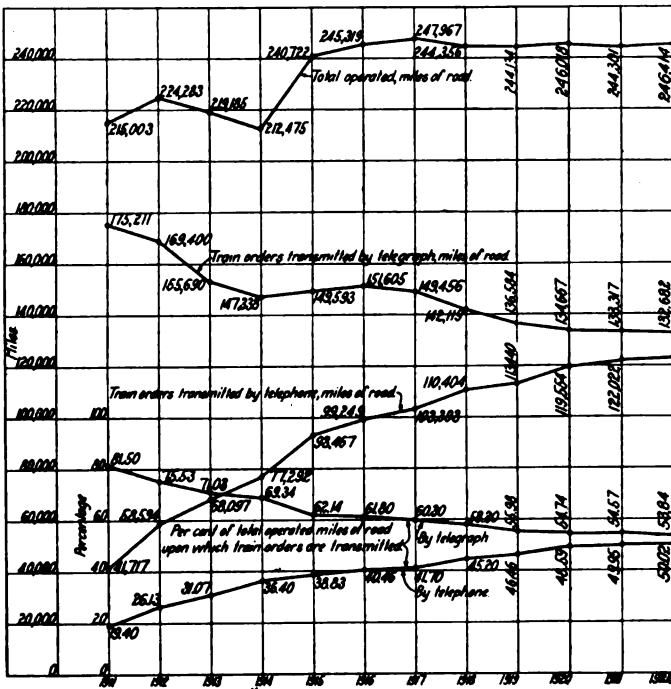


I. C. C. Statistics on Telegraph and Telephone Used for Train Orders

FOR the transmission of train orders, the railroads of the United States are using the telegraph on 132,682 miles of road and the telephone on 123,253 miles of road. These figures are given in the annual report as of January 1, 1922, compiled by the Bureau of Safety of the Interstate Commerce Commission. These statistics and tables cover the same details which

also the steady decrease in the use of the telegraph for such a purpose. These curves have been plotted from information issued by the Interstate Commerce Commission beginning with the report of January 1, 1911, at

Principle Changes in Telegraph and Telephone Mileage During 1921



Progress Report of Telegraph and Telephone Installations to January 1, 1922

have been issued by this bureau for the past several years. The report was compiled from information prepared by approximately 600 railroads in response to the Commission's orders of September 24, 1921.

A curve sheet which is presented here, but which does not appear in the report issued by the Bureau of Safety, shows the steady progress which has been made in the use of telephone for transmission of train orders and

	—Telegraph— In-De-crease crease	—Telephone— In-De-crease crease
Abilene & Southern.....	18	24
Arcade & Attica.....	16	18
Baltimore & Ohio (Chicago Terminal)....	82	16
Chicago & North-Western.....	41	62
Chicago, Milwaukee & Gary.....	158	41
Chicago, Milwaukee & St. Paul.....	18	146
Duluth & Northern Minnesota.....	41	18
Evansville & Ohio Valley.....	454	41
Fort Worth & Denver City.....	246	454
Wichita Valley.....	89	246
Hawaii Consolidated.....	62	89
Illinois Central.....	17	76
Joplin & Pittsburg.....	17	17
Manistee & North Eastern.....	17	17
Midland Valley.....	290	224
Minneapolis & Rainy River.....	13	13
Missouri Pacific.....	786	787
Nashville, Chattanooga & St. Louis.....	299	321
Lake Erie & Western.....	24	24
New York, New Haven & Hartford.....	11	10
Pacific Coast Railway.....	38	83
Pere Marquette.....	15	15
Philadelphia & Reading.....	20	20
Port Reading.....	245	20
Quincy, Omaha & Kansas City.....	20	245
Rock Island Southern.....	25	20
Sacramento Northern.....	340	25
St. Louis-San Francisco.....	729	340
San Antonio & Aransas Pass.....	34	729
Southern Pacific System—		
Galveston, Harrisburg & San Antonio.....	40	34
Houston & Shreveport.....	191	40
Houston East & West Texas.....	145	191
Morgan's Louisiana & Texas R. R. & S. S. Co.....	64	145
Pacific System.....	30	64
Texas & New Orleans.....	17	30
Virginian.....	17	17
Washington, Baltimore & Annapolis.....	17	17
Wisconsin & Michigan.....	21	21

which time the railroads were requested to furnish the Interstate Commerce Commission with information per-

Table No. 6.
USE OF TELEGRAPH AND TELEPHONE IN TRANSMITTING TRAIN ORDERS.

Name of railroad.	Telegraph (miles of road).	Telephone (miles of road).	Total operated (miles of road).	Name of railroad.	Telegraph (miles of road).	Telephone (miles of road).	Total operated (miles of road).
Aberdeen & Rockfish.....		59	59	Cincinnati, Indianapolis & Western.....	197	99	296
Abilene & Southern.....		96	96	Cleveland Southwestern & Columbus.....		205	205
Akron, Canton & Youngstown.....	162	8	170	Clinton, Oklahoma & Western.....		60	60
Alabama, Tennessee & Northern.....		186	186	Clinton, Davenport & Muscatine.....		65	65
Albany Southern.....	37		37	Colorado & Southern.....	843	2	845
Alcolu.....		25	25	Colorado & Wyoming.....	27	16	37
Alton Granite & St. Louis Traction Co.		36	36	Colorado-Kansas.....		22	22
East St. Louis & Suburban.....		39	54	Colorado, Wyoming & Eastern.....		111	111
Alton & Southern.....		15	15	Columbia, Newberry & Laurens.....	75		75
Andalusia Florida & Gulf.....		25	25	Combs, Cass & Eastern.....		16	16
Androscooggin & Kennebec.....		155	157	Copper Range.....		96	96
Angelina & Neches River.....		33	33	Copper River & Northwestern.....		195	195
Ann Arbor.....	294		294	Cornwall.....	12		12
Apache.....		72	72	Coudersport & Port Allegany.....	39		39
Apalachicola Northern.....	102		102	Cumberland & Manchester.....		27	27
Appalachian.....		10	10	Cumberland & Pennsylvania.....	4	51	55
Arcade & Attica.....		28	28	Dansville & Mount Morris.....	14		14
Arcadia & Betsey River.....		17	17	Danville & Western.....	81		81
Arkansas & Louisiana-Missouri.....		52	52	Dardanelle & Russellville.....		5	5
Aroostook Valley.....		32	32	Davenport, Rock Island & Northwestern.....	43		43
Asherton & Gulf.....		32	32	Dayton & Troy Electric.....		30	30
Atchison, Topeka & Santa Fe (including Gulf, Colorado & Santa Fe).....	3,195	8,320	11,515	Dayton & Union.....	32		32
Atlanta & St. Andrews Bay.....		82	82	Dayton, Toledo & Chicago.....	90		90
Atlanta & West Point.....		92	92	Death Valley.....		21	21
Western Railway of Alabama.....		133	133	Deering Southwestern.....		31	31
Atlanta, Birmingham & Atlantic.....	637		637	Delaware & Hudson.....	740	129	869
Atlanta Terminal.....	3		3	Cooperstown & Charlotte Valley.....		22	22
Atlantic & Western.....		24	24	Delaware & Northern.....	46		46
Atlantic Coast Line.....	3,029	1,252	4,281	Delaware, Lackawanna & Western.....		960	960
Atlantic Northern.....		17	17	Denver & Rio Grande Western.....	1,772	831	2,604
Augusta Northern.....		11	11	Denver & Salt Lake.....	255	255	255
Baltimore & Ohio System:				DeQueen & Eastern.....		36	36
Eastern lines.....	1,790	1,366	2,596	Detroit & Mackinac.....	198	159	347
Western lines.....	2,393	1,269	2,531	Detroit Terminal.....		23	23
Baltimore & Ohio Chicago Terminal.....		16	76	Detroit & Toledo Shore Line.....	45	45	45
New York Terminal lines.....		29	29	Detroit United Lines.....		379	379
Baltimore, Chesapeake & Atlantic.....	87		87	Duluth & Iron Range.....		291	291
Bamberger Electric.....		36	36	Duluth & Northeastern.....		62	62
Bangor & Aroostook.....	626		626	Duluth & Northern Minnesota.....		99	99
Batesville-Southwestern.....		17	17	Duluth, Missabe & Northern.....	202	33	235
Belt Railway of Chicago.....		21	21	Duluth, South Shore & Atlantic.....	531		531
Bennettsville & Cheraw.....		44	44	Mineral Range.....	84		84
Benton Harbor-St. Joe.....		39	39	Duluth, Winnipeg & Pacific.....	168	128	168
Berkshire Street.....		154	154	Durham & Southern.....	59	59	59
Bessemer & Lake Erie.....		195	204	Eagles Mere.....		10	10
Big Sandy & Cumberland.....		33	33	East Broad Top Railroad & Coal Co.....		51	51
Bingham & Garfield.....	17		20	East Carolina.....		38	38
Birmingham & Northwestern.....		48	48	East Jordan & Southern.....		50	50
Birmingham Southern.....		16	28	East Tennessee & Western North Carolina.....	34		34
Bloomburg & Sullivan.....		29	29	Eastern Kentucky.....	36		36
Blue Ridge.....	29		44	Easton Transit Co.....		33	33
Blytheville, Leachville & Arkansas Southern.....	44		44	Electric Short Line.....		57	57
Bonlee & Western.....		10	10	Elgin, Joliet & Eastern.....	188	7	195
Boston & Maine.....	1,932	470	2,402	El Paso & Southwestern System.....	474	515	1,028
Boyer City, Gaylord & Alpena.....		91	91	Erie.....	640	1,305	1,945
Bridgeton & Saco River.....		21	21	Bath & Hammondsport.....		10	10
Buffalo & Lake Erie Traction Co.....		91	91	Chicago & Erie.....		249	249
Buffalo & Susquehanna.....	252		252	Columbus & Erie.....		13	13
Buffalo Creek & Gauley.....	1	19	19	New Jersey & New York.....	38		38
Buffalo, Rochester & Pittsburgh.....		456	456	New York, Susquehanna & Western.....	168		168
Bullfrog & Goldfield.....	79		79	Wilkes-Barre & Eastern.....	65		65
Butler County.....		49	49	Escanaba & Lake Superior.....	70	70	145
Butte, Anaconda & Pacific.....	26		26	Etrick & Northern.....		10	10
Cairo, Truman & Southern.....		12	12	Evansville & Ohio Valley.....		71	71
California & Oregon Coast.....		15	15	Evansville, Indianapolis & Terre Haute.....	134		134
California Western Railroad & Navigation Co.....		40	43	Evansville, Suburban & Newburg.....		29	29
Camas Prairie.....	151		151	Fernwood, Columbia & Gulf.....		44	44
Cambria & Indiana.....		38	38	Florida East Coast.....	236	522	758
Canadian National.....	215		215	Fonda, Johnston & Gloversville.....	32		32
Canadian Pacific (in United States).....	33	129	162	Fort Dodge, Des Moines & Southern.....		145	145
Cape Girardeau & Northern.....		104	104	Fort Dodge, Des Moines & Southern.....		145	145
Carolina & Northwestern.....	134		134	Fort Smith & Western.....	197		197
Carolina & Yadkin River.....		35	35	Fort Wayne & Northwestern.....		40	40
Carolina, Clinchfield & Ohio.....	301		301	Fort Worth & Denver City.....	454	454	454
Cedar Rapids & Iowa City.....		43	43	Wichita Valley.....	246	246	246
Central California Traction Co.....		61	61	Frankfort & Cincinnati.....	41		41
Central Indiana.....	108		19	Franklin & Abbeville.....	11	44	55
Central New York & Southern.....		36	36	Fredericksburg & Northern.....		24	24
Central of Georgia.....		312	312	Freeo Valley.....		25	25
Central Railroad of New Jersey.....	1,071	696	1,767	Gainesville Midland.....		74	74
Central Vermont.....		312	488	Gales Creek & Wilson River.....		13	13
Central West Virginia & Southern.....		31	31	Galveston, Houston & Henderson.....	50		50
Charles City Western.....		23	23	Genesee & Wyoming.....	10	17	17
Charleston & Western Carolina.....	342		342	Georgia.....	311	245	315
Charlotte Harbor & Northern.....	97		97	Georgia & Florida.....	352	54	406
Chesapeake & Ohio, Chesapeake & Ohio of Indiana, and Chesapeake & Ohio Northern.....	403	1,995	2,474	Georgia, Florida & Alabama.....	194	194	194
Chesapeake Beach.....	26		28	Georgia Northern.....	69		69
Chesapeake Western.....		41	41	Georgia Southwestern & Gulf.....	36		36
Chesterfield & Lancaster.....	33		33	Gilmore & Pittsburgh.....		119	119
Chicago & Alton.....	613	399	1,012	Glenmora & Western.....		23	23
Chicago & Eastern Illinois.....	366	410	776	Grafton & Upton.....		15	15
Chicago & Eastern Illinois.....	30		30	Grand Rapids, Grand Haven & Muskegon.....		50	50
Chicago & Illinois Midland.....	5,751	2,356	8,538	Grand Trunk Railway System:			
Chicago & North-Western.....		28	28	Eastern Lines.....	20	172	198
Chicago & Western Indiana.....		28	28	Western Lines.....	495	457	952
Chicago, Burlington & Quincy.....	5,086	3,893	8,979	Grasse River Railroad.....		16	16
Chicago Great Western.....	790	686	1,477	Great Northern.....	2,728	4,963	7,691
Chicago, Indianapolis & Louisville.....	554	3	557	Farmers Grain & Shipping.....		66	66
Chicago, Kalamazoo & Saginaw.....	44		44	Watertown & Sioux Falls.....	103		103
Chicago, Lake Shore & South Bend.....		77	77	Great Western.....		88	88
Chicago, Milwaukee & Gary.....	100	100	100	Green Bay & Western.....	250		250
Chicago, Milwaukee & St. Paul.....	5,592	4,713	10,305	Ahnapee & Western.....	32		32
Milwaukee Terminal.....		6	6	Kewaunee, Green Bay & Western.....	36		36
White Sulphur Springs & Yellowstone Park.....		19	19	Greenwich & Johnsonville.....		31	31
Chicago, North Shore & Milwaukee.....		97	97	Groveton, Lufkin & Northern.....		36	36
Chicago, Ottawa & Peoria.....		106	106	Gulf & Ship Island.....	306		306
Chicago, Peoria & St. Louis.....	232		232	Gulf Coast Lines:			
Chicago, Rock Island & Pacific.....	4,421	2,740	7,682	Beaumont, Sour Lake & Western.....	84		84
Chicago, Rock Island & Gulf.....	394		471	Iberia, St. Marys & Eastern.....		48	48
Chicago, St. Paul, Minneapolis & Omaha.....	1,673		1,673	Louisiana Southern.....		65	65
Chicago, South Bend & Northern Indiana.....		171	171	New Iberia & Northern.....		49	49
Chicago, Terre Haute & Southeastern.....	194		365	New Orleans, Texas & Mexico.....	160		174
Cincinnati & Dayton Traction Co.....		54	54	Orange & Northwestern.....	61		61
Cincinnati, Georgetown & Portsmouth.....		53	53	St. Louis, Brownsville & Mexico.....	492	343	492
				Gulf, Florida & Alabama.....	143		143
				Gulf, Mobile & Northern.....	433	433	433

USE OF TELEGRAPH AND TELEPHONE IN TRANSMITTING TRAIN ORDERS—Continued.

Name of railroad.	Telegraph (miles of road).	Telephone (miles of road).	Total operated (miles of road).	Name of railroad.	Telegraph (miles of road).	Telephone (miles of road).	Total operated (miles of road).
Gulf, Texas & Western		100	100	Nevada Copper Belt	38		38
Hagerstown & Frederick		77	77	Nevada County Narrow Gauge		20	20
Hartwell	10		10	Nevada Northern	156	165	165
Hawaii Consolidated		89	89	Newburgh & South Shore		6	6
High Point, Randleman, Ashboro & Southern	28		28	New Jersey, Indiana & Illinois		11	11
Hocking Valley	337		337	New Mexico Central	116		116
Holton Interurban		10	10	New Orleans Great Northern	233		233
Hoosac Tunnel & Wilmington		24	24	New Orleans, Natalbany & Natchez		28	28
Houston & Brazos Valley		30	30	New York & Long Branch		38	38
Houston Belt & Terminal	21		21	New York & Stamford		19	19
Hudson & Manhattan		10	10	New York Central lines	162	4,749	4,911
Hudson Valley		109	109	Boston & Albany	388		388
Huntingdon & Broad Top Mountain R. R. & Coal Co.		70	70	Cincinnati Northern		203	203
Illinois Central	1,433	3,146	4,579	Cleveland, Cincinnati, Chicago & St. Louis	71	1,796	1,867
Chicago, Memphis & Gulf		49	49	Evansville, Indianapolis & Terre Haute		134	134
Yazoo & Mississippi Valley	800		1,312	Kanawha & Michigan	158		158
Illinois Terminal		15	15	Kanawha & West Virginia		35	35
Illinois Traction System	443	443	443	Kankakee & Seneca	42		42
Indiana Railways & Light Co.	53	53	53	Lake Erie & Eastern	8		8
Indianapolis & Cincinnati Traction Co.	100	107	107	Lake Erie & Western	10	700	710
Indianapolis & Louisville Traction	41	41	41	Michigan Central	1,265		1,265
Indianapolis Union Railway Co.	16	16	16	Peoria & Eastern		338	338
Intermountain	40	40	40	Pittsburgh & Lake Erie		200	200
International		33	127	Toledo & Ohio Central		399	399
International & Great Northern	1,106		1,106	Zanesville & Western		85	85
Interstate		35	35	New York, Chicago & St. Louis	516	516	516
Interstate Public Service Co.		79	79	New York, New Haven & Hartford	913	1,010	1,923
Interurban		59	59	Central New England	219	76	295
Iowa Southern Utilities Co.		33	33	New York connecting		9	9
Ironton		10	10	New York, Ontario & Western	504		504
Jefferson & Northwestern		40	40	New York, Westchester & Boston		19	19
Jonesboro, Lake City & Eastern	87		87	Norfolk & Portsmouth Belt Line		27	27
Joplin & Pittsburg		27	27	Norfolk & Western	84	1,658	2,074
Kabuli		30	30	Norfolk Southern	744		744
Kalamazoo, Lake Shore & Chicago		54	54	North East Oklahoma		13	13
Kanawha, Glen Jean & Eastern		14	14	Northern Pacific	3,409	2,701	6,110
Kansas City, Clay County & St. Joseph		72	74	Minnesota & International	212		212
Kansas City, Clinton & Springfield	155	155	155	Gilmore & Pittsburg		118	118
Kansas City, Kaw Valley & Western		35	35	Northwestern Pacific	230	277	507
Kansas City, Mexico & Orient and Kansas City, Mexico & Orient of Texas	723		723	Northwestern Railroad of South Carolina	70		70
Kansas City Southern	824		824	Norwood & St. Lawrence		18	18
Kansas, Oklahoma & Gulf	323		323	Oakdale & Gulf		12	12
Kentucky & Tennessee		16	16	Ocala Southern		69	69
Kentwood & Eastern		17	17	Ohio & Kentucky	25	14	39
Kosciusko & South Eastern		16	16	Ohio Electric		498	498
Lackawanna & Wyoming Valley		23	23	Ohio Valley Electric		37	37
La Crosse & Southeastern		43	43	Oklahoma, New Mexico & Pacific		36	36
Lake Erie, Franklin & Clarion		23	23	Ouachita & Northwestern		36	36
Lake Superior & Ishpeming	19	19	26	Okmulgee Northern		9	9
Lake Tahoe Railway & Transportation		15	15	Pacific & Arctic Railway & Navigation Co.		20	20
Lancaster & Chester	29	29	29	Pacific & Idaho Northern	90		90
Leavenworth & Topeka		47	47	Pacific Coast Railroad	22	53	53
Lehigh & Hudson River	73		73	Pacific Coast Railway	104	104	104
Lehigh & New England	97	154	154	Pacific Electric		228	228
Lehigh Valley	178	1,209	1,387	Pacific Northwest Traction Co.		36	36
Ligonier Valley		16	16	Pajaró Valley Consolidated		38	43
Linville River		32	32	Paris & Mount Pleasant		51	51
Litchfield & Madison		51	51	Pecos Valley Southern		40	40
Live Oak, Perry & Gulf	78		78	Peninsular		52	52
Long Island	167	222	389	Pennsylvania system	2,213	8,024	10,237
Louisiana & Arkansas		288	288	Lorain, Ashland & Southern		66	66
Louisiana & Northwest		99	99	Pittsburgh, Chartiers & Youghiogheny	13	7	20
Louisiana Railway & Navigation Co.	336		336	Pennsylvania & Atlantic	24	24	24
Louisville & Nashville	897	3,834	4,731	Peoria & Pekin Union	14		14
Louisville, Henderson & St. Louis		187	187	Pere Marquette	629	1,087	1,696
Lowville & Beaver River		10	10	Petaluma & Santa Rosa		37	37
McCloud River		47	47	Philadelphia & Reading	964	191	1,089
Macon & Birmingham		67	67	Philadelphia & West Chester	112	58	170
Macon, Dublin & Savannah	93	51	93	Atlantic City		32	32
Magma Arizona	29		29	Catasauqua & Fogelsville	30		30
Maine Central	1,168		1,168	Gattysburg & Harrisburg	38		38
Portland Terminal	24		24	Northeast Pennsylvania	26		26
Manistee & Northeastern	206	17	223	Perkiomen	38		38
Manistiquette & Lake Superior		38	38	Philadelphia & Chester Valley	24		24
Marquette, Tomahawk & Western		35	35	Philadelphia, Newtown & New York	22		22
Maryland & Pennsylvania	78		78	Pickering Valley	11		11
Maryland, Delaware & Virginia	72	77	149	Port Reading		20	20
Massachusetts, Northeastern Street		110	114	Reading & Columbia		60	60
Memphis, Dallas & Gulf	41	8	41	Stony Creek		10	10
Meridian & Memphis	33	33	33	Tamaqua, Hazleton & Northern		10	10
Michigan	91		91	Williams Valley	3		3
Midland Continental		68	68	Piedmont & Northern		128	128
Midland Terminal	53		53	Pittsburgh & Shawmut		83	83
Midland Valley	34		330	Pittsburgh & West Virginia and West Side Belt		26	26
Mineral Point & Northern	30	30	63	Pittsburgh, Lisbon & Western	164	114	185
Minneapolis & Rainy River		63	63	Pittsburgh, Shawmut & Northern		72	72
Minneapolis & St. Louis	1,537		1,537	Portland Railway Light & Power Co.		38	38
Minneapolis, Red Lake & Manitoba		33	33	Potomac, Fredericksburg & Piedmont		11	11
Minneapolis, St. Paul & Sault Ste. Marie	3,569	670	4,239	Prattburg Railway Corporation		33	33
Minnesota & International	212		212	Public Utilities Co.		16	16
Minnesota, Dakota & Western	17		17	Puget Sound & Cascade		83	83
Mississippi Central	177		177	Quincy, Omaha & Kansas City		245	245
Mississippi Eastern		16	16	Raleigh & Charleston	41	41	41
Mississippi River & Bonne Terre	64		64	Raritan River		15	15
Missouri-Illinois		137	137	Reynoldsville & Falls Creek		18	18
Missouri, Kansas & Texas	311	1,266	1,577	Richmond, Fredericksburg & Potomac		114	114
Missouri, Kansas & Texas of Texas	605	963	1,567	Roaring Fork		56	56
Wichita Falls & Northwestern	294	33	327	Rock Island Southern	20		20
Missouri Pacific	3,958	2,880	6,878	Roscoe, Snyder & Pacific		50	50
Missouri Southern		54	54	Rutland	414	160	414
Mobile & Ohio	960		997	Sacramento Northern		103	103
Monongahela		107	107	St. Louis & Hannibal		42	42
Monongahela Connecting		13	13	St. Louis, El Reno & Western		20	20
Montour		52	52	St. Louis, Kennett & Southeastern		1	1
Montana, Wyoming & Southern		25	25	St. Louis Merchants Bridge Terminal	8		8
Morehead & North Fork		22	22	St. Louis & O'Fallon		9	9
Mount Hood		20	20	St. Louis & Ohio River		13	13
Mount Jewett, Kinzua & Riterville	71		124	St. Louis & San Francisco	2,326	2,351	4,777
Munising, Marquette & Southeastern		54	54	Brownwood North & South		17	17
Muscogee, Burlington & Southern		28	28	Fort Worth & Rio Grande	328		328
Nacagdoches & Southeastern		28	28	St. Louis Southwestern	1,092	426	1,518
Natchez, Chattanooga & St. Louis	162	1,085	1,247	St. Louis, Troy & Eastern		21	21
Natchez, Columbia & Mobile		29	29	Salem, Winona & Southern		81	81
Neame, Carson & Southern		16	16	Salina Northern		15	15
Nevada-California-Oregon	171		171	Salt Lake, Garfield & Western		78	78
Nevada Central	93	93	93	Salt Lake & Utah		78	78
				San Antonio & Aransas Pass	729	729	729

USE OF TELEGRAPH AND TELEPHONE IN TRANSMITTING TRAIN ORDERS—Continued.

Name of railroad.	Telegraph (miles of road).	Telephone (miles of road).	Total operated (miles of road).	Name of railroad.	Telegraph (miles of road).	Telephone (miles of road).	Total operated (miles of road).
San Antonio Southern.....	54	.....	54	Texas, Oklahoma & Eastern.....	.....	33	33
San Antonio, Uvalde & Gulf.....	259	317	317	Texas Southeastern.....	.....	20	20
San Diego & Arizona.....	126	122	156	Thornton & Alexandria.....	.....	25	25
Sandy River & Rangeley Lakes.....	47	77	104	Tionesta Valley.....	.....	39	39
San Francisco-Sacramento.....	.....	56	56	Toledo & Indiana.....	.....	52	52
San Joaquin & Eastern.....	.....	12	12	Toledo & Western.....	81	81	81
San Luis Central.....	.....	31	31	Toledo, Bowling Green & Southern Traction Co.....	.....	51	51
San Luis Southern.....	.....	1	1	Toledo, Peoria & Western.....	231	14	231
Sault Ste. Marie Bridge Co.....	.....	145	145	Toledo, St. Louis & Western.....	.....	451	451
Savannah & Atlanta.....	.....	33	33	Tonopah & Goldfield.....	88	88	88
Savannah & Statesboro.....	.....	32	32	Tonopah & Tidewater.....	169	.....	169
Savannah & Southern.....	.....	1,984	3,547	Trans-Mississippi Terminal.....	12	12	12
Seaboard Air Line.....	1,563	41	41	Tremont & Gulf.....	.....	67	67
Sheffield & Tionesta.....	.....	15	53	Trinity & Brazos Valley.....	311	.....	311
Shreveport, Alexandria & Southwestern system:	.....	27	27	Trinity Valley & Northern.....	.....	18	18
Louisiana & Pacific.....	43	6	6	Trona.....	.....	31	31
Sibley, Lake Bisteneau & Southern.....	.....	7	7	Tucson, Cornelia & Gila Bend.....	29	29	29
Woodworth & Louisiana Central.....	.....	19	19	Uintah.....	63	43	43
Sierra Railways Co. of California.....	57	33	33	Utah.....	63	67	68
Sligo & Eastern.....	.....	10	10	Ulster & Delaware.....	129	.....	129
Smoky Mountain.....	.....	77	82	Unadilla Valley.....	.....	19	19
South Georgia.....	.....	33	33	Unadilla Valley.....	.....	17	17
Southern Indiana Gas & Electric.....	.....	.....	.....	Union Pacific.....	2,412	1,146	3,558
Southern Railway system:	.....	.....	.....	Los Angeles & Salt Lake.....	1,037	.....	1,037
Alabama Great Southern.....	296	.....	296	Oregon Short Line.....	1,405	766	2,172
Atlantic & Yadkin.....	160	.....	162	Oregon-Washington Railroad & Navigation Co.....	1,162	640	1,837
Cincinnati, New Orleans & Texas Pacific.....	335	.....	335	St. Joseph & Grand Island.....	258	.....	258
Georgia Southern & Florida.....	392	.....	392	Union Traction Co. of Indiana.....	.....	400	400
Harriman & Northeastern.....	.....	20	20	Utah.....	.....	102	102
Knoxville & Augusta.....	26	.....	26	Utah-Idaho Central.....	.....	113	113
Knoxville & Bristol.....	40	.....	40	Verde Tunnel & Smelter.....	11	.....	11
New Orleans & Northeastern.....	196	.....	196	Vicksburg Route:	.....	.....	.....
New Orleans Terminal.....	.....	19	19	Alabama & Vicksburg.....	139	.....	139
Northern Alabama.....	94	.....	94	Vicksburg, Shreveport & Pacific.....	169	.....	169
St. Johns River Terminal Co.....	.....	20	20	Virginia & Carolina Southern.....	.....	54	54
Southern.....	6,157	345	6,651	Virginia & Truckee.....	67	.....	67
Tennessee & Carolina Southern.....	31	.....	31	Virginia.....	.....	507	507
Southern Michigan.....	.....	33	33	Visalia Electric.....	21	37	37
Southern New York Power & Ry. Corporation.....	.....	59	59	Wabash.....	2,095	824	2,125
Southern Pacific system:	.....	.....	.....	Wabash, Chester & Western.....	64	.....	64
Arizona Eastern.....	372	161	382	Wadley Southern.....	.....	80	89
Galveston, Harrisburg & San Antonio.....	350	951	1,373	Walla Walla Valley.....	.....	14	14
Houston & Shreveport.....	.....	40	40	Warren & Ouachita Valley.....	.....	16	16
Houston & Texas Central.....	839	.....	843	Washington & Old Dominion.....	54	54	54
Houston East & West Texas.....	.....	191	197	Washington, Baltimore & Annapolis Electric.....	.....	79	127
Lake Charles & Northern.....	44	.....	44	Washington, Idaho & Montana.....	.....	49	49
Louisiana Western.....	197	.....	206	Washington & Virginia Railway.....	.....	40	40
Morgan's Louisiana & Texas R. R. & S. S. Co.....	183	145	385	Washington Water Power Co.....	.....	22	24
Pacific System.....	4,651	2,265	6,916	Waterloo, Cedar Falls & Northern.....	.....	90	90
Texas & New Orleans.....	316	161	498	Waycross & Southern.....	.....	20	20
Southwest Missouri.....	.....	59	71	Weatherford, Mineral Wells & Northwestern.....	41	41	41
Spokane & Eastern Railway & Bower Co. and Inland	.....	.....	.....	Wellington & Powellville.....	.....	22	22
Empire.....	168	.....	168	Western & Allegheny.....	.....	48	68
Spokane International.....	161	.....	161	Western Maryland.....	63	560	665
Spokane, Portland & Seattle.....	541	.....	541	Western Ohio.....	.....	112	112
Oregon Electric.....	69	154	154	Western Pacific.....	435	490	925
Oregon Trunk.....	156	.....	156	Western Pine Lumber Co.....	.....	16	16
United Railways.....	.....	19	19	West Virginia Midland.....	.....	33	33
Stanley, Merrill & Phillips.....	.....	38	38	West Virginia Northern.....	.....	11	13
Sugar Land.....	.....	39	39	Wharton & Northern.....	.....	23	23
Sumpter Valley.....	.....	80	80	Wheeling & Lake Erie.....	.....	510	510
Susquehanna & New York.....	.....	47	47	Wheeling Traction.....	.....	102	102
Tallulah Falls.....	44	.....	57	Wichita Falls & Southern.....	104	.....	104
Tampa & Gulf Coast.....	57	68	75	Wichita Northwestern.....	.....	102	102
Tampa & Jacksonville.....	47	.....	56	Wilkes-Barre Connecting.....	7	.....	7
Tampa Northern.....	56	.....	56	Williamsport & North Branch.....	.....	44	44
Tennessee.....	.....	46	62	Winona Interurban.....	.....	69	69
Tennessee & North Carolina.....	.....	65	65	Winston-Salem Southbound.....	.....	92	92
Tennessee & Alabama & Georgia.....	.....	34	38	Wisconsin & Michigan.....	.....	62	62
Tennessee Central.....	286	.....	286	Woodstock.....	.....	14	14
Terminal Railroad Association of St. Louis.....	3	11	16	Wrightsville & Tennille.....	102	.....	104
Terre Haute, Indianapolis & Eastern Traction Co.....	.....	400	400	Wyoming & Missouri River.....	.....	18	18
Texas & Pacific.....	1,933	806	1,933	Yadkin.....	52	.....	52
Texas Mexican.....	160	.....	160	Yosemite Valley.....	78	78	78
Texas Midland.....	125	.....	125				
				Total.....	132,682	123,253	246,414

*St. Louis & San Francisco: Includes Paris & Great Northern Railway.

taining to the use of both telephone and telegraph for transmission of train orders. It will be noted that if the mileage for both telegraph and telephone be added together for any year the sum will be more than the total operating miles of road. The same is true regarding the two curves showing the percentages, one for telegraph and the other for telephone—that is, the sum of the percentages for any year if added together will equal more than 100 per cent. The reason for this discrepancy in both cases is due to the fact that on many railroads there is an overlapping of the telegraph and telephone and on other roads both means of communication are used on the same districts.

The total miles of road given in the January, 1922, report as compared with the January, 1921, report show a decrease of 635 miles of road over which the telegraph is used for the transmission of train orders, and an increase of 2,113 miles of road over which the telephone is used for such purposes. Evidently very little telephone construction work was done during 1921 as compared with 1919, when 6,114 miles of road were equipped or

with 1920, when 2,468 miles of road were equipped with this class of apparatus. However, the figures show beyond doubt that there is a marked tendency toward the use of the telephone, and it is to be expected that with the revival of business telephone equipment will be installed extensively and that within a few years the miles of road equipped with the telephone will exceed that equipped with the telegraph. The small table which is published with this article, but which did not accompany the report of the Bureau of Safety, shows some of the principal changes in the mileage of the individual roads since the 1920 report was published. Perhaps the largest telephone installation was that on the Missouri Pacific, consisting of 784 miles of road, and the next in proportion was that on the San Antonio & Arkansas Pass consisting of 729 miles of road, and the third largest installation was that on the Ft. Worth & Denver City consisting of 454 miles of telephone equipment. On the Nashville, Chattanooga & St. Louis, 321 miles of road was equipped with telephone and several different installations of about 100 miles are noted in the table.