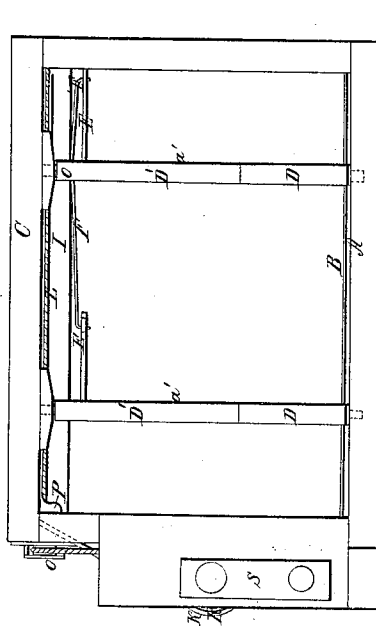
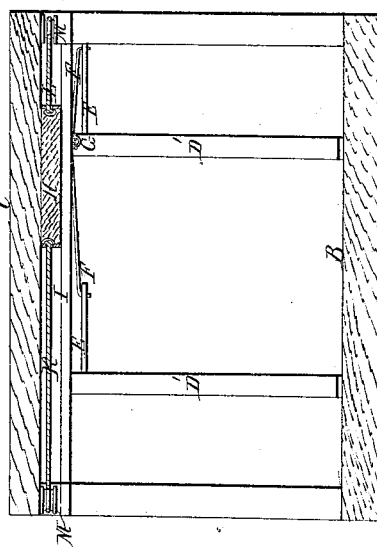


Patented Mar. 21, 1865.



Inventor;
Samuel W. Cushing
by his attorney
R. M. Adely

UNITED STATES PATENT OFFICE.

SAMUEL N. CUSHING, OF WALTHAM, MASSACHUSETTS.

IMPROVEMENT IN RAILWAY-GATES.

Specification forming part of Letters Patent No. **46,884**, dated March 21, 1865.

To all whom it may concern:

Be it known that I, SAMUEL N. CUSHING, of Waltham, in the county of Middlesex and State of Massachusetts, have made a new and useful invention having reference to Gates for Railway and Common Road Crossings; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings.

My invention is an improvement in the means of closing railway-crossing gates, either across the road or the track, as circumstances may require.

Of the said drawings, Figure 1 denotes a top view, Fig. 2 a side elevation, Fig. 3 an end elevation, and Fig. 4 a longitudinal section, of four gates applied to a railway and a common road crossing, and provided, in accordance with my invention, with means of moving them either across the roadway and its sidewalks or across the railway, as circumstances may require. When across the roadway, the gates close it against any passing of carriages or persons across the track, and open the railway for the passage of a train across the roadway. When across the railway, the gates not only close it against the passage of trains, but open the roadway for the passage of vehicles or passengers across the tracks at the crossing.

In such drawings, A denotes the road crossing, and B B the rails or track of the railway. Over the roadway I erect a frame, C, of suitable size to carry the gates D', two of which are placed within each of the two opposite sides of such frame, and should be applied thereto in such manner as to be capable of being swung either across the railway or the roadway, the turning-post *a'* of each gate being arranged at or about at the junction of the roadway and sidewalk. Each gate, as shown in the drawings, has a lesser or sidewalk gate, D, projecting from its post and in a direction opposite to that in which the main gate extends from such post. Furthermore, from the upper part of each main gate an arm, E, projects, the several arms being arranged with respect to their gates in manner as shown in Fig. 1. To the outer end of each arm the

extremity of one of a set of impelling-rods, F F F F, is jointed, the other ends of such rods being jointed to a projection or staple, G, extending down from a carriage or slider, H. The said slider H is arranged between and supported by horizontal ways I I, extending across the upper part of the frame. To opposite ends of the slider two ropes, K L, are affixed. These ropes are led around guide-sheaves M M, arranged at the ends of the ways I I, and pass to and around other sheaves or pulleys, O P, and from thence go to the barrel of a windlass, R, about which they are to be wound in opposite directions, and to which they are to be fastened. On laying hold of the crank S of such windlass and turning it so as to revolve the windlass the carriage or slider will be caused to move rectilinearly in one direction, an opposite rotary movement of the crank causing the said carriage or slider to be moved rectilinearly in an opposite direction to that of its first movement. One of these movements of the carriage through the medium of the arms and rods connecting the carriage with the gates will cause such gates to be moved so as to stand across the roadway. The movement of the carriage in the opposite direction in like manner will cause the gates to open the roadway and close the railway-track or stand across the latter. When the roadway may be closed by the larger gates the sidewalks will also be closed by the lesser gates.

I claim—

The combination for operating the gates, arranged with respect to the roadway and railway as described, the same consisting in the arms, the impelling-rods, the carriage, or its equivalent, and the windlass and ropes, or a mechanism for moving the carriage, in manner as explained, the whole being applied to a frame erected at the crossing or junction of the roadway and railway, and so as to operate and be capable of being operated substantially as specified.

SAMUEL N. CUSHING.

Witnesses:

R. H. EDDY,
F. P. HALE, Jr.