

ing his conversations free from interruption. Already these systems are being installed on a large scale in Chicago, and Grand Rapids, Mich.; Columbus, Ohio; Dayton, Ohio; Portland, Maine, and other cities in the United States. In Canada, also, the Canadian Machine Telephone Co. is installing a system in Ottawa and is preparing to enter the telephone field aggressively.

Further than this, a new system has recently been patented, which provides for the supply of electric light, power, telephone and telegraph facilities on the same circuit, thereby effecting a great reduction in the cost of construction and maintenance. This system is in actual operation, and so far as it has been tested is an undoubted success. If the same results can be obtained on a large system as have already been effected, and there is no reason to doubt it, this latest development will prove not only a source of great economy to electric light and telephone users; but it should be a most profitable investment for those who are fortunate enough to control it.

It is not possible in the limited space of this article to describe in detail these new developments of the telephonic art, nor would it be desirable to enter into a discussion of their respective merits. Suffice it to say that they are here, and it is for the public to note the fact and see to it that no binding contracts are made with existing companies, which would prevent them from participating in the benefits of these inventions for years to come.

The Bell Telephone Company's supporters will, no doubt, reply that, in the first place, the telephone is a natural monopoly, and therefore competition must fail, and in the second, that these new developments are mere experiments. In reply to the first statement, the result of the independent telephone movement in the United States has increased the number of telephones in use from 600,000, in 1894, to over 4,000,000 at the close of 1902; while the fact that there have been fewer failures in telephone companies than in national banks in the same period is sufficient proof of the financial success of competition.

In regard to the second statement, it may be said that experts in telephony, as competent as any the Bell Telephone Company have in their service, have pronounced these new systems to be of great practical commercial value.

The main question with the public, however, is whether competition in telephones tends to the advantage of the general community, and the best proof of this is to be found in the history of the independent telephone movement in the United States.

In 1894, before the advent of competition in telephones, the Bell Telephone Company of America had less than 238,000 subscribers' stations, with a total output of 582,000 telephones, the result of nearly twenty years' undisputed possession of the field. On December 31st, 1901, seven years later, the figures were:

Bell telephones	1,020,647	stations.
Independent telephones	1,250,000	"
Total	2,270,647	"

The following are the figures for the States of Ohio, Michigan, and Indiana:

Ohio.—Bell phones, 1894, 17,724; 1901, 79,500; Independent phones, 1894, nil; 1901, 106,344; Farmers' phones, 13,438.

Michigan.—Bell phones, 1894, 15,025; 1901, 48,930; Independent phones, 1894, nil; 1901, 33,731; Farmers' phones, 5,753. Michigan Bell Telephone Co. in receiver's hands through cutting rates in their effort to kill competition.

Indiana.—Bell phones, 1894, 6,000; 1901, 35,000; Independent phones, 1894, nil; 1901, 65,300; Farmers' phones, 16,353.

The records of the other States show a similar increase since 1894, but space prevents the publication of the figures in detail. The following statement by a well known authority in the independent field will, however, convey some idea of the marvellous development:

"There are at the present time in operation in the United States over 5,000 Independent telephone exchanges. A further proof of the immense growth of the Independent telephone work can be found in the fact that the combined out-

put of the Independent manufacturers during the year 1902, according to the report of sales, shows an average daily output during the entire year of 1,500 telephones, or practically 550,000 telephones for the year. These are figures which can be substantiated. If this is what was accomplished last year, it is not difficult to appreciate that the sales of preceding years would easily make up the difference required to give us an estimated total number of two and a half million telephones now in service."

"It seems almost beyond belief to the uninitiated, but a careful and conservative review of the financial affairs of the Independent telephone industry, covering a period of the last eight years, will show a most favorable condition. As heretofore stated, the percentage of failures among our national banks has been greater than in Independent telephone investments. And when one stops to consider that around the banks of this country is thrown a protective law, which should at least reduce to a minimum any question of failure, the claim of our common enemy, that we are a lot of dreamers, and that our work could not live, is idle; and considering the \$300,000,000 or more now invested in the Independent cause, we have from a financial standpoint the best of the argument. Verily the people have suffered long for a telephone service which might have been furnished by the Bell Company years ago."

Dual telephone systems in the United States are not looked upon with disfavor, the effect of competition upon the rates being ample compensation for the inconvenience of two exchanges in one town. The table published herewith furnishes ample proof of the truth of this statement:

Sixty-seven Cities and Towns in the United States Where Telephone Competition has not Increased the Cost to Subscribers who are Compelled to Use both Systems.

PLACE	"Bell" Rates now busin's Phone	Independent Rates now		Total pres't co't of 3 P'es	"Bell" rates be'f comp'n			Total cost of 2 phones before comp'n.	ANNUAL SAVING.
	Busi. Ph'ne	Res'd. Ph'ne	Busi. Ph'ne		Res'd. Ph'ne				
Ottumwa, Ia., mostly free	\$ 24	\$ 12	\$ 36-up	\$ 75	\$ 48	\$ 123	\$ 87-on most		
Iowa City, Ia.,	21	30	18	69	48	72	3		
Oskaloosa, Ia.,	24	30	18	72	48	84	12		
Fairfield, Ia.,	12	18	12	42	36	66	24		
Tipton, Ia.,	18	24	12	54	36	54	Same cost		
Hawkeye, Ia.,	15	15	12	42	36	60	18		
Greenburg, Ia.,	30	24	15	69	42	72	3		
Waterloo, Ia.,	30	30	18	78	50	86	8		
Decorah, Ia.,	12	14	9	35	36	60	25		
Cheboygan, Mich., ..	?	24	12	36-up	30	48	12-on most		
Benton Harbor,	12	25	16	53	48	84	31		
Adrian, Mich.,	?	24	12	36-up	48	84	48-on most		
Saginaw, " " " }	24	20-30	12-18	56-72	42-48	30-36	72-84	16-12	
Ray City, " " " }									
Flint, " " " }									
Caro, " " " }									
Holland, " " " }	24	20	12	56	48	24	72	16	
Lansing, " " " }	12	18	12	42	48	36	84	42	
Iron Mountain,	20	24	12	56	48	36	84	28	
Chillicothe, O.,	12	24-30	18-24	54-72	48	36	84	30-12	
Cleveland, O.,	42	24	18	84	48	36	84	Same cost	
Ashtabula, O.,	84	48	36	168	120	84	204	36	
Mt. Vernon, O.,	6-up	24	18	48-up	48	36	84	36-on most	
Fostoria, O.,	24	24	18	63	48	36	84	21	
Wellington, O.,	15	30	18	54-78	48	36	84	30-6	
Zanesville, O.,	18-36	24	12-18	54-78	48	36	60-84	0-24	
Shelby, Ohio,	24	24	12	60	36-48	24-36	96	33-3	
Barberton, O.,	12-42	33	18	63-93	60	36	96	Same cost	
Akron, O.,	18	24	12	54	36	18	54	24	
Cuyahoga Falls,	18-42	32-36	20-24	70-104	72-90	27-48	99-138	29-36	
Tiffin, O.,	24	24	12	60	48	36	84	24	
Midlingburg,	21	24	18	63	48	30	78	15	
Washington, O.,	24	24	15	63	48	36	84	21	
Ravenna, O.,	18	18	12	48	48	36	84	36	
Lima, O.,	24	30	18	72	48	36	84	12	
Sandusky, O.,	48	30	18	96	72	48	120	24	
Kenton, O.,	24	24	12	60	48	36	84	24	
Lancaster,	24	24	12	60	48	24	72	12	
Cambridge,	21	24	18	63	50	36	86	23	
Urbana, O.,	24	24	12	60	60	36	96	36	
Cambridge, Pa.,	12	18	12	42	24	18	42	Same cost	
York, Pa.,	15	30	18	63	60	48	108	45	
Johnstown, Pa.,	6-36	30	24	60-90	60	48	108	48-18	
Chambersburg, Pa., ..	12	24	18	54	48	24	72	18	
Fall River, Mass., ..	90	36	24	150	125	48-up	173-up	23-up	
New Bedford, Mass., ..	48	36	24	108	96	48	144	36	
St. Paul, Minn.,	24-72	48	30	102-150	120	66	186	84-36	
Minneapolis, Minn., ..	12	30	18	60	48	36	84	24	
Winona, Minn.,	0-54	30	20	50-104	54	54	108	58-4	
Duluth, Minn.,	36	24	12	72	60	24	84	12	
Beloit, Wis.,	42	30	18	90	60	36	96	6	
Owensburg, Ky.,	?	48	24-30	72-78-up	96	60	156	84-down'ds	
Louisville, Ky.,	30	28	18	76	64	64	128	52	
Lynchburg, Va.,	12	30	18	60	60	36	96	36	
Fayette, Ind.,	24	30	24	78	48	36	84	6	
Bluffton,	18	24	15	57	42	30	72	15	
Connersville,	18-36	24	18	60-78	42	36	78	18 Same cost	
Wabash,	24	24	12	60	48	30	78	18	
Columbus, Ind.,	24	25	15	64	48	36	84	20	
Logansport,	24	21	15	60	48	36	84	20	
Lebanon, Ind.,	12	27	15	54	48	36	84	30	
Michigan City,	30	36	16	82	60	40	100	18	
Tonawanda, N.Y.,	30-54	30	24	84-108	72	60	132	48-24	
Auburn, N.Y.,	24	24	18	66	72	54	126	60	
Joplin, Mo.,	36	36	18	90	80	60	140	50	
Trinidad, Col.,	30	30	20	80	50-48	40	90-88	10-12	
Grand Rapids, Mich									