

J. Buffington and C. S. Roberts, assistants; W. H. Howe, Manager, and T. V. Coales, assistant, Pittsburgh office; F. E. Paterson and T. P. Alder, assistants, New York office; E. R. Pool, Denver agent, having jurisdiction of Colorado, Utah, Wyoming and Montana; W. W. Bierce, New Orleans agent, in charge of Louisiana, Mississippi, Alabama, Georgia, Florida, North Carolina and South Carolina. Thos. H. Taylor, recently with the Washburn & Moen Mfg. Co., has been appointed manager of the works at Cleveland, formerly owned by the American Wire Co.

**New Stations and Shops.**

The St. Louis Southwestern is asking bids on a 20-stall brick roundhouse and two-story office building and store room at Tyler, Tex.

The Kansas City, Pittsburgh & Gulf has given a contract to Barnett & Record of Chicago to build a grain elevator at Port Arthur. The dimensions are: Grain elevator, 168 ft. x 70 ft.; engine and boiler room, 80 ft. x 30 ft.; conveyor, 1,100 ft. long; capacity, 500,000 lbs.

In connection with the track elevation work at Chicago, a new passenger station will be built at Englewood for the joint use of the Lake Shore, the Rock Island and the Port Wayne roads. As soon as the plans are completed and approved by the three roads bids will be asked for the building of the station, which must be finished by the end of the summer, when the tracks at this point will be elevated. The station will be triangular in shape, fronting south, west and northeast, with platforms on the three sides for the use of the three roads. The cost of the station will be about \$30,000.

**Interlocking.**

The National Switch & Signal Co. has put in a plant at the junction of the Chicago & Northwestern and the Chicago, Burlington & Quincy at East Clinton, Ill. It consists of 11 working levers and five spare spaces. There are four levers for seven switches and five locks, one lever for two facing point locks, and six levers for eight signals. The plant is equipped with electric locking with hand release wheel, as recently described and illustrated in the Railroad Gazette (March 11, page 174.)

**Railroad Testing Laboratory at Purdue.**

We have noted from time to time the progress of the movement and the final decision of the Executive Committee to put the M. C. B. brake shoe testing machine in Purdue University. A new building is now being erected which will provide suitable quarters for this and other apparatus for engineering research along lines which are of special interest to master car builders and superintendents of motive power. This building, which is to be 50 ft. wide by 100 ft. long, will form an addition to the present mechanical laboratories, being located between the steam engineering and locomotive laboratories, to both of which it will be connected by passage ways.

**Safety Appliances on Cars and Engines.**

The statistics gathered by the Interstate Commerce Commission concerning the equipment of freight cars with automatic couplers and train brakes, and the casualties to employees for the five years ending with 1897, which were recently called for by Congress, have been printed, as Senate document No. 140, which can, no doubt, be had on application to the Secretary of the Commission. The pamphlet contains lists of (1), the 42 companies whose cars and engines are all equipped; (2), the 483 companies reporting various percentages equipped; (3), the 84 companies owning engines, but not owning freight cars; (4), the 125 companies owning no equipment; (5), the 56 companies not reporting; (6), the 49 companies whose equipment is reported by other companies; (7), the 127 companies that have taken no steps to comply with the law, and (8), all railroads, showing the condition of their equipment and the number of employees killed and injured in each of the five years 1893-1897. The summary shows that in 1896 there were 831,688 employees, and that the total number of employees killed during the five years named was 9,954. The figures for the five years are:

	Killed.	Injured.
1893.....	9,727	31,724
1894.....	1,526	22,855
1895.....	1,811	25,656
1896.....	1,851	29,963
1897.....	1,732	27,623

The first table, that showing companies having 100 per cent. of their cars and engines equipped, contains mostly very small roads, though we find in it the Delaware, Susquehanna & Schuylkill, the Duluth & Iron Range and the Richmond, Fredericksburg & Potomac.

**Electricity on the "St. Paul."**

The Chicago City Council, April 6, passed an ordinance granting to the Chicago, Milwaukee & St. Paul Railway permission to equip its Evanston branch with an overhead trolley. The franchise is limited to 20 years and the railroad is to pay \$5,000 to the city as compensation. The ordinance will probably be vetoed by the Mayor who considers the compensation inadequate.

**A Storage Battery Meter.**

The General Electric Company has made a special type of meter designed to show the amount of energy available in a storage battery. It is a development of

the Thompson recording Watt-meter, with additional precaution against injury from shock or vibration. The essential requirement for a storage battery meter is that the armature shall revolve in either direction with equally accurate readings. The new meter answers this requisite. The energy put into the cells is added to the reading of the meter, while that withdrawn is subtracted; and to compensate for the loss in the cells the meter runs more slowly when charging. A reading shows the amount of energy available in the battery, not the amount put in. These meters are made with any desired percentage of difference between charging and discharging rates, but, as this percentage varies in almost every different case, the meters are made only to order. The 50-ampere meter may be considered as standard, and can be more promptly furnished than any other.

**New York Harbor.**

Last week Lieut. Colonel William Ludlow, Corps of Engineers, U. S. A., sent to the Chief of Engineers a report on his re-survey of the channels of New York Harbor. He recommends the improvement of the east channel, thus opposing the conclusion of his predecessor, Colonel Gillespie, who recommended the deepening of the main channel. Colonel Ludlow estimates that a channel 2,000 ft. wide and 35 ft. deep could be made for a total cost of \$3,200,750. This allows for 29,100,000 cubic yards of dredging at 7 1/2 cents, amounting to \$2,182,500, contingencies \$218,250, and four pump dredges at \$200,000 each. It is further estimated that if this work is given out to be done by contract 20 per cent. must be added. A channel 1,000 ft. wide and 35 ft. deep could be made within 15 months and the full width of 2,000 ft. could be secured in from 2 1/2 to 3 years. One advantage would be that the work in the east channel could be carried on without interference from the shipping passing in and out. In military security the east channel would not be quite so advantageous as the main channel. It lies about midway between Coney Island and Sandy Hook, being, on the average, about 3 1/2 miles distant from either shore. This range is somewhat greater than is regarded desirable in connection with torpedo defense and the protection of the torpedo fields from interference, but it is quite likely that the Romer shoal will be occupied for defense hereafter. "Furthermore, hostilities are abnormal and exceptional and commerce is habitual and constant. In such a great port as New York the disposition of the channels should facilitate to the utmost the movements of shipping."

**THE SCRAP HEAP.**

**Notes.**

The Pullman Palace Car Co. has renewed for 15 years its contract to run sleeping cars over the lines of the Union Pacific. It has been reported that the Wagner Company would get this contract.

The Michigan Legislature has failed to approve the bill for laying additional taxes on railroads which was proposed by Governor Pingree in his call for the extra session of the Legislature. The bill was passed in the Lower House by a large majority, but failed in the Senate by a single vote.

The pattern room connected with the shops of the Southern Pacific at Sacramento was destroyed by fire on the night of April 8. It is said that all of the valuable patterns of the company, accumulated during the past 20 years, were burned up. The car shops and other buildings of the Newburyport Car Co., at Newburyport, Mass., were burned down on the night of April 9. The loss, including eight finished street cars, is estimated at \$30,000.

The Southern Railway is now advertising in the Northern and Eastern states by means of a stereopticon, which is shown by an experienced lecturer, Dr. A. G. Rogers. The lecture has been given in New York, Philadelphia, Washington, Pittsburgh, Syracuse and a half dozen New England cities. At some places it is given under the auspices of some local association, and in such cases a small admission fee is sometimes charged for defraying the expenses of the hall. The lecturer, in showing the pictures, describes the mountain scenery of North Carolina, life in town and country all over the states traversed by the Southern Railway, and also shows views of the pleasure resorts and of the industrial establishments of the South. Dr. Rogers has engagements for a large number of cities and towns, his tour extending throughout the summer.

**Uniforms for Enginemen on the Lake Shore.**

On the Lake Shore & Michigan Southern all enginemen and firemen are now required to wear uniforms. An order has been issued by the Superintendent of Motive Power describing the garments and requiring their use after April 1.

The uniform consists of coat and overalls made of blue overalls and caps made of black Italian cloth. Summer and winter caps have been provided, but the men may wear either, as they choose. Badges and buttons will be furnished by the company. Uniforms will be examined and approved by the Master Mechanics, who will decide when they shall be renewed. The coat is single-breasted, with five buttons; short, soft roll, and square corners. Two outside breast pockets, and two outside lower, with flaps. The trousers will be in the "prevailing style," with or without apron; with suspenders made of the same material as trousers, sewed on at back. No pockets. The caps, in summer, are

to be made of black Italian cloth; Navy style crown; drop patent leather peak, black outside and green inside. In winter same material and style as summer, except that they will have ear and neck protection, and be slightly padded. Gilt buttons are to be used by engineers and silver by firemen. The buttons bear the letters "L. S. & M. S." with a raised form of a ten-wheel locomotive and tender. Badges will be worn on the caps, to be printed on silk ribbon, with the initials of the road and the word "Engineer" or "Fireman." For engineers the letters are in gilt and for firemen silver.

**Luxury in the Wilderness.**

A press dispatch from London states that the Russian Government has provided for the Siberian line a train de luxe, composed of four splendid cars, built at Moscow. There is an open saloon car, a dining car, a bathroom, a library, telephone, electric lighting, refrigerators, and ventilating apparatus, piano, chess boards, and means for gymnastic exercises. This will make the Pennsylvania and the New York Central, and the other American originators of luxurious trains, hide their heads in confusion. American passengers have, perhaps, all the luxury that they have been taught to appreciate, but we must admit that Russia has beaten us. The first half dozen features of the Siberian train are familiar matters here, even telephones being at our command if we want them; moreover pianos have been used in American cars, and something even better than a chessboard may be found in most smoking cars, even those used by the plebeian classes; but when it comes to gymnastics we give up. We have no better expedient than to stop 20 minutes and let the passengers walk up and down the station platform. Whether the Russian apparatus consists of a pair of 50-cent dumb bells or of only a 38-in. cane, is not stated.

**A Civil Engineer.**

Tom Maguire is a genius. He is yard foreman at the Lacadie Gas Company's plant. A sewer pipe leading from one of the buildings to the river bank, 160 feet away, became clogged. The pipe is 16 feet below the surface. Maguire had been thinking about a plan for several days. One night he caught two big gray rats, and these he determined to put into the sewer. They were taken to the mouth at the river bank and released. The opening was then closed securely behind them, leaving the animals with only one chance of life. That was to go straight ahead. And they did. Several more rats were caught and turned into the sewer, until a dozen were gnawing away in the pipe. The morning after the last detachment joined the main army, water began to trickle from the pipe. Iron rods and steam were applied. In ten minutes the sewer was clear.—St. Louis Post-Dispatch.

Engineering is directing the sources of power in nature to the use and convenience of man; therefore Tom is an engineer.

**Sale of the Nicaragua Railroad.**

The Atlas Steamship Co. has bought the National Railroad of Nicaragua. This line is not yet completed and extends from Corinth on the Pacific Coast, east about 58 miles, and from Managua, east about 32 miles, to Granada. It is stated that the Atlas line will run steamers to Valparaiso and California ports. This company also has a contract with the Nicaragua Government to build a railroad from Salico Lagoon to the San Juan River.

**Steel Car Steps.**

A number of railroads are making trials of the Q & C Stanwood steel car steps on passenger cars, and it is not unreasonable to expect that they will be found suitable for such service. These steps, which are made by the Q & C Co., Chicago, are now used quite generally on street cars.

**A Library for the Men.**

We have before now mentioned the flourishing Metropolitan Street Railway Association, organized largely through Mr. Vreeland's efforts among the employees of the Metropolitan Street Railway Company of New York City. It is a mutual relief association and has a club room, reading rooms, library and various conveniences and attractions. We have just received a copy of the catalogue of the library. This comprises about a thousand well selected volumes of fiction, books of travel, scientific and technical books, history, biography, etc. The library is open only to members of the association, and to them it is free.

**Armour Institute of Technology.**

The first exhibit of the work of Armour Institute will be made at the Trans-Mississippi Exposition to be held at Omaha this summer, and Prof. A. M. Feldman is preparing plans for an exhibit showing the progressive stages in all departments by drawing models and apparatus made by students. A series of tests of a new kind of pressed brick is now being conducted in the mechanical engineering laboratory. The electrical engineering department is making tests on a 5 H. P. synchronous motor.

**LOCOMOTIVE BUILDING.**

We understand that arrangements will shortly be made by the directors of the St. Paul & Duluth Railroad to buy three freight and three passenger engines.

The Interoceanic Railroad of Mexico has placed an order with the Schenectady Locomotive Works for four locomotives for delivery early in June. It is probable that this order will be increased to 10 or 12.

The Brainerd & Northern Minnesota has placed an order with the Richmond Locomotive Works for one simple and one compound mogul engine. The former will have 16 1/2 x 26-in. cylinders and the latter 18 and 23 1/2 x 26-in. cylinders. Both types will weigh 100,000 lbs., with 86,000 lbs. on the drivers, and will have 56-in. drivers, radial stay extended wagon to boilers with a working steam pressure of 200 lbs.; firebox, length 84 in.; width, 34 in.; tank capacity, 3,400 gals. Westinghouse brakes, Monitor Injectors, U. S. metal-ite pipes and valve rod packings, Crosby valves, Leach sanding devices and Nathan lubricators will be used.

The Toledo & Ohio Central ordered April 8, from the Brooks Locomotive Works, five 10-wheel simple freight locomotives, to be delivered in July and August. These engines are to have cylinders 18 in. x 24