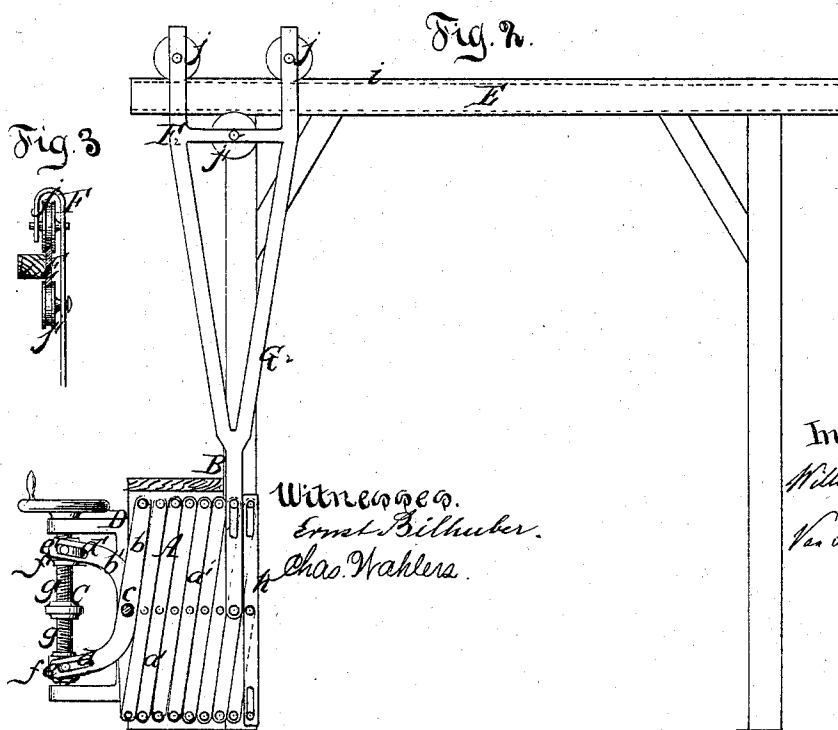
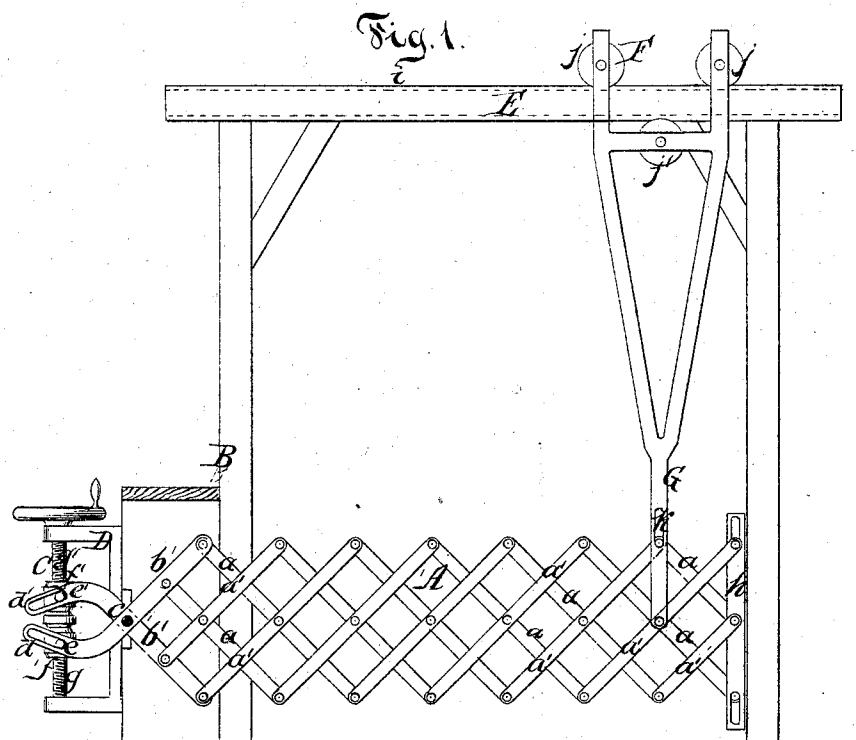


W. F. MORGAN.
Railroad-Crossing Gates.

No. 138,677.

Patented May 6, 1873.



UNITED STATES PATENT OFFICE.

WILLIAM F. MORGAN, OF NEW YORK, N. Y.

IMPROVEMENT IN RAILROAD-CROSSING GATES.

Specification forming part of Letters Patent No. **138,677**, dated May 6, 1873; application filed April 4, 1873.

To all whom it may concern:

Be it known that I, WILLIAM F. MORGAN, of the city, county, and State of New York, have invented a new and Improved Gate for Railroad-Crossings; and I do hereby declare the following to be a full, clear, and exact description thereof which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a sectional front view of my gate when the same is closed. Fig. 2 is a similar view of the same when open. Fig. 3 is a transverse section of the supporting-carriage and its rail.

Similar letters indicate corresponding parts.

This invention consists of a gate constructed of a series of lazy-tongs, the links at one end of which turn on a pivot secured in a suitable frame, and are connected to two nuts, which travel on a spindle with a right-and-left-handed screw-thread, while the links on the opposite end are suspended from a carriage which travels on a cross-beam of the frame supporting the gate in such a manner that, by turning the screw-spindle in one direction, the gate is opened, and by turning the same in the opposite direction the gate is closed; and, furthermore, by connecting the screw-spindles of two gates, situated on opposite sides of a railroad, both gates can be opened and closed simultaneously by one man.

In the drawing, the letter A designates my gate, which is constructed with a series of lazy-tongs, *a a'*, a double set of such tongs being used, by preference, so as to reduce the size of the open spaces between the links of said tongs when the gate is closed. The links at one end of the gate are pivoted to levers *b b'*, which swing on a pivot, *c*, secured in the frame B that supports the gate, and the outer ends of these levers are bifurcated and provided with slots *d d'*, which catch over pivots *e e'* projecting from nuts *f f'*. These nuts travel on a spindle, C, which is provided with a right-handed screw-thread, *g'*, and with a left-handed screw-thread, *g*, the nut *f* being tapped to fit the right-handed thread, and the nut *f'* to fit the left-handed thread. Said screw-spindle has its bearings in a bracket, D, which is

rigidly secured to the frame B; and if the spindle is turned, so that the nuts *f f'* will travel apart, the gate is opened, (see Fig. 2,) while, by turning the spindle in the opposite direction, the gate is closed. (See Fig. 1.) The outer links of my gate are pivoted to a vertical bar, *h*, which, when the gate is closed, shuts against one of the uprights of the frame B. On the cross-bar E of said frame travels a carriage, F, which connects by a hanger, G, with the gate A near its outer end, so that said outer end is supported when the gate is closed, and that during the operation of closing and opening said gate the carriage travels back and forth on the cross-bar E. To prevent the carriage from running off from said cross-bar a rail, *i*, is secured to said cross-bar, which projects beyond the surfaces thereof, above and below, and the wheels *j* of the carriage are grooved to catch over said rail. An additional wheel, *j'*, may be provided in the carriage to catch over the lower edge of the rail *i*. (See Fig. 3.) The hanger G is connected to the gate by one of the central pivots of the lazy-tongs, and it is provided with a slot, *k*, that catches over one of the outer pivots, so as to steady the gate, and at the same time allow the lazy-tongs to open and close freely.

If two gates are required at a railroad-crossing, one on each side of the railroad, the screw-spindles, used for operating the two gates, may be geared together by a shaft extending across the railroad under the ground, and connected to the spindles by bevel-wheels, so that one man is enabled to operate both gates. With the carriage F may be combined a signal-lamp, so that the same is turned to show danger when the gate or gates are closed, and then again turned to show safety when the gate or gates are opened.

What I claim as new, and desire to secure by Letters Patent, is—

The carriage F and hanger G in combination with the gate A and spindle C, constructed and operating substantially as and for the purpose set forth.

WM. F. MORGAN.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.