

THE DISTRICTS AND THE ROADS TREATED

In the following pages the attempt has been made to give a resume of interurban practice in the Central West. For the purpose of determining in so far as possible the latest methods and standards in interurban construction and operation in this section, a number of representative roads in Ohio, Indiana and Michigan were selected and a personal investigation of these roads was made by the editors. It is realized that the practices on roads other than those visited are well worthy of study, but owing to the lack of time and space it was impossible to include all the systems in this district, and it is believed the roads selected offer the basis for a resume of the latest and most typical practices. For the purposes of the investigation eight roads were selected in Northern Ohio, nine in Central and Southern Ohio, seven in Indiana and two in Michigan.

In the tables under each chapter are given in detail the latest practices in the various departments. In the text the attempt has been made to point out the latest standards where practices have been standardized. Where no definite standards have yet been reached the endeavor has been to indicate tendencies toward uniformity in practice, and where this could not be done the variations and differences are stated and the need for uniformity pointed out. In the pages containing the half-tone engravings, the arrangement has been to group together in so far as possible views that would show the latest and most representative practices in the matters treated.

INTERURBAN DEVELOPMENTS IN THE TERRITORY TREATED

The year 1906 will go down as an epoch-marker in the history of interurban railways in Ohio. The consolidations of many roads and the completion of new lines have made numerous changes in the interurban map of the greatest interurban State in the Union. At present there are in operation 2600 miles of strictly interurban roads in the State, of which 195 miles have been completed this year.

One of the most important incidents was the completion of the Western Ohio extension from Lima to Findlay. A golden spike presented by the STREET RAILWAY JOURNAL was the finishing touch in the line which linked together more than 4000 miles of interurban roads in the five States of New York, Pennsylvania, Ohio, Michigan and Indiana. The completion of this link was soon followed by the institution of limited service from Dayton to Toledo, 162 miles, and in connection with other roads giving limited service it rendered possible a fast trolley trip from the central part of Michigan across Ohio to all the numerous points in Indiana, or from the eastern part of Ohio to Indiana points.

The early part of this year saw the consummation of the plans of the Widener-Elkins-Schoepf syndicate for the consolidation of numerous lines in Ohio. This syndicate acquired the Columbus, Buckeye Lake & Newark and the Columbus, Newark & Zanesville. At receiver's sale it acquired the Columbus, London & Springfield; Columbus, Grove City & Southwestern; Dayton, Springfield & Urbana; Urbana, Bellefontaine & Northern and the Springfield & Western, known as the Appleyard systems. By purchase it also acquired the Dayton & Northern and the Dayton & Muncie, and by lease it secured the Dayton & Western. A steam road, known as the Columbus & Lake Michigan, was purchased, and will probably be electrified. These various properties have been grouped together under one head, known as the Indiana, Columbus & Eastern. In addition, the syndicate owns the Fort Wayne,

Van Wert & Lima, the Cincinnati Northern and the Cincinnati Interurban. It has under construction a line from Lima to Toledo, part of which will be placed in operation this year and will be completed next year. In all, the syndicate has in Ohio about 510 miles of operating interurban lines, where a year ago it had less than 100. Its system of interurban and city lines in the two States of Ohio and Indiana embraces about 1300 miles. In Ohio it plans to build from Bellefontaine to Lima, which, with the Lima & Toledo, will give it a continuous line from Cincinnati to Toledo independent of any other interests. The almost entire reconstruction of the Cincinnati Northern, with double track on private right of way, a new power station and new rolling stock capable of giving very fast service between Dayton and Cincinnati, will have an important bearing on the through Cincinnati to Toledo service.

This year witnessed the complete reconstruction of the Everett-Moore system larger and stronger than it was at the time of the embarrassment four years ago. This rebuilding of a scattered system demonstrated the remarkable persistence of the Cleveland syndicate and its belief in the future of interurban traction, in that while it sold its telephone properties and one of its city properties, the Cleveland Electric, its chief aim was to get back the interurbans and enlarge the system. The first step was the repurchase of the Detroit, Monroe & Toledo Short Line, the connecting link between the Michigan and Ohio properties. This has been added to the system of the Detroit United Railways, giving it 620 miles of road, of which about 420 is interurban mileage. The syndicate then purchased the Cleveland, Painesville & Ashtabula, which it originally promoted, adding it to the Cleveland, Painesville & Eastern. Last month saw the consolidation of the Canton-Akron, Canton-New Philadelphia and the Tuscarawas Traction into the Northern Ohio Traction & Light, making the mileage of the system 205 miles. The Lake Shore Electric, another of its properties, will shortly merge under its charter the Lorain Street Railway and the Avon Beach & Southern. It is building lines from Sandusky to Fremont, from Fremont to Tiffin and from Fremont to Fostoria. This last-mentioned line will form a very direct route between Cleveland and Dayton and Cleveland and Indianapolis, and the extensions mentioned will bring the Lake Shore Electric system up to 225 miles. These extensions with city lines will give the syndicate 1300 miles of connected roads, not including some isolated properties in other sections.

The Pomeroy-Mandelbaum syndicate, owning the Western Ohio and Cleveland & Southwestern, is building an extension to Mansfield, thus connecting with the Ohio Central and giving the system about 320 miles in the State. The Columbus, Delaware & Marion is building an extension from Marion to Bucyrus, which, with the extension above mentioned, will complete a through line from Columbus to Cleveland, a result which has long been talked of. In the eastern part of the State the Youngstown & Southern and the Youngstown & Ohio River companies are working together on a line from Youngstown to East Liverpool. This line, with extensions which the Ely syndicate is building south of East Liverpool and connection with the Wheeling Traction Company, will make a continuous line from Wheeling to Youngstown. This will doubtless be placed in operation next year.

The Eastern Ohio Traction Company has practically completed its refunding plans and will extend its Garrettsville division to form a connection with a line which the Mahoning

& Shenango Valley Traction Company will build from Leavittsburg to Garrettsville, and the two will be operated together, forming a high-speed line from Cleveland to Youngstown. With extensions under way in Pennsylvania, next year may see through service from Cleveland to Pittsburg over this route.

Several interests have projects well under way to connect

is going on in an unprecedented manner. The interurbans are now getting a considerable share of the long-distance business, and the links which are now being forged will turn much more of this class of business in their direction.

In Indiana at the present time several new roads are being constructed, and several of the roads which have been operating

TABLE I.—GENERAL INFORMATION PERTAINING TO PROPERTIES TREATED (See also Opposite Page).

NAMES OF COMPANIES.	OPERATES BETWEEN (Main Lines).	Miles of Route.	Miles of Single Track.	Miles of Double Track.	Total Mileage.	NUMBER OF CARS.		SYSTEM OF CONTROL.	
						Owued.	Average Operated Daily.	Number and Type of Motors per Car.	Type of Control.
NORTHERN OHIO GROUP.									
Cleveland & Southwestern Tr. Co.	Cleveland and Norwalk	56							
	Cleveland and Wooster	52	133	2	135	57	38	Four West., Nos. 112, 93, 76 and 56.	Type M, L4.
Lake Shore Electric Ry.	Cleveland and Toledo	120							
	Cleveland and Sandusky	40	160	15	175	70	42	Four West., Nos. 121 & 76, G.E. 57	Type M.
Eastern Ohio Tr. Co.	Cleveland and Garrettsville	37							
	Cleveland and Chardon	32	85		85	30	14	Four Lorain, No. 34.	K14.
Toledo & Indiana Ry.	Toledo and Bryan	56	56		56	13	9	Four West., No. 56.	K14.
Toledo & Western Ry.	Toledo and Pionet	46							
	Toledo and Adrian, Mich.	34	80		80	20	8	Four West., No. 76, Lorain, No. 34.	K6, Lorain 4.
Toledo, Pt. Clinton & Lakeside Ry.	Toledo and Marblehead	52	52		52	13	6	Four Bullock, Nos. 50 and 75.	Bullock.
Stark Electric Ry.	Canton and Salem	35	35	1	36	11	6	Four West., Nos. 76 and 56.	K14, L4.
Canton-Akron Ry.	Akron and New Philadelphia	58	84		84	12	8	Four G.E., No. 73.	Type M.
CENTRAL AND SOUTHERN OHIO GROUP.									
Western Ohio Ry.	Lima and Celina	40							
	Findlay and Piqua	80	112		112	22	12	Four West., No. 56.	K14.
Ft. Wayne, Van Wert & Lima Tr. Co.	Lima and Ft. Wayne	65	65		65	10	6	Four West., Nos. 85 and 121.	Type M.
Dayton & Troy Electric Ry.	Dayton and Piqua	31	21	10	31	8	4	Four West., No. 76.	L4.
Dayton, Covington & Piqua Tr. Co.	Dayton and Piqua	34	34		34	10	5	Four G.E., No. 67.	K14.
Scioto Valley Tr. Co.	Columbus and Lancaster	30							
	Columbus and Chillicothe	47	70	10	80	20	9	Four G.E., No. 66.	Type M.
Cincinnati & Columbus Tr. Co.	Cincinnati and Hillsboro	52	52		52	8	4	Four G.E., 75 h. p.	Type M.
Cincinnati, Milford & Loveland Tr. Co.	Cincinnati and Bluestone	31	24	7	31	10	7	Four Bullock, 50	Bullock.
	Cincinnati and New Richmond	24							
Interurban Ry. & Terminal Co., Cincinnati	Cincinnati and Bethel	32	95	6	101	36	20	Four West., Nos. 49 and 56.	K12, K14.
	Cincinnati and Letamon	32							
Cincinnati, Georgetown & Portsmouth	Cincinnati and Russelville	53	56		56	15	8	Four West., No. 56.	K14.
INDIANA GROUP.									
Indiana Union Tr. Co.	Indianapolis and Munice				250			Four West, No. 85	L4.
	Ind. and Logansport and Peru Anderson and Marion								
Indianapolis & Northwestern Tr. Co.	Indianapolis and La Fayette								
	Lebanon and Crawfordville		87		87	20	10	Four G.E., No. 73.	Type M.
Indianapolis & Cincinnati Tr. Co.	Indianapolis and Rushville								
	Indianapolis and Shelbyville				104	24	11	Four West, No. 106A	Electro-pneumatic.
Indianapolis, Columbus & Southern Tr. Co.	Indianapolis and Shelby, Ind						5	Four G.E., No. 57H	K14.
Terre Haute Tr. & Light Co.	Terre Haute and Clinton								
	Terre Haute and Brazil				*108	104	8	Four G.E., No. 73	Type M.
	Terre Haute and Sullivan								
	Terre Haute and St. Mary's								
Kokomo, Marion & Western Tr. Co.	Kokomo and Marion	28	28		28	*24	3	Four West, No. 93	K10
Ft. Wayne & Wabash Valley Tr. Co.	Ft. Wayne and Logansport								
	Ft. Wayne and Bluffton		101		101	*169	5	Four West, No. 121	Electro-pneumatic.
MICHIGAN GROUP.									
Rapid Ry. System (Detroit United)	Detroit and Pt. Huron	111			123	75	17	Four West, No. 112	Electro-pneumatic.
Detroit, Ypsilanti, Ann Arbor & Jackson Ry.	Detroit and Jackson								
	Ypsilanti and Saline		86		86	43	14	Four West., Nos. 76 and 93A.	L4.

*City and Interurban combined.

Marion and Findlay and Bucyrus and Fostoria, either of which would complete a very direct route from Columbus to Toledo, another long talked of through line.

The Sandusky, Norwalk & Mansfield is building from Plymouth to Shelby, which, in connection with the Mansfield-Shelby line, will give Mansfield connection with Cleveland over two routes.

In the western portion of the State the Toledo & Indiana has surveys completed and plans ready for extending its line to Fort Wayne, thus giving another very direct route from Toledo to numerous cities in Indiana. In the southern end of the State the Cincinnati, Georgetown & Portsmouth is working to complete its line to West Union, and then it will go on to Portsmouth. The Cincinnati & Columbus and the Cincinnati, Milford & Loveland are both heading for Columbus, the former by way of Chillicothe, making connection with the Scioto Valley, and the latter by way of Washington, to make connection with the Columbus, Grove City & Southwestern.

A number of other lines which look promising are being projected, and, in a word, the completing of unconnected links

for a number of years are building extensions. The Terre Haute Traction & Light Company has, within the past few months, completed an extension south from Terre Haute to Sullivan, a distance of 26 miles. In the extreme southwestern part of the State in the vicinity of Evansville two lines have recently been completed. One of these, the Evansville & Mt. Vernon Traction company, now operates southwest out of Evansville to Mt. Vernon, Ind., a distance of 17 miles. The Boonville extension of the Evansville Suburban & Newburgh Railway Company has been built within the last year. Its terminus is Boonville, a town of about 5000 people, lying 17 miles east of Evansville. The Winona Interurban Railway during the past summer began operation between Winona and Goshen, a distance of 28 miles. The same company is now building south from Warsaw to Peru. At about the beginning of the year the extension of the Indianapolis & Cincinnati Traction Company west from Rushville will be completed. This extension, which will eventually form part of the connecting road between Indianapolis and Cincinnati, is 19 miles long and has its eastern terminus at Connersville.

On the Shelbyville division of the Indianapolis & Cincinnati Traction Company considerable construction has been in progress during the past season. The whole line is being changed from direct current to an alternating-current system. Only a few months ago the Fort Wayne, Bluffton & Marion Traction Company was put in operation as far as Bluffton, 23 miles south of

Wayne & Wabash Valley Traction Company. The Muncie & Portland Traction Company also began operation during the year, as did also the Indiana Northern Railway Company on its St. Joseph extension from Fort Wayne north to St. Joseph, Mich. The Marion, Bluffton & Eastern Traction Company is now operating over a portion of the line between Marion and

TABLE I.—GENERAL INFORMATION PERTAINING TO PROPERTIES TREATED—Concluded.

NAMES OF COMPANIES.	POWER.		Average Schedule Service.	SPEEDS IN M.P.H.		
	Voltage Generated.	Voltage Transmitted.		Schedule Local Cars.	Schedule Limited Cars.	Maximum Running.
NORTHERN OHIO GROUP.						
Cleveland & Southwestern Tr. Co.....	390 A.C.	24,000	Hourly, 6 Lts.....	19	27	50
Lake Shore Electric Ry.....	390 A.C., 16,500 A.C.	16,500	Hourly, 5 Lts.....	20	27	60
Eastern Ohio Tr. Co.....	650 D.C.	18,000	Hourly, 2 Lts.....	17	24	40
Toledo & Indiana Ry.....	13,500 A.C.	13,500	Hourly, Lts. & Locals Alternate	24	32	55
Toledo & Western Ry.....	13,200 A.C.	13,200	Hourly, No Lts.....	20	..	40
Toledo, Pt. Clinton & Lakeside Ry.....	375 A.C.	20,000	Hourly, 2 Lts.....	23	26	50
Stark Electric Ry.....	360 A.C.	22,000	Hourly.....	21	..	50
Canton-Akron Ry.....	13,200 A.C.	13,200	Hourly, 3 Lts.....	18	23	45
CENTRAL AND SOUTHERN OHIO GROUP.						
Western Ohio Ry.....	420 A.C.	33,000	Hourly, Lts. & Locals Alternate	21	31	60
Ft. Wayne, Van Wert & Lima Tr. Co.....	Buy's power	33,000	Hourly, Lts. & Locals Alternate	24	30	62
Dayton & Troy Electric Ry.....	650 D.C.	650 D.C., 980 D.C.	Hourly, Lts. every 2 hours.....	22	30	60
Dayton, Covington & Piqua Tr. Co.....	650 D.C.	650 D.C.	Hourly.....	19	..	45
Scioto Valley Tr. Co.....	375 A.C.	27,000	Hourly.....	28	..	60
Cincinnati & Columbus Tr. Co.....	380 A.C.	33,000	13 Local Cars each way daily.....	25	..	55
Cincinnati, Milford & Loveland Tr. Co.....	400 A.C.	16,500	20	..	45
Interurban Ry. & Terminal Co., Cincinnati.....	10,000 A.C.	10,000	Hourly.....	18	..	40
Cincinnati, Georgetown & Portsmouth.....	360 A.C.	15,000	20	..	45
INDIANA GROUP.						
Indiana Union Tr. Co.....	385 A.C.	15,000 and 30,000	Hourly, Lts. & Locals Alternate	23	28	65
Indianapolis & Northwestern Tr. Co.....	390 A.C.	30,000	Hourly, 4 Lts.....	20	28	65
Indianapolis & Cincinnati Tr. Co.....	2,300 A.C.	33,000	Hourly.....	21	27	50
Indianapolis, Columbus & Southern Tr. Co.....	370 A.C.	15,000	Hourly.....	23	..	45
Terre Haute Tr. & Light Co.....	2,200 A.C. and 600 D.C.	22,000 and 11,000	Hourly.....	27	..	52
Kokomo, Marion & Western Tr. Co.....	2,300 A.C.	22,000 and 11,000	Hourly.....	22	..	50
Ft. Wayne & Wabash Valley Tr. Co.....	13,200 A.C., 16,500 A.C.	16,500 and 13,200	1½ hour, 4 Lts.....	23	30	..
MICHIGAN GROUP.						
Rapid Ry. System (Detroit United).....	390 A.C.	16,500	Hourly, 3 Lts.....	20	23	..
Detroit, Ypsilanti, Ann Arbor & Jackson Ry.....	390 A.C. and 650 D.C.	22,000	Hourly and half-hourly.....	20	26	57

Fort Wayne. This road is operated by the Fort Wayne & Wabash Valley Traction Company. The La Fayette & Logansport Traction Company is building between La Fayette and Logansport. This company is closely identified with the Fort

Bluffton, and the work of extension to Bluffton will be completed within a few months. Construction work on the Indianapolis Coal Traction Company, extending west of Indianapolis towards Terre Haute, is also being pushed rapidly.

