

ADVANCE SHEETS

OF THE

TWENTY-SIXTH ANNUAL REPORT

OF THE

.. COMMISSIONER OF ..

RAILROADS ^{AND} TELEGRAPHS

TO THE

GOVERNOR OF THE STATE OF OHIO,

FOR THE YEAR 1893.


NORWALK, OHIO:
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*Ohio. Dept. of railroads and
telegraphs.*

...TWENTY-SIXTH...

ANNUAL REPORT
II

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COMMISSIONER

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FOR THE YEAR 1893.



COMMISSIONERS OF RAILROADS AND TELEGRAPHS.

DEPARTMENT CREATED APRIL 5, 1867. TERM OF OFFICE, TWO YEARS.

George B. Wright ¹	1867-1871.
Richard D. Harrison ²	1871-1872.
Orlow L. Wolcott.....	1872-1874.
John G. Thompson ³	1874-1876.
Lincoln G. Delano.....	1876-1878.
William Bell, Jr.....	1878-1880.
James S. Robin.....	1880-1881.
Hylas Sabine.....	1881-1883.
Hy as Sabine.....	1883-1885.
Henry Apthorp.....	1885-1887.
William S. Cap.....	1887-1889.
William S. Capper.....	1889-1890.
James A. Norton ⁶	1890-1892.
William Kirkby.....	1892-1893.

¹Resigned Oct., 1871.

²Died April 1872.

³Resigned Dec., 1875.

⁴Resigned Feb., 1881.

⁵Resigned May, 1890.

⁶Resigned May, 1892.

DEPARTMENT OF COMMISSIONERS OF RAILROADS
AND TELEGRAPHS.

WILLIAM KIRKBY, Commissioner.....	Columbus, O.
E. H. ARCHER, Chief Clerk.....	Columbus, O.
J. H. WEIRICK, Secretary.....	Columbus, O.
JAMES McMILLAN, Inspector	Toledo, O.
E. G. BROOKS, Messenger	Columbus, O.

Annual Report.

OFFICE COMMISSIONER OF RAILROADS AND TELEGRAPHS,

COLUMBUS, OHIO, *December 31, 1893.*

HON. WM. MCKINLEY, *Governor:*

SIR: I herewith submit for your consideration the twenty-sixth annual report of the Commissioner of Railroads and Telegraphs for the year ending December 31, 1893.

INSPECTIONS.

James McMillan, Esq., of Toledo, Ohio, was appointed Inspector June 21, 1893.

Twenty-four of the fifty-four operating railroad companies in Ohio have been inspected during the year. A detailed report showing the physical condition, etc., of the roads inspected is now on file and made a part of the records of this office.

OFFICIAL ORDERS.

Twenty-four interlocking plants at railroad crossings have been approved and permission given to operate the same during the year.

Complaints that the railroads crossing streets and highways at grade, thereby rendering such crossings dangerous, to the number of fifty-two, have been investigated; twenty-two of which were provided with either watchmen or bells by voluntary action of the railroad companies, and the agreement thereto by the civil authorities making the complaint. The remaining thirty complaints were dismissed, not being such as required protection by watchmen or gates.

ACCIDENTS.

During the year there have been reported four hundred and ninety-three fatalities. A majority of the fatal accidents have been to persons who were trespassing upon the railroad property. There has also been a large number of employes killed while in the discharge of their duties. But of the four hundred and ninety-three fatal accidents not one of the persons killed was a passenger.

The most notable accidents of the year have been those that occurred at Monroe Falls, Ohio, July 25, 1893; Lindsey, Ohio, August 5, 1893; Wellsville, Ohio, October 17, 1893; Bradner, Ohio, November 9, 1893.

The accident at Monroe Falls on the Pittsburgh & Western railroad was caused by the train leaving the track on a curve. I personally inspected the ground and account for the accident by the fact that the train, which was a heavy one—twelve cars—and drawn by two locomotives; the first locomotive, when leaving the curve, caused the tender of the second one to raise on the rail sufficiently to throw the truck off and thus cause the cars to follow it.

I am also of the opinion that the sudden application of the air brake at this point caused this condition of affairs, resulting in the wheels of the front truck of the tender of the second locomotive leaving the track. The bulk of the coal was in the rear end of the tender, and the water in the tank was low, and the train was running at a high rate of speed.

There was nothing to show that the condition of the track had anything to do with causing the wreck. The train was made up of new cars which stood the shock, and the result was that none of the passengers or trainmen were killed and the injuries were slight.

The accident at Lindsey, Ohio, on the Lake Shore & Michigan Southern road on the night of August 5, 1893, resulted in the death of four persons: C. E. Laverty, engineer; C. E. Spane, brakeman of freight train; J. K. Robinson and L. Pelham, porters of the sleeping car of the passenger train.

The circumstances surrounding this accident were of a very peculiar nature, and the coroner's inquest held at Fremont soon after the accident, failed to fix the responsibility or show the cause.

It appeared from the testimony taken at the inquest that an east bound freight train was standing on the second siding at Lindsey for the west bound fast passenger train to pass. The engine of the passenger train and four cars passed over the switch leading from the main track safely, as did the forward truck of the first sleeper; the rear truck of that car passed into the switch and the car was thrown against the freight engine, killing the engineer and brakeman; the other cars followed the first sleeper into the first siding. One of the cars was a complete wreck and several passengers were injured, including Professor Emerson of Harvard college.

The passenger train broke between the first sleeper and the rear day coach and ran for a considerable distance before the engineer discovered the breaking of his train.

All of the parties who examined the switch leading from the main track after the accident, testified that it was properly closed and nothing to show but that it had been in that position all the time; the engineer and fireman of the passenger train testified that the signals were at safety

as they approached the station, and they were not aware that anything was wrong until the train broke.

The brakeman of the freight train who had charge of the switch, testified that the switch was properly set for the passenger train to pass, and that he could not account for the sleepers getting on the siding. In fact, all the testimony presented failed to throw any light whatever on the cause of the wreck.

My theory is that the switch was either left unlocked, thoughtlessly, and the jarring of the heavy passenger train opened the point of the switch and let the cars in after the forward truck of the first sleeper had passed over it; or, that it was thrown open between the forward and rear trucks of the first sleeper and closed again after all the sleepers had passed in on the first siding.

I cannot see how this accident could have occurred in any other manner, as the switch was in perfect working order immediately after the wreck occurred, and there were no wheel marks on the rails to show that the trucks had jumped the main track, which certainly would have been the case had those heavy cars done so. And in further support of my opinion will state that the trucks of the sleepers were all on the rails of the first siding.

The accident at Wellsville, Ohio, October 17, 1893, occurred in the yards at that place, and was a collision between a passenger and freight train which resulted in the death of G. D. Carrothers, a pilot; B. Jackson, engineer; E. Jackson, fireman; Robert Ferry, express messenger; and Alex. Frazer, baggage master, all of the passenger crew.

The passenger train was a regular on the P., Ft. W. & Chicago road, but was taken around by Wellsville over the Cleveland & Pittsburgh tracks on account of a freight wreck on the former road. The train was in charge of pilot Carrothers, and when it approached the yards there was a heavy fog and no one on the engine could see the signals. The freight train was using the cross-over and the semaphore was against the passenger train, but on account of the fog they seemed to have lost their bearings and collided with the freight.

As all the parties in charge of the passenger train were killed, there is no other way to account for the accident.

The accident on the Columbus, Hocking Valley & Toledo railroad near Bradner, Ohio, November 9, 1893, which resulted in the death of engineer L. H. Jones, fireman C. H. Jones, express messenger Gresh of passenger train, and engineer Kerlin of freight train, was caused by the stopping of engineer Kerlin's watch. According to the time shown by the watch of the engineer, it was nineteen minutes slow when the collision occurred, and as there was a dense fog prevailing at the time he could not see the approaching passenger train.

There is no doubt but that this collision could have been prevented had it not been for the fog, as the track is clear and straight for some distance along the line where the trains came together.

A photograph of the engineer's watch showing time of stopping is on file in this office with report of wreck.

GRADE CROSSINGS.

Action to abolish dangerous grade crossings by substitution of over or under-ways, pursuant to the provisions of the act of the 70th General Assembly, for abolition of dangerous grade crossings has been under advisement at three different places during the year, and the final conclusion of the same will no doubt result in the substitution of over-ways at each place and will lead to similar action at numerous places in the State during the coming year.

SAFETY APPLIANCES.

The act of the 70th General Assembly, providing for the equipment of cars with air brakes and automatic couplers, is being complied with by all roads doing business in Ohio, as fast as time and means financial will permit.

TRAIN HEATING AND LIGHTING.

Great improvements have been made in the manner of heating and lighting the coaches in the passenger service in this State during the past year. The principal roads are putting in apparatus for lighting with gas and heating their cars with steam direct from the locomotive.

BLOCK SYSTEM.

This system of signals for the safe running of trains is receiving marked attention by the railroad companies operating in this State, and there is a notable improvement during the past year.

GENERAL CONDITIONS.

Upon the date of the filing of the twenty-fifth annual report of the Commissioner of Railroads and Telegraphs, December 31, 1892, there were fifty-four operating companies in Ohio, and as indicated by the statistical returns, large expenditures were being made for improving the roads, and to provide equipment for the then and indicated increasing business for the year. All traffic was such as to require the best facilities to meet the then indicated increasing volume of business.

At the present date, December 31, 1893, as indicated by the same source of returns, fourteen of the fifty-four operating railroad companies have been placed in the hands of receivers.

Notwithstanding the necessarily increased traffic incident to the World's Fair, the operations for the present will fall far below that of

last year. In fact, a general financial depression has permeated each and every department of railroad operations within this year, and indications point to an increased and continued similar condition.

STATISTICAL RETURNS.

Tables comprising the statistical returns for the year ending June 30, 1893, have been compiled which are herewith submitted.

CONCLUSION.

In all my official relations to matters between railroad companies and citizens of Ohio, the officials of said companies have manifested a desire to make provision whereby the safety of life and property can best be maintained.

Yours very respectfully,

WM. KIRKBY,

Commissioner of Railroads and Telegraphs.

STATISTICAL SUMMARY.

The following foreign systems operate the following named corporations:

- I. Baltimore and Ohio Railroad Company.
 - 1 Akron and Chicago Junction Railroad.
 - 2 Baltimore and Ohio and Chicago Railroads.
 - 3 Central Ohio Railroad.
 - 4 Cleveland, Wooster and Muskingum Valley Railroad.
 - 5 Columbus and Cincinnati Midland Railroad.
 - 6 Newark, Somerset and Straitsville Railroad.
 - 7 Pittsburgh and Western Railway.
 - 8 Pittsburgh, Cleveland and Toledo Railroad.
 - 9 Pittsburgh, Painesville and Fairport Railroad.
 - 10 Sandusky, Mansfield and Newark Railroad.
 - 11 Baltimore and Ohio Southwestern Railroad.
 - 12 Ohio and Mississippi Railway.
- II. Cincinnati, New Orleans and Texas Pacific Railway Company.
 - 1 Cincinnati Southern Railway.
- III. New York, Lake Erie and Western Railroad Company.
 - 1 Chicago and Erie Railroad.
 - 2 New York, Pennsylvania and Ohio Railroad.
 - 3 Cleveland and Mahoning Valley Railway.
- IV. Pennsylvania Company.
 - 1 Pittsburgh, Cincinnati, Chicago and St. Louis Railway Company.
 - 2 Little Miami Railroad.
 - 3 Columbus and Xenia Railroad.
 - 4 Cleveland and Pittsburgh Railroad.
 - 5 Cleveland and Marietta Railway.
 - 6 Massillon and Cleveland Railroad.
 - 7 Pittsburgh, Fort Wayne and Chicago Railway.
 - 8 Pittsburgh, Ohio Valley and Cincinnati Railroad.
 - 9 Pittsburgh, Youngstown and Ashtabula Railroad.
 - 10 Toledo, Walhonding Valley and Ohio Railroad.
- V. Michigan Central Railroad Company.
 - 1 Toledo, Canada Southern and Detroit Railway.

The following inter-state systems operate the following named corporations:

- I. Alliance and Northern Railroad and Lake Erie, Alliance and Southern Railway Companies.

- II. Cleveland, Canton and Southern Railroad Company.
 - 1 Cleveland, Belt and Terminal Railroad.
- III. Wheeling and Lake Erie Railway Company.
 - 1 Toledo Belt Railway.

The following partly foreign and partly inter-state systems operate the following named corporations:

- I. Cincinnati, Hamilton and Dayton Railroad Company.
 - 1 Cincinnati, Hamilton and Dayton Railroad.
 - 2 Cincinnati, Dayton and Chicago Railroad.
 - 3 Cincinnati, Hamilton and Indianapolis Railroad.
 - 4 Dayton and Michigan Railroad.
- II. Cleveland, Cincinnati, Chicago and St. Louis Railway Company.
 - 1 Cleveland, Cincinnati, Chicago and St. Louis Railway.
 - 2 Mount Gilead Short Line Railroad.
 - 3 Peoria and Eastern Railway.
- III. Lake Shore and Michigan Southern Railway Company.
 - 1 Lake Shore and Michigan Southern Railway.
 - 2 Mahoning Coal Railroad.
 - 3 Toledo and Ohio Northern Railway.
- IV. Toledo and Ohio Central Railway Company.
 - 1 Toledo and Ohio Central Railway.
 - 2 Kanawha and Michigan Railway.
 - 3 Toledo, Columbus and Cincinnati Railway.

The following partly inter-state and partly foreign corporations operate under the following names:

- 1 Cincinnati, Jackson and Mackinaw Railway Company.
- 2 Lake Erie and Western Railroad Company.
- 3 New York, Chicago and St. Louis Railroad Company.
- 4 Norfolk and Western Railroad Company.
- 5 Pittsburgh and Lake Erie Railroad Company.
- 6 Pittsburgh, Marion and Chicago Railway Company.
- 7 Pittsburgh, Shenango and Lake Erie Railroad Company.
- 8 Toledo, Ann Arbor and Northern Michigan Railway Company.
- 9 Toledo, St. Louis and Kansas City Railroad Company.
- 10 Wabash Railroad Company.

The following inter-state corporations operate under the following names:

- 1 Addyston and Ohio River Railroad Company.
- 2 Barberton Belt Line Railroad Company.
- 3 Bellaire, Zanesville and Cincinnati Railway Company.
- 4 Cincinnati, Georgetown and Portsmouth Railroad Company.
- 5 Cincinnati, Lebanon and Northern Railway Company.
- 6 Cincinnati and Muskingum Valley Railway Company.
- 7 Cincinnati and Northwestern Railway Company.
- 8 Cincinnati, Portsmouth and Virginia Railroad Company.
- 9 Cincinnati and Westwood Railroad Company.
- 10 Cleveland, Akron and Columbus Railway Company.
- 11 Cleveland, Lorain and Wheeling Railroad Company.
- 12 Columbus, Hocking Valley and Toledo Railway Company.
- 13 Columbus, Shawnee and Hocking Railway Company.
- 14 Dayton, Lebanon and Cincinnati Railroad Company.
- 15 Dayton and Union Railroad Company.
- 16 Eastern Ohio Railroad Company.
- 17 Findlay, Fort Wayne and Western Railroad Company.
- 18 Iron Railway Company.
- 19 Ivorydale and Mill Creek Valley Railway Company.
- 20 Kingston and Adelphi Railroad Company.
- 21 Lakeside and Marblehead Railroad Company.
- 22 Lancaster and Hamden Railway Company.
- 23 Middletown and Cincinnati Railway Company.
- 24 Ohio Southern Railroad Company.
- 25 Pittsburgh, Akron and Western Railroad Company.
- 26 Port Clinton Short Line Railway Company.
- 27 Salem Railroad Company.
- 28 Sandusky and Columbus Short Line Railroad Company.
- 29 St. Clairsville and Northern Railroad.
- 30 Toledo and Ohio Central Extension Railroad Company.
- 31 Valley Railway Company.
- 32 Zanesville and Ohio River Railway Company.

TELEGRAPH COMPANIES.

The following telegraph companies operate in Ohio:

- | | | |
|---|---|---|
| 1 Cincinnati and Eastern Telegraph Company. | | |
| 2 Edison Mutual | " | " |
| 3 Kingsville Magnetic | " | " |
| 4 Put-in-Bay | " | " |
| 5 Postal | " | " |
| 6 Union Metropolitan | " | " |
| 7 Western Union | " | " |

RECAPITULATION.

	Number.	Number of corporations.
Foreign systems	5	27
Inter-state systems.....	3	6
Partly inter-state systems.....	4	13
Partly inter-state corporations.....	10	10
Inter-state corporations	32	32
Totals	54	88

MILEAGE.

The railroad mileage operated within Ohio is as follows :

Miles of road.....	8,643.18
Miles of main line.....	7,981.07
Miles of second track.....	714.40
Miles of branches and spurs.....	681.11
Miles of yard and siding.....	2,920.98
Total miles of track.....	12,278.56
Miles of new track built during year.....	394.44
Miles of track laid with steel rails.....	10,515.24
Miles of track laid with iron rails.....	1,064.25
Miles of road representing capital stock.....	8,422.68
Miles of road, main line.....	7,595.47
Miles of road, branches and spurs.....	827.21
Miles of second track.....	706.59
Miles of track, yard and siding.....	2,907.57
Total miles of track.....	12,036.84
Miles of road operated under contract.....	863.59
Miles of road operated under lease.....	1,445.02
Miles of road operated under trackage rights	220.50

GAUGE OF TRACK.

Miles of road, standard gauge.....	8,451.78
Miles of road, narrow gauge.....	191.40

CAPITAL STOCK.

The eighty-eight corporations within Ohio represent \$262,451,719.72 capital stock, the average per mile being \$31,160.12.

FUNDED INDEBTEDNESS.

Bonds to the amount of \$294,499,427.33 are secured by mortgage upon the — miles of road within Ohio, being \$34,965.05 per mile.

CURRENT LIABILITIES.

The total current liabilities of the railroads are \$214,188.75, being \$25.43 per mile.

Total stock, bonds and liabilities.....	\$557,642,901	56
Total average per mile.....	66,207	50

COST OF RAILROADS AND EQUIPMENT.

Total cost of railroads.....	\$431,455,825	88
Total cost of railroads, per mile.....	51,225	48
Total cost of railroad equipment.....	59,333,385	24
Total cost of railroad equipment, per mile.....	7,048	04
Total stocks owned.....	28,376,248	21
Total bonds owned.....	12,852,687	50

EARNINGS FROM OPERATION.

Passenger.....	\$18,220,045	96
Freight.....	59,381,294	41
Mail.....	2,011,115	30
Express.....	1,516,497	04
Baggage and other items.....	315,393	61
Car mileage and switching.....	747,087	12
Telegraph companies.....	46,271	05
Rents for tracks and terminals.....	886,037	95
Total earnings.....	\$83,117,752	42
Total earnings per mile.....	9,639	48

OPERATING EXPENSES.

Maintenance of Ways and Structures—		
Charge to passenger.....	4,133,286	44
Charge to freight.....	5,688,460	41
Maintenance of Equipment—		
Charge to passenger.....	2,939,762	77
Charge to freight.....	6,378,592	80
Conducting Transportation—		
Charge to passenger.....	10,032,589	02
Charge to freight.....	18,944,756	90
General Expenses—		
Charge to passenger.....	2,220,925	74
Charge to freight.....	3,184,162	50
Total charge to passenger.....	19,326,563	97
Total charge to freight.....	34,195,972	61
Grand total.....	53,522,536	58
Total per mile.....	6,123	31

INCOME FROM OPERATION AND LEASE.

Total income from operations and lease.....	\$60,063,375	28
Income from stocks and bonds.....	3,123,469	45
Total.....	63,186,844	73
Total per mile.....	7,426	29

DEDUCTIONS.

Interest paid.....	\$27,914,723 64
Interest per mile.....	3,229 68
Rents paid.....	13,452,533 27
Taxes paid.....	4,656,948 99
Taxes per mile.....	552 76
Permanent improvements.....	394,641 63
All other deductions.....	1,559,835 68
Total.....	47,978,683 21
Total per mile.....	5,551 04

DIVIDENDS AND SURPLUS.

Number corporations paid dividends.....	24
Amount.....	12,600,728 18
Number not paying dividends.....	64
Number having surplus.....	45
Amount.....	\$5,808,094 39
Number having deficits.....	38
Amount.....	\$3,274,590 29

EMPLOYES.

Number employes.....	65,192
Number days employed.....	19,963,212
Total amount paid.....	\$36,426,385 32
Average per employe per day.....	\$1 82
Average per mile.....	\$4,214 46
General Administration—	
Number employed.....	3,256
Amount expended.....	\$2,717,856 03
Maintenance Ways and Structures—	
Number.....	16,831
Amount expended.....	\$6,492,365 85
Maintenance Equipment—	
Number.....	12,986
Amount expended.....	\$6,910,836 45
Conducting Transportation—	
Number.....	32,119
Amount expended.....	\$20,295,326 99

PASSENGERS.

Number carried.....	32,987,323
Average distance (miles).....	30.4
Average receipt per passenger.....	\$0.55.2
Average receipt per mile.....	0.01813
Estimate cost per mile.....	0.01923

FREIGHT.

Number tons carried.....	98,248,543
Average distance (miles).....	92.20
Average receipt per ton.....	\$0.60.17
Average per ton per mile.....	0.00652
Cost per ton per mile.....	0.00377

TRAIN MILEAGE.

Passenger, number miles.....	24,944,274
Freight, number miles.....	41,027,240
Mixed, number miles.....	686,883
Switching, number miles.....	20,787,701
Construction, number miles.....	2,477,030
Total train mileage.....	89,923,128

FREIGHT TONNAGE.

Tons agriculture.....	9,212,676
Tons animals.....	2,782,062
Tons product forests.....	6,791,685
Tons product mines.....	54,995,822
Tons manufactures.....	17,256,690
Tons merchandise.....	7,209,608
Total tonnage.....	98,248,543

EQUIPMENT.

Number of locomotives.....	4 859
Number equipped with air brakes.....	3,423
Number not equipped with air brakes.....	1,436
Number equipped with automatic couplers.....	674
Number not equipped with automatic couplers.....	4,185
Cars—	
Passenger equipped with air brakes.....	3,360
Passenger not equipped with air brakes.....	260
Passenger equipped with automatic couplers.....	3,348
Passenger not equipped with automatic couplers.....	272
Freight equipped with air brakes.....	20,053
Freight not equipped with air brakes.....	176,675
Freight equipped with automatic couplers.....	34,779
Freight not equipped with automatic couplers.....	161,949
Total number air brakes.....	26,836
Total number automatic couplers.....	38,801

ACCIDENTS.

Total number employes killed.....	197
Total number passengers killed.....	20
Total number trespassers killed.....	276
Total number all others killed.....	39
Total number killed.....	532
Total number employes injured.....	2,966
Total number passengers injured.....	107
Total number trespassers injured.....	334
Total number all others injured.....	119
Total number injured.....	3,526

CHARACTERISTICS.

Total number miles of road—

Total number of curves.....	9,129
Total number miles of curves.....	1,769.56
Total number miles of straight road.....	7,937.41
Total number miles of level road.....	2,001.62
Total number of ascending grades.....	7,393
Total sum of ascending grades in feet.....	73,917.23
Total number of ascending grades in miles.....	3,617.19
Total number of descending grades.....	7,486
Total sum of descending grades in feet.....	71,302.86
Total sum of descending grades in miles.....	3,715.94

BRIDGES.

Total number of bridges.....	3,193
Aggregate length in feet of bridges.....	226,263.11

TRESTLES.

Total number of trestles.....	4,848
Aggregate length in feet of trestles.....	501,626.08

TUNNELS.

Total number of tunnels.....	59
Aggregate length in feet of tunnels.....	44,200.07

STREET AND HIGHWAY CROSSINGS.

Total number crossings, at grade.....	8,372
Total number crossings, overhead.....	310
Total number crossings, underway.....	434
Total number of crossings.....	9,116
Total number crossings with gates.....	267
Total number crossings with watchmen.....	468
Total number crossings with bells.....	54
Total number railroads crossing railroads.....	601
Total number of interlockings.....	138

FUEL CONSUMED.

Total number of tons consumed.....	14,461,909.95
Miles run.....	80,031,464
Average number pounds per mile.....	82.57
Average cost per ton.....	\$1 31

INSPECTIONS DURING THE YEAR.

The following roads were inspected and a detailed report showing condition of road bed, ties, rails, bridges, and trestles now on file in this office :

Baltimore and Ohio Railroad Company.

Bellaire, Zanesville and Cincinnati Railway Company.

Cincinnati, Georgetown and Portsmouth Railroad Company.
 Cincinnati, Dayton and Ironton Railroad.
 Cincinnati, Jackson and Mackinaw Railway Company.
 Cincinnati, Lebanon and Northern Railway Company.
 Cincinnati, Portsmouth and Virginia Railroad Company.
 Cleveland, Akron and Columbus Railway Company.
 Cleveland, Canton and Southern Railroad Company.
 Cleveland, Lorain and Wheeling Railroad Company.
 Cleveland and Marietta Railway Company.
 Dayton, Lebanon and Cincinnati Railroad Company.
 Findlay, Ft. Wayne and Western Railroad Company.
 Lake Erie and Western Railroad Company.
 Middletown and Cincinnati Railway Company.
 New York, Pennsylvania and Ohio Railroad Company.
 Pittsburgh and Lake Erie Railroad Company.
 Toledo and Ohio Central Railway Company.
 Kanawha and Michigan Railway Company.
 Toledo and Ohio Central Extension Railroad Company.
 Toledo, St. Louis and Kansas City Railroad Company.
 Wheeling and Lake Erie Railway Company.
 Zanesville and Ohio River Railway Company.

Orders approving interlocking plants were issued as follows:

1 January 3, 1893. To General Superintendents Chicago and Erie and Cleveland, Cincinnati, Chicago and St. Louis Railways, approving interlocking at crossing, Kenton, Ohio.

2 January 11, 1893. To General Superintendents New York, Lake Erie and Western and Alliance and Northern Railways, approving interlocking at crossing, Braceville, Ohio.

3 January 12, 1893. To General Superintendents Wabash and Cincinnati, Jackson and Mackinaw Railroads, approving interlocking at crossing, Alvordton Ohio.

4 February 5, 1893. To General Superintendents Baltimore and Ohio and Sandusky and Columbus Short Line, approving interlocking at crossing Attica, Ohio.

5 March 6, 1893. To General Superintendents Toledo and Ohio Central and Cleveland, Akron and Columbus Railways, approving interlocking at crossing, Centerburg, Ohio.

6 April 19, 1893. To General Superintendents Sandusky and Columbus Short Line and Cleveland, Cincinnati, Chicago and St. Louis Railways at crossing, Worthington, Ohio.

7 April 8, 1893. To Signal Engineer New York, Lake Erie and Western Railway, approving plan for construction of interlocking at crossing Cleveland, Cincinnati, Chicago and St. Louis and Sandusky and Columbus Short Line and Chicago and Erie Railways, and Columbus, Hocking Valley and Toledo Railway, Marion, Ohio.

8 April 8, 1893. To Chief Engineer Sandusky and Columbus Short Line Railway, approving plan for construction of interlocking at crossing, Lake Shore and Michigan Southern Railway, Sandusky, Ohio.

9 April 25, 1893. To General Superintendent Pittsburgh, Cincinnati, Chicago and St. Louis Railway, approving interlocking at Mingo Junction Siding, Ohio.

10 May 14, 1893. To General Superintendent Pittsburgh, Cincinnati, Chicago and St. Louis Railway, approving interlocking at double track terminal, Miller's Tower, Ohio.

11 May 14, 1893. To General Superintendent Pittsburgh, Cincinnati, Chicago and St. Louis Railways, approving interlocking at crossing Toledo, Walhonding Valley and Ohio Railway, Coshocton, Ohio.

12 May 14, 1893. To General Superintendents Pittsburgh, Cincinnati, Chicago and St. Louis Railway and Norfolk and Western Railway, approving interlocking at crossing, Columbus, Ohio.

13 June 29, 1893. To General Superintendent New York, Lake Erie and Western Railway, approving interlocking at "Y" terminals, Kent, Ohio.

14 June 28, 1893. To General Superintendents New York, Lake Erie and Western and Pittsburgh, Ft. Wayne and Chicago Railways, approving interlocking at crossing, Leetonia, Ohio.

15 July 9, 1893. To General Superintendents Cleveland, Akron and Columbus and Norfolk and Western Railways approving interlocking at Junction and crossing, Columbus, Ohio.

16 July 12, 1893. To General Superintendents Cincinnati, Jackson and Mackinaw and Wabash Railways, approving interlocking at crossing, Alvordton, Ohio.

17 July 16, 1893. To General Superintendents Cleveland, Canton and Southern and Valley Railways, approving interlocking at crossing Brooklyn, Ohio.

18 August 3, 1893. To General Superintendents Chicago and Erie and Toledo and Ohio Central Railways, approving interlocking at crossing, Peoria, Ohio.

19 August 3, 1893. To General Superintendents Ohio Southern and New York, Lake Erie and Western Railways, approving interlocking at crossing, Springfield, Ohio.

20 August 13, 1893. To General Superintendents New York, Lake Erie and Western and Cleveland, Lorain and Wheeling Railways, approving interlocking at crossing, Massillon Junction, Ohio.

21 August 27, 1893. To General Superintendents Pittsburgh, Cincinnati, Chicago and St. Louis and Baltimore and Ohio Railways, approving interlocking at Terminal, Newark, Ohio.

22 September 1, 1893. To General Superintendents Cleveland, Akron and Columbus and Norfolk and Western Railways, approving interlocking at crossing, Columbus, Ohio.

23 September 19, 1893. To General Superintendents Toledo and Ohio Central and Cleveland, Cincinnati, Chicago and St. Louis Railways, approving plans interlocking at crossing, Ridgeway, Ohio.

24 September 19, 1893. To General Superintendents Sandusky and Columbus Short Line, Lake Shore and Michigan Southern; Cleveland, Cincinnati, Chicago and St. Louis and Lake Erie and Western Railways approving interlocking at crossing and Junction, Sandusky, Ohio.

DANGEROUS GRADE, STREET AND HIGHWAY CROSSINGS.

Complaints of the dangerous character of grade, street and highway crossings were made and after investigation, protection was made as follows:

Against the Pennsylvania Company.

Cedarville, Green county, alarm bell.
Covington, Miami county, watchman at High street.
Xenia, Greene county, alarm bells at Market and Second streets.
Jamestown, crossing Greene county, alarm bells at crossing.
Salem, Columbiana county, alarm bells and watchman.
Mingo Junction, Jefferson county. Complaint dismissed.
Perryville, Ashland county. Complaint dismissed.
East Palestine, Columbiana county. Complaint dismissed.
Scio, Harrison county. Complaint dismissed.
Port Washington, Tuscarawas county. Complaint dismissed.
Morrow, Warren county. Complaint dismissed.
Steubenville, Jefferson county. Complaint dismissed.
Trebines, Greene county. Complaint dismissed.
Lucas crossing, Greene county. Complaint dismissed.
Bridgeport, Belmont county. Complaint dismissed.

Against the New York, Lake Erie and Western Railway.

Garrettsville, Portage county, alarm bell.
Washingtonville, Columbiana county. Complaint dismissed.
Sterling, Wayne county. Complaint dismissed.

Against Cleveland, Lorain and Wheeling Railway.

Mingo Junction, Jefferson county, Complaint dismissed.

Against the Lake Shore and Michigan Southern Railway.

Port Clinton, Ottawa county, watchman.
Ashtabula, Ashtabula county, watchman.
Bryan, Williams county, watchman.
Wauseon, Fulton county, watchman.
Archibald, Fulton county, watchman.
Conneaut, Ashtabula county. Complaint dismissed.

Against the Baltimore and Ohio Railroad.

Monroeville, Huron county, watchman.
Sabina, Clinton county, watchman.
Newton Falls, Summit county, bell.
Chicago Junction, Huron county. Complaint dismissed.
Columbus, Franklin county. Complaint dismissed.
Bellville, Richland county. Complaint dismissed.

Against the Baltimore and Ohio Southwestern Railway.

Chillicothe, Ross county. Complaint dismissed.
McArthur, Vinton county. Complaint dismissed.

Against the Wheeling and Lake Erie Railway.

Orrville, Wayne county. Complaint dismissed.
Bellevue, Huron county, watchman.

Against the Cleveland, Cincinnati, Chicago and St. Louis Railway.

Tiffin, Seneca county, watchman.
London, Madison county, watchman.
Galion, Crawford county. Complaint dismissed.

Against the Wheeling Bridge and Terminal Railway.

Martin's Ferry, Belmont county. Complaint dismissed.

Against the Cincinnati, Hamilton and Dayton Railroad.

Columbus Grove, Putnam county, watchman.
Toledo, Lucas county, watchman.
Ottawa, Putnam county. Complaint dismissed.
Trebines, Greene county. Complaint dismissed.

Against Columbus, Hocking Valley and Toledo Railway.

McArthur, Vinton county. Complaint dismissed.
Columbus, Franklin county. Complaint dismissed.

Against Cincinnati and Muskingum Valley Railway.

Sabina, Clinton county, watchman.

Against the Columbus, Shawnee and Hocking Railway.

Glouster, Athens county, watchman.

Against the New York, Chicago and St. Louis Railway.

Bellevue, Huron county, watchman.

Stuartsville, Hancock county. Complaint dismissed.

Ft. Seneca, Seneca county. Complaint dismissed.

Against the Valley Railway.

Canton, Stark county. Complaint dismissed.

Against the Sandusky and Columbus Short Line Railway.

Bellevue, Huron county, watchman.

Bucyrus, Crawford county. Complaint dismissed.

