MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS.

Scope of the inquiry.—It is necessary to present the statistics for the municipal electric fire-alarm and police-patrol signaling systems in order to cover the entire field for the commercial use of electricity. The object of a fire-alarm signaling system is to transmit an alarm of fire to the fire-fighting force within the shortest possible time after a fire is known to exist, and the best efforts and ingenuity of skilled engineers have been brought to bear on this vital question of saving time in the transmission of alarms. It is obvious that a fire may be more readily checked in its incipiency than after it has made headway; therefore, no matter how efficient a fire department may be, it will fail in achievement of its purpose if not supplemented by facilities for obtaining knowledge, without loss of time, of the exact location of a fire. The history of fire-alarm telegraphy shows progress toward certainty of operation and an increasing use of alarm apparatus to meet modern requirements. The first fire-alarm telegraph system in the United States was installed in Boston in 1852.

A telegraph signaling system consists of four elements, namely, boxes or signaling stations, alarm apparatus, central station equipment, and circuits. The central station is the heart of the signaling system, and at this point is located the apparatus for receiving, recording, and transmitting signals and fire alarms. The battery for supplying the electromotive force necessary to operate the system is also located in the central station. The boxes or signaling stations may be considered the outposts of the signaling system and constitute that element of the system with which the general public comes most frequently in contact. Each box is provided with a train movement which, when set in motion by the operation of the starting mechanism, propels a signal wheel, the revolution of which opens and closes the circuit a certain number of times in such a manner as to cause a code signal indicating the location of the box to be transmitted to the central station, where the number of the box is registered, and from which the signal is transmitted to the fire-fighting force. The alarm apparatus informs this force of the location of the fire. This equipment consists of gongs and indicators in the fire department houses. Where volunteers form part of the fire-fighting force, public alarms are given by means of devices for automatically striking large bells or blowing whistles. These devices are supplemented by equipment at the central stations which automatically records and dates all signals passing over the alarm circuits.

Fire-alarm signaling systems range from single-circuit systems adequate for small towns to systems of many circuits, requiring forces of operators constantly on duty in the central stations, and they may be classified under two general headings, namely, automatic and manual.

The word "automatic" may only be applied to systems which require no manual intervention whatever in transmitting alarms from the street signal boxes to the fire-fighting force. When a system becomes large enough to warrant the constant attendance of one or more operators at the central station, it ceases to be entirely automatic in its functions and requires facilities for the manual transmission of signals from the central station to the fire department houses.

There is great variation in local conditions and requirements of the municipalities in which central stations are employed, and for this reason no fixed rule as to the exact amount and arrangement of apparatus can be established which will apply in every case.

The census inquiry covers systems operated by electricity and used exclusively for sending signals or messages to the central offices of fire or police departments. In some cases these systems are leased by the municipalities wholly or in part from telephone or telegraph companies. The census does not cover the adaptation of local telephone systems for the conveyance of alarms unless arrangements are made for registration at central offices devoted exclusively to the fire-alarm or police-patrol service.

The following cities and towns reported arrangements with the local telephone companies to operate, through the regular switchboards at the telephone exchanges, systems to carry fire alarms transmitted from boxes located at intervals on streets:

New Canaan, Conn.	Lorain, Ohio.
Dover, Del.	Mount Vernon, Ohio.
North Vernon, Ind.	Marshfield, Oreg.
Valparaiso, Ind.	Abington, Pa.
Charles City, Iowa.	Bellevue, Pa.
Kansas City, Kans.	Honesdale, Pa.
Wichita, Kans.	Sayre, Pa.
Grand Island, Nebr.	Vandergrift, Pa.
Collingswood, N. J.	Williamsport, Pa.

No information was secured in regard to the number of alarms and other data relating to the fire-alarm service in these cities or in any other places where similar arrangements were in existence.

Combined fire-alarm and police-patrol signaling systems.—Table 1 presents a summary of the principal statistics for all of the fire-alarm and police-patrol

signaling systems for which data were collected at the censuses of 1912, 1907, and 1902.

Table 1

	ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS.					
	1912	1907	1902	Per cent of increase.		
				1902–1912	1907–1912	1902–1907
Number of systems	1,397	1,157	889	57.1	20.7	30.1
Miles of single wire	90,284	70,812	54,710	65.0	27.5	29.4
Overhead	48.290	42,796	40,008	20.7	12.8	7.0
In underground subways or conduits	41,994	28,016	14,702	185.6	49.9	90.6
Number of boxes or signaling stations	81,282	62,504	46,767	73.8	30.0	33.6
Signaling	73,393	58,121	45,597	61.0	26.3	27.5
Telephoning	7,889	4,383	1,170	574.3	80.0	274.6
Number of fire alarms received	175,539	120,719	85,070	106.3	45.4	41.9
Central office equipment:						
Number of transmitters	789	679	539	46.4	16.2	26.0
Manual	369	287	226	63.3	28.6	27.0
Automatic	420	392	313	34.2	7.1	25.2
Number of receiving registers of all kinds	4,953	2,427	834	493.9	104.1	191.0

During the decade ending with 1912 there was a rapid development of the fire-alarm and police-patrol signaling systems of the cities. The miles of wire used for the service increased from 54,710 in 1902 to 90,284 in 1912, a net gain of 35,574 miles, or 65 per cent. During the same period the number of boxes or signaling stations increased from 46,767 to 81,282, or 73.8 per cent. The large increase in the number of telephone stations is due in part to the fact that no telephones were reported as used for fire-alarm service in 1902, whereas 2,688 were reported for such service in 1907 and 3,683 in 1912. The police-patrol service reported the use of 1,170 telephones in 1902, 1,695 in 1907, and 4,206 in 1912.

The methods of reporting the number of fire alarms were not uniform in the different cities, and it is probable that the same class of alarms was not reported for all places. The total includes a large number of false alarms and fires too small to have any significance.

Methods of administration.—The police-patrol and fire-alarm systems are controlled by various administrative offices and departments of city governments. Table 2 shows the numbers of systems reported at each census as under the control of the various boards or departments of administration.

While the figures given in Table 2 are interesting, they possess little significance on account of the difference in titles applied in different localities to officials or boards exercising similar functions. Systems administered under similar conditions have been reported as directed by officials bearing dissimilar titles but whose duties were alike. In some communities these is considerable doubt and confusion among the officials as to the real authority over fire-alarm and police-patrol systems. It was impracticable to examine all of the ordinances which define the duties of municipal officials in order to determine definitely the particular boards or departments that had jurisdiction over fire-alarm and police-patrol systems, respectively. The reports, however, indicate that in earlier years the general tendency in different cities was to place the fire departments under the general supervision of administrative bodies, such as boards of aldermen, boards of selectmen, city councils, etc., and to place the police departments under the administration of boards of police commissioners or public safety departments. There has been, however, a tendency in later years to place these branches of the public service under the authority of officers who have made a specialty of service of this character, rather than under the control of boards or committees the personnel of which is constantly changing.

Table 2

BOARDS OR DEPARTMENTS OF ADMINISTRATION.	ELECTRIC FIRE-ALARM AND POLICE-PATROL SYSTEMS—NUMBER, GROUPED ACCORDING TO BOARDS OR DEPARTMENTS OF ADMINISTRATION.					
	Fire-alarm systems.			Police-patrol systems.		
	1912	1907	1902	1912	1907	1902
Total number	1,149	979	764	319	226	148
Administrative bodies not specified	126	215	341	22	31	49
Boards consisting of:						
Aldermen and police and fire commissioners	14	14	1	1	.....	.....
Assessors	.....	1	2	.....	.....	.....
Commissioners of public utilities	6	12	10	.....	2	.....
Fire commissioners (or commissioner)	76	65	62	2	.....	.....
Fire engineers	58	62	67	1	.....	.....
Police commissioners (or commissioner)	5	2	.....	42	27	27
Police and fire commissioners	19	10	.....	14	11	6
Public safety (or director or commissioner of)	125	65	36	52	24	14
Public works (or commissioner of)	20	23	6	.....	5	4
Selectmen and board of engineers	13	12	1	2	.....	.....
Trustees	55	.....	.....	8	.....	1
Trustees elected by voluntary firemen	2	3	2	.....	.....	.....
Chief of fire department and city electrician	2	16	2	.....	.....	.....
City council and chief of fire department	18	11	4	.....	.....	.....
City council and fire marshal	.....	3	5	.....	.....	.....
City council and superintendents of fire and police departments	6	5	1	3	.....	.....
Committee elected by citizens at town meetings	.....	5	2	.....	.....	.....
Department of:						
Electricity (or city electrician)	58	44	21	36	26	7
Fire and police-patrol telegraph	5	4	1	1	11	2
Police and public (or city) property	.....	3	1	.....	1	1
Wire inspection	9	7	2	10	6	1
Fire and police board	4	8	1	2	2	.....
Fire and water committee of the sanitary improvement commission	19	15	1	1	.....	.....
Fire commissioner and city council	38	17	.....	.....	3	1
Fire department (chief, director, or committee of)	358	251	141	15	4	.....
Fire marshal	.....	2	2	.....	.....	.....
Joint board of fire wardens and selectmen	.....	5	1	.....	.....	.....
Mayor	3	2	.....	3	1	1
Mayor and board of police commissioners	.....	3	.....	3	6	1
Mayor and chief of police	.....	1	.....	.....	1	1
Mayor and city council	24	9	20	6	4	3
Mayor and city marshal	.....	1	.....	.....	1	1
Mayor, city council, and fire department	10	8	1	.....	.....	.....
Ordinance Department of United States Army	.....	.....	1	.....	.....	.....
Park commission	.....	.....	.....	2	2	.....
Police and fire commissions	5	12	12	2	.....	.....
Police and fire departments	5	8	1	1	5	.....
Police department (or police)	12	2	.....	61	40	24
Special committee by vote of town	.....	2	.....	.....	1	1
Superintendent of fire-alarm and police-patrol telegraph	20	12	4	9	3	.....
Superintendent of police and board of public safety	2	6	.....	.....	3	1
Water department	2	3	1	.....	.....	.....
Water and light department	23	8	1	7	2	.....
Not specified	7	22	10	13	4	2

Fire-alarm and police-patrol systems in municipalities: 1912.—Table 3 shows, by cities and towns (1,160 in number), the number of systems, miles of wire, number of signaling boxes or stations, number of transmitters, and number of receiving registers of all kinds reported for the operation of fire-alarm and police-patrol signaling systems during 1912.

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912.

Table 3

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
UNITED STATES	71	1,078	248	90,284	81,282	73,393	7,889	369	420	4,953
GEOGRAPHIC DIVISIONS:										
New England	9	266	65	13,207	14,839	13,993	846	86	130	830
Middle Atlantic	19	264	70	21,089	23,814	21,808	2,006	92	104	1,274
East North Central	23	223	51	29,932	19,975	17,334	2,641	81	73	1,390
West North Central	6	61	14	6,090	5,414	4,440	974	14	22	289
South Atlantic	3	76	17	8,907	5,773	5,369	404	29	34	312
East South Central	3	37	7	1,345	2,136	2,011	125	15	8	165
West South Central	3	29	4	2,041	2,358	2,127	231	14	11	159
Mountain		49	6	1,239	1,670	1,636	34	9	12	127
Pacific	5	73	14	6,434	5,303	4,675	628	29	26	407
ALABAMA	1	5	2	211	427	415	12	3	4	32
Anniston		1		9	32	32		1		3
Birmingham		1		37	112	112			1	12
Mobile		1	1	83	124	124		1		2
Montgomery		1	1	52	97	97		1	1	10
Selma	1			25	50	40	10		1	4
Sheffield		1		5	12	10	2		1	1
ARIZONA		5		38	99	99		1	1	8
Douglas		1		8	20	20			1	2
Globe		1		6	21	21				1
Phoenix		1		8	16	16		1		3
Prescott		1		5	20	20				1
Tucson		1		11	22	22				1
ARKANSAS	1	2		61	72	62	10		1	11
Fort Smith	1			24	10		10			1
Hot Springs		1		10	23	23				3
Little Rock		1		27	39	39			1	7
CALIFORNIA	4	53	8	4,994	3,486	3,080	406	21	17	274
Alameda	1			70	61	48	13		1	2
Alhambra		1		11	18	18				1
Arcata		1		3	7	7				1
Bakersfield	1			14	41	15	26			6
Berkeley		1	1	76	110	106	4		2	9
Chico		1		12	29	29			1	4
Coalinga		1		12	17	17		1		1
Coronado		1		8	23	15	8	1	1	2
Crockett		1		3	48	48			1	7
Eureka		1		21	45	36	9			7
Fresno		1		25	25	25		1		1
Grass Valley		1		5	13	13				1
Hanford		1		10	19	19				1
Long Beach		1		15	27	27				4
Los Angeles		1	1	2,094	625	625		1	2	60
Los Gatos		1		4	10	10			1	2
Marysville		1		6	19	19		1		1
Modesto		1		12	28	21	7			7
Monterey		1		8	14	14		1		2
Napa		1		14	23	23		1		2
National City		1		1	2	2		1		1
Nevada City		1		2	13	13				2
Oakland	1			1,164	418	231	187	2		49
Ocean Park		1	1	13	35	35		1		3
Oroville		1		7	25	25				1
Palo Alto		1		9	15	15		1		2
Pasadena		1	1	55	94	53	41			6
Petaluma		1		8	16	16		1		1
Piedmont	1			50	15	15				2
Pomona		1		1	2	2				1
Red Bluff		1		8	20	16	4		1	1
Redding		1		4	10	10				2
Redwood City		1		11	21	21				3
Riverside		1		8	28	28				2
Ross		1		5	18	18			1	1
Sacramento		1	1	148	178	178			1	9
Salinas		1		5	15	15				1
San Anselmo		1		5	10	10			1	1
San Bernardino		1		10	18	18				1
San Diego		1	1	160	201	201		1	2	18
San Francisco		1	1	737	676	676				17
San Jose		1	1	40	98	76	22	1		2
San Luis Obispo		1		5	17	15	2			1
San Rafael		1		7	28	26	2			1
Santa Ana		1		13	26	26			2	2

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
CALIFORNIA—Continued.										
Santa Barbara		1		9	8	8				1
Santa Clara		1		6	18	18		1		2
Santa Cruz		1		7	12	12				1
Santa Rosa		1		11	26	26		1		1
Sebastopol		1		2	7	7				1
Stockton		1		18	124	43	81	1		5
Tulare		1		3	7	7				1
Vallejo		1		14	24	24				6
Visalia		1		6	17	17		1		1
Whittier		1		6	7	7				1
Willows		1		6	25	25		1		2
Woodland		1		7	10	10		1		1
COLORADO		16	3	660	712	695	17	1	4	48
Boulder		1		6	17	14	3			6
Canon City		1		30	14	14				3
Colorado City		1		7	21	21				1
Colorado Springs		1	1	56	75	61	14		1	2
Cripple Creek		1		15	27	27				2
Denver		1	1	318	328	328			1	19
Durango		1		4	12	12				1
Englewood		1		18	14	14			1	1
Fort Collins		1		15	23	23				1
Greeley		1		10	18	18			1	2
Idaho Springs		1		5	13	13				2
Leadville		1		6	14	14				1
Pueblo		1	1	156	102	102				2
Salida		1		4	10	10				3
Trinidad		1		4	12	12		1		1
Victor		1		6	12	12				1
CONNECTICUT	2	34	8	1,575	2,079	1,907	172	10	20	137
Ansonia		1		20	40	40				1
Bridgeport		1	1	211	288	233	55	1	3	13
Danbury		1		25	51	51			1	4
Danielson		1		11	12	12				1
Derby	1			15	43	39	4			4
East Hartford		1		3	46	43	3	1		2
Enfield		1		18	24	24		2		1
Greenwich		1	1	31	46	16	30			2
Hartford		1	1	181	224	224			1	16
Meriden		1	1	32	106	81	25	1	2	5
Middletown		1		12	28	28				5
Naugatuck		1		16	34	34				1
New Britain		1	1	58	90	90			1	9
New Haven		1	1	421	319	304	15	2	2	18
New London		1	1	42	46	46		1	1	3
Norwalk		1		11	23	23				1
Norwich		1	1	40	66	66			2	2
Pawcatuck		1		5	9	9				1
Putnam		1		26	18	15	3			1
Rockville		1		15	24	24			1	4
Seymour		1		20	20	20				1
Shelton		1		12	18	18				1
Sound Beach		1		6	12	12				2
Southington		1		12	18	18				1
South Manchester		1		20	28	28			1	1
South Norwalk	1			13	41	38	3			4
Stamford		1		25	54	49	5	1	1	3
Stonington		1		4	9	9				1
Thompsonville		1		14	25	25			1	1
Torrington		1		20	49	42	7			4
Wallingford		1		6	24	24		1		3
Waterbury		1		160	140	129	11		2	13
West Haven		1		18	37	31	6		1	1
Willimantic		1		18	28	28				4
Windsor Locks		1		4	7	7				1
Winsted		1		30	32	27	5			2
DELAWARE	1			225	150	150			1	3
Wilmington	1			225	150	150			1	2
DISTRICT OF COLUMBIA	1			4,888	919	842	77	2	2	75
Washington	1			4,888	919	842	77	2	2	75

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
FLORIDA		10	3	279	410	387	23	2	3	23
Fernandina		1		7	11	11				1
Gainesville		1		12	20	20				1
Jacksonville		1	1	128	140	140			1	2
Key West		1		14	38	38			1	4
Miami		1		14	26	26		1		4
Pensacola		1	1	32	68	45	23	1	1	2
Quincy		1		3	8	8				1
St. Augustine		1		9	23	23				1
Tallahassee		1		10	8	8				1
Tampa		1	1	50	68	68				6
GEORGIA		17	3	572	932	857	75	6	9	51
Albany		1		10	26	26		1		2
Athens		1		18	37	37				2
Atlanta		1	1	233	257	185	72	1	1	14
Augusta		1		82	129	129			1	1
Brunswick		1		15	25	25		1		1
Carrollton		1		8	10	10			1	4
Columbus		1		22	32	32				5
Dublin		1		9	21	21				1
Elberton		1		2	5	5				1
Griffin		1		5	16	16			1	1
Hawkinsville		1		1	3	3				1
Macon		1	1	28	126	126		1	1	7
Newnan		1		10	14	14			1	1
Quitman		1		6	12	12			1	1
Rome		1		18	47	47		1	1	6
Savannah		1	1	98	155	154	1	1	1	2
Valdosta		1		7	17	15	2			1
IDAHO		7		137	217	217				15
Boise		1		71	60	60				1
Coeur d'Alene		1		12	25	25				1
Lewiston		1		4	27	27				1
Nampa		1		20	25	25				6
Pocatello		1		14	33	33				2
Sandpoint		1		11	27	27				3
Wallace		1		5	20	20				1
ILLINOIS	13	39	10	6,397	5,663	4,139	1,524	12	9	353
Alton		1		8	14	14				3
Aurora		1	1	76	206	120	86	1	1	10
Belleville	1			20	22	22		1		2
Berwyn		1		5	25	25				1
Bloomington		1		20	52	52			1	5
Blue Island		1	1	10	42	17	25			2
Chicago	1			4,929	3,226	1,979	1,247			177
Chicago Heights	1			39	65	44	21			2
Cicero	1			40	110	110				2
Danville		1		35	66	66				1
Decatur		1		26	72	72				5
Dekalb		1	1	15	42	34	8			3
Dundee		1		6	10	10				2
East St. Louis		1		59	100	100			1	7
Elgin		1	1	55	117	102	15	3	1	13
Evanston		1	1	47	68	68			1	4
Forest Park	1			12	27	27				4
Freeport		1		10	24	24				3
Granite	1			8	15	15				1
Harvey		1		25	24	24				3
Highland Park		1		7	3	3				1
Jacksonville	1			32	35	35				2
Joliet	1			98	147	110	37			17
Kankakee	1			16	46	32	14	1		1
La Grange		1		7	3	3				1
La Salle	1			13	60	60				3
Macomb		1		12	30	30				8
Marengo		1		3	5	5				1
Mendota		1		5	23	23				4
Moline		1		69	82	82		1		10
Monmouth		1		5	15	15				2
Morris		1		2	16	16				1
Mount Pulaski		1		5	8	5	3			1
Mount Vernon		1		6	9	9				1
Oak Park		1	1	22	25	14	11			3
Ottawa		1	1	29	27	27				2
Pana		1		8	19	19				1
Pekin		1		12	19	19		1		4
Peoria		1	1	272	167	167		1	1	3
Peru	1			17	76	76				2

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITIY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
ILLINOIS—Continued.										
Pontiac		1		10	24	24				1
Portland	1			2	10	10				1
Rock Falls		1		3	20	20			1	2
Rockford		1	1	95	100	84	16	1	1	2
Rock Island	1			58	90	55	35			6
Springfield		1		77	111	111				4
Sterling		1		7	19	19				1
Streator		1	1	20	42	42		1		5
Sycamore		1		14	23	23		1		3
Waukegan		1		20	50	50				5
Western Springs		1		3	12	6	6		1	1
Woodstock		1		3	20	20				4
INDIANA		42	8	1,823	2,227	2,108	119	10	11	199
Albion		1		5	12	12				2
Alexandria		1		5	8	8		1		4
Anderson		1		46	95	91	4	1		1
Auburn		1		8	9	9				1
Brazil		1		11	18	18				1
Columbus		1		15	28	28				3
Connersville		1		15	32	32			1	4
Crawfordsville		1		7	18	18			2	2
Elkhart		1		20	43	43				4
Elwood		1		5	19	19			1	1
Evansville		1		38	83	83				12
Fort Wayne		1	1	149	143	143			1	15
Gary		1	1	46	70	36	34			9
Gas City		1		8	18	18				2
Goshen		1	1	24	41	41				11
Greencastle		1		3	16	16				1
Hammond		1		28	41	41				7
Huntington		1		12	33	23	10			1
Indianapolis		1	1	800	362	362		1	1	37
Kokomo		1		35	48	27	21	1		5
Lafayette		1		35	45	45			1	7
Laporte		1	1	20	45	30	15		1	3
Logansport		1		35	64	64			1	4
Madison		1		9	19	19				8
Marion		1		30	59	45	14		1	6
Michigan City		1	1	34	47	36	11	1		7
Mishawaka		1	1	24	39	29	10	1		6
Muncie		1		20	51	51		1		4
New Albany		1		21	38	38				1
New Castle		1		11	100	100				1
Noblesville		1		7	8	8				1
Peru		1		9	23	23				1
Plymouth		1		6	22	22				1
Princeton		1		6	16	16		1		1
Richmond		1		26	62	62				1
Rushville		1		15	21	21		1		3
Shelbyville		1		20	36	36				3
South Bend		1	1	105	200	200				10
Terre Haute		1		69	107	107			1	1
Vincennes		1		20	41	41				4
Wabash		1		11	21	21		1		1
Washington		1		10	26	26				2
IOWA		19	2	521	692	654	38	6	8	54
Burlington		1		17	50	43	7			2
Cedar Rapids		1		50	52	52		1	1	6
Clinton		1		25	70	70			1	1
Council Bluffs		1	1	70	47	47		1		6
Davenport		1		80	87	80	7		1	1
Des Moines		1		107	85	85			1	5
Dubuque		1		35	57	57		1		3
Estherville		1		5	15	15				1
Fort Dodge		1		8	13	13			1	4
Iowa City		1		10	15	15			2	6
Keokuk		1		8	3	3				1
Le Mars		1		10	18	12	6			2
Marshalltown		1		12	38	23	15	1		2
Mason City		1		5	6	6		1		1
Missouri Valley		1		5	14	14				1
Ottumwa		1		10	19	19				3
Sioux City		1	1	43	62	59	3		1	4
Waterloo		1		16	31	31		1		4
Webster City		1		5	10	10				1

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
KANSAS		6		113	144	122	22	1	1	9
Arkansas City		1		50	22		22			1
Fort Scott		1		10	15	15		1		1
Ottawa		1		5	10	10			1	3
Parsons		1		10	24	24				2
Pittsburg		1		4	6	6				1
Topeka		1		34	67	67				1
KENTUCKY	1	17	4	667	976	929	47	4	1	72
Ashland		1		2	5	2	3	1		2
Bellevue	1			5	14	14				1
Bowling Green		1		4	17	17				2
Covington		1	1	88	147	147				11
Dayton		1		16	12	12				1
Frankfort		1		7	22	22				1
Georgetown		1		4	10	10				1
Henderson		1	1	19	36	36				3
Lexington		1	1	68	101	62	39		1	6
Louisville		1		368	396	396		1		27
Ludlow		1		4	15	15				1
Maysville		1		6	21	21		1		2
Newport		1	1	23	60	60				1
Owensboro		1		10	40	40		1		4
Paducah		1		26	43	38	5			6
Paris		1		8	20	20				1
Shelbyville		1		4	8	8				1
Winchester		1		5	9	9				1
LOUISIANA		7		1,010	509	497	12	7	3	19
Alexandria		1		8	22	18	4	1	1	4
Baton Rouge		1		15	24	24				5
Donaldsonville		1		3	12	12				1
Hammond		1		4	22	14	8	1		1
Lake Charles		1		16	36	36		1	1	2
New Orleans		1		930	325	325		2	1	1
Shreveport		1		34	68	68		2		5
MAINE	1	43	6	739	1,035	981	54	4	7	78
Auburn		1		26	32	32				1
Augusta		1		20	38	38				1
Bangor		1	1	78	97	80	17		5	9
Bar Harbor		1		6	11	11		1		3
Bath		1		12	25	25				3
Belfast	1			18	20	20				1
Biddeford		1	1	35	48	29	19			3
Boothbay Harbor		1		8	7	7				1
Brewer		1		7	17	17				1
Bridgton		1		2	4	4				1
Brunswick		1		10	23	23				1
Calais		1		7	18	16	2			2
Dexter		1		6	10	10				1
Dover and Foxcroft		1		4	12	12				1
East Livermore		1		5	10	9	1			4
Eastport		1		5	12	12				1
Eden		1		4	14	12	2	1		2
Fairfield		1		4	11	11				1
Farmington		1		5	12	12		1		1
Houlton		1		8	18	18				1
Kennebunk		1		6	13	13				1
Kingfield		1		2	6	6				1
Lewiston		1	1	50	66	53	13			2
Livermore		1		6	9	9				1
Madison		1		1	9	9				1
Mexico		1		7	10	10				1
Millinocket		1		2	14	14				1
Norway		1		2	7	7				1
Oakland		1		11	9	9				1
Old Orchard		1		5	12	12				1
Old Town		1		14	19	19				1
Pittsfield		1		12	12	12				1
Portland		1	1	231	204	204		1	2	11
Presque Isle		1		6	6	6				1
Rockland		1		15	18	18				1
Rumford Falls		1		12	21	21				1
Saco		1		7	22	22				1
Sanford		1		15	41	41				2
Skowhegan		1		10	13	13				1
South Portland		1		8	12	12				1
Waterville		1	1	17	42	42				3
Westbrook		1	1	18	15	15				2
Winthrop		1		2	5	5				1
Yarmouth		1		10	11	11				1

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
MARYLAND		4	1	1,298	1,131	1,118	13	3		20
Baltimore		1	1	1,024	980	980		3		14
Cumberland		1		8	21	21				4
Govans		1		260	110	97	13			1
Hagerstown		1		6	20	20				1
MASSACHUSETTS	6	125	39	8,915	9,086	8,673	413	61	81	461
Abington		1		17	21	21				1
Adams		1	1	28	36	32	4			2
Amesbury		1	1	13	38	30	8			2
Amherst		1		13	19	19				1
Andover		1		35	38	36	2		1	2
Arlington		1	1	34	52	52		1	1	4
Athol		1	1	20	45	43	2			3
Attleborough		1		77	73	73			1	1
Avon		1		4	11	6	5			1
Ayer		1		6	19	19				1
Belmont		1		18	45	45		1		3
Beverly		1	1	121	89	89			1	7
Boston[1]		1	3	2,565	1,448	1,431	17	20	19	34
Braintree		1		28	29	29				1
Bridgewater		1		11	25	25				1
Brockton		1	1	130	156	156		1	1	12
Brookline		1	1	75	119	119			1	2
Cambridge		1	1	191	270	270		2		5
Canton		1		60	32	32				1
Chelsea		1	1	53	106	82	24	2	1	8
Chicopee		1		35	63	63				4
Clinton		1	1	57	38	25	13	1		2
Cohasset	1			27	33	33				2
Concord		1		35	19	19			1	2
Danvers		1		47	27	27		1		4
Dedham		1		32	45	45			3	6
Easthampton		1		16	20	20				1
Everett		1	1	60	90	90			1	4
Fairhaven		1		25	23	22	1			9
Fall River		1	1	235	334	298	36	1	2	9
Falmouth		1		3	3	3				1
Fitchburg		1	1	63	102	102			1	8
Foxborough		1		26	26	25	1			1
Franklin		1		7	14	14		1		1
Gardner		1		36	49	49			1	4
Gloucester		1	1	85	83	74	9	1	1	2
Great Barrington		1		7	13	10	3			1
Greenfield		1		21	44	44				1
Haverhill		1	1	82	99	99				9
Hingham		1		55	41	38	3			3
Holbrook		1		13	18	18				7
Holyoke	1			96	33	33				10
Hopedale		1		16	15	15				1
Hopkinton		1		2	5	5				1
Hudson		1		18	24	24			1	3
Ipswich		1		20	17	17				2
Lawrence		1	1	115	165	165		1	2	4
Leominster		1		35	37	37				3
Lexington		1		30	44	44		1		2
Lowell		1	1	221	236	214	22	1	1	21
Ludlow		1		8	23	23			1	1
Lynn		1	1	230	221	221		1	2	6
Malden		1	1	126	148	141	7		1	7
Manchester		1	1	15	20	20				3
Mansfield		1	1	32	29	29				2
Marblehead		1		24	42	42				3
Marion		1		12	14	14				1
Marlborough		1		23	44	42	2	1	3	4
Maynard		1		4	14	14				1
Medford		1	1	63	76	76				2
Melrose		1	1	75	72	72				4
Merrimac		1		7	16	16				1
Methuen		1		65	46	46			1	2
Middleborough		1		15	31	31		1		2
Milford		1		25	31	27	4		3	4
Millbury		1		28	20	20				2
Milton		1	1	99	86	86		1		2
Monson		1		6	16	16				1

[1] Includes figures for the Blue Hills and Revere Beach Divisions of the Metropolitan Park Commission.

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
MASSACHUSETTS—Continued.										
Nahant		1		9	22	19	3			1
Nantasket Beach		1	1	36	19		19			2
Nantucket		1		17	25	25		1		2
Natick		1		35	35	35		1	5	4
Needham		1		42	34	34				1
New Bedford		1	1	188	299	228	71		5	10
Newburyport		1		35	43	43		1	1	6
Newton		1	1	151	226	206	20	2	1	4
North Adams		1	1	30	61	61				8
North Andover		1		25	31	31				2
North Attleborough		1		35	49	44	5		1	1
North Brookfield		1		3	1	1				1
North Easton		1	1	15	35	35				2
Northampton		1		29	56	55	1	1		2
Northbridge		1		10	25	25				1
Norwood		1		27	38	32	6	1		1
Orange		1		15	22	22		1		1
Palmer		1		22	26	26				1
Peabody		1		30	63	63				5
Pepperell		1		10	12	12				1
Pittsfield	1			60	80	80		1		1
Plymouth		1		24	34	34				4
Quincy		1	1	138	161	161			1	3
Randolph		1		15	22	22				1
Reading		1		40	45	45				1
Revere	1			92	74	57	17		1	4
Rockland		1		45	30	30				1
Rockport		1		7	25	15	10		2	1
Salem	1			132	120	96	24	1		2
Saugus		1		45	30	30				2
Sharon		1		7	13	13				1
Shelburne		1		2	7	7				1
Somerville		1	1	138	177	177			1	11
Southbridge		1		11	25	25			1	2
South Framingham	1			40	67	51	16		1	3
South Hadley		1		6	14	14				1
Springfield		1	1	293	262	262		1	1	25
Stoneham		1		22	30	30				1
Stoughton		1		18	19	19				1
Swampscott		1		14	30	30		1		5
Taunton		1		94	131	131			2	1
Three Rivers		1		6	17	17				1
Turners Falls		1		15	17	17				1
Wakefield		1		37	46	46			1	3
Walpole		1		29	47	47		1		2
Waltham		1	1	126	124	119	5	5	1	2
Ware		1		8	23	21	2			1
Warren		1		6	13	13				1
Watertown		1	1	79	56	56				2
Webster		1		10	28	28				1
Wellesley		1	1	47	56	56		1	1	2
West Springfield		1		24	36	36				2
Westborough		1		9	16	13	3			1
Westfield		1		30	49	38	11	1	3	2
Weston		1		30	22	20	2			1
Weymouth		1		53	49	49				1
Whitman		1		20	38	33	5			3
Williamstown		1		10	19	18	1			1
Winchendon		1		20	22	22				1
Winchester		1		15	40	40		1		2
Winthrop		1		16	48	48			1	2
Woburn		1		60	62	56	6			7
Worcester		1	1	382	360	337	23	1		26
MICHIGAN	3	58	8	10,904	3,820	3,755	65	22	17	278
Adrian		1		13	27	27		1		2
Allegan		1		2	2	2				1
Battle Creek		1	1	59	116	116		4	2	7
Bay City		1		112	135	135		2		4
Big Rapids		1		14	18	18				1
Cadillac		1	1	11	36	36			3	4
Calumet		1		15	32	32				6
Caro		1		6	13	13		1		1
Clare		1		2	10	10				1
Detroit		1	1	9,616	1,579	1,579		6	1	103
Dowagiac		1		7	26	26				2
Escanaba		1		8	30	30				4
Essexville		1		4	7	7				2
Evart		1		2	10	10				1
Flint		1	1	44	92	77	15	1	1	5

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
MICHIGAN—Continued.										
Flushing		1		5	7	7				1
Gaylord		1		4	10		10			1
Gladstone		1		7	17	17		1		1
Grand Haven		1		6	21	21				3
Grand Rapids		1	1	251	286	286		1	2	16
Hamtramck		1	1	25	20	20				2
Hancock		1		5	22	22				1
Harbor Beach		1		4	12	12				1
Harbor Springs		1		5	9	9				1
Harrison		1		2	4	4				2
Hastings		1		4	16	16				2
Highland Park		1		11	22	22				1
Holland		1		10	37	37				3
Houghton		1		16	23	23				1
Ionia		1		6	24	24				1
Iron River		1		5	14	14				2
Iron Mountain	1			16	50	40	10			3
Ironwood		1		8	39	39				4
Ishpeming		1		23	35	35				1
Jackson		1		35	113	113			1	7
Kalamazoo		1		45	60	48	12	1		6
Lansing		1	1	100	94	94			1	7
Laurium		1		5	7	7				1
Ludington		1		12	16	16			1	2
Manistee		1		20	42	42				1
Marine City		1		6	26	26				1
Marquette		1		15	23	23		1	1	1
Marshall		1		4	9	9				1
Menominee		1		16	66	66				5
Mount Clemens	1			16	42	36	6		1	2
Mount Pleasant		1		5	9	9			1	1
Munising		1		7	26	26				1
Muskegon		1		30	58	46	12		1	6
Negaunee		1		5	10	10				1
Norway		1		7	25	25				1
Otsego		1		3	14	14				5
Owosso		1		10	29	29				2
Petoskey		1		12	16	16		1		2
Pontiac		1		26	86	86		1		5
Port Huron	1			46	15	15			1	6
River Rouge		1	1	30	26	26				2
Saginaw		1		48	100	100		1		12
St. Clair		1		7	14	14				2
Sault Ste. Marie		1		38	33	33				1
Traverse City		1		18	44	44				5
Wyandotte		1		10	16	16				1
MINNESOTA	4	22	4	2,278	1,764	1,535	229	5	10	110
Anoka		1		12	20	18	2	1		1
Austin		1		11	17	17				3
Biwabik		1		2	10	10				2
Chisholm		1		7	33	33				1
Cloquet	1			15	75	75				1
Crookston		1		10	5	5				2
Duluth		1	1	162	193	193			1	9
Ely		1		6	17	17				1
Eveleth		1		9	31	31				2
Farmington		1		3	18	18				1
Hibbing		1		13	44	44				6
Mankato		1		12	19	19			1	2
Minneapolis		1	1	811	575	547	28	1		37
Moorhead		1		6	15	15				1
New Ulm		1		10	25	25				1
Owatonna		1		14	16	16				2
Red Wing		1		13	36	32	4	1		1
Rochester		1		20	20	20			1	1
St. Cloud		1	1	18	22	22				2
St. Paul		1	1	1,020	427	245	182	1	1	20
South St. Paul	1			12	9	9				1
Spring Valley		1		3	10	10				1
Stillwater		1		8	29	29				2
Two Harbors		1		16	13	13				1
Virginia	1			15	20	17	3	1		1
Winona	1			50	65	55	10		6	8

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
MISSISSIPPI		9		126	196	177	19	5	2	34
Biloxi		1		12	5	5		1		1
Columbus		1		3	2	2				1
Greenville		1		11	22	22		1		10
Gulfport		1		5	15	15		1		1
Hattiesburg		1		11	19	19				1
Jackson		1		53	32	32			1	4
Meridian		1		12	33	33		1		5
Vicksburg		1		10	48	29	19	1		7
Yazoo City		1		9	20	20			1	4
MISSOURI	2	6	2	2,462	2,419	1,822	597	2	1	91
Bonne Terre		1		8	5	5				1
Cape Girardeau		1		2	27	15	12			2
Fulton		1		2	5	3	2			2
Joplin	1			19	58	46	12		1	5
Kansas City			1	150	178	178				10
St. Charles		1		6	14	14				7
St. Joseph	1			107	63	63				4
St. Louis		1	1	2,139	2,004	1,433	571	2		58
Springfield		1		29	65	65				2
MONTANA		9	1	161	254	250	4	3	1	22
Anaconda		1		9	33	33				4
Billings		1		2	15	11	4			2
Bozeman		1		10	20	20				1
Butte		1	1	53	82	82		1	1	4
Great Falls		1		23	17	17				3
Helena		1		25	36	36				3
Lewistown		1		8	7	7		1		1
Miles City		1		10	25	25				1
Missoula		1		21	19	19		1		3
NEBRASKA		3	3	661	273	192	81		2	16
Lincoln		1	1	40	74	69	5		1	10
Omaha		1	1	602	176	110	66		1	4
South Omaha		1	1	19	23	13	10			2
NEVADA		2	1	55	87	74	13		1	5
Goldfield		1		7	27	27				2
Reno		1	1	48	60	47	13		1	3
NEW HAMPSHIRE		31	4	484	828	814	14	5	13	72
Allenstown		1		2	4	4				1
Ashland		1		4	14	14				1
Berlin		1	1	9	38	33	5			4
Bristol		1		8	8	8				2
Claremont		1		14	33	33				2
Concord		1	1	68	90	88	2		1	9
Derry		1		4	16	16				1
Dover		1		20	40	40				5
Exeter		1		25	24	24				1
Franklin		1		14	20	20				1
Goffstown		1		5	7	7				1
Greenville		1		1	1	1				1
Hanover		1		4	10	10				1
Hillsboro		1		3	10	10				2
Keene		1		28	41	38	3	1	1	3
Laconia		1		12	39	39			2	2
Lancaster		1		6	14	14				2
Lebanon		1		9	13	13				3
Littleton		1		4	27	27				1
Manchester		1	1	110	136	136		1	3	3
Milford		1		15	19	19			1	1
Nashua		1	1	50	77	77			1	6
Newmarket		1		10	12	12		1		4
Newport		1		4	13	13				1
Pembroke		1		2	5	5				1
Plymouth		1		5	11	11				1
Portsmouth		1		25	44	40	4	1	3	4
Rochester		1		7	17	17				3
Somersworth		1		6	25	25				3
Sunapee		1		4	7	7				1
Tilton		1		6	13	13		1	1	1

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
NEW JERSEY	5	67	25	3,655	4,400	3,844	556	18	34	324
Asbury Park		1	1	44	46	46		1		10
Atlantic City		1	1	178	113	113			1	19
Bayonne		1	1	90	106	106			1	2
Belleville		1		14	20	20			1	3
Belmar		1		5	10	10				1
Bloomfield		1		46	43	43		1	1	7
Boundbrook		1		5	10	10				3
Bradley Beach		1		5	16	16			1	1
Bridgeton		1		25	25	25			1	1
Burlington		1		8	22	22				4
Camden	1			250	218	218		2	1	14
Cape May		1		16	18	18				2
Cranford		1	1	12	21	12	9			2
Dover		1		10	22	22				2
East Newark		1		2	4	4				1
East Orange		1	1	88	109	102	7	1	1	2
East Rutherford		1		7	16	16			1	4
Edgewater		1		11	16	16				1
Elizabeth		1	1	71	115	115			1	2
Englewood		1		22	20	20				3
Flemington		1		4	20	20				1
Glen Ridge		1		4	14	14		1		2
Gloucester		1		8	12	12				1
Hackensack		1	1	24	47	41	6		1	2
Haddonfield	1			12	16		16			1
Haledon		1		4	12	12				1
Harrison		1		8	33	33				3
Hoboken		1	1	28	83	83			1	7
Irvington		1		24	40	40				3
Jersey City		1	1	301	402	374	28		1	8
Kearny		1	1	42	56	33	23	1	1	6
Lakewood		1		21	19	19		1		2
Long Branch		1		18	40	40				9
Milburn		1		10	27	27			1	1
Montclair		1	1	133	110	82	28	1		8
Moorestown		1	1	27	29	19	10		1	2
Morristown		1		14	23	23		1		6
New Brunswick		1		25	50	50			1	16
Newark		1	1	816	971	735	236	1	7	13
Newton		1		12	21	21				1
North Plainfield		1		8	15	15				1
Nutley		1		22	26	26				3
Ocean City		1		5	21	21				1
Ocean Grove		1		5	14	14				1
Orange		1		19	36	36				4
Passaic		1	1	119	114	96	18		1	3
Paterson		1	1	161	258	258			2	6
Perth Amboy		1	1	42	55	55		1	2	16
Phillipsburg		1		14	24	24				6
Plainfield		1	1	41	72	72			1	6
Princeton		1		81	21	21		1		3
Rahway		1		10	11	11				1
Raritan		1		2	6	6				2
Red Bank		1		11	22	22				3
Ridgewood		1	1	26	39	31	8			4
Roselle	1			16	12		12	1		1
Roselle Park			1	30	19		19			1
Rutherford		1	1	40	37	37			1	4
Somerville		1		7	17	17				4
South Amboy		1		20	9	9			1	1
South Orange		1	1	27	18	2	16			2
South River		1		7	14	14				1
Summit	1			15	31	24	7	1		2
Trenton	1			346	240	188	52	1	1	49
Union		1		5	20	20				1
Vineland		1		19	28	28				1
Weehawken		1	1	20	37	21	16			2
West Hoboken		1	1	17	48	28	20			4
West New York		1		10	27	17	10		1	7
West Orange		1		32	30	30		1		1
Westfield		1	1	12	34	29	5			2
Wildwood		1	1	11	25	15	10	1		2
Woodbury		1		11	25	25				2
NEW MEXICO		1		11	42	42				7
Albuquerque		1		11	42	42				7

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
NEW YORK	6	97	28	11,169	11,434	10,300	1,134	44	41	482
Albany		1	1	205	257	257		1		3
Amsterdam		1		22	56	56			1	6
Auburn		1		25	67	67			1	1
Batavia		1		19	33	33		1		7
Binghamton		1		69	114	114			1	9
Buffalo		1	1	1,181	997	974	23	2	1	117
Canajoharie		1		4	13	13				4
Canandaigua		1		9	27	27				4
Carthage		1		7	18	18				1
Catskill		1		10	24	24				1
Cazenovia		1		2	8	3	5			1
Cohoes		1	1	40	69	69		1	2	3
Corning		1		14	30	30		1	1	1
Cortland		1		20	42	42				3
Coxsackie		1		10	11	11			1	1
Depew		1		14	16	16				5
Dobbs Ferry		1		7	16	11	5			4
Dolgeville		1		8	16	16				1
Dunkirk			1	25	24	24				1
East Chester		1		75	49	49			1	8
Elmira		1	1	73	105	105			1	3
Fort Plain		1		5	4	4				1
Fredonia		1		5	6	6		1		1
Freeport			1	14	12		12			3
Fulton		1		15	20	20			1	1
Geneva		1		17	46	46				4
Glens Falls		1		14	32	32			1	1
Gloversville		1		17	48	48			1	4
Gouverneur		1		4	15	15				2
Gowanda		1		4	14	14				1
Granville		1		20	17	17			1	1
Hancock		1		4	11	11			1	1
Haverstraw		1		10	12	12			1	1
Hempstead		1		7	16	16				3
Herkimer		1		7	15	15				1
Hillburn		1		2	8	8				1
Hornell		1		22	27	27		1		1
Hudson		1	1	20	42	42				2
Ilion		1		8	28	28				1
Ithaca		1		20	33	33		1		2
Jamestown		1	1	40	84	84		1		9
Johnstown		1		18	32	32				3
Kingston		1		18	67	67			1	4
Lackawanna		1		18	31	31		1		4
Lancaster		1		7	12	12				2
Larchmont			1	11	12		12			1
Leroy		1	1	14	16	16		2		2
Lestershire		1		6	20	17	3			1
Little Falls		1		9	29	29			1	3
Lockport	1			26	60	49	11		1	1
Malone		1		16	30	30				2
Mamaroneck	1			10	20	12	8	1		1
Mechanicsville		1		12	17	17			1	1
Medina		1		9	14	14		1		1
Middleport	1			1	6	6			1	2
Middletown		1		35	52	52			1	8
Mount Vernon		1	1	131	74	49	25	1		10
New Rochelle		1	1	100	86	68	18	1		2
New York City		1	1	5,421	5,692	4,852	840	5	8	35
Newark		1		10	19	14	5			2
Newburgh		1		33	40	40				1
Niagara Falls		1	1	125	130	130		2		8
North Tarrytown		1	1	20	40		40			2
North Tonawanda			1	25	19		19			1
Norwich		1		7	18	18				2
Ogdensburg		1		20	38	38				4
Olean		1		18	45	45				7
Oneida		1		11	18	18				1
Oneonta		1		22	27	27				1
Oswego		1		29	55	51	4		1	1
Owego			1	1	3	3				1
Patchogue		1		5	6	6				1
Peekskill		1		6	26	26				1
Pelham		1		14	13	13			1	2
Plattsburg		1		10	18	18				1
Port Chester		1	1	28	37	25	12			7
Potsdam		1		4	10	10				1
Poughkeepsie	1			92	60	55	5			4
Red Hook		1		2	7	7				1
Rensselaer		1		10	19	19			1	1

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
NEW YORK—Continued.										
Rhinebeck		1		5	10	10				1
Richfield Springs	1			16	16	16				1
Rochester		1	1	824	439	429	10	6	1	7
Rome		1	1	37	60	60				3
Rye	1			13	56	43	13			2
St. Johnsville		1		3	12	12				1
Salamanca		1		10	22	22				1
Saranac Lake		1		5	15	15		1		1
Saratoga Springs		1		27	43	43		1	1	1
Schenectady		1	1	74	126	126		1	1	21
Seneca Falls		1		8	23	15	8	1		1
Solvay		1		7	15	15				1
Southampton		1		5	5	2	3			1
Suffern		1		3	10	10				1
Syracuse		1	1	438	263	263		1		5
Tarrytown		1	1	28	22	22			1	5
Tonawanda		1	1	42	44	44				3
Troy		1		120	135	135			2	16
Tuckahoe		1		15	27	12	15	1		1
Utica		1	1	97	189	179	10		1	15
Walden		1		7	13	13				1
Warsaw		1		6	14	14		2		1
Watertown		1	1	65	113	113		2	1	10
Watervliet		1		8	27	27				5
Waverly		1		6	15	15		1		1
Wellsville		1		6	14	14		1		3
White Plains		1	1	66	63	45	18	1		2
Yonkers		1	1	780	243	233	10	1		13
NORTH CAROLINA	1	14	2	242	449	402	47	4	6	45
Asheville		1		13	43	24	19	1		5
Charlotte		1		45	52	52		1		4
Durham		1	1	23	39	33	6			4
Elizabeth City		1		10	12	12				1
Goldsboro		1		6	18	11	7	1		3
Greensboro		1		25	34	34				4
High Point		1		10	24	24			1	2
Mount Airy		1		5	10	10				1
Newbern		1		7	20	20			2	4
Raleigh	1			26	51	36	15		1	4
Rocky Mount		1		8	26	26				1
Salisbury		1		8	15	15				1
Wilmington		1	1	31	64	64			1	6
Wilson		1		5	14	14			1	1
Winston-Salem		1		20	27	27		1		4
NORTH DAKOTA		2	1	31	73	67	6			4
Fargo		1	1	21	46	40	6			3
Grand Forks		1		10	27	27				1
OHIO	5	52	18	7,979	5,489	4,991	498	28	22	361
Ada		1		6	15	15			1	1
Akron		1	1	182	197	197			1	17
Alliance		1	1	33	93	93		1		3
Barberton		1		8	50	50				2
Bellaire		1		8	25	25		1		5
Bellefontaine		1		7	18	13	5	1	1	1
Bucyrus		1		11	15	15		1		1
Canton		1	1	226	148	148			2	9
Chillicothe		1		10	40	40				3
Cincinnati		1	1	1,766	900	683	217	1		64
Circleville		1		9	25	25				1
Cleveland		1	1	2,542	895	770	125	2	5	87
Columbus		1	1	582	334	324	10	1		26
Coshocton		1		3	23	23		1		1
Dayton		1	1	262	336	336		1	1	3
Defiance		1		13	21	21				1
East Cleveland	1			36	30	30				2
East Liverpool		1	1	44	56	40	16	1		9
East Youngstown		1		5	5	5				1
Elyria	1			25	15	15			1	3
Findlay		1		28	35	35				4
Galion		1		15	24	24		1		2
Greenville		1		10	21	21		1		1
Hamilton		1		25	43	43			1	1
Hartwell	1			8	30	30			1	1
Ironton		1		30	83	83				5
Kenton		1		15	23	23			1	1
Lakewood		1		21	31	31			1	1
Lancaster		1		28	31	31				1
Lima		1		34	63	54	9		1	4

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
OHIO—Continued.										
Lorain			1	18	21	21		1		1
Mansfield		1		52	70	70			1	7
Marietta	1			8	40	24	16			3
Marion		1		28	43	43		1		7
Martins Ferry		1		14	38	30	8			2
Massillon		1	1	38	74	67	7	2		10
Middletown		1		22	42	42		1		4
Newark		1	1	72	66	29	37	2		5
New Philadelphia		1		18	21	21		1		1
Norwood		1	1	75	61	61				3
Piqua		1		18	43	43				2
Portsmouth		1		35	75	75		1		3
St. Bernard		1		18	21	21				1
Sandusky		1		40	49	49			1	5
Sidney		1		14	29	29				2
Springfield		1	1	105	197	187	10		1	2
Steubenville		1	1	40	53	53				2
Tiffin	1			40	54	54		1		3
Toledo		1	1	1,009	427	427		1		19
Troy		1		10	26	26		1		1
Van Wert		1		12	13	13		1		1
Warren		1		20	23	23		1		2
Wellsville		1	1	19	36	36				3
Wooster		1		8	16	16				1
Wyoming		1		4	36	36				1
Xenia		1		22	30	26	4			2
Youngstown		1	1	149	145	145			1	4
Zanesville		1	1	79	115	81	34	1	1	3
OKLAHOMA	1	7	1	188	264	250	14		2	22
Anadarko	1			6	14		14			1
Bartlesville		1		10	15	15				1
Enid		1		7	20	20			1	2
McAlester		1		8	16	16				2
Muskogee		1		19	49	49			1	4
Oklahoma City		1	1	92	62	62				4
Sapulpa		1		9	26	26				1
Tulsa		1		37	62	62				7
OREGON		7	1	572	502	331	171	1	3	63
Albany		1		3	12	12				2
Ashland		1		5	7	7				1
Astoria		1		10	20	20			1	2
La Grande		1		8	22	22				1
Oregon City		1		2	6	6				1
Portland		1	1	539	428	257	171	1	2	55
The Dalles		1		5	7	7				1
PENNSYLVANIA	8	100	17	6,265	7,980	7,664	316	30	29	468
Allentown		1	1	175	131	131			2	12
Altoona		1	1	133	133	118	15	1	1	3
Ambridge		1		10	12	12				1
Apollo		1		2	8	8				1
Archbald		1		10	15	15		1		1
Aspinwall		1		4	15	11	4		1	4
Bangor		1		5	11	11				4
Beaver Falls		1		12	29	29		1		6
Berwick		1		2	10	10				3
Bethlehem		1		24	28	28			1	6
Blakely		1		7	16	16				2
Bloomsburg		1		4	12	12				3
Braddock		1	1	18	45	45			1	2
Bradford		1		28	65	65			1	1
Bristol		1		5	14	14				4
Canonsburg		1		8	24	24				1
Carbondale		1		14	24	24				4
Carlisle		1		11	26	26			1	6
Chambersburg		1		15	22	22				5
Charleroi		1		10	25	25				2
Chester		1		31	51	51				2
Coatesville		1		10	17	17				2
Connellsville		1		6	29	29				2
Corry		1		8	12	12		1		2
Crafton	1			8	25		25			1
Dunmore		1		20	30	30				9
Easton		1		24	55	55				1
East Pittsburgh		1		5	3	3				1
Edgewood	1			13	20	20				2
Ephrata	1			12	18	18				1

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
PENNSYLVANIA—Continued.										
Erie	1			124	208	169	39		1	3
Etna		1		10	14	14				2
Forest City		1		2	5	5				1
Forty Fort		1		9	15	15				1
Franklin		1		8	13	13		1		2
Freeland		1		2	10	10				1
Greensburg		1	1	18	48	34	14		1	2
Hanover		1		7	23	23		1		2
Harrisburg		1	1	70	109	102	7		1	16
Hazleton		1		10	43	43				3
Homestead		1		9	25	25				1
Johnstown		1		51	97	97		1	1	1
Kane		1		8	15	15				2
Lancaster		1	1	53	110	96	14		1	2
Lansford		1		5	15	15				1
Larksville		1		4	24	24				2
Lebanon		1		16	30	30				8
Lehighton		1		4	14	14				1
Lititz		1		5	8	8				1
Luzerne		1		6	11	11				1
McKeesport		1	1	97	127	99	28	1		7
Mahanoy City		1		4	16	16				1
Mauch Chunk		1		4	15	15				1
Meadville		1		33	71	42	29	1		1
Middletown		1		7	13	13				1
Millvale		1		12	12	12				1
Monongahela City		1		6	17	17				1
Mount Pleasant		1		7	15	15				1
Munhall		1		4	22		22			1
Nanticoke		1		16	19	19				1
Nazareth		1		4	7	7				1
New Castle		1		53	66	66		1		9
Norristown		1		40	44	32	12	1	1	6
Ogontz			1	80	11		11			1
Oil City		1		14	32	32		1		3
Olyphant		1		4	14	14				3
Parnassus		1		2	6	6				1
Parsons		1		5	15	15				2
Philadelphia		1	1	2,019	2,765	2,710	55	2	1	104
Phoenixville		1		7	21	21				4
Pitcairn		1		4	16	16				1
Pittsburgh		1	1	1,827	1,506	1,506		2	1	65
Pittston		1		10	20	20				5
Plymouth		1		8	24	24			1	1
Pottstown		1		26	32	32				1
Pottsville		1		25	34	34			1	10
Quakertown		1		4	16	16				1
Rankin	1			14	22	17	5	1		1
Reading		1	1	80	149	149		1	1	2
Rochester		1		1	1	1			1	1
St. Clair		1		12	11	11				1
Scranton	1			330	239	239		2		5
Sewickley	1			9	21	21				1
Shamokin		1		10	27	27			1	5
Sharon		1		2	10	10				1
Sharpsburg		1	1	13	29	25	4		1	4
Shenandoah		1		25	30	30			1	4
Shickshinny		1		5	7	7				1
South Bethlehem		1		14	25	25				3
South Brownsville		1		6	12	12				2
Steelton		1		10	20	20				1
Sunbury		1		13	26	26		1		1
Susquehanna		1		6	18	18		1		2
Swissvale	1			14	43	23	20		2	2
Taylor		1		8	6	6				1
Titusville		1		10	27	27		1		2
Uniontown		1	1	65	46	34	12	1		5
Warren		1		12	23	23		1		3
Washington		1		15	59	59		1		1
West Chester		1		9	28	28				2
West Homestead		1		7	25	25				4
West Pittston		1		5	10	10			1	3
Wilkes-Barre		1	1	70	147	147			1	10
Wilkinsburg		1	1	29	50	50		1		3
Wilmerding		1	1	10	28	28		2		2
Windber		1		5	13	13				1
Woodlawn		1		16	22	22				2
Wyoming		1		7	12	12				1
York		1	1	56	76	76		1	2	10

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
RHODE ISLAND		13	6	1,287	1,372	1,181	191	5	6	43
Burrillville		1		4	10	10				1
Central Falls		1	1	27	54	54				2
Cranston		1		10	35	35				1
Cumberland		1		12	14	14				1
East Providence		1	1	30	26	9	17		1	2
Narragansett		1		18	7	7			1	1
Newport		1	1	139	83	83		1	1	12
Pascoag		1		7	10	10			1	1
Pawtucket		1	1	87	169	169		1	1	9
Providence		1	1	880	807	633	174	1		9
Riverpoint		1		7	18	18				1
Westerly		1		8	24	24			1	1
Woonsocket		1	1	58	115	115		2		2
SOUTH CAROLINA		12	2	235	413	393	20	6	7	27
Aiken		1		10	11	11			1	1
Camden		1		5	15	15		1	2	4
Charleston		1	1	112	171	171			1	2
Columbia		1	1	50	54	54		2	2	6
Darlington		1		5	10	10		1		1
Florence		1		5	20	20				1
Georgetown		1		3	12	12		1		3
Greenwood		1		6	14	14				2
Orangeburg		1		7	37	17	20			3
Rock Hill		1		10	25	25				1
Spartanburg		1		12	32	32		1		1
Sumter		1		10	12	12			1	2
SOUTH DAKOTA		3	2	24	49	48	1			5
Lead		1	1	12	20	19	1			2
Sioux Falls		1	1	11	26	26				2
Yankton		1		1	3	3				1
TENNESSEE	1	6	1	341	537	490	47	3	1	27
Chattanooga	1			37	110	80	30	1		7
Cleveland		1		8	28	26	2	1		1
Columbia		1		7	12	12				1
Harriman		1		15	12	12				1
Knoxville		1	1	25	76	76		1		1
Memphis		1		185	141	126	15			2
Nashville		1		64	158	158			1	14
TEXAS	1	13	3	782	1,513	1,318	195	7	5	107
Abilene		1		2	5	5				1
Beaumont		1		12	74	64	10	1	1	7
Dallas		1	1	169	314	294	20	1		3
El Paso		1		23	77	77		1		6
Fort Worth	1			155	185	141	44		1	17
Galveston		1		59	66	66		1	1	11
Houston		1	1	129	206	206		1	1	12
Lufkin		1		5	5	5		1		1
Paris		1		8	12	12				2
Port Arthur		1		8	37	37				5
San Antonio		1		75	376	255	121		1	16
Texarkana		1		21	44	44				6
Victoria		1		2	5	5				2
Waco		1	1	114	107	107		1		18
UTAH		3	1	105	135	135		4	1	10
Bingham		1		2	5	5				1
Ogden		1		16	25	25			1	3
Salt Lake City		1	1	87	105	105		4		6
VERMONT		20	2	207	439	437	2	1	3	39
Barre		1		18	27	27				7
Bellows Falls		1		8	18	18				1
Bennington		1		12	20	20				5
Brattleboro		1		10	23	23		1		1
Burlington		1	1	32	92	92			1	6
Fair Haven		1		1	1	1				1
Hardwick		1		5	10	10				1
Hartford		1		1	13	13				1
Ludlow		1		4	7	7				1
Middlebury		1		2	3	3				1

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
VERMONT—Continued.										
Montpelier		1		16	52	51	1			3
Newport		1		5	11	11				1
Proctor		1		8	10	10				1
Rutland		1	1	25	47	47			1	2
St. Albans		1		17	29	29				1
St. Johnsbury		1		15	19	18	1			1
Springfield		1		6	21	21				1
White River Junction		1		7	14	14				1
Winooski		1		7	11	11			1	2
Woodstock		1		8	11	11				1
VIRGINIA		12	4	947	1,035	912	123	3	6	43
Danville		1		15	33	33				2
Farmville		1		6	22	12	10			1
Harrisonburg		1		4	8	8				1
Lynchburg		1	1	59	111	111			1	6
Newport News		1		22	26	26		1		1
Norfolk		1	1	130	211	211			1	13
Petersburg		1	1	51	95	88	7			2
Portsmouth		1		33	39	39			1	6
Richmond		1	1	566	361	255	106	1	2	2
Roanoke		1		44	78	78		1	1	7
Staunton		1		10	32	32				1
Suffolk		1		7	19	19				1
WASHINGTON	1	13	5	868	1,315	1,264	51	7	6	70
Aberdeen		1	1	24	51	39	12	1		5
Bellingham		1		38	49	49				4
Centralia		1	1	4	6	3	3		1	2
Ellensburg		1		2	8	8			1	1
Everett		1	1	39	50	50		1		3
Hoquiam		1		17	31	31		1		4
North Yakima		1		28	28	28		1		2
Olympia		1		9	17	17				2
Port Townsend		1		5	13	13		1		2
Roslyn		1		2	12	12				1
Seattle	1			200	426	406	20	1	2	9
Spokane		1	1	320	341	325	16		2	19
Tacoma		1	1	158	228	228		1		14
Walla Walla		1		22	55	55				2
WEST VIRGINIA		7	2	221	334	308	26	3		25
Benwood		1		7	18	18				2
Bluefield		1		4	28	25	3	1		1
Charleston		1		12	29	29		1		3
Huntington		1	1	71	80	80		1		6
McMechen		1		3	10	10				1
Parkersburg		1	1	78	60	37	23			3
Wheeling		1		46	109	109				9
WISCONSIN	2	32	7	2,829	2,776	2,341	435	9	14	199
Appleton		1		25	73	70	3	3	3	3
Ashland		1		11	30	30		1		1
Baraboo		1		3	4	4				1
Beloit		1		24	54	54			2	4
Burlington		1		12	13	13				2
Chippewa Falls		1		11	23	23				1
Eau Claire		1	1	29	53	39	14		1	4
Edgerton		1		1	2	2				1
Ellsworth		1		2	7	7				1
Fond du Lac		1		23	42	42			1	10
Fort Atkinson		1		3	12	12				1
Green Bay		1		27	61	58	3			4
Hudson		1		4	7	7				1
Janesville		1		35	74	72	2	1	1	4
Hurley		1		4	7	7				1
Kenosha		1	1	44	78	78		1	1	5
La Crosse		1		36	54	49	5		1	6
Lake Geneva		1		4	14	14				1
Madison		1		32	61	61		1		7
Manitowoc		1	1	34	75	75			1	3
Marinette		1		21	64	64			1	1
Milwaukee		1	1	2,139	1,425	1,024	401	1		89
Monroe	1			9	9	9				2
Oconto		1		9	27	27				1
Oshkosh		1	1	76	149	149				7

MUNICIPAL ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS, BY GEOGRAPHIC DIVISIONS, STATES, AND MUNICIPALITIES: 1912—Continued.

Table 3—Continued.

STATE AND MUNICIPALITY.	NUMBER OF SYSTEMS.			Total number of miles of single wire.	NUMBER OF BOXES OR SIGNALING STATIONS.			NUMBER OF TRANSMITTERS.		Number of receiving registers of all kinds.
	Combined fire alarm and police patrol.	Fire alarm.	Police patrol.		Total.	Signaling.	Telephoning.	Manual.	Automatic.	
WISCONSIN—Continued.										
Platteville		1		5	10	10				1
Racine		1	1	65	87	80	7			17
Rhinelander		1		7	17	17				5
Sheboygan		1		29	53	53				6
Stevens Point	1			11	25	25				1
Superior		1	1	49	86	86		1	1	2
Tomahawk		1		1	4	4				1
Watertown		1		15	34	34				1
Wausaw		1		29	42	42			1	4
WYOMING		6		72	124	124			4	12
Casper		1		9	31	31				1
Cheyenne		1		34	38	38			2	2
Evanston		1		12	23	23			2	2
Lander		1		4	6	6				1
Laramie		1		5	11	11				4
Rock Springs		1		8	15	15				2

In 1,149 cities and towns there were fire-alarm systems, 1,078 of them being separate fire-alarm systems and 71 combined with police patrol. In 319 cities and towns there were police-patrol systems, 237 being independent of the fire-alarm systems and 71 combined with the fire alarm, while 11 cities had police patrol only. At the census of 1910 there were 14,186 incorporated cities and towns in the United States, including New England towns having a population of 2,500 or more. The figures, therefore, indicate that only about 8.1 per cent of them have either electric fire-alarm or electric police-patrol signaling systems.

Underground wires.—One of the improvements that have characterized the installation of signaling systems during recent years has been the placing of wire in subways or conduits. Table 4 shows, for 1912, 1907, and 1902, the miles of wire reported as being operated in this manner in cities of 30,000 and over.

ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS—MILES OF SINGLE WIRE IN SUBWAYS OR CONDUITS IN CITIES OF 30,000 AND OVER: 1912, 1907, AND 1902.

Table 4

STATE AND CITY.	1912	1907	1902
ALABAMA:			
Birmingham	4		
ARKANSAS:			
Little Rock	13	12	
CALIFORNIA:			
Los Angeles	423	41	82
Oakland	825	153	
Pasadena	5	3	2
Sacramento	8		
San Diego	3	5	
San Francisco	101	275	165
COLORADO:			
Denver	58	36	
Pueblo	71	41	
CONNECTICUT:			
Bridgeport	11		
Hartford	151	102	50
Meriden	1	2	
New Britain	2	8	3
New Haven	276	156	152
DELAWARE:			
Wilmington	50	4	
DISTRICT OF COLUMBIA:			
Washington	4,888	3,091	760
GEORGIA:			
Atlanta	88	72	
Augusta	12		
Macon	7		
Savannah	52	56	
ILLINOIS:			
Chicago	2,864	1,904	1,278
Joliet	16	17	
Peoria	145	130	
Rockford	2		6
Springfield	2	18	
INDIANA:			
Fort Wayne	42	13	11
Indianapolis	200	50	105
South Bend	35	10	
IOWA:			
Davenport	10	10	2
Des Moines	47	20	
KENTUCKY:			
Lexington	7		
Louisville	169		
Newport	12		
LOUISIANA:			
New Orleans	30		
MAINE:			
Portland	165	133	33
MARYLAND:			
Baltimore	725	280	242
MASSACHUSETTS:			
Boston	1,754	1,844	1,305
Brockton	66		
Cambridge	1	3	3
Chelsea	15	11	
Fall River	126	107	60
Fitchburg	11	1	
Haverhill	46	38	30
Holyoke	8		9
Lawrence	38		
Lowell	102	100	100
Lynn	86	69	
Malden	21	22	
New Bedford	66	49	46
Newton	75	95	17
Pittsfield	15	10	
Quincy	19	19	20
Salem	1		
Somerville	31		
Springfield	268	250	160
Waltham	19	25	14
Worcester	334	285	159
MICHIGAN:			
Bay City	12	7	7
Detroit	8,710	1,105	485
Grand Rapids	116	87	13

ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS—MILES OF SINGLE WIRE IN SUBWAYS OR CONDUITS IN CITIES OF 30,000 AND OVER: 1912, 1907, AND 1902—Continued.

Table 4—Con. STATE AND CITY.	1912	1907	1902
MICHIGAN—Continued.			
Jackson	10		10
Kalamazoo	15	1	7
Lansing	5	3	2
Saginaw	10	1	
MINNESOTA:			
Duluth	55	37	
Minneapolis	400	330	200
St. Paul	636	378	273
MISSOURI:			
Joplin	6		
St. Joseph	52	51	50
St. Louis	481	455	455
NEBRASKA:			
Omaha	298	64	55
NEW JERSEY:			
Atlantic City	158	146	
Camden	200	3	
East Orange	4	19	2
Elizabeth		13	
Newark	423	294	204
Passaic	97		
Paterson	6	11	26
Trenton	269	264	3
NEW YORK:			
Albany	10	25	45
Auburn	5	2	
Binghamton	9		
Buffalo	443	253	265
Elmira	26	12	12
Jamestown	1		
Mount Vernon	46	46	
New York City	2,775	2,830	1,545
Niagara Falls	5		
Rochester	781	703	65
Schenectady	2		
Syracuse	22	32	15
Troy		4	4
Utica	4		
Yonkers		4	10
OHIO:			
Akron	32	66	23
Canton	76	76	7
Cincinnati	640	470	353
Cleveland	2,042	1,250	105
Columbus	262	269	45
Dayton	100	89	
OHIO—Continued.			
Springfield	13		
Toledo	731	750	126
Youngstown	51		
OREGON:			
Portland	231	78	
PENNSYLVANIA:			
Allentown	50		
Altoona	73	50	
Erie	6	9	14
McKeesport	49	60	
New Castle	21	22	
Philadelphia [1]	5,899	4,281	3,905
Pittsburgh	1,260	[2] 957	[2] 501
Scranton	55	52	
RHODE ISLAND:			
Providence	560	547	236
Woonsocket	18	12	
SOUTH CAROLINA:			
Charleston	9	12	
TENNESSEE:			
Memphis	85	75	45
Nashville	4		
TEXAS:			
Dallas	4		
El Paso	2	3	
Fort Worth	80		
Galveston	15	5	2
Houston	4		
San Antonio	25	6	20
UTAH:			
Salt Lake City	32	20	
VIRGINIA:			
Lynchburg	3	12	
Norfolk	40	36	9
Richmond	352	198	141
Roanoke	18	34	
WASHINGTON:			
Seattle	100		2
Spokane	80		
WISCONSIN:			
La Crosse	4	10	15
Milwaukee	1,844	1,097	304
Oshkosh	18		
Racine	10	18	
Superior	2		

[1] Only a portion of the wire is devoted to police-patrol and fire-alarm purposes; the remainder is used for municipal telephone circuits and is not included in the United States totals for 1912.
[2] Allegheny included.

The table furnishes indisputable evidence of the fact that cities are constantly increasing their wire mileage underground. This tendency is in harmony with the practice of removing electric wires for lighting, power, telephone, and telegraph service entirely from overhead construction and placing them underground. Underground service is especially desirable in the cases of fire-alarm and police-patrol systems, whose successful operation in all conditions of weather is of prime importance.

There were 132 cities in 1912 with a population of 30,000 and over that reported fire-alarm and police-patrol systems, with a total of 45,595 miles of wire underground. Nearly all of the underground wire is located in the larger cities, only 1,477 miles being in cities of less than 30,000. The following cities, in the order named, reported the greatest amounts of wire: Detroit, Washington, Chicago, New York, Cleveland, Milwaukee, and Boston. The underground wire reported for these cities formed 54.6 per cent of the total for all cities. During the period from 1902 to 1912 Detroit increased its mileage of underground wire by 8,225 miles. The decreases in wire shown for certain cities are due, as a rule, to the fact that the individual circuits have been enlarged and the total number of circuits reduced, with the result of bringing about a reduction of wire mileage without any diminution of the service afforded by underground construction.

The figures given are as reported at the respective censuses. Certain inconsistencies appear, however, which can not be explained, though they may be due to a misunderstanding of the inquiry. Thus Los Angeles, Cal., reported 82 miles of wire in subways or conduits in 1902 and none in 1907, and a similar condition appears in the case of a number of cities.

Table 5 shows, by states, for 1912, 1907, and 1902, the total mileage of single wire, the mileage in subways or conduits, and the percentage which the latter figure forms of the former.

ELECTRIC FIRE-ALARM AND POLICE-PATROL SIGNALING SYSTEMS—MILES OF SINGLE WIRE IN SUBWAYS OR CONDUITS, BY STATES: 1912, 1907, AND 1902.

Table 5

STATE.	TOTAL NUMBER OF MILES OF SINGLE WIRE.			MILES OF SINGLE WIRE IN SUBWAYS OR CONDUITS.			PERCENTAGE WHICH MILEAGE IN SUBWAYS OR CONDUITS FORMS OF TOTAL MILEAGE.		
	1912	1907	1902	1912	1907	1902	1912	1907	1902
United States	90,284	70,812	54,710	41,994	28,016	14,702	46.5	39.6	26.9
Alabama	211	241	162	4	.....	.....	1.9	.....	.....
Arkansas	61	42	37	37	12	.....	60.7	28.6	.....
California	4,994	2,232	1,855	1,385	479	249	27.7	21.5	13.4
Colorado	660	432	358	159	77	.....	24.1	17.8	.....
Connecticut	1,575	1,193	886	444	276	205	28.2	23.1	23.1
Delaware	225	90	140	50	4	.....	22.2	4.4	.....
District of Columbia	4,888	3,091	760	4,888	3,091	760	100.0	100.0	100.0
Georgia	572	529	362	163	128	.....	28.5	24.2	.....
Idaho	137	39	10	7	.....	.....	5.1	.....	.....
Illinois	6,397	6,692	4,977	3,088	2,124	1,330	48.3	31.7	26.7
Indiana	1,823	1,423	1,306	290	81	116	15.9	5.7	8.9
Iowa	521	430	418	75	31	2	14.4	7.2	0.5
Kansas	113	144	158	25	.....	27	22.1	.....	17.1
Kentucky	667	401	299	188	.....	.....	28.2	.....	.....
Louisiana	1,010	496	423	32	.....	.....	3.2	.....	.....
Maine	739	597	446	185	152	33	25.0	25.5	7.4
Maryland	1,298	1,055	712	725	280	242	55.9	26.5	34.0
Massachusetts	8,915	8,320	6,964	3,384	3,068	2,043	38.0	36.9	29.3
Michigan	10,904	2,886	1,834	8,984	1,272	528	82.4	44.1	28.8
Minnesota	2,278	1,965	1,465	1,097	747	473	48.2	38.0	32.3
Missouri	2,462	2,977	2,647	539	506	505	21.9	17.0	19.1
Montana	161	107	64	1	.....	.....	0.6	.....	.....
Nebraska	661	242	300	300	76	45	45.4	31.4	15.0
Nevada	55	36	11	19	2	.....	34.5	5.6	.....
New Hampshire	484	476	336	7	19	14	1.4	4.0	4.2
New Jersey	3,655	2,549	4,084	1,396	799	242	38.2	31.3	5.9
New York	11,169	10,133	7,152	4,437	4,058	1,964	39.7	40.0	27.5
North Carolina	242	155	95	3	.....	.....	1.2	.....	.....
North Dakota	31	27	25	6	2	.....	19.4	7.4	.....
Ohio	7,979	6,572	3,741	3,977	2,992	682	49.8	45.5	18.2
Oregon	572	199	87	231	78	.....	40.4	39.2	.....
Pennsylvania [1]	11,999	9,084	8,869	7,459	5,435	4,420	62.2	59.8	49.8
Rhode Island	1,287	1,167	751	691	656	269	53.7	56.2	35.8
South Carolina	235	235	121	18	27	.....	7.7	11.5	.....
South Dakota	24	15	15	4	.....	.....	16.7	.....	.....
Tennessee	341	296	209	89	75	45	26.1	25.3	21.5
Texas	782	389	309	147	15	26	18.8	3.9	8.4
Utah	105	51	18	32	20	.....	30.5	39.2	.....
Vermont	207	179	110	5	1	9	2.4	0.6	8.2
Virginia	947	621	505	419	280	150	44.2	45.1	29.7
Washington	868	309	183	182	2	2	21.0	0.6	1.1
West Virginia	221	157	58	.....	2	.....	.....	1.3	.....
Wisconsin	2,829	2,177	1,253	1,899	1,149	321	67.1	52.8	25.6
Wyoming	72	26	8	20	.....	.....	27.8	.....	.....
All other states	642	[2] 335	187	.....	.....	.....	.....	.....	.....

[1] In Philadelphia, Pa., only a portion of the mileage of wire shown is devoted to fire-alarm and police-patrol purposes, the remainder being used for municipal telephone circuits. This telephone wire is not included in the United States totals for 1912 (5,734 miles of single wire, 5,097 miles in subways or conduits) but is included for 1907 and 1902, the figures for amounts included not being available.

[2] Includes the territory of Alaska.

Fire alarms, fire loss, assessed valuation, and insurance.—Table 6 presents the number of fire alarms, assessed valuation of real estate and improvements, property loss by fires, and insurance paid in municipalities having a population of 30,000 and over, for 1912 and 1907.

NUMBER OF FIRE ALARMS, ASSESSED VALUATION OF REAL ESTATE AND IMPROVEMENTS, PROPERTY LOSS BY FIRES, AND INSURANCE PAID, IN MUNICIPALITIES HAVING A POPULATION OF 30,000 AND OVER: 1912 AND 1907.

Table 6

STATE AND MUNICIPALITY.	TOTAL NUMBER OF ALARMS.		ASSESSED VALUATION OF REAL ESTATE AND IMPROVEMENTS.		PROPERTY LOSS BY FIRES.				TOTAL INSURANCE PAID.[1]	
					Total.[1]		Per capita.			
	1912	1907	1912	1907	1912	1907	1912	1907	1912	1907
ALABAMA:										
Birmingham	1,485	575	$85,119,638	$28,710,054	$813,109	$335,281	$5.57	$7.12	$733,159	$293,899
Mobile	277	229	32,216,959	26,359,040	49,290	(2)	0.90	.....	36,524	389,400
Montgomery	436	293	23,363,804	21,143,221	134,309	123,089	3.20	3.00	132,341	108,467
ARKANSAS:										
Little Rock	337	212	31,373,900	19,070,688	225,493	106,257	4.51	2.57	208,023	76,525
CALIFORNIA:										
Berkeley	290	114	38,812,245	(2)	55,220	15,000	1.20	0.37	(2)	(2)
Los Angeles	1,833	1,074	330,934,480	267,126,304	850,635	631,942	2.43	6.17	(2)	(2)
Oakland	614	(2)	116,881,725	103,653,400	136,259	(2)	0.78	.....	118,696	(2)
Pasadena	127	(2)	47,138,470	(2)	73,200	(2)	2.15	.....	69,700	(2)
Sacramento	217	180	63,176,320	27,253,150	88,737	51,465	1.22	1.64	49,462	38,844
San Diego	367	104	49,068,148	(2)	52,251	13,445	1.16	0.76	38,075	4,135
San Francisco	1,873	966	510,429,316	454,708,331	1,035,233	1,271,488	2.38	3.71	773,749	867,760
COLORADO:										
Denver	1,028	1,026	133,987,715	118,921,855	389,221	290,577	1.69	1.89	344,936	272,500
Pueblo	299	246	16,768,073	16,261,148	15,000	32,849	0.32	1.05	12,996	26,081
CONNECTICUT:										
Bridgeport	439	311	97,683,477	74,508,171	68,843	96,588	0.65	1.12	67,685	92,776
Hartford	174	(2)	138,060,842	72,535,383	[3] 206,315	(2)	[3] 2.02	.....	[3] 171,559	(2)
Meriden	92	67	(2)	(2)	39,035	17,807	1.30	0.69	36,035	(2)
New Britain	162	116	40,592,672	(2)	50,477	21,225	1.01	0.63	(2)	(2)
New Haven	843	608	139,779,146	116,312,984	279,034	168,086	1.99	1.36	252,325	155,633
Waterbury	395	193	69,204,926	55,963,821	186,769	92,226	2.43	1.45	172,342	89,879
DELAWARE:										
Wilmington	213	(2)	57,390,838	49,238,867	180,540	(2)	1.96	.....	(2)	(2)
DISTRICT OF COLUMBIA:										
Washington	1,165	897	359,932,253	277,727,824	626,260	434,272	1.78	1.39	(2)	(2)
FLORIDA:										
Jacksonville	371	284	55,834,360	22,203,230	113,726	83,977	1.75	2.21	107,115	70,933
Tampa	287	(2)	25,643,737	(2)	115,266	(2)	2.45	.....	106,470	(2)
GEORGIA:										
Atlanta	914	593	154,827,487	91,840,350	347,633	222,843	2.11	2.10	331,507	(2)
Augusta	493	274	32,360,077	22,800,438	112,646	54,949	2.25	1.26	102,548	54,949
Macon	318	234	25,358,761	19,735,901	84,844	31,394	1.97	0.96	70,998	27,078
Savannah	362	278	51,488,818	47,392,051	12,289	191,107	0.18	2.89	(2)	(2)
ILLINOIS:										
Chicago	13,910	9,162	940,450,171	477,921,976	6,162,561	(2)	2.59	.....	6,162,561	5,170,033
Decatur	250	155	7,234,964	(2)	31,272	41,588	0.95	2.00	28,755	33,041
East St. Louis	470	257	13,311,411	6,357,939	109,334	59,315	1.82	1.39	96,879	55,100
Joliet	183	161	7,519,794	3,990,637	40,291	(2)	1.06	.....	40,291	20,338
Peoria	537	374	22,084,481	11,375,291	110,947	(2)	1.63	.....	110,947	182,545
Quincy	244	130	10,537,403	5,920,267	30,271	34,210	0.82	0.87	30,271	(2)
Rockford	237	148	19,701,707	7,645,167	259,938	27,721	5.20	0.76	244,288	27,276
Springfield	429	272	17,382,465	8,652,875	166,801	199,178	3.03	5.03	165,097	198,383
INDIANA:										
Evansville	443	226	38,510,400	32,637,960	93,503	(2)	1.28	.....	(2)	196,702
Fort Wayne	336	277	35,220,470	30,581,530	47,926	60,221	0.74	1.15	45,661	58,939
Indianapolis	1,777	1,171	218,048,140	174,244,325	633,370	(2)	2.53	.....	(2)	181,756
South Bend	377	252	28,290,570	21,897,950	74,053	26,567	1.30	0.60	60,782	(2)
Terre Haute	405	271	33,763,845	28,656,920	81,145	95,634	1.25	1.81	79,226	(2)
IOWA:										
Cedar Rapids	223	217	28,310,167	(2)	23,905	28,278	0.71	1.10	21,885	26,923
Davenport	333	(2)	24,283,260	21,753,635	30,324	(2)	0.68	.....	28,634	(2)
Des Moines	891	546	22,684,473	18,510,340	356,367	153,377	3.97	1.89	348,389	142,200
Dubuque	190	216	25,912,190	24,376,450	80,000	(2)	2.00	.....	77,031	30,000
Sioux City	353	203	9,590,098	8,127,937	647,219	64,324	12.69	1.46	606,529	62,509
KANSAS:										
Kansas City	(2)	438	90,367,010	13,888,502	372,753	106,713	4.01	1.33	349,085	87,415
Topeka	260	213	52,160,655	12,460,855	66,986	40,948	1.40	0.96	55,760	20,939
Wichita	(2)	169	63,880,157	7,690,657	53,911	23,979	0.90	0.65	53,911	22,079
KENTUCKY:										
Covington	319	169	27,850,276	25,319,119	200,411	17,198	3.64	0.34	150,867	16,698
Lexington	290	277	23,901,824	(2)	78,112	90,122	2.11	3.42	65,332	76,272
Louisville	1,177	900	192,414,861	166,302,330	819,332	722,445	3.41	3.15	819,332	(2)
Newport	127	161	15,921,886	13,288,890	12,418	67,405	0.40	2.20	11,962	64,495
LOUISIANA:										
New Orleans	624	610	235,564,586	217,366,255	453,085	593,353	1.29	1.89	(2)	(2)
MAINE:										
Portland	516	411	67,093,268	54,198,386	251,039	188,071	4.05	3.36	225,350	184,054
MARYLAND:										
Baltimore	1,947	1,626	723,800,340	626,756,439	996,650	916,603	1.59	1.63	883,097	905,523
MASSACHUSETTS:										
Boston	5,420	4,414	1,489,608,820	1,315,709,757	2,530,475	2,314,517	3.61	3.80	2,397,388	2,160,682
Brockton	661	466	49,981,748	37,408,333	104,540	87,644	1.67	1.72	90,011	78,048
Cambridge	719	498	111,581,235	107,009,290	328,488	166,233	3.10	1.67	304,446	153,626
Chelsea	380	279	28,147,960	26,414,750	119,760	126,098	3.42	3.27	112,157	107,704
Everett	261	171	29,742,700	24,050,350	53,214	25,482	1.48	0.82	52,060	18,996
Fall River	519	333	97,935,957	84,730,844	147,842	275,013	1.21	2.59	133,939	246,526
Fitchburg	193	174	33,150,934	26,474,438	25,637	12,985	0.67	0.39	25,111	12,261
Haverhill	357	206	37,051,095	28,609,398	227,845	73,158	5.01	1.92	218,809	64,398
Holyoke	459	244	57,526,680	44,753,780	125,720	145,673	2.09	2.82	123,856	128,903
Lawrence	398	307	75,493,314	54,246,294	63,466	168,118	0.70	2.30	38,485	164,887
Lowell	839	706	84,792,243	75,454,738	264,528	247,591	2.45	2.60	254,952	207,967
Lynn	1,000	788	81,529,354	65,912,157	125,982	120,180	1.37	1.49	123,129	106,753
Malden	301	214	40,617,596	32,759,650	63,313	(2)	1.40	.....	62,997	48,912
New Bedford	487	141	101,744,559	71,279,611	143,359	15,008	1.37	0.19	(2)	12,921
Newton	452	382	80,132,445	67,523,685	100,688	60,062	2.70	1.58	99,273	50,121
Pittsfield	163	96	34,014,985	(2)	328,576	53,520	9.13	2.46	327,051	50,356
Quincy	378	291	35,375,898	(2)	66,859	32,122	1.91	1.34	64,359	29,986
Salem	274	180	37,293,231	31,451,589	140,689	(2)	3.06	.....	129,261	18,286
Somerville	697	411	69,632,540	61,527,750	68,784	79,201	0.86	1.10	67,754	75,846
Springfield	880	491	151,960,100	92,378,624	215,535	505,715	2.25	6.47	184,375	480,121
Taunton	342	251	24,023,517	21,907,906	177,058	85,304	5.06	2.76	132,922	63,421
Worcester	1,333	1,156	153,883,558	124,841,138	149,513	145,479	0.96	1.10	132,302	119,374

[1] Statistics for insurance paid, and property loss, taken from the Insurance Yearbook, 1913 and 1908. [2] Figures not available. [3] Report for 8 months.

NUMBER OF FIRE ALARMS, ASSESSED VALUATION OF REAL ESTATE AND IMPROVEMENTS, PROPERTY LOSS BY FIRES, AND INSURANCE PAID, IN MUNICIPALITIES HAVING A POPULATION OF 30,000 AND OVER: 1912 AND 1907—Continued.

Table 6—Continued.

STATE AND MUNICIPALITY.	TOTAL NUMBER OF ALARMS.		ASSESSED VALUATION OF REAL ESTATE AND IMPROVEMENTS.		PROPERTY LOSS BY FIRES.				TOTAL INSURANCE PAID.[1]	
					Total.[1]		Per capita.			
	1912	1907	1912	1907	1912	1907	1912	1907	1912	1907
MICHIGAN:										
Bay City	385	(2)	18,119,690	15,133,967	66,503	(2)	1.33	.....	(2)	(2)
Detroit	2,981	1,677	452,255,100	339,217,590	1,347,622	1,617,990	2.69	4.40	(2)	(2)
Flint	213	(2)	23,555,106	(2)	415,225	(2)	10.38	.....	94,420	(2)
Grand Rapids	500	440	89,197,915	78,834,500	156,323	160,490	1.30	1.58	145,103	141,595
Jackson	247	147	20,046,001	(2)	20,869	29,678	0.61	1.18	19,319	29,468
Kalamazoo	260	155	22,436,570	19,034,110	54,312	63,706	1.29	1.88	54,312	63,569
Lansing	241	84	16,475,695	(2)	151,110	79,790	4.08	4.84	133,136	77,423
Saginaw	386	385	27,245,669	25,032,733	60,734	102,599	1.10	2.06	52,000	92,000
MINNESOTA:										
Duluth	442	336	47,507,603	35,153,158	213,803	258,157	2.58	3.70	194,053	234,227
Minneapolis	2,360	1,472	252,089,279	177,499,018	1,155,203	1,048,838	3.57	3.67	1,058,099	971,380
St. Paul	1,515	1,076	167,423,292	108,549,241	751,746	(2)	0.37	.....	751,746	528,448
MISSOURI:										
Joplin	347	235	10,042,877	7,389,833	72,617	26,770	2.20	0.72	67,290	28,611
Kansas City	3,169	1,701	178,820,427	144,548,041	1,263,466	541,886	4.77	2.92	1,114,040	482,361
St. Joseph	617	389	39,215,020	34,261,501	200,000	68,915	2.50	5.72	188,565	62,024
St. Louis	5,248	2,630	652,261,285	571,791,577	1,509,088	1,588,726	2.01	2.40	1,362,376	1,374,772
Springfield	330	158	16,178,302	(2)	88,948	(2)	2.25	.....	75,113	7,036
MONTANA:										
Butte	223	192	24,184,365	23,150,350	423,074	21,935	9.84	0.48	344,868	21,935
NEBRASKA:										
Lincoln	290	232	9,498,467	7,795,540	109,283	75,261	2.43	1.52	97,120	62,739
Omaha	1,037	651	32,749,722	23,457,487	608,967	217,204	4.76	1.70	555,379	207,584
NEW HAMPSHIRE:										
Manchester	541	383	65,118,287	35,388,394	87,217	23,555	1.21	0.36	68,150	19,168
NEW JERSEY:										
Atlantic City	286	197	88,171,200	51,433,280	150,667	16,349	3.01	0.39	61,427	10,264
Bayonne	418	138	48,828,025	33,286,470	60,193	46,280	1.00	.....	60,193	(2)
Camden	266	187	56,778,458	49,897,528	159,261	199,141	1.67	2.31	(2)	(2)
East Orange	148	132	50,490,649	(2)	81,502	(2)	2.33	.....	(2)	9,130
Elizabeth	323	256	60,210,102	49,988,620	61,746	77,884	0.80	1.22	61,746	(2)
Hoboken	319	249	69,496,462	65,856,519	114,214	86,009	1.52	1.27	99,737	66,447
Jersey City	1,102	861	257,644,605	267,039,754	441,354	319,746	1.56	1.31	431,634	269,754
Newark	1,183	908	383,864,182	295,787,923	1,095,667	657,370	2.92	2.22	957,292	581,117
Passaic	246	86	37,516,260	28,432,904	185,804	59,979	3.20	1.44	185,804	(2)
Paterson	651	424	100,052,522	90,707,516	573,922	142,348	4.41	1.25	568,905	132,275
Perth Amboy	85	(2)	19,166,188	(2)	250,400	(2)	7.15	.....	(2)	(2)
Trenton	241	189	72,050,589	68,978,869	43,441	278,753	0.43	3.15	41,646	274,453
West Hoboken	68	47	24,327,979	20,919,200	17,055	46,968	0.46	1.49	(2)	46,403
NEW YORK:										
Albany	927	846	103,792,737	82,814,082	332,616	153,686	3.17	1.55	325,616	140,913
Amsterdam	137	93	15,859,948	(2)	55,873	46,257	1.68	2.21	55,873	39,142
Auburn	165	107	22,538,902	18,410,728	61,871	166,183	1.77	4.98	61,073	165,031
Binghamton	169	127	34,875,515	25,212,530	42,530	60,488	0.85	1.36	37,142	59,498
Buffalo	2,087	1,554	371,582,942	325,776,081	804,548	(2)	1.89	.....	804,548	1,018,017
Elmira	225	216	24,718,743	20,934,891	85,472	182,063	2.28	5.09	85,472	181,964
Jamestown	132	83	16,831,602	(2)	69,926	63,209	2.00	2.76	59,769	60,319
Mount Vernon	175	105	38,751,167	(2)	32,961	109,415	0.96	5.15	(2)	(2)
New York City	14,194	13,851	9,177,495,629	7,796,175,039	11,827,994	(2)	2.24	.....	11,589,339	12,116,524
Niagara Falls	144	(2)	41,459,289	(2)	40,545	(2)	1.16	.....	40,545	(2)
Rochester	1,048	829	206,451,956	159,045,153	261,462	(2)	1.11	.....	(2)	569,545
Schenectady	150	217	56,828,899	45,287,076	165,312	70,978	2.07	1.08	158,907	69,363
Syracuse	552	414	151,068,969	104,977,771	339,040	332,438	2.39	2.76	330,625	259,998
Troy	217	378	63,011,733	59,224,212	230,064	(2)	2.95	.....	230,064	(2)
Utica	347	306	56,103,838	45,194,304	107,905	274,226	1.42	4.12	101,654	239,829
Yonkers	557	322	87,000,771	65,417,544	304,421	84,935	3.38	1.27	394,418	72,294
NORTH CAROLINA:										
Charlotte	211	145	18,216,755	(2)	140,097	95,208	3.69	5.26	137,482	77,294
OHIO:										
Akron	413	194	93,967,200	25,639,470	385,746	173,597	4.82	3.33	359,695	127,618
Canton	297	150	60,429,260	16,772,960	2,031,737	(2)	36.94	.....	56,292	9,840
Cincinnati	1,916	1,365	525,826,770	242,988,590	901,472	1,971,217	2.27	5.68	901,472	1,414,369
Cleveland	3,060	1,912	756,831,185	240,262,315	1,485,045	514,782	2.43	1.08	1,305,456	428,974
Columbus	769	624	247,576,390	87,307,905	582,852	567,986	2.99	3.82	472,162	421,685
Dayton	677	489	150,005,610	56,581,280	121,242	124,818	1.01	1.21	99,436	117,287
Hamilton	231	181	46,251,980	(2)	84,991	16,166	2.36	0.68	80,189	16,166
Lima	170	125	31,054,190	(2)	37,795	8,270	1.14	0.38	(2)	8,270
Springfield	215	154	50,105,900	21,497,980	103,822	120,800	2.16	2.83	97,058	39,372
Toledo	964	658	223,939,440	78,984,280	343,631	121,192	1.91	0.74	319,656	115,767
Youngstown	689	368	137,272,100	28,046,390	36,670	396,434	0.41	7.29	33,465	396,034
OKLAHOMA:										
Oklahoma City	438	313	95,173,338	5,667,529	73,000	(2)	1.04	.....	(2)	(2)
OREGON:										
Portland	1,294	779	298,941,430	166,661,695	809,983	424,183	3.24	3.76	704,102	331,220
PENNSYLVANIA:										
Allentown	124	96	36,301,021	30,179,109	92,362	115,397	1.71	2.71	86,977	(2)
Altoona	362	305	25,007,408	22,565,235	49,129	250,986	0.91	5.13	46,751	229,992
Chester	124	101	18,526,284	17,288,435	13,915	(2)	0.35	.....	(2)	(2)
Erie	289	219	26,068,062	22,520,599	75,253	38,673	1.05	0.63	75,253	(2)
Harrisburg	109	(2)	47,577,399	41,792,207	[3] 33,085	(2)	[3] 0.47	.....	[3] 33,085	(2)
Johnstown	454	191	19,233,820	16,986,895	32,466	61,492	0.54	1.39	31,209	(2)
Lancaster	92	49	25,852,390	20,537,391	30,000	(2)	0.61	.....	30,000	18,863
McKeesport	192	158	24,302,800	22,722,383	32,301	(2)	0.74	.....	32,301	18,537
New Castle	274	207	19,995,000	16,961,270	67,980	37,943	1.70	0.99	65,480	36,043
Philadelphia	3,823	3,591	1,556,323,614	1,287,287,123	3,081,412	2,093,522	1.93	1.43	2,966,175	1,871,018
Pittsburgh	2,200	1,431	749,583,440	686,742,887	1,198,201	644,103	2.12	1.21	(2)	429,402
Reading	103	170	54,958,975	51,663,400	23,238	(2)	0.23	.....	(2)	(2)
Scranton	426	351	81,555,630	66,757,430	154,615	236,792	1.14	1.95	149,664	234,325
Wilkes-Barre	234	145	50,473,882	43,120,243	131,699	224,017	1.88	3.64	(2)	(2)
Williamsport	(2)	105	15,154,520	(2)	150,417	24,456	4.30	0.85	149,887	19,234
York	75	76	24,901,571	19,932,816	105,286	24,381	2.29	0.61	(2)	21,685
RHODE ISLAND:										
Providence	1,825	1,654	313,063,860	230,683,760	1,104,765	447,712	4.80	2.15	1,061,427	400,186
Woonsocket	223	(2)	25,631,100	19,206,150	15,060	(2)	0.38	.....	(2)	(2)

[1] Statistics for insurance paid, and property loss, taken from the Insurance Yearbook, 1913 and 1908. [2] Figures not available. [3] Report for 10 months.

NUMBER OF FIRE ALARMS, ASSESSED VALUATION OF REAL ESTATE AND IMPROVEMENTS, PROPERTY LOSS BY FIRES, AND INSURANCE PAID, IN MUNICIPALITIES HAVING A POPULATION OF 30,000 AND OVER: 1912 AND 1907—Continued.

Table 6—Continued. STATE AND MUNICIPALITY.	TOTAL NUMBER OF ALARMS.		ASSESSED VALUATION OF REAL ESTATE AND IMPROVEMENTS.		PROPERTY LOSS BY FIRES. Total.[1]		PROPERTY LOSS BY FIRES. Per capita.		TOTAL INSURANCE PAID.[1]	
	1912	1907	1912	1907	1912	1907	1912	1907	1912	1907
SOUTH CAROLINA:										
Charleston	267	204	19,742,774	17,723,953	38,164	76,801	0.64	1.36	36,179	66,468
TENNESSEE:										
Chattanooga	270	258	28,598,222	21,846,060	98,291	116,331	1.96	3.38	93,439	102,728
Knoxville	270	189	22,782,239	19,008,500	105,407	102,585	2.85	2.80	85,915	(2)
Memphis	1,042	698	110,519,277	72,235,336	314,334	950,814	2.17	7.38	264,111	814,155
Nashville	575	485	77,161,306	62,619,338	367,585	265,096	3.22	2.52	279,244	(2)
TEXAS:										
Dallas	840	483	89,430,575	49,592,234	644,677	135,826	6.32	2.50	497,663	87,385
El Paso	315	157	32,250,450	(2)	29,804	116,243	0.66	7.31	24,633	68,778
Fort Worth	726	477	62,451,780	34,681,475	416,577	117,012	4.98	4.38	396,771	104,507
Galveston	496	343	27,097,687	21,033,525	38,683	106,538	0.94	3.02	28,938	98,421
Houston	653	(2)	77,294,351	50,876,142	4,602,692	(2)	51.14	.....	(2)	(2)
San Antonio	506	279	88,674,375	54,661,470	472,172	172,725	4.72	2.69	394,368	100,695
UTAH:										
Salt Lake City	436	372	62,288,818	46,917,527	84,884	(2)	0.85	.....	74,175	132,363
VIRGINIA:										
Norfolk	511	392	63,881,180	48,027,360	344,234	184,345	4.15	2.69	254,042	(2)
Portsmouth	156	(2)	12,343,960	(2)	58,096	(2)	1.66	.....	39,063	(2)
Richmond	727	360	148,768,790	105,811,707	345,456	(2)	2.66	.....	336,500	278,536
Roanoke	276	148	35,361,123	(2)	54,125	14,852	1.35	0.69	48,785	13,697
WASHINGTON:										
Seattle	1,089	643	212,929,048	155,751,045	447,594	337,517	1.79	4.18	(2)	(2)
Spokane	636	486	89,799,772	35,796,907	270,107	253,606	2.23	6.88	243,306	176,154
Tacoma	507	422	73,299,008	42,960,214	428,313	461,988	5.04	12.25	361,423	380,485
WEST VIRGINIA:										
Huntington	155	(2)	29,432,257	(2)	56,613	(2)	1.62	.....	39,015	(2)
Wheeling	265	162	61,851,235	58,277,648	38,822	73,111	0.86	1.74	23,415	(2)
WISCONSIN:										
La Crosse	155	185	20,475,907	19,651,048	29,209	191,556	0.96	6.57	27,524	156,668
Milwaukee	2,206	1,764	460,548,763	216,975,945	834,649	531,681	2.11	1.65	823,447	528,061
Oshkosh	95	90	22,706,113	19,102,153	7,627	80,500	0.22	2.56	7,627	(2)
Racine	144	94	26,552,448	19,728,555	65,790	22,180	1.57	0.66	63,380	19,600
Superior	253	253	23,739,502	15,525,566	32,085	1,591,647	0.76	41.09	19,997	1,510,799

[1] Statistics for insurance paid, and property loss, taken from the Insurance Yearbook, 1913 and 1908.

[2] Figures not available.

Owing to the constant increase in population in most cities, it is only natural that the number of fire alarms, as well as the assessed valuation of property, should increase. Approximately 50 per cent of the cities show an increase in property destroyed by fire.

In 1912 Houston, Tex., had the largest loss per capita, suffering one of the most disastrous fires of that year, which entailed a loss of over $4,500,000. Canton, Ohio, and Sioux City, Iowa, also had large fires during 1912, the loss per capita being $36.94 for the former city and $12.69 for the latter.

Superior, Wis., shows the largest per capita loss for 1907. This was due to a $1,000,000 fire which destroyed several large grain elevators with their contents. Tacoma, Wash., and Memphis, Tenn., were next, with losses per capita of $12.25 and $7.38, respectively.

Of the largest 25 cities for which data as to property loss by fire in both years are available, only 5 show less total loss from fire in 1912 than in 1907, while 13 show reduced losses per capita. The proportionate increase in fire losses, as a rule, appears to be less than the proportionate increase in property values. For the cities reporting assessed valuation and property loss by fire for both years, the assessed valuation aggregated $17,206,782,679 for 1912, as compared with $12,615,571,667 for 1907, an increase of $4,591,211,012, or 36.4 per cent; and the aggregate property loss by fire was $42,818,005 in 1912, as compared with $35,702,855 in 1907, an increase of $7,115,150, or 19.9 per cent. In like manner, the 25 cities above referred to show an increase in assessed valuation of 33.7 per cent, with an increase in fire loss of 22.9 per cent.

The assessed valuation of the largest 25 cities, and which includes some cities for which data as to assessed valuation and property loss by fire in 1907 are not available, aggregated $21,701,525,068 for 1912, and the aggregate property loss by fire was $42,259,349. The property loss by fire for these largest 25 cities ranges from $1.29 per capita for New Orleans, La., to $4.80 for Providence, R. I. In 8 of these cities the fire loss was less than $2 per capita in 1912; in 13 cities it was from $2.01 to $3; in 3 cities, from $3.01 to $4; and in one city over $4.