GRAND TRUNK WESTERN RAILWAY DIARY VI

C. H. RIFF

The Editor's Mail

Learning About Railroads

There are lots of things to be learned if a person takes the time to browse around Uncle Sam's mammoth Library of Congress. With the thousands and thousands of volumes stored in the institution, every man, woman and child in America should find something of interest.

For instance, the other day I wanted to see what I could learn about railroads, so I went to the voluminous card index which is located in the files at the back end of the main reading room and looked under the word, "Railroads." Here are some of the things I found:

In a volume called, "When Railroads Were New," by C. F. Carter, I learned that in the year of 1817 there was a young chap named Henry Meigs who was a member of the New York legislature. But, this volume relates, that he "lost his influence, ruined his prospects, and came to be regarded as a proper subject for a strait-jacket because he expressed his belief that steam carriages would be operated successfully on land."

In the same book I learned that Dorchester, Mass., a suburb of Boston, held a town meeting in 1842 to instruct its representatives in the Massachusetts legislature "to use their utmost endeavors to prevent, if possible, so great a calamity to our town as must be the location of any railroad through it.—*Robert L. Glenn, in the Brotherhood of Locomotive Firemen and Enginemen's Magazine.*

First Train Journey

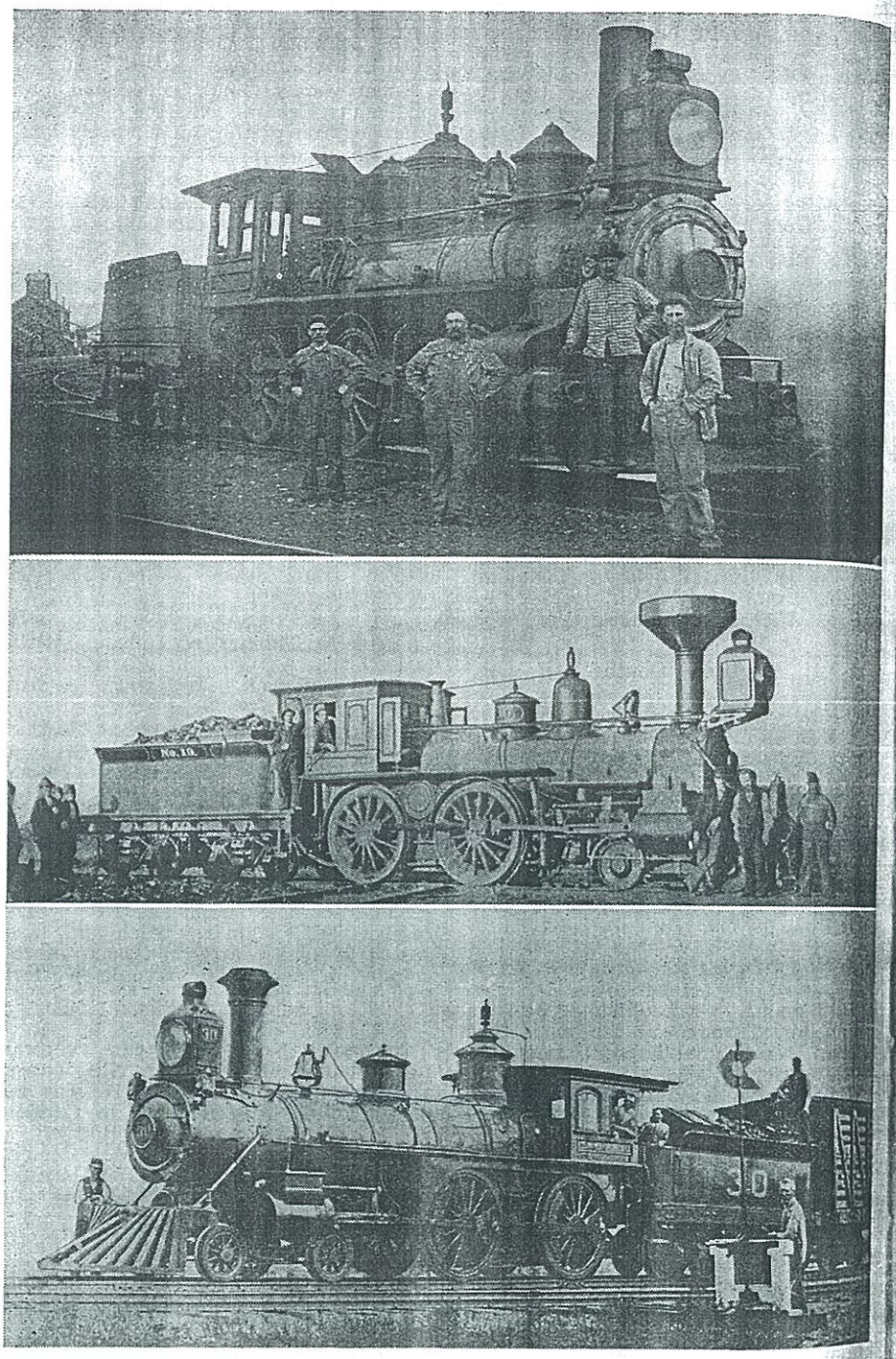
Here is an account of the first train operated on the Stockton and Darlington Railway of England on September 27, 1825. It is found in a book with the somewhat lengthy title of "The World's History and Its Makers: Achievements of the Nineteenth Century." George Stephenson was the engineer on this occasion.

"The signal being given, the engine started off with this immense line of carriages, and such was the velocity that in some parts the speed was frequently 12 miles an hour, and the number of passengers was counted to be 450, which, together with the coals, merchandise, and carriages, would amount to near 90 tons.

"The engine, with its load, arrived at Darlington, travelling the last eight and three-quarter miles in 65 minutes. The six wagons loaded with coals, intended for Darlington, were then left behind, and obtaining a fresh supply of water, and arranging the procession to accommodate a band of music and numerous passengers from Darlington, the engine set off again, and arrived at Stockton in three hours and seven minutes, including stoppages, the distance being nearly 12 miles."

Passengers Beware

In a book called "Our Day," by John Peter Robinson, appear these very instructive "Rules for Travellers," a copy of which was given to every person intending to ride on a railroad in England in the year 1830:



TOP: Locomotive No. 37 of the old Grand Trunk Railway. This interesting photograph is the property of Engineer J. Halloran of Battle Creek, Mich., whose father, the late Tom Halloran, appears in the picture. MIDDLE: Locomotive No. 19 of the old Detroit, Grand Haven and Milwaukee Railroad (now part of Grand Trunk Western lines) photographed at Owosso Junction about 1874. In the cab window is the late Charles D. Brown who ran out of Detroit for many years, retired several years ago and died in 1930. This engine had two bells, one of which was mounted on the buffer beam on the front of the engine. BOTTOM: Old Number 30 of the Chicago and Grand Trunk Railway about which little information is now available. Photographs loaned for reproduction by J. E. Donnelly, General Chairman, B. of L. E., Durand, Mich.

"(1) Any person desiring to travel from Liverpool to Manchester, or vice versa, or any portion of the journey thereof, must 24 hours beforehand, make application to the station agent at the place of departure, giving his name, address, place of birth, age, occupation and reason for desiring to travel.

"(2) The station agent upon insuring himself that the applicant desires to travel for a just and lawful cause, shall thereupon issue a ticket to the applicant, who shall travel by the train named thereon.

"(3) Trains will start at their point of departure as near schedule time as possible, but the company do not guarantee when they will reach their destination.

"(4) Trains not reaching their destination before dark will put up at one of the several stopping places along the route for the night, and passengers must pay and provide for their own lodging during the night.

"(5) Luggage will be carried on the roof of the carriages. If such baggage gets wet, the company will not be responsible for any loss attaching thereto."

Chicago Track Elevation.

The report for 1904 of John O'Neill, Track Elevation Expert for the City of Chicago, which has just been made public, contains a grand summary of the ordinances which have been passed by the City Council and accepted by the railroad companies for the elevation of their roadbed and tracks from May 23, 1892, to April 6, 1905, as follows:

Total number of miles of main track to be elevated	153.23
" " " miles of all tracks to be elevated	746.33
" " " miles of subways to be constructed	576
" estimated cost of entire work when completed	$48,910,250

The amount of work completed up to Dec. 31, 1904, is as follows:

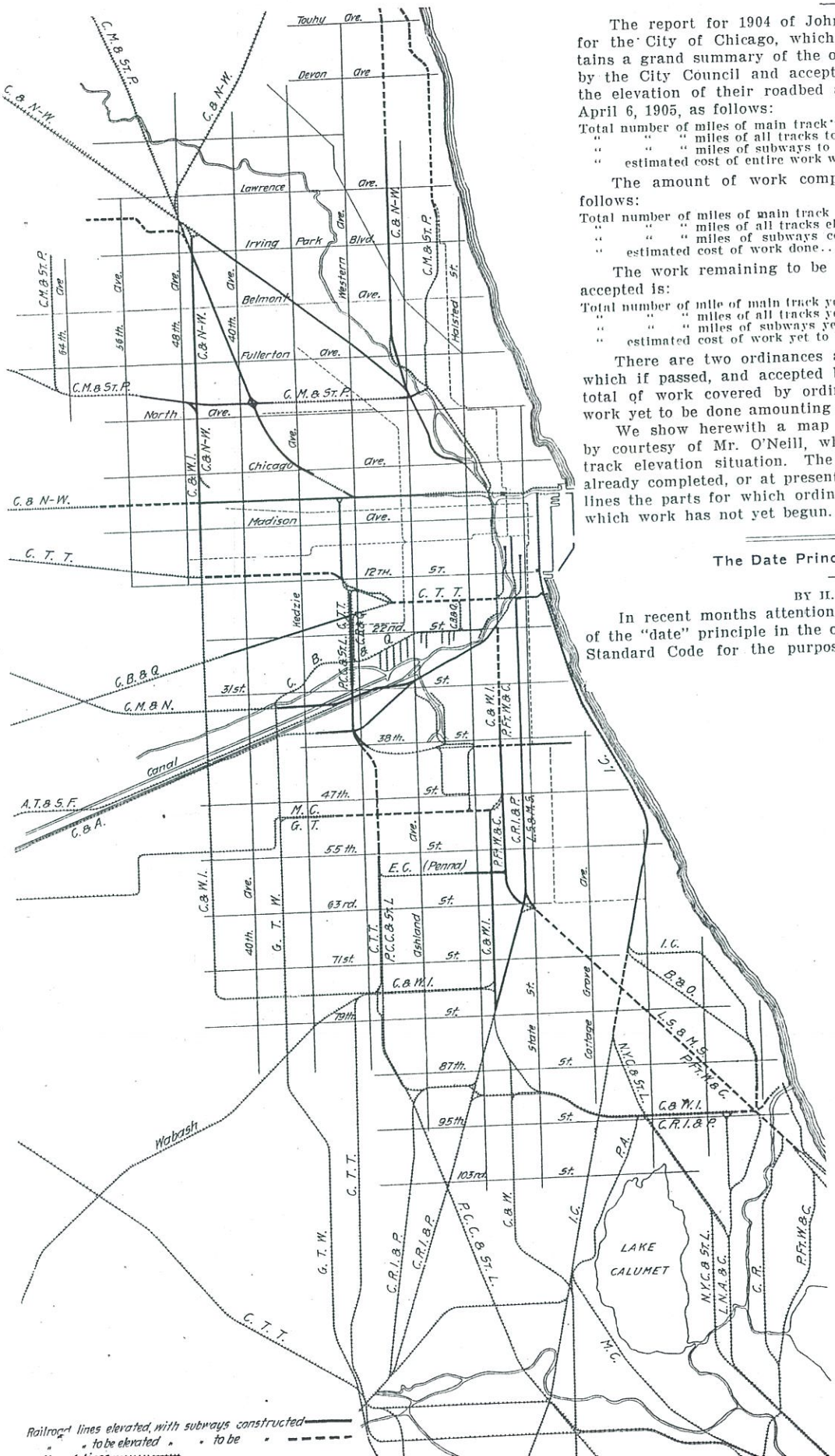
Total number of miles of main track elevated	82.84
" " " miles of all tracks elevated	425.19
" " " miles of subways constructed	360
" estimated cost of work done	$28,725,250

The work remaining to be done under ordinances passed and accepted is:

Total number of mile of main track yet to be elevated	70.39
" " " miles of all tracks yet to be elevated	321.14
" " " miles of subways yet to be constructed	216
" estimated cost of work yet to be completed	$20,185,000

There are two ordinances at present before the City Council which if passed, and accepted by the roads, will bring the grand total of work covered by ordinances to date to $51,860,250, and work yet to be done amounting to $23,135,000.

We show herewith a map of the City of Chicago, furnished by courtesy of Mr. O'Neill, which presents in graphic form the track elevation situation. The heavy solid lines show the work already completed, or at present under way, and the heavy broken lines the parts for which ordinances have been accepted but upon which work has not yet begun.

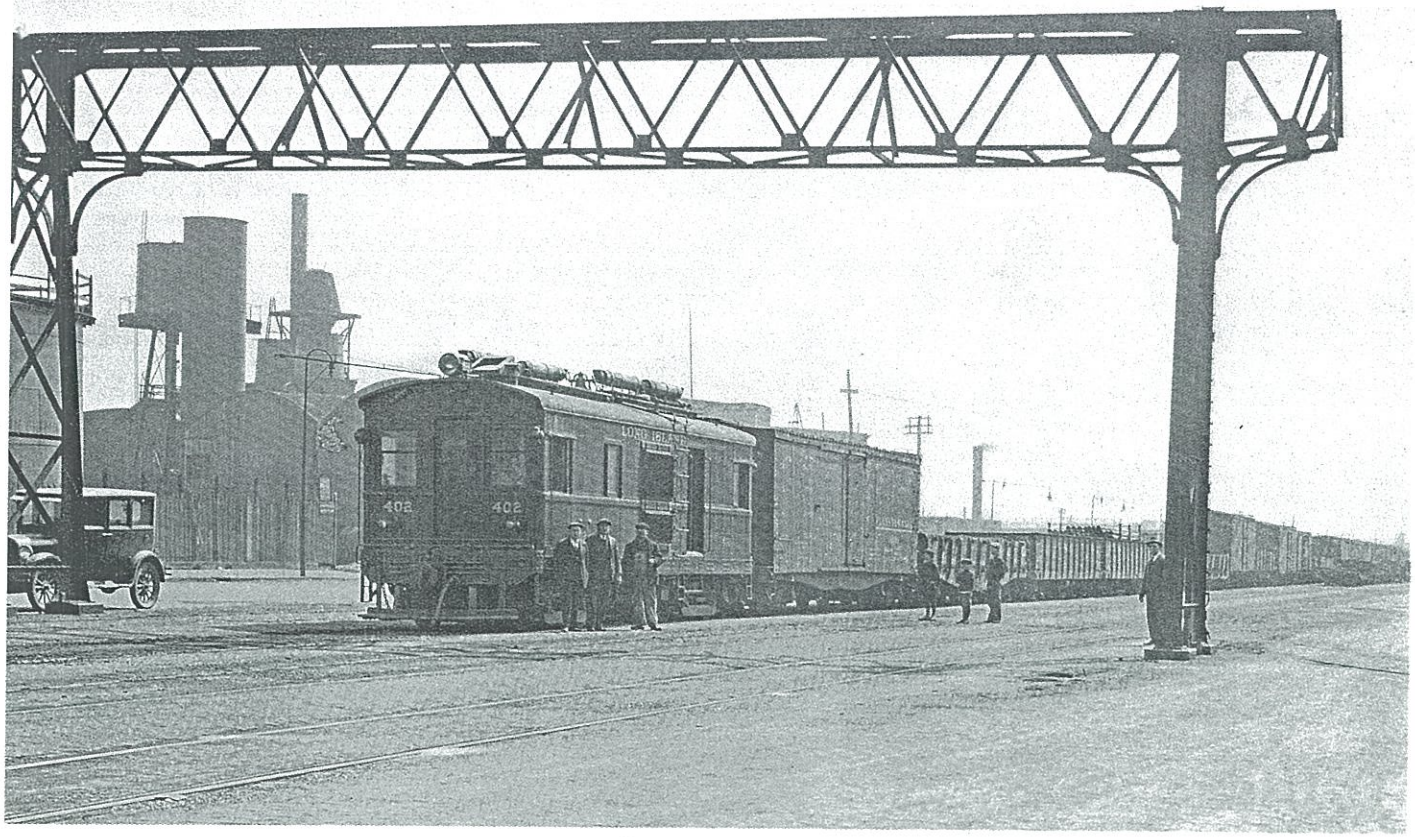


The Date Principle and Rule 4 B.

BY H. A. DALBY.

In recent months attention has been called to the application of the "date" principle in the operation of Rule 4, Form B, of the Standard Code for the purpose of determining beyond question whether or not a particular schedule is in effect after a change of time-table and what trains may or may not assume that schedule. To any one who has made a study along this line the necessity for some such determining factor is so apparent that no argument is required for its support. The fact that almost every road, whether using the Standard Code or not, employs the principle of Rule 4B seems sufficient evidence that it is considered the most advantageous for the government of trains at such a time. The principle is that the authority of a schedule that is in effect when there is a change of time-table shall be transferred to a corresponding schedule of the new time-table, the train or trains that were using the old being instructed to proceed to their destination on the new. The principle is good but in the present rule *only* the principle is established. In many cases the schedule on the new time-table can be made to supersede the corresponding one on the old without confusion, but in others serious questions have arisen and not a few instances have been pointed out in which it is entirely possible for two trains to assume the same schedule while following the instructions in the rule. To overcome this defect the "date" principle has been adopted as the official understanding on a few roads.

The weakness of the present rule can best be explained by referring to a change of time-table which took place on a western road something more than a



Still working out in the Philadelphia area after completion, the Long Island Rail Road's #402 (1st) switches along the Pennsylvania Railroad's Delaware Avenue tracks in Philadelphia on March 21, 1926. The PRR was the Long Island's parent company. **J.G. Brill, Donald Duke Collection**

not be confused with Long Island #402 (2nd) built in September 1928, which was an Alco-GE-IR 600 horsepower, 109 ton double end box cab Diesel-electric locomotive.

At this time the Long Island was a subsidiary of the Pennsylvania Railroad. Delivery was made to the PRR which served Brill's plant. The locomotive was first operated by the Pennsylvania on the Delaware Avenue waterfront and in February was delivered to the Long Island Rail Road at Long Island City. The locomotive's performance did not meet the railroad's requirements and after a relatively short service period it was returned to Brill.

Later, the locomotive was modified, assigned new construction number 23152 and sold in June 1934 to the Grand Trunk Western as its #7730 and assigned railroad classification Q2a. The GTW repowered this locomotive in 1939 in its own shops with two Cummins model LI, 6 cylinder, 7"x10" Diesel engines rated 250 horsepower each at 1,000 rpm. In 1930 the locomotive was renumbered #73. It was scrapped in February 1961 at age 35.[3] Its principal assignment was serving the Grand Trunk Western's isolated car float and yard facility at Milwaukee, Wis.

Coincidental with the completion of this locomotive in January 1926, the J.G. Brill Company became a part of the American Car and Foundry Company of New Jersey. Other facets of ACF at this time included ACF of Delaware, Fageol Motors Company of Ohio and the Hall- Scott Motor Car Company of California, the latter building gasoline engine powered rail motor cars in Berkeley, Calif.

Lehigh Valley #125 (1st). Brill and the Long Island Rail Road soon found, as did other builders and railroads, that the cost of gasoline required to power a locomotive the size of Long Island #402 made it practically a standoff against the cost of using a conventional steam locomotive on the same assignment. Accordingly, Brill next built a Diesel-electric locomotive following the general configuration of Long Island #402. This was a 73 ton double end box cab locomotive with B–B wheel arrangement which was completed almost exactly one year after Long Island #402 on January 20, 1927. This locomotive was sold to the Lehigh Valley Railroad, assigned LV classification BB-1 and road number #125. It also was identified by Brill construction number 22343 and General Electric construction number 10084.[4]

Brill built the mechanical portion, McIntosh & Seymour of Auburn, N.Y., supplied the Diesel engine and General Electric the electric transmission and control equipment. On the basis of this combination of suppliers of components, this unit would properly be called a Brill-GE-M&S locomotive. McIntosh & Seymour was the sponsor of this locomotive's construction which was prior to the acquisition of M&S by Alco in 1929.

The M&S Diesel engine was a 12 cylinder Vee 8"x9½" 4 cycle air injection unit rated 300 bhp. The GE electric transmission included 14:82 gearing coupled to four model HM-840 traction motors and was identical to that which was standard on the Alco-GE-IR locomotives that were then being constructed. Its maximum speed was 30 mph.

For McIntosh & Seymour, this engine was the end product of a locomotive engine development program that had begun at Auburn in 1925. At that time two 8"x9½" Vee 4 cycle air injection 550 rpm engines were constructed, one in 8 cylinders and one in 12 cylinders.

The V-8 engine, rated 200 horsepower, was installed in New

Why did General Electric and the American Locomotive Company with their worldwide sales organizations let Ingersoll–Rand take the initiative in marketing these joint venture locomotives to the railroads? The answer is quite simple. General Electric, for more than 25 years, had been successful in selling straight electrifications to trunk line railroads. The prospect still appeared to be excellent that there would be an attractive market in the future for more electrification.

In such projects General Electric and Westinghouse Electric and Manufacturing Company of East Pittsburgh, Penna., were the only competitors for the business and when an electrification was sold to a railroad, the package included not only the locomotives but the substation equipment, then consisting of rotary converters or frequency changers, stepdown transformers and the related switch gear and distribution systems. With Diesel, they could only hope to sell the electrical equipment carried on board the locomotive which represented about one-third the total cost of the Diesel-electric locomotive.

It is quite obvious that General Electric's interests were to be best served by selling straight-electrification to railroads and becoming a supplier of electric transmissions to any and all builders. Had GE been a seller of Diesel-electric locomotives, other locomotive builders would have been reluctant to purchase electric transmissions from their competitor.

As for Alco, its plants and tooling for producing steam locomotives were paid for and the continued manufacture of steam locomotives from these tools and facilities would provide maximum profitability until the Diesel gained a wide enough acceptance to permit volume rather than sporadic production.

General Electric did not then usually engage in manufacturing mechanical portions for the larger electric or Diesel locomotives although its facilities at Erie were suitably tooled to do so. The Erie plant did regularly build mechanical portions for the smaller sized straight-electric locomotives. When the larger car bodies were required by General Electric, they were usually ordered from Alco under an arrangement similar to that existing at the time between Westinghouse Electric and Baldwin relative to straight-electric locomotives sold by Westinghouse.

Had Alco at the inception undertaken the manufacture of complete Diesel locomotives by themselves it would have been required to purchase the Diesel engines and the electrical apparatus from others. Therefore, in the end Alco's profitability would have been no greater than that obtainable from manufacturing mechanical portions only, as required for these joint venture locomotives which were assembled by GE.

Furthermore, since these Diesel-electrics were a joint venture, Alco had access to all performance and engineering data that resulted from their use. Through Alco's field service representatives who followed these locomotives, Alco was fully conversant with all the troubles that developed as a consequence of their operation. Through these channels Alco in effect participated fully in the research and development attendant to launching the Diesel-electric locomotive commercially, without incurring any of the liabilities and did so at exceedingly small field service expense.

As for Ingersoll–Rand, its interest was intense since it was already a major manufacturer of Diesel engines for stationary and marine purposes, and this would extend its market into the railroad field. Since of the three companies IR had the maximum to gain from this project, it was natural that it exert the leadership in selling the locomotive to the railroads.

J.G. Brill Company

The J.G. Brill Company of Philadelphia started out in 1869 as a manufacturer of horse cars. With the advent of electric traction Brill moved into the production of street railway and interurban cars. Shortly after 1900, when street railway systems were being rapidly expanded, Brill purchased three other large manufacturers of street and interurban cars: American Car Company, St. Louis, Mo.; Kuhlman Car Company, Cleveland, Ohio; and John Stephenson Company, Elizabeth, N.J. The activities of these builders were later expanded to include the building of elevated and subway cars for rapid transit service.

General Electric's success in developing self-propelled gasoline powered rail motor cars led Brill to enter into the manufacture of this type of equipment, also. The gasoline engines which were used to power these cars were manufac-

Dawn of the Diesel Age
Interurban Press John F. Kirkland Special 80
Glendale California

tured by the Westinghouse Electric & Manufacturing Company under the Brill name at the former's South Philadelphia Works and by the Hall- Scott Motor Car Company at Berkeley, Calif. The larger cars were powered either by two 300 horsepower engines or by one 550 horsepower engine. The interior car body configurations of these high horsepowered cars varied from Railway Post Office and baggage compartments only and no passenger seating to omitting these facilities and providing seating for some 70 passengers. These cars were capable of pulling at least three cars besides themselves, such as standard coaches, milk cars or Railway Express cars.

With the Alco-GE-IR 300 horsepower double end box cab Diesel locomotives gaining acceptance in the early 1920s. Brill made the decision to enter into this business as well.

Long Island Rail Road #402 (1st). The first locomotive to be completed by Brill, in general appearance closely resembled the early Alco-GE-IR units. It was equipped with a double end box cab car body mounted on a B–B wheel arrangement. Conventional drop side equalizer motor trucks were used. Its nominal weight in working order was 75 tons and the unit was 40′0″ long over couplers.

The locomotive was powered by two Brill–Westinghouse 7¼″x8″ 6 cylinder in-line valve-in-head gasoline engines rated 250 horsepower each at 1,100 rpm. These engines had dual intake and exhaust valves as well as dual ignition, and were counterparts of the engines used by Brill to power rail motor cars.

Each engine was coupled to a Westinghouse model 176 main generator which powered two Westinghouse model 562D6 traction motors located in the truck immediately below its engine–generator set. The gear ratio was 61:16 and 33″ wheels were used.

The locomotive was completed on January 7, 1926, lettered for the Long Island and numbered #402. Brill construction number 22315 was assigned. The road number #402 should

Appropriately switching cars at the factory where it was built, Long Island Rail Road's #402 (1st) is put through its paces in a workout along the four-track New York–Washington main line of the Pennsylvania Railroad in 1926. The photo was taken at the Brill Interlocking plant two years before the main line was electrified. The #402 is heading south from the PRR up the spur leading into the Brill plant. The two flatcars with canvas-covered loads are carrying completed streetcars destined for their purchasers. Note that since the streetcars are longer than the flatcars they sit on, idler cars are cut in as spacers.

J.G. Brill, Donald Duke Collection

on post office and civil service, the attorney general, the librarian of Congress, the archivist, and five other members appointed by the President. The commission will "advise on and consent to the plans formulated by the archivist and submitted to it for exhibiting the Freedom Train, and with respect to its itinerary."

Members of the commission will serve without compensation, other than reimbursement for expenses incurred in the work. The act authorizes appropriations, not exceeding $2,500,000, for the purpose of carrying out its provisions.

Freight Car Loadings

Loadings of revenue freight in the week ended March 5 totaled 705,552 cars, the Association of American Railroads announced on March 10. This was an increase of 17,424 cars, or 2.5 percent, above the previous week, a decline of 86,432 cars, or 10.9 per cent, under the corresponding week last year, and a drop of 100,223 cars, or 12.4 per cent, under the equivalent 1947 week.

Loadings of revenue freight for the week ended February 26 totaled 688,128 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows

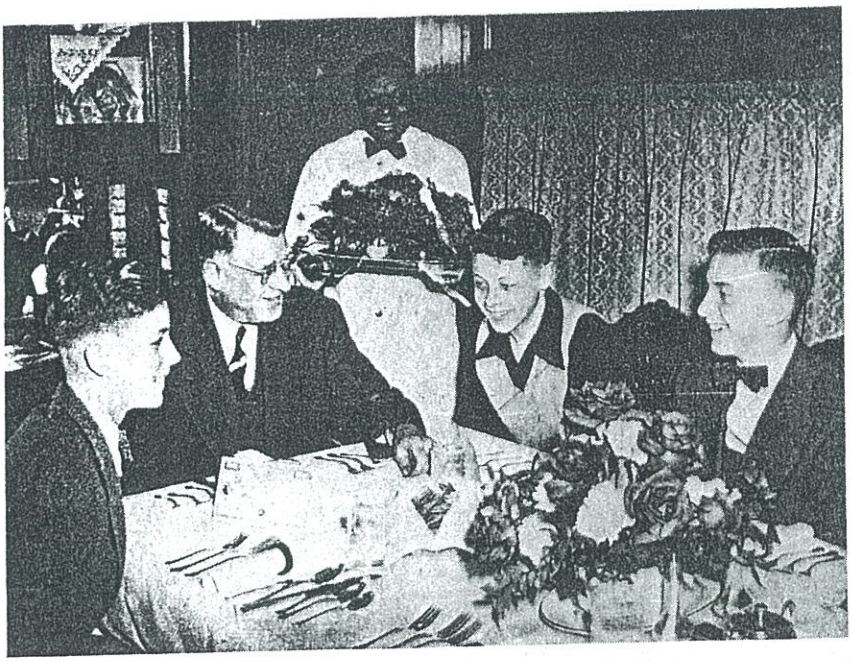
REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, February 26

District	1949	1948	1947
Eastern	131,753	156,867	158,765
Allegheny	147,387	169,558	175,997
Pocahontas ...	56,826	69,874	67,447
Southern	120,107	138,462	141,634
Northwestern ..	72,315	75,209	97,324
Central Western	104,620	117,379	136,471
Southwestern ..	55,120	63,561	72,003
Total Western Districts	232,055	256,149	305,798
Total All Roads	688,128	790,910	849,991
Commodities:			
Grain and grain products	39,709	33,139	56,871
Livestock	8,604	8,447	13,179
Coal	145,665	191,763	185,080
Coke	15,054	14,894	14,482
Forest products	35,304	14,654	53,069
Ore	14,346	13,993	12,852
Merchandise l.c.l.	86,092	109,020	124,286
Miscellaneous ..	343,354	375,000	390,172
February 26 ..	688,128	790,910	849,991
February 19 ..	697,335	804,937	776,689
February 12 ..	699,442	733,870	799,977
February 5 ..	682,143	746,936	767,301
January 29 ...	679,255	726,345	835,051
Cumulative total 8 weeks	5,610,667	6,213,255	6,509,950

In Canada.—Carloadings for the week ended February 26 totaled 73,224 cars, compared with 70,591 cars for the previous week, and 76,422 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
February 26, 1949	73,224	32,340
February 28, 1948	76,422	38,288
Cumulative totals for Canada:		
February 26, 1949	574,171	258,773
February 28, 1948	581,172	283,503



RAIL EXECUTIVE SAYS "THANKS" TO YOUTHS WHO AVERTED POSSIBLE DERAILMENT.—When three South Bend (Ind.) youngsters spotted a large piece of iron imbedded in a tie and overlapping the track of the Grand Trunk Western recently, they notified the railroad and stood by to flag oncoming trains until the iron was removed. Charles A. Skog, vice-president and general manager of the G.T.W., expressed the road's appreciation for their deed by entertaining the three youths at a turkey luncheon in his business car. A U. S. savings bond and an opportunity to inspect the road's equipment were also given to each of the boys

B. & O. Appoints 150 Officers To Help in Public Relations

Approximately 150 key officers, located at various points on its system, have been designated by the Baltimore & Ohio to assist its public relations department by keeping local newspapers in their respective communities informed about B. & O. affairs.

The appointments, which are in addition to the men's regular duties, have been made, according to R. M. Van Sant, director of public relations, "because we feel that there is a real need for such a set-up; further, that by having it, we can get better coverage in the papers than we have had, can establish friendly relations with the press, and can enhance what we feel is the already good feeling toward the B. & O. in the communities that we serve."

Each of the men appointed has been furnished with a mimeographed memorandum of "Suggestions for Handling News." While they will work in cooperation with the road's public relations department, they will not normally be subject to close supervision or detailed instructions.

Waybill Studies

Five additional waybill studies have been issued recently by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. They are:

Statement No. 491, Distribution of Freight Traffic and Revenue Averages by Commodity Groups and Rate Territories—Terminations in Second Quarter of 1948.

Statement No. 492, State-to-State Distribution of Tonnage by Commodity Groups—Terminations in Second Quarter of 1948.

Statement No. 493, Bituminous Coal Traffic and Revenue, by Territorial Movement, Length of Haul (Short-Line), and Type of Rate—Terminations in 1947.

Statement No. 495, Distribution of Freight Traffic and Revenue Averages in the Products of Agriculture Group by Commodity Classes and Rate Territories—Terminations in 1947.

Statement No. 496, Distribution of Freight Traffic and Revenue Averages in the Animals and Products Group by Commodity Classes and Rate Territories—Terminations in 1947.

Shipper Volunteers to Salvage Its Unclaimed Freight

Johnson & Johnson, manufacturer of surgical supplies, has notified the railroads that, to keep substandard goods from reaching the consumer, it will salvage all unclaimed merchandise bearing the firm's name. The company cites instances where carriers have sold unclaimed J. & J. freight which had been on hand for an extended period and, as a result, had deteriorated.

W. K. Cabot, traffic manager of the company, notified the Freight Claim division, Association of American Railroads, of its offer. He stated: "If every carrier will return on-hand freight of ours to the Johnson & Johnson plant indicated on the shipping case, we will do one of three things: (1) establish proof of ownership, and apply the salvage against the items; (2) refund the amount of salvage if a claim has been paid on the basis of that short-

formed in temperatures as high as 110 deg. F., and at altitudes up to 8,000 ft. It has worked in tunnels up to a mile long with no indication of difficulty. Complete operating statistics will not be assembled until some time next summer when later phases of the test work are completed.

The locomotive is now in the shops at Los Angeles, Cal., undergoing thorough inspection before undertaking a new test phase stressing cold weather and long distance operation. G. W. Wilson, manager of G. E.'s Locomotive and Car Equipment Divisions, said it is hoped that, during the remainder of the winter, the unit can be placed in road freight service on U. P. divisions subject to extremely low temperatures.

Approve Site for South-Side Union Station in Chicago

With little more than a rough estimate of the cost ($200 million), and no specific idea whatever as to how financing would be effected, or of the many legal aspects involved, the City Planning Advisory Board to the Chicago Plan Commission, on February 6, voted favorably upon the commission's plan for consolidation of Chicago's south side passenger stations on a site a block or more south of the southwest corner of the city's elevated rapid transit loop, and almost directly south of the LaSalle Street station.

The stations involved in the consolidation plan include Dearborn; Grand Central, and LaSalle Street. The Illinois Central's Central station on the lake front, serving the I.C., the Michigan Central and the Cleveland, Cincinnati, Chicago & St. Louis (both New York Central), would not be involved.

The board had before it three plans for consolidation, as well as a plan proposed by the 14 roads serving the Dearborn, LaSalle Street and Grand Central stations for modernization and extension of existing south-side passenger terminals, which proposed the essential street improvements sought by the city under any of the plans to improve traffic conditions. Details of the railroads' plan are set forth in a feature article in this issue.

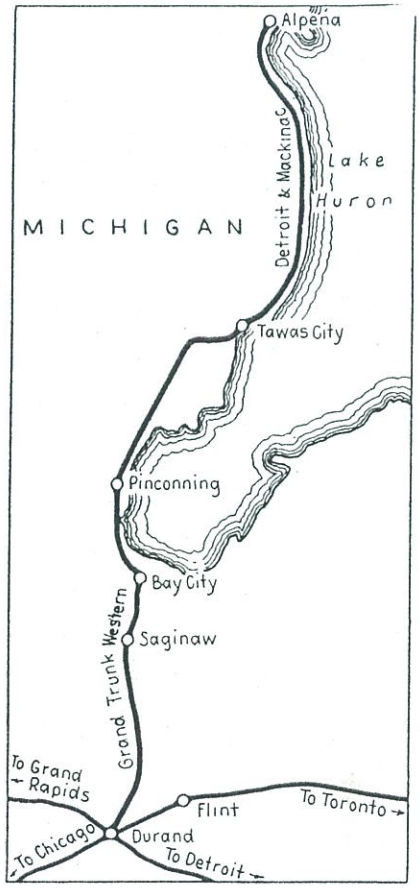
The other two consolidation plans were proposed by the South Side Planning Board, a slum clearance and improvement group, and the Illinois Central, both of which plans are mentioned briefly in the feature article referred to.

The action of the board to adopt the City Plan Commission's proposal was taken in spite of an amendment supported by many on the board, which would have postponed a decision pending a study of the costs and legal aspects. It was explained, however, that the action of the board is merely a recommendation to the City Council, which, necessarily, will have to give consideration to all phases of the problem. The railroads have attacked consolidation under any of the proposed plans as unnecessary and economically unsound.

G.T.W.-D. & M. Establish Detroit-Alpena Passenger Train

C. A. Skog, vice-president and general manager of the Grand Trunk Western, and C. A. Pinkerton, Jr., president and general manager of the Detroit & Mackinac, held a ribbon across the track at Alpena, Mich., on February 6, to be severed by the inaugural departure of a new interline train to Detroit, 244 mi., via Bay City and Saginaw.

The new service — made possible by re-arrangement and coordination of existing Grand Trunk and D.&M. passenger service — makes direct connections at Durand, Mich., with G. T. trains to and from Chicago, Battle Creek, Mich., and the state capital at Lansing; Toronto, Ont., and Flint, Mich., and Muskegon and Grand Rapids. An air-conditioned coach is operated through between Detroit and Alpena. From Alpena to Durand the train is handled by a D. & M. 1,500-hp. Diesel road-switching locomotive. Beyond Durand, the through equipment is consolidated with a Muskegon-Detroit passenger train.



The new Alpena, Mich.-Detroit train, operated jointly by the Grand Trunk Western and the Detroit & Mackinac, provides service to many destinations through direct connections at Durand

The new service leaves Alpena at 9:35 a.m. and arrives at Detroit at 5:55 p.m. Returning, the train leaves Detroit at 1:40 p.m. and arrives at Alpena at 10:00 p.m. The connections at Durand make possible, for the first time in a number of years, a daylight railroad trip between D.&M. points and Detroit, Chicago, Toronto and intermediate stations.

Asked by the press—who were guests of the two railroads on the inaugural run—whether the new trains would eventually provide dining or parlor car service, Mr. Skog stated that additional equipment would be provided to the extent that patronage warrants; that he hoped operation of a through parlor-buffet car to Chicago might prove justified.

Conemaugh & Black Lick Strike Called Off

Striking employees of the Conemaugh & Black Lick, all members of the C.I.O.'s steelworkers' union, returned to work late last week. The strike had been attributed to the alleged posting of signs by the company saying that a social insurance program was being discontinued (see last week's *Railway Age*, page 57). The strike was called off after the union reportedly agreed to administer an interim social insurance program until a permanent program can be negotiated.

Signaling Order Modified For Santa Fe and U. P.

Division 3 of the Interstate Commerce Commission has granted petitions of the Atchison, Topeka & Santa Fe and the Union Pacific for modification of its June 17, 1947, order which requires railroads to install automatic train-stop or train-control systems, or automatic cab-signal systems, on lines over which any train is operated at a speed of 80 m.p.h. or more. The modifications were made, respectively, in the commission's sixth and seventh reports (both by Commissioner Patterson) on further hearing in No. 29543.

The relief accorded the Santa Fe will permit a different scheduling of the required installations, but does not change the December 31, 1952, deadline by which all such installations must be completed. The basic order, as amended, stipulated that when the required installations were to be made on 100 mi. of track or less, they should be completed by December 31, 1948; and that when they were to be made on more than 100 mi. of track, specified percentages and mileages were to be completed each year through 1952.

The modifications made for the Santa Fe provide that the installations required of it "be made on not less than 33⅓ per cent of the miles of track during each of the calendar years 1950 and 1951, and on the remainder of the miles of track during the calendar year 1952." The report indicated that about

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that of the 2½-in. by 4-in. by 8½-in. vertical fibre (plain wire-cut) brick. This size and type of brick increased from 2.2 per cent of the total shipments in 1922 to 4.4 per cent of the shipments in 1924. It was the judgment of the committee that the experience during 1925 would in all probability determine the value of this thinner brick and that including it in the list of recognized types and sizes could be given careful consideration at the next meeting of the committee in 1926.

State May Take Over Michigan Road

Both houses of the legislature of the state of Michigan have passed a bill providing for the acquisition of the Detroit, Grand Haven & Milwaukee, which is now owned by the Grand Trunk, and for its operation by the state. This proposal has arisen out of a tax dispute between the road and the state. Under the original charter of the railway it was provided that taxes of the company should not be assessed on the valuation of the property but should equal 1 per cent annually on the paid-in capital stock. Although, as the state claims, the cost of construction was $13,437,985, the paid-in capital stock now equals only $2,517,140. Thus the taxes of the railway for 1923 were $25,171 instead of the $213,709 that they would have been if assessment had been made on the valuation of $7,500,000. The right to purchase the road is claimed through a provision in the original charter that the state should have the right at any time after the expiration of 20 years from the completion of the railway to purchase and hold it for the use of the state, at a price not exceeding the cost of construction and 14 per cent.

The bill having been passed by both houses the next move of the state will be to appoint a committee to make all arrangements for the purchase.

Contracts for Air Mail Service

Postmaster General New has issued regulations governing the letting of contracts to transport mail by air, carrying out recent legislation. It is expected that the operation of the new law will place America on a par with commercial aviation abroad which in most cases is heavily subsidized by the government. Contractors on air mail routes will be permitted to transport passengers, express packages, and freight. The act authorizes postage rates

OPERATING REVENUES AND OPERATING EXPENSES OF CLASS 1 STEAM ROADS IN THE UNITED STATES

(For 192 Steam Roads, Including 16 Switching and Terminal Companies)

For the Month of February, 1925 and 1924

Item	United States 1925	United States 1924	Eastern District 1925	Eastern District 1924	Pocahontas Region 1925	Pocahontas Region 1924	Southern Region 1925	Southern Region 1924	Western District 1925	Western District 1924
Average number of miles operated	236,637.54	236,023.51	59,490.15	59,516.01	5,501.54	5,498.98	38,505.45	38,337.90	133,140.40	132,670.62
Revenues:										
Freight	$336,799,840	$252,692,475	$152,452,116	$162,068,242	$16,215,573	$16,135,017	$48,811,699	$50,178,595	$119,320,452	$124,310,621
Passenger	a 77,566,197	b 83,394,858	36,645,620	38,564,441	1,773,498	1,869,272	13,131,680	13,146,937	26,015,399	29,814,208
Mail	7,678,383	7,758,573	2,886,434	2,922,545	214,326	193,250	1,106,749	1,096,803	3,470,874	3,545,975
Express	9,231,783	11,230,442	3,903,332	5,039,785	178,807	233,672	1,568,283	1,525,716	3,581,361	4,431,269
All other transportation	14,490,517	14,850,886	8,452,985	8,552,380	168,340	160,800	919,249	887,820	4,949,943	5,249,886
Incidental	8,628,699	8,708,949	4,278,424	4,422,474	289,608	304,037	1,288,107	1,109,590	2,772,560	2,872,848
Joint facility—Cr.	797,684	1,032,267	347,078	329,877	15,915	12,414	125,641	124,809	309,050	565,167
Joint facility—Dr.	197,004	214,483	93,476	114,290	1,702	1,722	36,315	31,791	65,511	66,680
Ry. operat'g revenues	454,996,099	479,453,967	208,872,513	221,785,454	18,854,365	18,906,740	66,915,093	68,038,479	160,354,128	170,723,294
Expenses:										
Maintenance of way and structures	54,923,944	54,419,439	23,7[illegible]380	22,952,938	2,754,508	2,525,800	8,682,708	8,501,576	19,758,348	20,439,125
Maintenance of equip't	101,491,536	107,006,053	49,343,229	52,287,960	4,263,274	4,790,273	12,316,301	13,048,560	35,568,732	36,879,260
Traffic	8,241,355	7,922,077	3,056,831	2,983,231	221,472	196,206	1,583,207	1,448,773	3,379,845	3,293,867
Transportation	173,731,479	188,782,705	83,131,883	91,532,707	5,650,730	6,410,190	23,573,799	24,688,365	61,375,067	66,151,443
Miscellanecus op'r'tions	4,052,697	3,902,037	1,877,768	1,905,884	92,130	83,938	619,146	442,769	1,463,653	1,469,446
General	13,916,181	13,691,626	6,208,269	6,116,555	446,058	402,436	1,791,124	1,787,510	5,470,730	5,385,125
Transportation for investment—Cr.	802,433	807,831	140,858	115,206	22,504	17,015	139,740	103,398	499,331	572,212
Ry. op'r'ting expenses	355,554,759	374,916,106	167,205,502	177,664,069	13,405,668	14,391,828	48,426,545	49,814,155	126,517,044	133,046,054
Net revenue from railway operations	99,441,340	104,537,861	41,667,011	44,121,385	5,448,697	4,514,912	18,488,548	18,224,324	33,837,084	37,677,240
Railway tax accruals	26,953,787	25,630,692	10,105,135	9,857,486	1,208,136	1,158,677	3,922,127	3,504,938	11,718,389	11,109,591
Uncollectible ry. revenues	126,273	213,006	38,878	74,112	14,776	2,194	17,069	10,925	55,550	125,775
Ry. operating income	72,361,280	78,694,163	31,522,998	34,189,787	4,225,785	3,354,041	14,549,352	14,708,461	22,063,145	26,441,874
Eq'p't rents—Dr. balance	5,900,636	5,564,828	3,143,579	3,667,305	d 456,494	d 364,065	985,879	574,820	2,227,672	1,686,768
Joint facility rent — Dr. balance	1,540,434	1,524,185	679,352	654,181	106,801	103,255	41,820	96,343	712,461	670,406
Net railway operating income	64,920,210	71,605,150	27,700,067	29,868,301	4,575,478	3,614,851	13,521,653	14,037,298	19,123,012	24,084,700
Ratio of expenses to revenues (per cent)	78.14	78.20	80.05	80.11	71.10	76.12	72.37	73.21	78.90	77.93

For Two Months Ended with February, 1925 and 1924

Item	United States 1925	United States 1924	Eastern District 1925	Eastern District 1924	Pocahontas Region 1925	Pocahontas Region 1924	Southern Region 1925	Southern Region 1924	Western District 1925	Western District 1924
Average number of miles operated	236,601.07	236,027.32	59,491.07	59,516.96	5,501.54	5,498.98	38,490.50	38,338.89	133,117.96	132,672.49
Revenues:										
Freight	$687,401,274	$686,211,960	$306,842,600	$314,163,513	$33,525,372	$31,223,207	$97,434,376	$96,806,659	$249,598,926	$244,018,581
Passenger	c 166,230,100	e 175,121,282	79,057,681	80,836,439	3,784,366	3,966,960	27,395,756	27,452,223	55,992,297	62,865,660
Mail	15,785,674	15,665,025	5,981,867	5,967,024	431,245	384,929	2,271,985	2,225,604	7,100,577	7,087,468
Express	19,996,374	21,708,700	9,007,657	9,646,301	475,162	469,800	3,045,098	2,951,865	7,468,447	8,640,734
All other transportation	30,338,869	29,756,679	17,516,120	17,113,474	348,234	320,841	1,822,450	1,731,374	10,652,055	10,590,990
Incidental	18,626,620	18,387,999	9,283,270	9,393,166	625,100	645,255	2,671,234	2,267,049	6,047,016	6,082,529
Joint facility—Cr.	1,791,751	2,114,015	834,152	714,015	31,132	30,026	250,155	267,812	676,312	1,102,162
Joint facility—Dr.	418,551	422,280	201,010	198,971	3,660	3,716	66,111	62,705	147,770	156,888
Ry. operat'g revenues	939,752,111	948,543,380	428,322,337	437,634,961	39,216,951	37,037,302	134,824,943	133,639,881	337,387,880	340,231,236
Expenses:										
Maintenance of way and structures	111,894,779	109,769,491	49,137,607	46,756,290	5,280,645	4,835,087	17,798,991	17,141,053	39,677,536	41,037,061
Maintenance of equip't	209,844,361	217,337,259	101,661,304	105,862,585	9,154,828	9,469,249	25,946,061	26,813,908	73,082,168	75,191,517
Traffic	16,741,086	16,015,601	6,162,718	6,014,683	444,127	399,205	3,130,857	2,987,860	7,003,384	6,613,853
Transportation	365,496,687	382,637,298	172,842,237	183,157,841	11,927,833	12,852,449	48,868,313	50,345,306	131,858,304	136,281,702
Miscellaneous op'r'tions	8,406,530	8,115,227	4,042,669	3,956,766	179,539	165,636	1,167,874	890,340	3,016,448	3,102,485
General	28,356,903	28,080,217	12,629,942	12,500,246	915,474	821,623	3,652,706	3,647,439	11,158,781	11,110,909
Transportation for investment—Cr.	1,452,101	1,880,986	235,959	235,583	43,487	31,712	282,195	214,937	890,460	1,398,754
Ry. op'r'ting expenses	739,288,245	760,074,107	346,240,518	358,012,828	27,858,959	28,511,537	100,282,607	101,610,969	264,906,161	271,938,773
Net revenue from railway operations	200,463,866	188,469,273	82,081,819	79,622,133	11,357,992	8,525,765	34,542,336	32,028,912	72,481,719	68,292,463
Railway tax accruals	54,256,509	51,327,818	20,730,011	19,986,038	2,435,445	2,315,385	7,667,144	6,692,475	23,423,909	22,333,920
Uncollectible ry. revenues	271,202	369,783	116,284	146,486	18,412	3,544	30,870	28,466	105,636	191,287
Ry. operating income	145,936,155	136,771,672	61,235,524	59,489,609	8,904,135	6,206,836	26,844,322	25,307,971	48,952,174	45,767,256
Eq'p't rents—Dr. balance	11,959,817	10,682,715	6,153,834	6,787,635	d 883,875	d 693,497	1,681,615	930,673	5,008,243	3,657,904
Joint facility rents—Dr. balance	3,230,372	3,079,112	1,444,578	1,380,099	199,920	212,704	189,432	211,794	1,396,442	1,274,515
Net railway operating income	130,745,966	123,009,845	53,637,112	51,321,875	9,588,090	6,687,629	24,973,275	24,165,504	42,547,489	40,834,837
Ratio of expenses to revenues (per cent)	78.72	80.13	80.84	81.81	71.04	76.98	74.38	76.03	78.52	79.93

a Includes $2,724,360 sleeping and parlor car surcharge. *b* Includes $2,605,712 sleeping and parlor car surcharge. *d* Deficit or other reverse items. *c* Includes $5,702,212 sleeping and parlor car surcharge. *e* Includes $5,367,626 sleeping and parlor car surcharge.

(Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.)

held from the despatcher. The conductor was busy collecting tickets and the meeting order dropped out of his mind until he reached the station. While passing he imagined he saw two eastbound passenger trains on the side track, though in fact there was only one such train there. The operator who gave the clear flag signal had been stationed at that point temporarily for the purpose of block-signaling trains running in the same direction, without regard to despatcher's orders concerning the movement of trains running toward each other.

Collisions, 4, 6, 8, 9, 10, 16 and 22 were due to mistakes or forgetfulness in connection with telegraphic orders or in reading time-tables. In collision No. 3 the men at fault had been on duty 18 hours.

Railroad Law.

The following abstracts are taken from recent decisions of the Supreme Court and the Federal Circuit Courts in railroad cases:

Connecting Carriers.—A special contract by a railroad company to transport a through shipment by a vessel of a connecting carrier sailing on a designated day will be deduced from the acceptance of a through rate for shipment "to be forwarded" via such a steamer, which rate was quoted with notice that it was of vital importance that the shipment should be transported promptly to enable the shipper to fulfill a contract for the sale of the goods at destination which required prompt delivery, and such a contract is binding though entered into by "a general eastern agent" of the receiver in control of the contracting carrier. (Sup. Ct. U. S.) Northern Pacific Ry. Co. vs. American Trading Co., 25 Sup. Ct. 84.

Exercise of Eminent Domain by Lessee of Franchise.—The lessee of a telegraph company cannot as such lessee exercise the right of eminent domain possessed by its lessor. (Sup. Ct. U. S.) Western Union Telegraph Co. vs. Pennsylvania Ry. Co., 25 Sup. Ct. 150.

Relationship as Disqualification of Receiver.—When the appointment of a person as one of the receivers of a railroad company in foreclosure proceedings is asked by the trustees in the mortgages and other creditors and favored by practically all of the parties in interest and is opposed by only a small minority of the bondholders who make no charge against his integrity or ability and he is specially fitted for the position by reason of his familiarity with the property and its operation the appointment will not be refused because of his relationship to certain of the large stockholders and bondholders nor because he had been an officer and director of the company. (U. S. Cir. Ct. Va.) Bowling Green Trust Co. vs. Virginia Passenger & Power Co., 133 Fed. Rep. 186.

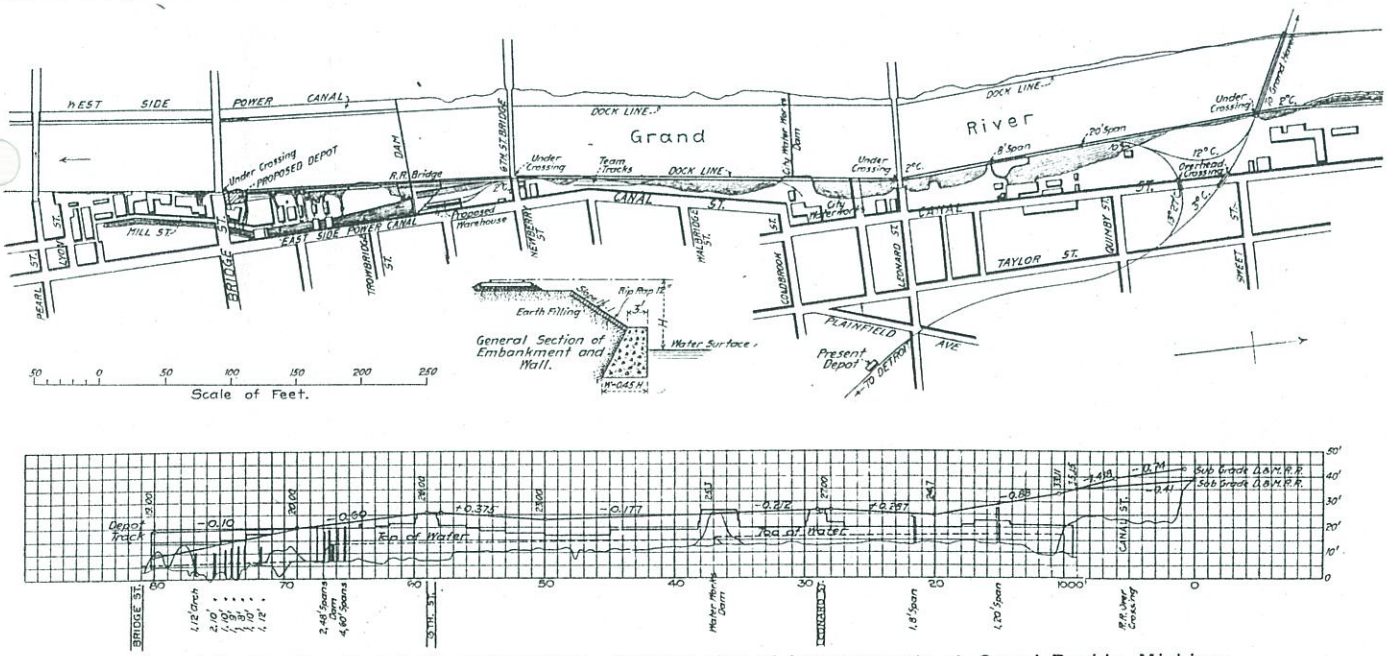
Telegraph Company's Entry on Railroad Right of Way.—Telegraph companies were not granted a right to enter upon and occupy railroad rights of way without consent by acts of Congress giving telegraph companies the right to construct, maintain and operate telegraph lines through and over the public domains and "over and along any of the military or post roads of the United States"; the purpose of that act being to withdraw interstate commerce by telegraph from state interference. (Sup. Ct. U. S.) Western Union Telegraph Co. vs. Pennsylvania R. R. Co., 25 Sup. Ct., Rep. 183.

Grand Trunk Terminal Improvements at Grand Rapids.

The present passenger and freight station of the Detroit, Grand Haven & Milwaukee Railway at Grand Rapids, Mich., being about 1¾ miles from the center of the manufacturing and business district of the city, it was decided last July that the line should be extended into this district. For this purpose the Grand Rapids Terminal Railroad Company was organized, and an ordinance secured from the City Council of Grand Rapids permitting a line to be built from a point on the Detroit, Grand Haven & Milwaukee just east of the bridge crossing Grand River, southerly and adjoining a dock line recently established on the east bank of the river to Bridge street, a distance of about 8,000 ft. The ordinance also provided for a further extension of the line under Bridge street and about 1,000 ft. further south, to form connection with industries established there. To build an embankment adjoining the dock line as established, it was necessary to build a protection wall in the river, about 7,000 ft. long, the face of which should be the dock line. The ordinance provided that at street crossings and across city property this wall should be built to grade elevation. Elsewhere, on the score of economy, it is but a few feet above the ordinary stage of water in the river. The height of this protection wall thus varies from about 7 ft. to 20 ft. After the completion of the embankment it is to be further protected to high-water mark by hand-placed riprap, as shown on the sketch of the general section of embankment and wall.

Bridge and Canal streets are the most important in the city. At the former the city has recently completed a concrete arch bridge about 500 ft. long. In order to pass under the approach to this structure, the track extending below Bridge street has to be depressed considerably. The elevation of the roadway at Bridge street is 28 ft.; the floor of the passenger station will be at about that same elevation, while the station tracks will be 21 ft. The elevation of the depressed track under Bridge street will be 10½ ft. at that point. It will therefore be necessary for the Terminal Company to build in addition to the dock line wall, another wall supporting the filling for the station tracks, which will lie above the depressed track for about 1,000 ft; also another wall protecting the property to the east and north of the company's property, on account of the limited space that could be acquired for track purposes.

The crossing of the power canal and dam will require four 60-ft. and two 48-ft. double-track, through-girder spans. Between the dam and Bridge street there will be eight different arches from 8 ft. to 12 ft. span and of sufficient length to carry three tracks, to serve as tail-races for the various industries situated on the canal and receiving power therefrom. The masonry will all be concrete and will amount to over 16,500 cu. yds.



Grand Rapids Terminal Railroad Company—General Plan of Improvements at Grand Rapids, Michigan.

The foregoing information was obtained from Mr. R. S. Logan, Assistant to Second Vice-President of the Grand Trunk.

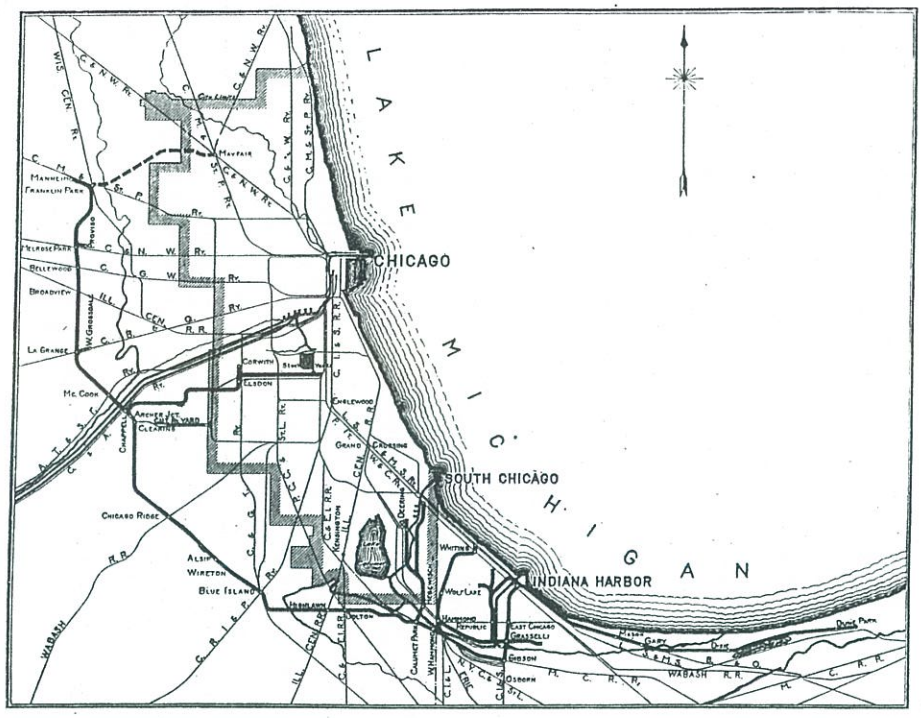
Pig Iron Production in 1904.

The Bulletin of the American Iron & Steel Association prints the following statistics of pig iron production in the United States during 1904.

The total production was 16,497,033 gross tons, against 18,009,252 tons in 1903, 17,821,307 tons in 1902, 15,878,354 tons in 1901, 13,789,242 tons in 1900, 13,620,703 tons in 1899, and 11,773,934 tons in 1898. The following

1½ fares per round trip to military tickets with a discount of 78½ per cent. There has recently been a considerable reduction in passenger rates in the hope that the reduction will lead to more long distance travel and a greater intimacy between the people of north and south Italy.

Large contracts for new rolling stock, rails, etc., have recently been placed, and larger ones will soon be imperative, as the property taken over by the government is much deteriorated. To all suggestions that America presents a fine field for purchases a disposition to have the contracts given to Italian firms is exhibited, but as there has been a limited demand on Italian factories in the past for such material, they are unprepared for the emergency, and it will be necessary to go into foreign markets to meet the necessities of the case.



Map of the Indiana Harbor Railroad.

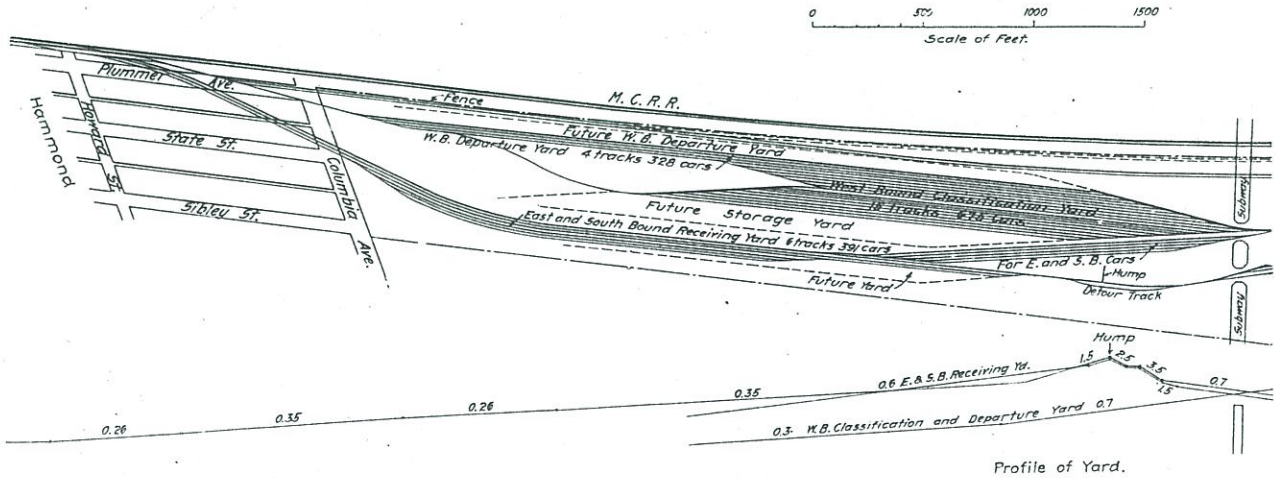
Wear of Roads by Automobiles.

The Massachusetts State Highway Commission finds that motor vehicles are causing rapid deterioration of macadam roads, and that something will have to be done to provide for the great resulting expense. The weight of these vehicles and the rapid speed at which they are operated make them far more injurious to roads than wagons. Over half of the 13,000 automobiles registered in Massachusetts are above 20 h.p. The commission recommends the revision of the taxation laws, so that automobiles shall be taxed, because of repair state roads, and next year at least $80,000 will be wanted. The commission holds that a 30-h.p. machine will damage a road three times as much as a 10-h.p. machine, and it is proposed that the taxes shall be on this basis.

The Gibson Yard of the Chicago, Indiana & Southern and Indiana Harbor.

An official map of the new Chicago, Indiana & Southern Railroad, the New York Central line formed last spring by consolidating the Indiana, Illinois & Iowa and the part of the Indiana Harbor Railroad from Chicago through Indiana Harbor, Ind., to Danville, Ill., was published in our issue of June 1, together with some comment regarding the advantages and traffic possibilities of the new road. The name Indiana Harbor Railroad is retained by the Indiana Harbor Belt, operating the Chicago outer belt, extending from Indiana Harbor, Ind., to Franklin Park, Ill., as shown by the accompanying map. Lines to the Union Stock Yards and to Dune Park, Ind., are included, the total mileage operated being 86 miles. This line does a general freight interchange business with all of the lines entering Chicago and serves a great many industries. Following the establishment of the new system, one of the first considerations was the provision of suitable yard facilities for proper handling of the considerable traffic originating in the Indiana Harbor, East Chicago, etc., industrial districts, and from the south over the C., I. & S., destined for the lines west and north from Chicago, and vice versa.

Referring to the map it will be noted that the Chicago, Indiana & Southern joins the belt system at Gibson, Ind., the crossing with the Michigan Central. This vicinity, therefore, was the logical place for the location of the ward. The site selected is immediately south of and parallel to the Michigan Central, the western end of the yard lying close to the eastern outskirts of Hammond and the eastern end being adjacent to the main line of the Chicago, Indiana & Southern, as shown by the accompanying plan of the yard. The yard has two parallel independent connecting tracks to the Michigan Central at the west end, and a north and a south connection to the Chicago, Indiana & Southern tracks at the eastern end. The yard is about two miles long, has capacity for 2,600 cars exclusive of the future additions indicated, and consists of practically duplicate halves for east and westbound business respectively. Its location is only about four miles from Lake Michigan and the country is low-lying and sandy. Sand was used entirely for filling and grading, some 550,000 cu. yds. being required for the 40 miles of track in the yards.



Proposed Yard for the Indiana Harbor Railroad near Hammond, Ind. (1)

As the plan shows, it is a gravity yard, and two features are particularly worth noting. One of these is the relation of the receiving yards to the humps, best seen in the profile, and the