extensively for purely speculative and oftentimes swindling enterprises.

It is largely this abuse by professional speculative promoters and swindling security vendors, mostly on a comparatively small scale, not in any way associated or connected with the general business organizations or systems, that has been the cause of most of the popular odium surrounding this necessary machinery of business. It does not seem possible that the only way of reaching such offenders is through penalties for "misuse of the mails," but however or by whomever the remedy is applied, he who does it should re-

ceive the heartiest thanks and appreciation of the community.

The large corporate combinations which often in popular opinion are supposed to be owned or wholly controlled by some one man or some few men, are, in fact, made up of thousands and tens of thousands of silent partners, the shareholders, who are the real owners. The existence of these real owners, these shareholders, is often obscured in the shadow of some one or more individuals who dominate these companies, not by large ownership, as popularly believed, but by administrative and operating aggressiveness and successful management. The shareholding owners are in the aggregate very numerous and, in any other country than America, would be frequently in evidence and heard from, would always take an active participation in all meetings, annual or special, and would in that way protect themselves and their holdings by associating the corporation or combination in the minds of the public with the particular and separate individual ownerships, or interests in them. In this way that same protection, recognition or consideration, to which all interests, whether individual or corporate, are alike entitled, would be assured.

Public Utilities.

THE "SERVED" AND THE "SERVERS."

Under the existing conditions the corporations or combinations represent the "servers." To the shareholders, dividends represent good management and desirable investment, but to many of the community, the community that is "served," profits which in individual enterprise would be considered reasonable are unreasonable and forced out of their pockets by unscrupulous management or illegal or dishonest practices.

The contest between the "served" and the

"servers," the "producer" and the "consumer," between "he-who-has" and "he-who-has-not," has been going on from the dawn of civilization, from the time when some one had more of some one thing than he wanted, while another had none, or less than he wanted.

From time immemorial efforts have been made in some way to control or restrict any accumulation, in the hands or in the uncontrolled possession of any individual or set of individuals, of those things which had become necessary to public wants, and to prevent necessities from in any way getting outside that control which natural competition, or the law of supply and demand under normal conditions exercises.

There has always been and will always be the laudable desire of the great public to be served rightly, and as cheaply as possible, which sometimes selfishly degenerates into a lack of consideration for the rights of those who are serving.

On the other hand there has always been the laudable desire of the "server," or the producer, to get a profit for his service or production, which sometimes degenerates into a selfish disregard or lack of consideration for those who are served.

This conflict, which originated with the first commercial transaction or exchange, has continued ever since and will continue to the end of time.

Until the state, or conditions under which society was organized, began to be complex there were very few things which were not and could not be regulated by the law of supply and demand, the law of substitution of one article for another in case of scarcity, or by the laws of competition. In the simple life, which was with the masses of the people until very recent years enforced, and is with all laudable, there were few articles which were in themselves necessities, and of these very few which did not have alternative articles of use, or substitutes, and, in fact, there was little that was not produced by the local

community or by the family. Those few things which, in the growth of civilization, and particularly by the increase of urban population, were of general use and necessity for all, those few things in which the masses of the public had an interest in receiving regularly and reasonably, soon became the object of control or regulation, and here was the beginning of and reason for state control and regulation or state ownership.

Public Control.

Public control or regulation of Public Service Corporations by permanent commissions, has come and come to stay. Control or regulation exercised through such a body has many advantages over that exercised through regular legislative bodies or committees. The permanent commission will be a quasi-judicial body. It should be made up of members whose duty it will be, and who will have the desire, the time and the opportunity, to familiarize themselves with the questions coming before them. It should act only after thorough investigation and be governed by the equities of each case. It would in time establish a course of practice and precedent for the guidance of all concerned.

Experience also has demonstrated that this "supervision" should stop at "control" and "regulation" and not "manage," "operate" nor dictate what the management or operation should be beyond the requirements of the greatest efficiency and economy.

Management or operation requires intimate knowledge and experience which can only be gained by continuous, active and practical participation in actual working, while control or regulation can be intelligently exercised, after judicial hearing, by those who have not the knowledge or experience to operate.

State control or regulation should be of such character as to encourage the highest possible standard in plant, the utmost extension of facilities, the highest

efficiency in service, rigid economy in operation, and to that end should allow rates that will warrant the highest wages for the best service, some reward for high efficiency in administration, and such certainty of return on investment as will induce investors not only to retain their securities, but to supply at all times all the capital needed to meet the demands of the public.

Such "control" and "regulation" can and should stop all abuses of capitalization, of extortion or of overcharges, of unreasonable division of profits.

If there is to be state control and regulation, there should also be state protection—protection to a corporation striving to serve the whole community (some part of whose service must necessarily be unprofitable), from aggressive competition which covers only that part which is profitable.

Governmental control should protect the investor as well as the public. It should ensure to the public good service and fair rates. It should also ensure fair returns to the investor.

A public utility giving good service at fair rates should not be subject to competition at unfair rates.

It is not that all competition should be suppressed, but that all competition should be regulated and controlled. That competition should be suppressed which arises out of the promotion of unnecessary duplication, which gives no additional facilities or service, which is in no sense either extension or improvement, which without initiative or enterprise tries to take advantage of the initiative and enterprise of others by sharing the profitable without assuming any of the burden of the unprofitable parts or which has only the selfishly speculative object of forcing a consolidation or purchase.

State control and regulation, to be effective at all, should be of such a character, that the results from the operation of any one enterprise would not warrant

the expenditure or investment necessary for more duplication and straight competition. In other words, the profits should not be so large as to warrant duplication of capitalization in the competition for the same business.

When thoroughly understood it will be found that "control" will give more of the benefits and public advantages, which are expected to be obtained by state ownership, than could be obtained through such ownership, and will obtain them without the public burden of either the public office-holder or public debt or operating deficit. It is conceded that as a rule private management is better, more economical and more efficient than public management, and much more advanced and enterprising. The economical margin between public and private management has been shown by experience to be more than sufficient to secure the best private administration.

When through a wise and judicious state control and regulation all the advantages without any of the disadvantages of state ownership are secured, state ownership is doomed.

State control of public utilities should not prevent progress, should be sufficiently unrestricting to encourage the introduction and demonstration of the value of any new or novel enterprise, and should allow sufficient reward for the initiative, enterprise, risk and imagination of the adventurers behind such enterprises. It should discriminate between the useful adventurers or promoters, pioneers in fact, and those pirates or sharks who, on the strength of other successes, extravagantly capitalize undeveloped ideas, and exchange the worthless securities for the savings of deluded and credulous investors. Corporate control and restriction should always exist to a sufficient degree to prevent such speculative promoting, and such stock-jobbing schemes.

The regulation or control of any new or novel thing

which is a mere convenience and not a necessity can be left largely to the laws of trade; such a thing, if offered, must be offered at a price acceptable to the public, who are the customers, at a price which in the opinion of the purchaser leaves him a margin of profit either in convenience or enjoyment. Under such control private initiative can be depended upon for the introduction of everything believed to have possibilities.

The combination of the promoter, investor and capitalist, with their imagination, personality, optimism and desire, has been at the bottom of every development of every kind or nature which has benefitted the human race in the way of utilities, and still is the only way in which new utilities can be developed. Whenever any great works have been undertaken by governments they have been on lines of old development, based on experience of that which has been developed by the persistent genius and application of some individual or group of individuals.

State control or regulation, to be effective, should when exercised, be accepted and acquiesced in by the public. If all the decisions not in exact accord with the desire or contention of the public are condemned, if it is expected and required that all decisions be against the utilities controlled, if politics and political effect are to govern decisions, if decisions go for nothing with, and are not respected by the public, failure and disappointment are bound to follow, self-respecting men will refuse to act, the standard of appointments will fall and state control and regulation will become a disgrace, and the evils which it was intended to correct will multiply.

If any company gives good service, meets all the reasonable demands of the public, does not earn more than sufficient to provide for the maintenance of its plant up to the latest standard and for reconstruction of plant when worn out or obsolete, pays

only fair dividends to its shareholders—if a company is only doing this its rates and charges to the public cannot be unreasonable.

Competition vs. Control or Regulation.

Effective, aggressive competition, and regulation and control are inconsistent with each other, and cannot be had at the same time.

Control or regulation, to be effective, means publicity; it means semi-public discussion and consideration before action; it means deliberation, non-discrimination; it means everything which is the opposite of and inconsistent with effective competition.

Competition—aggressive, effective competition—means *strife*, industrial warfare; it means contention; it oftentimes means taking advantage of or resorting to any means that the conscience of the contestants or the degree of the enforcement of the laws will permit. To make competition effective great and uncontrolled latitude of action is necessary; action must be prompt and secret.

Aggressive competition means duplication of plant and investment. The ultimate object of such competition is the possession of the field wholly or partially; therefore it means either ultimate combination on such basis and with such prices as will cover past losses, or it means loss of return on investment, and eventual loss of capital. However it results, all costs of aggressive, uncontrolled competition are eventually borne, directly or indirectly, by the public.

Competition which is not aggressive, presupposes co-operative action, understandings, agreements, which result in general uniformity or harmony of action, which, in fact, is not competition but is combination, unstable but for the time effective.

Competing Exchanges.

Two local telephone exchanges in the same community are regarded as competing exchanges, and the public tolerates this dual service only in the fast disappearing idea that through competition in the telephone service some benefit may be obtained both as to rate and efficiency. Competition means that the same thing, or a satisfactory substitute, is offered. In this sense there can be no competing exchanges unless each exchange has substantially the same list of subscribers, which is in itself inconceivable.

It is not telephone service *per se* that an exchange affords; it is a particular, definite telephone connection between two people which can only be given between two parties connected with the same exchange or the same system. Each of the several independent exchanges in the same community offers you telephone service, but telephone service only with its particular list of subscribers.

Opposition exchanges compete in the same way as do two street railway lines, each starting in the center of the city, running a short distance through the same main street, and then branching off, each supplying an entirely different district of the city. Those traveling only from point to point on the main street can use either line, pay one fare; there is to this extent competition—there is a choice. Beyond that, to reach the other districts, there is no choice, there is no competition; one line or the other must be taken, depending on the particular district wished to be reached.

In the case of the street car service, payment is made only to the line used, when used.

To be in a position to obtain full telephone service where there are opposition exchanges, subscriptions to all are necessary.

In all other opposition utilities, to get the full service one or the other is paid—not both.

As before said, the purpose and object of an exchange is to afford a direct speaking circuit between parties at points distant from each other, to afford a highway for personal communication between any two. The exchange gives nothing but that connection, does nothing but provide that highway of communication, and place it at the service of the two parties desiring to communicate. The actual communicating is done by the parties themselves over this circuit placed at their exclusive service for the time being. To get this service, however, both parties must be connected with the same system; if not, the telephone circuit between the two parties cannot be made.

In two exchanges each having 2,000 subscribers, Messrs. A, B, C, D, E, F, G, H, I, J, K, L, M, N are connected with one, and Messrs. A, B, C, O, P, Q, R, S, T, U, V, X, Y, Z, connected with the other. Messrs. A, B, and C can use either exchange to connect with each other, but to connect with each other one exchange with one subscription and with but one payment would be sufficient. This is not competition; this is duplication.

Messrs. A, B, C can connect with all the others on both exchanges only by two subscriptions and two payments. There is no choice; there is no competition.

Any competition between opposition exchanges is confined to obtaining new subscribers—to increasing their subscription lists. Neither the same thing nor what could possibly be called a substitute is offered. Each exchange affords that connection between the subscribers on its particular list and that is all—between Messrs. A, B, C, D, E, F, G, H, etc., or between Messrs. A, B, C, O, P, Q, R, S, T, etc. A subscription to only one exchange is of no benefit when a connection with the other exchange is wanted, subscription to the other exchange is also necessary. This is not competition in any beneficial or any other sense.

When anyone decides to become a subscriber to an exchange he does not go to the one which offers any other inducement than the ability to connect with the people with whom it is the habit or necessity of the person subscribing to communicate. If it is his habit or necessity to communicate with some or all of those on both exchanges, subscriptions to both exchanges are necessary; in other words to get the advantage of complete local telephone service in a community, subscription to every local exchange in that community is necessary.

The fundamental idea of the Bell System is that the telephone service should be universal, intercommunicating and interdependent; that there are *certain people* with whom one *communicates frequently* and *regularly*; there are a *certain few* with whom one *communicates occasionally,* while there are *times* when it is *most necessary to get* communication with *some other one,* who, until the *particular necessity* arose, *might have been unknown and unthought of. It is this necessity, impossible to predetermine, which makes the universal service the only perfect service.*

On the assumption that a perfect telephone system must afford this direct highway of communication between any two desiring to converse, this system must reach everyone; must be universal, comprehensive. To the extent that any system does not reach everyone it is not perfect; to the extent that any system does not reach everyone, it is not in competition with the one that does; and to the extent that both systems reach everyone it is merely duplication; it is not competition.

Two exchanges may compete for subscribers, but not by offering the same list of subscribers; it would be impossible to keep the list of subscribers to any two opposition exchanges the same. One may offer a more desirable list of subscribers from your point of view than the other, therefore you will subscribe to that

one, but if both offer an equally desirable list of subscribers to you then you must choose between them, or you must subscribe to both exchanges.

One may call the carriage industry and the automobile industry competing. They are in a sense, or one is a substitute in a very general sense for the other. One might say the wholesale or retail flour merchant and the rice merchant are competing, as one is a substitute for the other, but two exchanges offering different lists of subscribers are not competing even in that sense, as neither is a substitute for the other, in that on one you may have communication with certain people, and on the other with certain other people; therefore they are not competing.

Two exchange systems in the same place offering identically the same list of subscribers, if such a thing can be imagined, are as useless as a duplicate system of highways or streets in a village not connecting with each other, but each reaching all the residents.

Physical Connections.

Physical connection. What is meant by it? And what object is it intended to accomplish?

Where there are two or more so-called competing local telephone exchanges in the same territory, each offers a particular service; each offers a connection with its particular list of subscribers.

Physical connection would connect these separate exchanges by trunk lines the same as exchanges belonging to one system are connected.

This in itself would be an easy matter in many cases, and would allow the subscriber to one local exchange speaking connection with the subscribers to the other local exchanges. A fairly satisfactory service could be given if all of the exchanges had the same general style of equipment, uniform operating methods, and if harmony and concert of action between the

operators of entirely independent and rival exchanges could be assured.

But what has been accomplished? You have enabled any subscriber to any exchange to communicate with any subscriber to any other exchange. You have not avoided the objectionable duplication. You have not given service to all the exchanges for one subscription. This can only be done through merger or combination, not by physical connection. Physical connection implies separate and independent entities. For the privilege of this physical connection with the other exchanges the subscriber to any one of the exchanges must pay. This payment or toll must be more or less the equivalent of what the regular subscribers pay, otherwise there would be discrimination.

If the equipment and the operating methods of the opposition or independent exchanges physically connected are different, the service is bound to be unsatisfactory. No one of the exchanges can have any control over the operators of the other exchanges. There is bound to be strife and contention between the operators, resulting in delays and poor service. Each exchange must necessarily give preference and attention to its own service.

From the standpoint of local telephone exchange service, therefore, there can be nothing to gain from physical connection, either in economy or quality of service.

The most important matter to consider in connection with physical connection, the one that has the greatest bearing on the subject, is the character of such physical connection between telephone exchanges, and wherein it differs from regular exchange of service or physical connection between other public utility companies.

A telephone exchange does not furnish a commodity, does not transport goods, nor does it transmit messages.

What the telephone exchange does is to place at the disposition of any subscriber a telephone circuit, consisting of two wires, connecting such subscriber with another person at a distant point. This circuit enables them to carry on speaking communication with each other; it must be continuous and unbroken; it is for their exclusive use and while the circuit is at their service it cannot be used by any others desiring to communicate, or for any other telephone purpose. The employes of the exchange render no other service than selecting and connecting the wires together to form this circuit, and putting the parties in communication. To do this, and do it satisfactorily, the operators making up the circuit must have absolute control of the wires necessary for these circuits over the whole distance between the points of communication; that is, the operator at the starting point must have either control of or perfect working unity and harmony of action with all the operators of all the trunk lines and exchange lines necessary for this circuit.

These conditions can only exist where there is a strong, common interest or control.

Physical connection between independent or opposition exchanges means, therefore, the placing of the wires necessary to give it effect out of the control for the time being of the owning company and under the control of a competing, opposition company, to enable that competing, opposition company to give its subscribers the use of property, equipment, facilities, operating staff, other than its own, and for the time being depriving the owning company and its subscribers of the use of such facilities.

Physical connection demands the exclusive use of an integral part of the property and facilities and operating staff of one company for the customers of a competing company, no matter how urgent may be the owner's necessity for the immediate use of such property and facilities, nor how small the surplus facilities beyond the owner's requirements.

If the service consisted of carrying packages or transmitting messages along with other packages or other messages, or hauling cars to their destination, or accepting through tickets or transfers from connecting or cross lines of travel, it would be very different. In such cases the property, facilities and operation remain in the control of the owning company or its operating staff; no property intended for the benefit of the customers of one company is put to the exclusive use of another company; all that is done, is the same as is done with and for all comers. The package or passenger is carried, or the message transmitted, to its destination at the convenience of the company, along with other packages or messages.

So far we have considered only the local exchange. Physical connection between independent or opposition telephone systems or between an independent local exchange and a telephone system presents not only the same but many more complications, and is far more objectionable.

To better understand what is meant by physical connection and what it is meant to accomplish, a knowledge of the evolution and development and policy of the Bell System is necessary, and what that policy and belief is.

Repeating what has been said above, it believes that the telephone system should be universal, interdependent and intercommunicating, affording opportunity for any subscriber to any exchange to communicate with any other subscriber of any other exchange within the limits of speaking distance, giving to every subscriber every possible additional facility for *annihilating time or distance by use of electrical transmission of intelligence or personal communication.* It believes that some sort of a connection with the telephone system should be within reach of all.

This is what the Bell System aims to be—one system with common policy, common purpose and

common action; comprehensive, universal, interdependent, intercommunicating; like the highway system of the country, extending from every door to every other door; affording *electrical communication of every kind,* from every one at every place to every one at every other place.

To create this system has been the policy of the Bell interests from the beginning. It is the only way by which a satisfactory telephone service—satisfactory to the public or profitable to its owners—can be maintained.

The Bell System as established is as advanced and extended as the country as a whole will warrant. Its policy of extension carries it a little in advance of the public demands. In any effort to cover the whole country many unremunerative exchanges and toll lines have to be constructed and operated. Some of these will in time become remunerative; some never will, and those, for the benefit of the whole system, will have to be carried at the cost of the whole system.

Most of the opposition exchanges have been built up in a selected territory with capital obtained by the promise of, or in anticipation of large profits; as a rule capitalized far in excess of the plant value or construction cost. Subscribers have been obtained by promises of improved service at low rates. Many of such exchanges owe what success they have, where there is any success, to personal local influence or interest. Many, if not all, have been a disappointment. The day of local telephone exchanges or limited telephone systems has gone. This is recognized and fully appreciated by those who have exploited or are operating them.

The idea of physical connection is born of a desire to get for these local and isolated competing or opposition exchanges or these comparatively limited exchange systems, the advantage of the more extensive, comprehensive Bell System. To get for the subscri-

ers of these so-called competing, opposition exchanges the connections which their own systems do not give them, to get for their subscribers all the advantages enjoyed by subscribers of the Bell exchanges by giving them the use of a part of the Bell System.

Physical connection would force the Bell System to place at the disposal of and under the control of any opposition company, Philadelphia for instance, for the time being, one of its circuits from Chicago to Philadelphia, to connect that Bell circuit with the circuits and system of the opposition company and disconnect it, for the time being, from the circuits of the Bell System.

This is not carrying packages or transmitting messages for the subscribers of the opposition Philadelphia exchange; it is turning over to that exchange for the use of its subscribers the property of the Bell System.

The fact that the opposition exchange could get such facilities would enhance its importance at the expense of the Bell System.

Physical connection would force the comprehensive Bell System, which has been built up with foresight and enterprise and is being maintained in its completeness at the cost of maintaining unremunerative exchanges and unremunerative lines, to turn over to, and put under control of, any opposition system for its use and benefit, for the time being, a physical part of the property of the Bell System and at the same time deprive the subscribers to the Bell System of the use of such property. Physical connection would oblige any system to construct and maintain surplus facilities and employ a surplus staff of operators for the benefit of any so-called competing or opposition—but less enterprising—company.

No possible compensation would be adequate for such service or such deprivation.

One of the arguments for physical connection is that

it will stop duplication. How? All agreements as to territory, rates or character of opposition; all arrangements which would come under the head of combination or pooling; all understandings or anything that would be equivalent to consolidation or combination, must be eliminated; this is not what is meant by and is not a part of, physical connection. Leaving all understandings out of consideration what effect would physical connection have on the local opposition exchanges? Neither exchange could stop competing for subscribers. The exchange that did would soon dwindle to a point of absolute undesirability; in other words, to a point where the subscription list would offer no inducements to others to join. Consequently activity must be maintained, each exchange making every effort not only to retain all on its list of subscribers but to add more. The same territory must be covered, the consequent duplication of conduits, pole lines, central and branch offices must continue; in fact the strife or competition would have to be more severe.

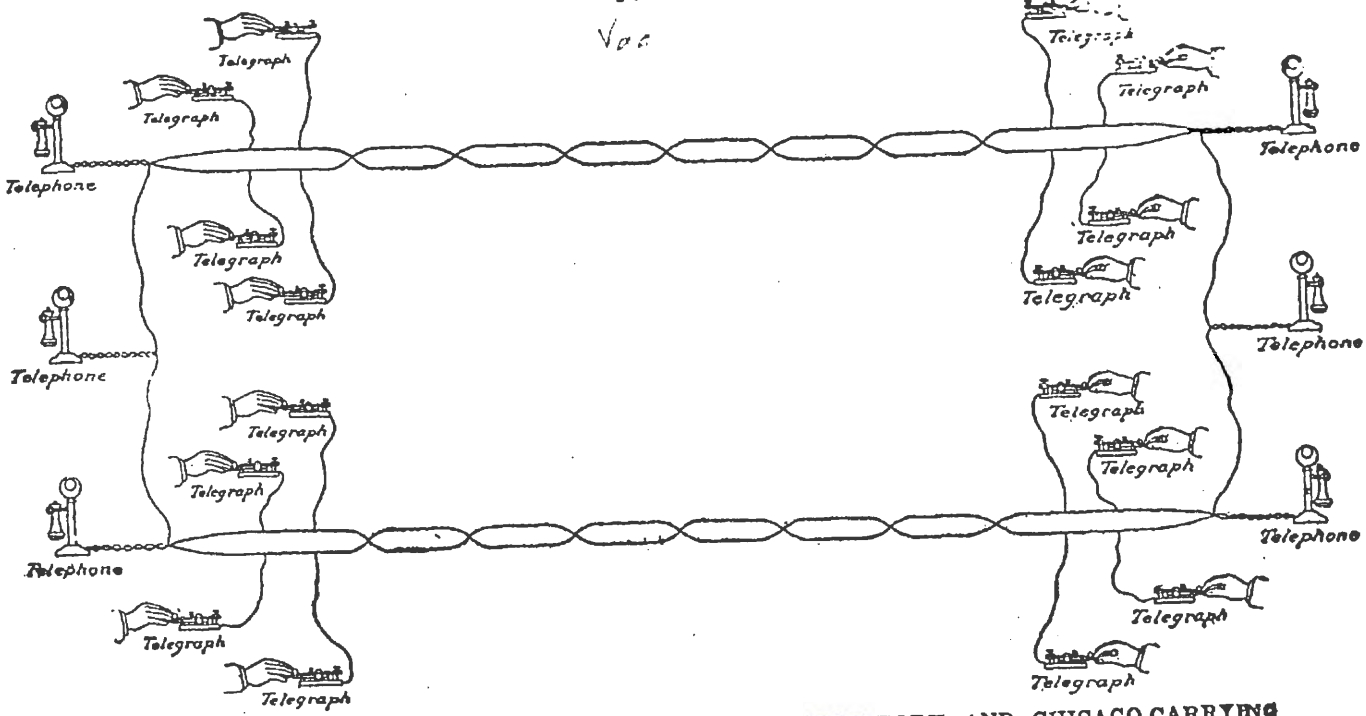
It is claimed that physical connection would bring about one system, where any one telephone subscriber could obtain connection with any other telephone subscriber within the limits of possible communication. With physical connection that would be the case, after a fashion, but what kind of a system would it be? It would be imperfect in that it would still be a dual system, with dual charges, made up of heterogeneous units of exchanges and lines, operated under independent managements with different operating methods and interests, with no common control over operators, without which service can not be satisfactory; in fact with all those imperfections that it has taken the Bell interests years to correct—imperfections which can be removed only by combination, agreement, understanding, which would be in effect consolidation.

Such demand as there may be for physical connection from opposition exchanges is a recognition of supe-

rior facilities and comes from a desire to get the benefits of those superior facilities.

So far as it comes from the public it is an expression of weariness with dual service or so-called competition.

Is there anything in practice, law or precedent that can compel one system, built upon a comprehensive basis, and trying to meet all the requirements of the public, to turn over its physical property for the use of so-called competitors—opposition exchanges built in selected territory with selfish views or motives? Is there anything to compel one to share the prosperity of a business created by enterprise and advanced policy with those who wish to appropriate the benefits of such work? Can any public utility company be compelled to divest itself of the operating control of its own property which was created for and may be needed at any time in the conduct of its own business? This is not the kind of interchange of business contemplated by the rules governing common carriers. It is not co-operation. It is pure and simple confiscation.



TWO TELEPHONE CIRCUITS IN DAILY USE BETWEEN NEW YORK AND CHICAGO CARRYING
THREE TELEPHONE CONVERSATIONS AND EIGHT TELEGRAPH MESSAGES
SIMULTANEOUSLY WITHOUT INTERFERENCE WITH EACH OTHER.

TELEPHONE AND TELEGRAPH.

The relations between the telephone system and the telegraph system are complementary.

Telephone service is furnishing for the personal use of the public an electrical circuit for personal communication between distant points. Nothing is carried by the telephone company, no commodity furnished, nothing transmitted by its staff, and nothing done except to make up a direct circuit between, and place it at the disposal of, the parties.

It annihilates distance in that it brings parties at distant points into speaking distance with each other.

Telegraph service is the electrical transmission, by the operating staff of the telegraph company, of written communications for others.

It annihilates time in that it instantaneously transmits written messages between different points.

The telephone provides something to be used by the public themselves.

The telegraph performs a distinct service for the public.

A telephone "circuit" consists of two copper wires of superior construction, arranged in a particular relation to each other, forming a metallic circuit equipped with auxiliary apparatus, loading coils, etc., connected with a switchboard—all very complicated and elaborate.

A telegraph "circuit" consists of one wire at most—a grounded circuit. This wire can be divided into several distinct "circuits."

A telephone "circuit" cannot be used for telephone purposes by any but the two parties in communication, during the time of such communication, but the same telephone "circuit" can, at the same time it is being

used for telephone service, be divided into two, four or even eight telegraph "circuits," each of which can be used for the transmission of telegraph messages.

While the existing telephone toll and long-distance lines can be used for telegraph purposes, the existing telegraph lines cannot be used for telephone toll and long-distance purposes until reconstructed and arranged as described above.

There are two factors which determine the cost of both services—Plant Cost and Operating Cost. The total of these costs must be distributed over the actual service performed, and the cost of each item of service, whether telephonic communication or telegraph message, varies directly with the total amount of that service. The more the capacity of the plant in service is utilized the less the cost of each particular item of service.

The plant cost is the fixed charge on capital invested in plant, the cost of its maintenance and the depreciation reserve.

The operating cost is more or less a constant initial charge on each item of service, i. e., telephone connection or telegraph message. In the telephone service it is the cost of the time of the operators in putting up the circuit or connection for the use of the parties, and getting them into communication with each other. It is relatively small in that one set of operators can care for a number of circuits. In the telegraph service there is a large constant initial cost, for each message, made up of the cost of the skilled and expert operators on each circuit, offices with clerical and messenger staff for the collection and delivery, receiving, recording and preparing messages for transmission, insurance against mistakes in transmission or delay in delivery, etc.*

* NOTE. It seems unreasonable that a telegraph company should have a possible liability of many thousands of dollars for a single message at ordinary rates. There is no other business where there is not some additional charge for insurance beyond a minimum.

The possible use—the number of hours during which a telephone circuit can be used as well as the number of items of service, i. e., communications or connections, which can be given within those hours—is limited by the necessity of the *personal presence* on the circuit of the parties communicating; by the time necessary to get both parties on the circuit; by the time taken by the communication; and by the intervals lost while waiting for parties.

This limited capacity, together with the costly character of the telephone circuit, makes the plant cost of each connection or communication very large. The operating cost is relatively very small in that one set of operators can take care of the connections of a number of circuits.

The relatively small operating cost and large plant cost make *distance* the important controlling element in the cost of telephone toll line or long-distance service.

In the telegraph service the messages are transmitted by the operating staff, one after another, with the speed of writing. There are no lost intervals during the busy hours. The plant cost of each item of service, i. e., the telegraph message, is relatively very small, while the operating cost, for reasons given above, is relatively very large for each message.

The relatively large operating cost and small plant cost per telegraph message make distance a subordinate factor in the cost of telegraph service.

The ratio of the possible number of telegraph messages over the same wires compared to the possible number of telephone communications is very large.

It is possible to "telephone" messages, but while the operating cost would be somewhat larger than in the case of "telegraphing," the plant cost would make telephoning messages prohibitive over long distance under ordinary conditions. The use of the telephone for that purpose is therefore limited econ-

omically to short distances, or some situation where the plant cost would be almost or entirely negligible.

The small operating but very large plant cost of the telephone communication and the large operating but relatively small plant cost of the telegraph message limit the possibility of either being used indiscriminately or interchangeably to *very short distances, or to other particular situations.*

Under existing conditions or the present state of the art, the "telephonic" transmission of written messages cannot take the place of "telegraphic" transmission in the regular conduct of the business.

In a large way the complementary character exists in the joint occupancy and joint use for both purposes of the trunk line plant of both companies. For the general service of each the operating staffs of the telephone and of the telegraph are in every respect distinct and different, and not in the slightest degree interchangeable. Each function requires an independent operating organization, made up largely of experts in each particular business, complete in every respect. Any attempt on the part of a telephone company to do a regular "telegraph business" would necessitate a "telegraph" operating organization in addition to its "telephone" operating organization.

Before a telegraph company could do a "telephone business" it would be necessary to reconstruct and rearrange its entire wire plant; to construct and equip central offices, distributing subways and lines, subscribers' connections and stations, at a cost of several times its existing telegraph wire plant, and also to create a distinct "telephone" operating organization.

While the large economies are in the joint occupancy and the joint use of the trunk "wire plant," there are great advantages and large economies in the utilization for both purposes of other plant and operating facilities which must be maintained for a single purpose in any case, and which could bear the additional burden

of the service of the other without an additional cost. There are in the distributing and branch lines of both services large plant and operating facilities which are only being utilized to a small part of their capacities; where the business of either company is not sufficient to maintain either office or operating staff; where to maintain any office there must be utilized the office and employees of some business which has first claim on the service and attention of such employees. Under these conditions satisfactory service is impossible, and to a great degree affects the reputation of the whole service, particularly that of the telegraph. This large economic waste incident to separate service could be almost entirely eliminated by joint use or occupancy, and by bringing the business entirely under one common control or influence the efficiency and the reputation of the service could be greatly improved.

The utilization of plant and operating staff not fully employed makes it possible to collect and deliver messages by telephone and to connect exchanges and subscribers' stations by telephone toll lines with the night telegraph offices at other points.

To the extent that these waste facilities are utilized for public benefit and private profits, just to that extent regular standard service could be cheapened or *new service* and *additional facilities* given to the public.

The idea of universality has been referred to in connection with the telephone system. This idea can be broadened and applied to a wire system. We believe that the future development of the wire system in the United States will afford facilities for the annihilation of both *time and distance* by the general use of *electrical transmission* for *written or personal communication,* and will afford electrical communication of every kind of intelligence from everyone at every place to everyone at every other place. It will be comprehensive, universal.

To do this efficiently and economically means the combination of every kind of electrical transmission of intelligence into one system in order that new and additional uses may be developed and that the wire plant and other facilities may be utilized to their fullest extent.

Cheap service comes from full loads. In the wire service this can only be had by employing the plant to its full capacity, *all the time.* The charts on pages 56 and 57 will show to what a limited extent this is now being done.

In some lines of business like the transportation of passengers, where the unit of service is the car mile, and the overload capacity of the car is large, the average load can be greatly increased by making use of the "overload" during the few hours of maximum business. In no other way could the prevailing cheap fares be afforded for such long hauls.

In the electrical transmission of intelligence each item of service, the "message" or "telephonic connection" occupies the wires and the time to the exclusion of all else, and the law of increasing returns therefore works within the narrow limits of the capacity of the line. There can be no overload. *Cheaper service can only be given by the development of new or additional uses which can be distributed over the time now unused.* In the telephone business what can be done in this direction is restricted by the necessity of the personal presence of the parties using the telephone, which limits the use of circuits for telephone purposes to certain hours of the day. In the telegraph and cable business, under present conditions, it is different. There is a large capacity unused waiting to be utilized.

Expedited service means a large surplus plant to meet maximum demands, unutilized at all other times. The cost of the unutilized facilities must be borne by the expedited service. The result is high charges, due to small average load with consequent large plant cost.

Up to the present time the telegraph and cable business has been developed wholly on lines of *expedition* and the business that has been developed is such as will stand the extra cost of expedition. Theoretically at least, there should be no possibility of any further expedition, of any rush or special service, beyond what should be, if it is not now being given.

To do anything which would retard the expedition of the business as now developed would be detrimental to the social and business organization of the world; as in expedition lies the prime value of the present service.

Under a universal wire system operated on the lines and in the manner indicated above, the additional services will be given to the public at rates commensurate with the value of such services, and in the great possibilities of electrical transmission of intelligence some uses will be found or developed to absorb and utilize this enormous waste, and also relieve any congestion now suffered by the more important business by furnishing a service which would be satisfactory to such of the existing business as has heretofore had no alternative, but would prefer the new service.

The Night Letter—the first attempt—met with popular reception and is filling a definite place in the business and social world. The Day Letter, so recently introduced that its possibilities cannot yet be determined, will doubtless find its place. Depending upon the reception of these, other services will be introduced.

It is also intended to extend some of these new classes of service to the transatlantic cables as soon as

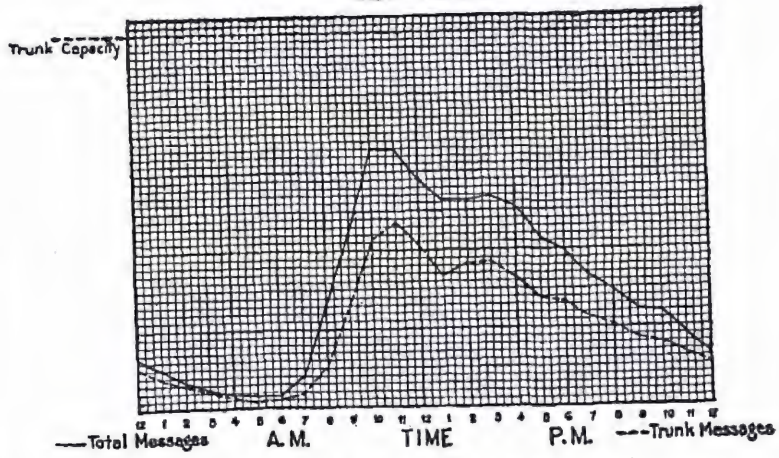
W. U. TELEGRAPH CHART

SHOWING

RANGE OF SENT AND RECEIVED BUSINESS

AT

NEW YORK.



CABLE CHART

OF

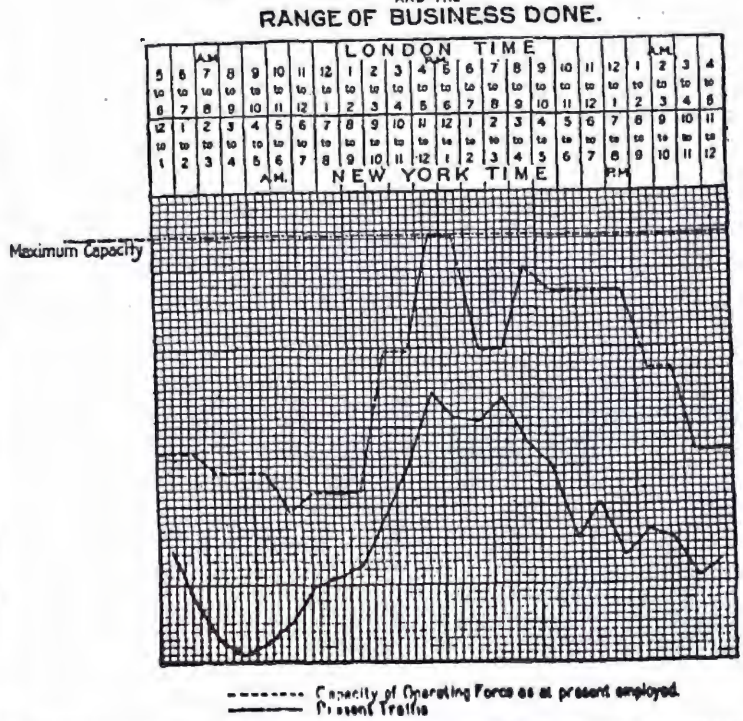
TRANSATLANTIC BUSINESS

SHOWING THE

CAPACITY OF OPERATING FORCE

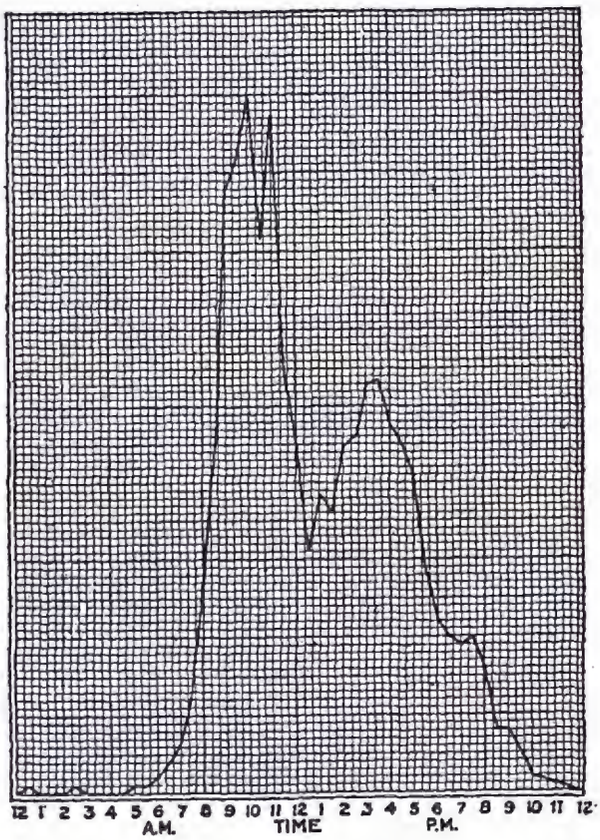
AND THE

RANGE OF BUSINESS DONE.



TELEPHONE CHART

TYPICAL LONG DISTANCE TRAFFIC RECORD



it is made possible by the completion of negotiations and arrangements now pending.

Until the economies, which may result from the joint occupancy or joint use and the consequent utilization of these now unutilized facilities, are determined, there will be no changes made in the present conduct of expedited or regular service. Whether all or only part of the economic waste will be absorbed in the other classes of service is a question yet to be answered; until answered anything that might result adversely either to the quality of the service, the extension and introduction of new service, or to the reasonable profits to which the companies are entitled, would be foolish and uncalled for.

RÉSUMÉ AND CONCLUSION.

The following condensed summary of some of the principal things shown in this and previous reports is made with the purpose of taking away any excuse for further repetition or publication of those misstatements, distorted facts and erroneous conclusions which, for various reasons, are circulated from time to time.

It is shown that the total outstanding obligations of the Bell System in the United States, not including the manufacturing company, amount to $580,000,000. All the capital of the various companies composing the System not included in this consists of inter-company items and duplications.

It is shown that the book value of the property representing these outstanding obligations is $696,700,000, $116,000,000 in excess of the outstanding obligations. It is shown that in all cases of official appraisement the actual value of this plant has been found to be above the book value.

It is shown that there is no water in the capital of the American Telephone and Telegraph Company; that each $100 of outstanding obligations is represented by more than $100 cash paid into the treasury; that the excess of cash paid into the treasury over the outstanding obligations at the close of the year amounted to nearly $17,000,000.

It is shown that the construction costs of the Bell System are small. The cost per exchange station is but $117.12. The cost per exchange station, including the extensive system of toll lines, is but $142.13. This valuation includes the first class exchanges and exchange construction. All or substantially all of the cheaper class of construction, the rural co-operative and association lines, is embraced in the sub-licensee or connected companies, constructed on the basis of giving a low-cost local service.

It is shown that the cost of construction per exchange station has steadily decreased from $199.00 in 1900 to $142.00 in 1910, notwithstanding the great increase in the investment in real estate, underground construction, toll line construction and copper wire.

It is shown that instead of increasing and oppressive rates there has been a continual decrease of the average annual charge for exchange service from an average of $44.68 in 1900 to $31.28 in 1910.

It is shown that the taxes paid in the year 1910 by the Bell System amount to over 5 per cent. of its gross earnings, 16.4 per cent. of its net earnings, and 1.4 per cent. of the value of its telephone plant.

It is shown that the control of the company is not vested in any one interest nor has it been used for the

benefit of any individual or group of individuals; that the shareholders, recognizing an uninterrupted administration of their affairs in their interest have continued the Directorate on the same lines or the lines of natural succession from the beginning.

It is shown that the American Telephone and Telegraph Company is not in the accepted sense a trust nor has it been built up by absorbing competing companies or in restraint of business. That while the Bell System is made up of separate corporations, these corporations are not, never have been, and never could be in competition, and also that under any system of organization or under one ownership, separate companies are necessary for purposes of State jurisdiction.

That a universal and comprehensive telephone system cannot have any operating limits, but must give unbroken, continuous, connecting circuits under one control, from every subscriber's station in every direction to the limits of telephone speaking possibility.

It is shown that bona fide competition between local exchanges cannot exist, owing to the peculiarities of the service rendered by these exchanges.

It is shown that physical connection does not and cannot bring about any economical or beneficial result and increases instead of decreases the evil of dual construction and subscription.

That physical connection would give to subscribers of an opposition exchange the service and use of property provided for the use of others, and for which others pay.

We are charged with maintaining a large experimental and patent organization largely for the purpose of suppressing new inventions and improved methods. The Bell System does maintain a large experimental and engineering department, but for the purpose of developing the value and efficiency of anything that is now; what it really does is demonstrated by the fact

that the construction, equipment and operating methods of the Bell System are the standard the world over. That the equipment of the exchanges of the whole world is either the same as, or is modeled upon that of the Bell System. And that no construction, equipment or operating methods rejected or "suppressed" by the engineering experts of the Bell System have ever yet come into permanent use.

We are charged with making abnormal profits on the equipment, supplies, etc., furnished the operating companies by the Western Electric Company, and in this way increasing the cost of service to the public. It is shown that the profits on Western Electric sales to the operating companies of the Bell System are less than on sales to the independent companies, to the extent at least of the saving in the cost of selling to the operating companies.

It is also shown that the telephone service and the telegraph service are complementary, not competitive; that each has its own proper place; that joint use and joint occupancy of wires will reduce operating cost, maintenance charges and construction investment. That utilizing the unutilized facilities of both will make possible large economies and improvement in the wire service as well as new, additional and useful services of both telephone and telegraph, for the benefit of both the corporations and the public.

For the Directors,

THEODORE N. VAIL,
President.

BELL TELEPHONE SYSTEM IN THE UNITED STATES.

	Dec. 31, 1895.	Dec. 31, 1900.	Dec. 31, 1905.	Dec. 31, 1909.	Dec. 31, 1910.	Increase, 1910.
Miles of Exchange Pole Lines	25,330	30,451	67,698	113,893	120,175	6,282
Miles of Toll Pole Lines	52,873	101,087	145,535	164,111	167,827	3,716
Total Miles of Pole Lines	78,203	131,538	213,233	278,004	288,002	9,998
Miles of Underground Wire	184,515	705,269	2,345,742	5,337,436	5,992,303	654,867
Miles of Submarine Wire	2,028	4,203	9,373	22,698	24,636	1,938
Miles of Aerial Wire	488,872	1,252,329	3,424,803	5,119,892	5,625,273	505,381
Total Miles of Wire	675,415	1,961,801	5,779,918	10,480,026	11,642,212	1,162,186
Comprising Toll Wire	215,687	607,599	1,265,236	1,804,552	1,963,994	159,442
Comprising Exchange Wire	459,728	1,354,202	4,514,682	8,675,474	9,678,218	1,002,744
Total	675,415	1,961,801	5,779,918	10,480,026	11,642,212	1,162,186
Total Exchange Circuits	237,837	508,262	1,135,449	1,829,942	2,082,960	253,018
Number of Central Offices	1,613	2,775	4,532	4,968	4,933	35†
Number of Bell Stations	281,695	800,880	2,241,367	3,588,247	4,030,668	442,421
Number of Bell Connected Stations	27,807	55,031	287,348	1,554,445	1,852,051	297,606
Total Stations	309,502	855,911	2,528,715	5,142,692	5,882,719	740,027
Number of Employees	14,517	37,067	89,661	104,956	120,311	15,355
Number of Connecting Companies				10,354	12,300	1,946
Exchange Connections Daily	2,351,420	5,668,986	13,543,468	19,925,194	21,681,471	1,756,277
Toll Connections Daily	51,123	148,528	368,083	517,341	602,539	85,198

* Includes Private Line Stations.

† Decrease.

BELL TELEPHONE SYSTEM IN THE UNITED STATES.

ALL DUPLICATIONS BETWEEN COMPANIES EXCLUDED.

COMBINED BALANCE SHEETS AT FIVE YEAR INTERVALS, 1885–1910.

	Dec. 31, 1885.	Dec. 31, 1890.	Dec. 31, 1895.	Dec. 31, 1900.	Dec. 31, 1905.	Dec. 31, 1910.
ASSETS:						
Contracts and Licenses	$16,732,100	$18,925,700	$20,005,300	$14,794,300	$13,313,400	$2,943,381
Telephone Plant	38,618,600	58,512,400	87,858,500	180,699,800	368,065,300	610,999,964
Supplies, Tools, etc.	348,500	1,021,800	1,810,000	6,464,400	11,069,500	20,987,551
Receivables	1,450,900	1,761,600	3,746,600	13,644,000	26,220,800	26,077,802
Cash	1,792,600	1,183,300	2,484,100	3,223,000	11,005,900	27,548,933
Stocks and Bonds	1,138,800	2,697,400	4,480,500	11,400,400	23,041,200	64,766,089
Total	$60,081,500	$84,102,200	$120,385,000	$230,225,900	$452,716,100	$753,323,720
LIABILITIES:						
Capital Stock	$38,229,200	$43,792,800	$57,462,700	$130,006,900	$238,531,100	$344,645,430
Funded Debts	367,400	6,473,100	10,074,100	44,137,900	93,079,500	224,791,696
Bills Payable	2,618,900	1,323,000	2,000,000	7,000,000	35,000,000	42,566,943
Accounts Payable		3,301,100	6,138,000	13,583,300	22,407,500	21,721,125
Total Outstanding Obligations	$41,215,500	$54,890,000	$75,674,800	$194,728,100	$389,018,100	$633,725,194
Surplus and Reserves	18,866,000	29,212,200	44,710,200	35,497,800	63,698,000	119,598,526
Total	$60,081,500	$84,102,200	$120,385,000	$230,225,900	$452,716,100	$753,323,720

American Telephone and Telegraph Company.

Balance Sheet, December 31, 1910.

ASSETS.

Stocks of Associated Companies	$356,662,338.33	
Bonds of Associated Companies	2,885,000.00	
Capital Advances to Associated Companies	34,165,499.20	$393,712,837.53
Telephones	$11,568,966.04	
Real Estate	2,184,730.44	
Long Distance Telephone Plant	45,948,391.62	59,702,088.10
Cash and Deposits	$13,109,340.32	
Short Term Notes	627,466.52	13,736,806.84
Special Demand Notes		16,970,229.34
Current Accounts Receivable		6,093,415.42
Treasury Bonds		17,300,000.00
		$507,515,377.23

LIABILITIES.

Capital Stock		$263,335,600.00
Four Per Cent. Collateral Trust Bonds, 1929	$78,000,000.00	
Four Per Cent. Convertible Bonds, 1936	38,941,000.00	
Five Per Cent. Coupon Notes, 1907	5,000.00	
Five Per Cent. Coupon Notes, 1910	22,000.00	
Other Notes Payable	13,150,000.00	
Indebtedness to Western Union Telegraph Co. for New York Telephone Co. Stock payable 1912 to 1915	16,500,000.00	146,618,000.00
Dividend Payable January 15	$5,266,712.00	
Interest and Taxes Accrued, but not due	2,163,658.83	
Current Accounts Payable	593,895.44	
Reserve for Unearned Revenue	2,758.99	8,027,025.26
Depreciation Reserve	$37,425,080.08	
Surplus	52,109,671.89	89,534,751.97
		$507,515,377.23

CHARLES G. DuBOIS, *Comptroller.*

BELL TELEPHONE SYSTEM IN THE UNITED STATES.

ALL DUPLICATIONS BETWEEN COMPANIES EXCLUDED.

COMPARATIVE EARNINGS AT FIVE YEAR INTERVALS, 1885-1910.

	Year 1885.	Year 1890.	Year 1895.	Year 1900.	Year 1905.	Year 1910.
EARNINGS:						
Gross Earnings	$10,033,600	$16,212,100	$24,197,200	$46,385,600	$97,500,100	$165,612,881
Expenses	5,124,300	9,067,600	15,488,400	30,632,400	66,189,400	114,618,473
Net Earnings	$4,909,300	$7,144,500	$8,708,800	$15,753,200	$31,310,700	$50,994,408
Interest	27,700	278,700	655,500	2,389,600	5,836,300	11,556,864
Balance	$4,881,600	$6,865,800	$8,053,300	$13,363,600	$25,474,400	$39,437,544
Dividends	3,107,200	4,101,300	5,066,900	7,893,500	15,817,500	25,160,786
Surplus Earnings	$1,774,400	$2,764,500	$2,986,400	$5,470,100	$9,656,900	$14,276,758

American Telephone and Telegraph Company.

Comparative Statement of Earnings and Expenses

For the years 1909 and 1910.

	1909.	1910.
EARNINGS:		
Dividends	$15,949,213.73	$19,205,494.35
Interest and other revenue from Associated Companies	10,661,431.03	10,838,442.84
Telephone Traffic (net)	4,360,104.94	4,893,513.39
Real Estate	95,723.97	95,119.69
Other Sources	1,694,867.76	325,758.44
Total.	$32,761,341.43	$35,358,328.71
EXPENSES	2,570,575.57	3,425,114.22
NET EARNINGS	$30,190,765.86	$31,933,214.49
Deduct Interest	7,095,377.34	5,077,321.33
Balance	$23,095,388.52	$26,855,893.16
Dividends Paid	17,036,275.64	20,776,822.12
Balance	$6,059,112.88	$6,079,071.04
Carried to Reserves	$3,000,000.00	$3,000,000.00
Carried to Surplus	3,059,112.88	3,079,071.04
	$6,059,112.88	$6,079,071.04

CHARLES G. DuBOIS, *Comptroller.*

American Telephone and Telegraph Company.

Annual Earnings and Dividends.

Year.	Net Revenue.	Dividends Paid.	Added to Reserves.	Added to Surplus.
1900	$5,486,058	$4,078,601	$937,258	$470,198
1901	7,398,286	5,050,024	1,377,651	970,611
1902	7,835,272	6,584,404	522,247	728,622
1903	10,564,665	8,619,151	728,140	1,217,374
1904	11,275,702	9,799,117	586,149	890,435
1905	13,034,038	9,866,355	1,743,295	1,424,380
1906	12,970,937	10,195,233	1,773,737	1,001,967
1907	16,269,388	10,943,644	3,500,000	1,825,744
1908	18,121,707	12,459,156	3,000,000	2,662,551
1909	23,095,389	17,036,276	3,000,000	3,059,113
1910	26,855,893	20,776,822	3,000,000	3,079,071

CHARLES G. DuBOIS, *Comptroller.*

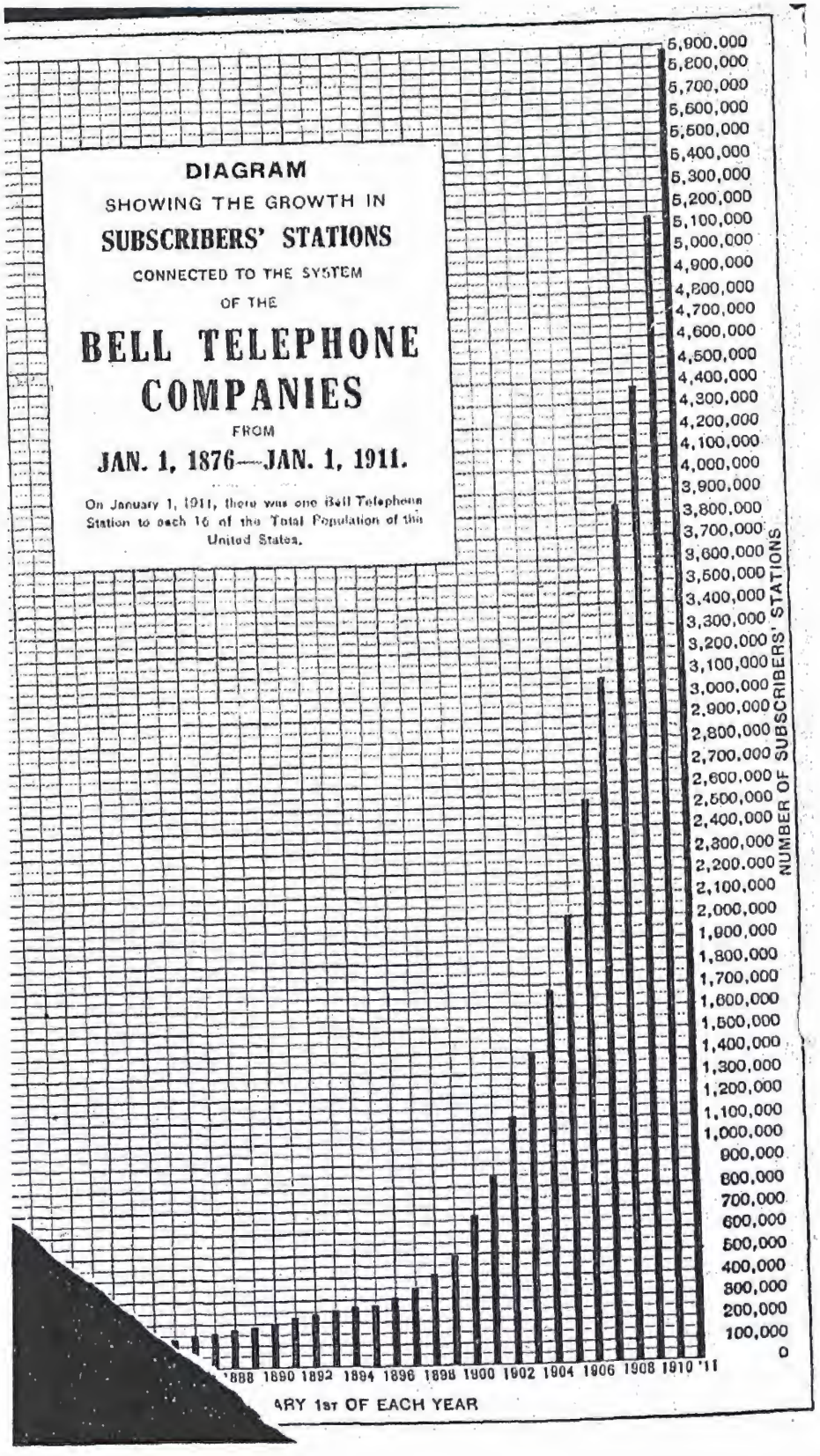


DIAGRAM
SHOWING THE GROWTH IN
SUBSCRIBERS' STATIONS
CONNECTED TO THE SYSTEM
OF THE
BELL TELEPHONE COMPANIES
FROM
JAN. 1, 1876—JAN. 1, 1911.
On January 1, 1911, there was one Bell Telephone Station to each 16 of the Total Population of the United States.
5,900,000
5,800,000
5,700,000
5,600,000
5,500,000
5,400,000
5,300,000
5,200,000
5,100,000
5,000,000
4,900,000
4,800,000
4,700,000
4,600,000
4,500,000
4,400,000
4,300,000
4,200,000
4,100,000
4,000,000
3,900,000
3,800,000
3,700,000
3,600,000
3,500,000
3,400,000
3,300,000
3,200,000
3,100,000
3,000,000
2,900,000
2,800,000
2,700,000
2,600,000
2,500,000
2,400,000
2,300,000
2,200,000
2,100,000
2,000,000
1,900,000
1,800,000
1,700,000
1,600,000
1,500,000
1,400,000
1,300,000
1,200,000
1,100,000
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
NUMBER OF SUBSCRIBERS' STATIONS
'888 1890 1892 1894 1896 1898 1900 1902 1904 1906 1908 1910 '11
ARY 1st OF EACH YEAR