

& Atlantic, Greenville & Vanceboro, Scotland Neck & Roanoke, Dublin & Onslow, Trent River & Cape Fear, Rutherfordton, Marion & Northwestern, Jackson Springs, New River Valley, Charlotte Monroe & Columbia, Thomasville & Eldorado, Asheville & Weaverville, Rutherfordton Hickory Nut Gap & Asheville, Atlantic & Northwestern, Kenansville Air Line.

The Wilson Railway Crossing Gates.

Grade crossing gates of the ordinary type, having arms extending across the road and sidewalk, are very generally operated by wires or by compressed air, but the illustration herewith shows a gate which is operated by pipe connections and levers similar to those of an interlocking plant. In the gateman's tower is placed a signal lever, fitted with sector, latch and latch handle, and connected by 1-inch gas-pipe and bell cranks 9 by 9 inch, with the operating mechanism of the gate arms. The bell cranks have 7/8-inch turned pins, and the pipe under the roadway is supported by ordinary pipe carriers, as used in interlocking work. The general arrangement is shown in Fig. 1. Each gate arm is carried by a hollow cast-iron post or casing which contains the mechanism and has a moveable top.

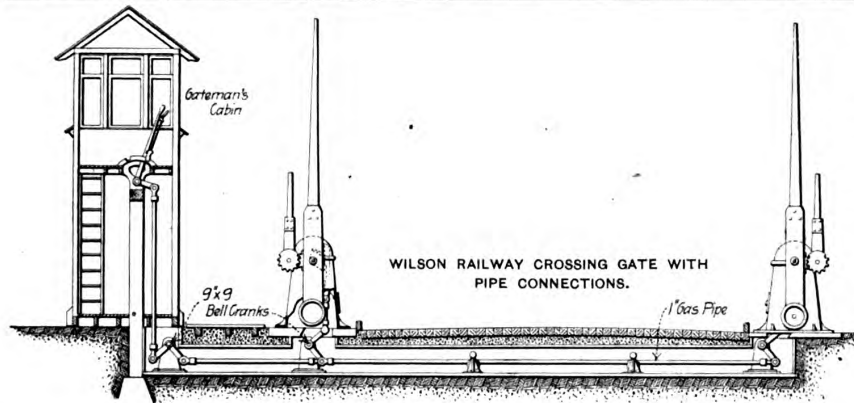
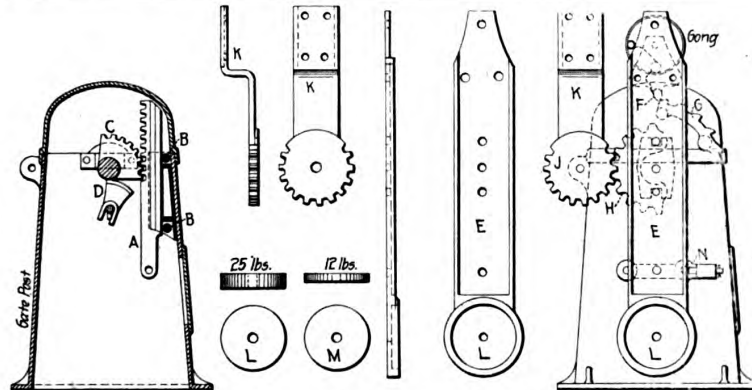


Fig. 2 shows the details of the mechanism. The vertical pipe from the bell crank under the post is connected to a vertical malleable iron bar having a rack cut in one edge, while the back of the bar is supported by two rollers fitted between the guides. The rack meshes with a segmental rack upon the gate shaft. This shaft rests upon two anti-friction rocker bearings. Two iron plates are attached to this shaft, outside the post, and to these are attached the wooden arms forming the main gate. Pivoted between the ends of plates is a gong, having the hammer which engages with a ratchet, and thus rings the gong as the arm descends. The latch on the operating lever prevents the opening of the gate by persons in the road. On the end of the shaft outside the post, is a segmental rack gearing with a similar rack on the shaft of the sidewalk arm, this arm being attached to the iron plate. Each main arm is counterbalanced by two 25-pound weights fitted to the ends of the iron plates, while each sidewalk arm is counterbalanced by a single, 12-pound weight. On each post is a spring stop, which acts as a buffer for the arms when they are raised to the end of their travel. The pipe makes a stroke of 7 inches to turn the shaft 90 degrees and thus close or open the gate. To prevent freezing of the connections, the post and pipe box are drained by pipes leading to a sewer or drain.

RICE LAKE & NORTHERN.—Incorporated in Wisconsin to build a railroad from Rice Lake to Ashland, 100 miles. Surveys have been commenced and it is stated that grading will begin as soon as possible. Capital stock, \$100,000. Incorporators: George Fuller of Saint Paul, George M. Huss of Chicago, J. E. Horsman of Rice Lake, Clarence C. and Arthur E. Coe of Barron, Wis.

TIMPSON NORTHWESTERN.—Incorporated in Texas to build a railroad 8 miles long from Timpson to Ragley. Capital stock, \$12,500. Incorporators: W. G. Ragley, M. J. Ragley, R. W. Wright, W. M. Byrne, A. H. Schluter, J. M. Lankford and R. J. Andrews. Principal office, Ragley, Tex.



DETAILS OF WILSON RAILWAY CROSSING GATE.

TOLEDO & CHICAGO.—Incorporated in Ohio to build the extension of the Wabash from Montpelier to Toledo. Capital stock, \$250,000. Incorporators: Bryant C. Winston, Fred J. Reynolds, George H. Beckwith, Charles H. Newton and Charles L. Reynolds.

This gate was invented some years ago by Mr. H. C. Wilson, who was for 14 years signal engineer of the Grand Trunk Railway, and had charge also of all crossing gates. Having experienced considerable difficulty in keeping the ordinary gates in service during the bad weather, he conceived the idea of making the mechanism from interlocking material then in stock. The results were so satisfactory that others were made, and the design was patented, but the gates were not put upon the market until about four years ago. They are now in use on a number of leading railways, and are manufactured by the Wilson Railway Gate Company of Birmingham, Mich., of which H. C. Wilson is manager. The advantages claimed are reliability, positive action and economy in maintenance. The company also manufactures mechanical and electric signals for road crossings, and derrails and signals for railway crossings at grade.

FOREIGN CONSTRUCTION.

MEXICO.

Several weeks ago the federal government, by direction of President Diaz, advertised for bids for a concession to be granted by the government for the building of a railroad from Monterey to Matamoros, on the Rio Grande border, opposite Brownsville, Tex., a distance of about 150 miles. A large number of bids for the concessions were received, and it is stated that the fortunate bidder is a syndicate of American capitalists, headed by William Anderson, who has been in Mexico for some time figuring on building the road in question. The concession will carry with it a government subsidy of about \$8,000 per mile and certain donations of land, right of way, etc.

Railways in Indian Territory cannot be taxed by municipalities, under existing laws, is the decision of Judge Townsend of the United States Court, Southern District, rendered at Ardmore, I. T., on March 14. The municipal governments of many towns sought to tax the Chicago Rock Island & Pacific and Santa Fe roads, and were temporarily enjoined. Judge Townsend held there was no law to tax railroads in the southern district for the reason that Congress had provided no machinery to carry out a system of taxation in the territory, and before municipalities can levy and collect taxes upon property of railroads it will be necessary for Congress to provide for levying taxes against these roads.

The Young Men's Christian Association of New York, needing \$30,000 to pay off its debt, applied for help to Mr. J. P. Morgan, who for many years was treasurer of the association, and has always shown great interest in its work. "Where's your book," he asked. The solicitor produced it and in a minute received it back with the inscription: "J. P. Morgan, \$100,000."

Consul Nelson of Bergen, under date of January 30, 1901, reports a successful attempt to produce steel by electricity in Sweden. The consul says: "The experiments are being carried on at Gysinge factory, Sweden, and about 25,000 pounds of steel are produced in six drafts daily. The steel is of an excellent quality and meets with ready sales at high prices. On account of the relatively cheap method of production, the profits are large, but as the electrical power is limited, the output is insignificant. To overcome this drawback, plans have been formed for the erection of a large electric plant near the Dalafuven River, the water power of which will be utilized. This will enable the company to carry on the manufacture of steel by electricity on a large scale."

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