

City, Mo., but after August 1 the permanent headquarters of the company will be in Chicago. This valve gear is adapted to either locomotive or stationary engines, and a model was shown at the Saratoga conventions and attracted much attention. By a slight modification of the existing valve gear, a steam distribution is obtained quite similar to that got with Corliss engines. Tests have been made on the locomotive testing plant at Purdue University which confirm the expectations of the inventors.

Iron and Steel.

The Carnegie Co. has a contract to supply 4,000 tons of 65-lb. rails for the Cape Government Railways.

Advices from Pittsburgh indicate a drop in the price of steel billets to \$22 and \$23 per ton for immediate delivery.

It is stated that the attempt to form a consolidation of a number of valve manufacturing concerns of Pittsburgh and Allegheny has been abandoned, as the options have expired.

Frank E. Kirby, for a number of years Chief Engineer and Designer for the Detroit Dry Dock Co., and lately connected with the American Ship Building Co., resigned on July 1. It is understood that he will locate in New York as a civil engineer.

Conferences were held in New York City last week by officers of the larger steel companies to consider the general condition of the market and to agree on prices. President Gary, of the Federal Steel Co., gave out a statement which covers the situation in a general way: "The conferences between the presidents of the leading steel and iron companies were wholly informal. The questions discussed relate to the general condition of the iron industry, including supply and demand and present and future prices. The purpose was simply to get information concerning the exact situation and to exchange views in regard to individual business policies. The feeling prevails that as to many products prices have about reached the bottom, and although it is generally believed the prices of pig iron and billets are at present high in proportion to some of the finished products, and should be reduced to some extent as soon as circumstances will permit, I think prices will rapidly adjust themselves to the entire satisfaction of the producer and the consumer. The disposition of manufacturers to consult from time to time one another as well as their larger customers, thus following the example of the presidents of all the leading railroads, should result in benefit to all concerned."

In the issue of July 5 the *Iron Age* says about the situation of the iron and steel market: "Half the year has gone and the time has at last arrived when most of the contracts placed by large consumers for pig iron and finished products have expired. For the past 90 days the end of June has been anxiously awaited by manufacturers who believed that the good condition of the country at large would certainly lead to the general renewing of contracts. It is disappointing to find that elements have entered into the situation which have completely upset all calculations. The downward tendency in prices was for awhile strongly resisted by those having contracts to fill for the first six months in order to protect not only their own business but also that of their customers, whose prices, on their own products, would, of course, be unfavorably affected by declines in raw material. The decline which set in, despite such resistance, has gone considerably further than had been expected when it began. We have had very heavy reductions since the height of the market was reached last October, in some cases amounting to 50 per cent., and in others from 30 to 40 per cent. In the past week rapid progress was made in getting down to bottom prices. Tubular goods were reduced 20 to 25 per cent., and further cuts were made on pig iron, steel billets, plates and bars."

Heavier Passenger Locomotives for the Santa Fe.
Under the direction of Mr. John Player, Superintendent of Machinery, A. T. & S. F. Railroad, a new type of passenger locomotive for mountain service is being designed. The design will include the main features of passenger engines now working in the mountains upon this railroad, but the total weight of locomotive will be greater, the cylinders will be 20 in. x 28 in., the driving wheel centers 60 in. in diameter, with a total diameter of 67 in. outside of tires. These locomotives are intended for service between Winslow and Barstow on the Santa Fe Pacific. There the ruling grades are 75 ft. per mile on one section of over 100 miles in one direction, and in some places the ruling grade is as great as 90 ft. per mile in the other direction.

The Big Locomotives Doing Well.

Information has been received in regard to the working of Pittsburgh, Bessemer & Lake Erie engines Nos. 150 and 151, described in our issue of June 29. The engines have been in continual service since received from the builders and are steaming freely and giving satisfaction. They are in drag service, hauling ore from Conneaut Harbor to Albion, a distance of 14 miles. Their total trainload is 2,373 tons, of which 1,775 tons are ore. From Conneaut Harbor to State Line, a distance of about four miles, a helper engine having 19 in. x 26 in. cylinders is used. The maximum grade between these points is a trifle over 40 ft. per mile, one-half mile having a 7° curve, the work thus being equivalent to similar performance upon a grade of 52 ft. per mile of straight track. From State Line to the E. & P. crossing, a distance of 8 miles, there is an average curvature of 1° and 40 minutes, with a total rise of 20.8 ft. The average

grade is 26 ft. per mile, and the maximum grade 40 ft. per mile, the greatest length of maximum grade being 1¼ miles. Over this section, and from the E. & P. crossing to Albion, where the grades are about the same, the trains are taken without helper engines. The engines are carrying 215 lbs. of steam. There has been no trouble thus far from running hot.

Master Car Builders' and Master Mechanics' Associations.

Mr. J. W. Taylor has been re-elected Secretary of the Master Car Builders' and Master Mechanics' Associations to serve during the ensuing year. A list of the other officers was published in our issue of June 29. As is well known, the Executive Committees select the Secretary, and, therefore, Mr. Taylor's election was not known when the names of the other officers were announced.

Car Heating Patents.

We have the following from the Consolidated Car-Heating Co.: "Judge Pagnuelo, of the Superior Court of the Province of Quebec, Canada, on June 28th, rendered a decision in favor of the Consolidated Car-Heating Co. in its suit against the Gold Car-Heating Co., through its Canadian agent, Frank E. Came. The suit was to prevent the use and sale of the Gold Straight Port Coupler. The decision sustains the Sewall patents, grants an injunction against the sale and use of the infringing coupler, awards damages and assesses costs on the defendant."

Bracket on the Head of Main Reservoirs.

The Westinghouse Air Brake Company issues the following notice: "Some years ago, when main reservoirs of comparatively small capacity were generally employed, and but very few standard sizes were made, a bracket was bolted on one end of the reservoir to facilitate its application, especially when located between the engine frames. This style of reservoir is illustrated in many of our publications, and particularly in our 1897 Catalogue, on Plate F23, Fig. 1, which naturally leads to the impression that the construction indicated is standard. The greatly increased number of different sizes of main reservoirs now called for by our patrons, however, and the various locations on the locomotive in which they are installed, render this bracket on the head entirely useless in the large majority of cases; and, in view of this fact, it will be hereafter omitted in every instance unless distinctly specified."

Traveling Engineers' Association.

The Traveling Engineers' Association has sent out a letter of inquiry on the subject of smokeless firing, and replies should be sent to Mr. J. H. Burns, Assistant Master Mechanic of the Burlington, Cedar Rapids & Northern, Cedar Rapids, Iowa. The following questions are asked:

Have you experimented in firing locomotives with soft or bituminous coal without emitting black smoke? If so, what has been your success, and how accomplished?

Have you experimented in firing locomotives without black smoke through efforts and skill of the engineers and firemen only? If so, on what theory did they fire and operate the engine?

What, in your opinion, is smokeless firing? Does it admit of any smoke, or is brown or gray smoke tolerated, and dense black smoke only considered poor firing?

Do you claim a saving in fuel by smokeless firing? If so, what per cent.?

Can smokeless firing be accomplished by any device known to you, without skilful firing?

Can an engineer aid in smokeless firing by the manner in which he operates his engine?

If you are not using the system of smokeless firing, what are your reasons for not doing so?

Do you consider that smokeless firing will be of sufficient advantage, apart from reasons of economy, in added comfort to passengers and safety to employees to warrant its adoption?

Can as good results be obtained by skilful firing without devices as with them? What is your opinion of an arch as effecting smokeless firing?

Do you get the same results as to smokeless firing from all grades of bituminous coal?

Interlocking.

The State Railroad Commissioners of Illinois have apportioned the cost of installation and of maintenance of interlocking signal plants at Atlanta and Minier, the roads interested being the Chicago & Alton and the Terre Haute & Peoria, in each case; also at Shattuck at the crossing of the Baltimore & Ohio Southwestern with the Jacksonville & St. Louis.

Block Signals Between Providence and Worcester.

Readers interested in the history of automatic block signaling will recall that the Providence & Worcester Railroad, now the Worcester Division of the New York, New Haven & Hartford, was one of the earliest roads to be equipped with Union automatic track circuit signals. These signals were not continuous, however, most of the sections being at or near stations. But the stations are very near together throughout the 44 miles of road, and especially near the southern end, and the gaps between the sections are now being signaled so as to make a continuous block system. The signals now being erected are those which were recently taken out of the Providence Division to make way for electrically controlled manual signals.

Interlocking on the New York Central.

The low pressure pneumatic interlocking plant at Hoffman's, the new junction of the West Shore and the New York Central main line, west of Albany, is now completed. This is a 20-lever machine made by the Standard Railroad Signal Company. The Central has also just finished a 36-lever mechanical interlocking plant at De

Witt. This road now has mechanical interlocking signals at Lyons, Canastota, Rome, Little Falls, St. Johnsville, Fonda, Amsterdam, Karner (east end and west end) West Albany (east end) and east of the passenger station at Utica. Work is now in progress on the 96-lever low-pressure pneumatic interlocking plant at Suspension Bridge.

Nickel Steel on Locomotives.

The Northern Pacific has specified Bethlehem nickel steel for the driving axles and crank pins for 20 locomotives now under contract with the Schenectady Locomotive Works, and the Bethlehem Steel Company has already booked orders for the forgings in question. The latter concern reports that the list of railroads using this material is steadily growing, but calls attention to the fact that those wishing to specify it for locomotive forgings should be careful to designate it as "Bethlehem Nickel Steel," as the reputation gained by it has resulted in the production of inferior imitations.

THE SCRAP HEAP.

Notes.

The Pan-American Exposition Co., which is to hold a fair at Buffalo next year, reports the receipt of \$150,000 from the New York Central & Hudson River Railroad and \$15,000 from the Pennsylvania.

The Cleveland, Cincinnati, Chicago & St. Louis is experimenting with willow hoops for the delivery of "19" train orders to moving trains. The stick by which the stationman holds the hoop is about 4 ft. long.

The proprietor of a flour mill has been expelled from the Minneapolis Chamber of Commerce, and the members of another firm have been indefinitely suspended, for manipulating the bills on grain which was brought to their mills over the Minneapolis & St. Louis to be re-shipped on milling-in-transit rates.

A man is held for trial in Brooklyn, N. Y., on a charge which may land him in state's prison, when the only offense of which he is accused is tearing up a few rods of the track of a miniature railroad at Coney Island. The train probably never runs faster than six miles an hour, but the seriousness of the man's case arises from the fact that the railroad, though very small, is not, as one might at first suppose, a mere toy railroad. A locomotive weighing about 500 lbs. hauls nine cars, carrying four children each. The accused had been discharged from his position as engineman on this road, on account of drunkenness, and in revenge he tore up some of the track. He was brought before Magistrate Voorhees, who, after learning the facts, said that, according to the law, the crime was the same as it would be in the case of tampering with a standard railroad. This is in accordance with Section 635 of the Penal Code.

Traffic Notes.

The suit of the state of California against the Southern Pacific to forbid an advance in passenger fares from San Francisco to Fresno and other towns in the San Joaquin Valley, has been decided in favor of the state, but it is said that the railroad company will appeal to the higher court.

An Effective Advertisement.

At the new passenger office of the Southern Railway, at Broadway and Twenty-eighth street, New York city, a map of the lines of the road has been painted on the largest plate glass window. The drawings were made by the American Bank Note Company on paper, and these were transferred to the glass by expert painters. The window is 12 ft. in height, and the map covers 140 square ft. of space. It includes the territory within the bounds of the Potomac River, the Atlantic seaboard, the Gulf of Mexico and the Mississippi River; and there is also a map of Cuba, Porto Rico and the Bahamas. The field of the map is translucent, the waters blue tinted, the railroad lines red and the lettering black. Every important town on the system and its connections is conspicuously represented.

Work of Traction Engines in South Africa.

The London *Times* of recent date gives an account of work done in South Africa by traction engines belonging to the British army. Seven of these engines have been used in hauling stores across the veldt. The seven engines carry 5,000 ton-miles of freight daily, which is equivalent to each engine hauling 35 tons over 20 miles. In the wild country where this work is done, transportation by ox teams costs 75 cents per ton per mile, so that each steam engine is earning, on that basis, over \$500 a day, and it is estimated that a machine will pay for itself in 10 days. Going on to commend traction engines generally, the writer remarks that in England country roads much traversed by these engines are always smoother than those which are traversed only by horses and narrow-tired wagons. Bicycle riders always notice this fact.

New Railroad in West Poland.

The Consul General at St. Petersburg, Russia, under date of May 9, writes that the Warsaw-Vienna Railroad Co. has been authorized to build a line from Warsaw via Lodz to Calish and Skalmeritz. The authorized capital is 125,000 shares of \$50 each, and 4 per cent. bonds without the Government guarantee. The shares mature in 1932, and the bonds in 60 years. The line is to be about 165 miles long, and be completed within three years.

The New East River Bridge.

The steel tower on the Manhattan side of the new East River Bridge has been finished to its full height of 320 feet above high water mark. The Williamsburg tower is nearly completed. Arrangements are under way for starting the girder work. The contractors for the cable work will begin operations as soon as the steel towers have all the girders in place.

The Chief Engineer of the New East River bridge in a recent report said that the clearing up of rubbish and pumping water out of the anchor chain tunnels has been finished. Except for dismantling the travelers the anchorage is in the shape required for the cable-making plant. Steel towers and end spans—the K column sec-