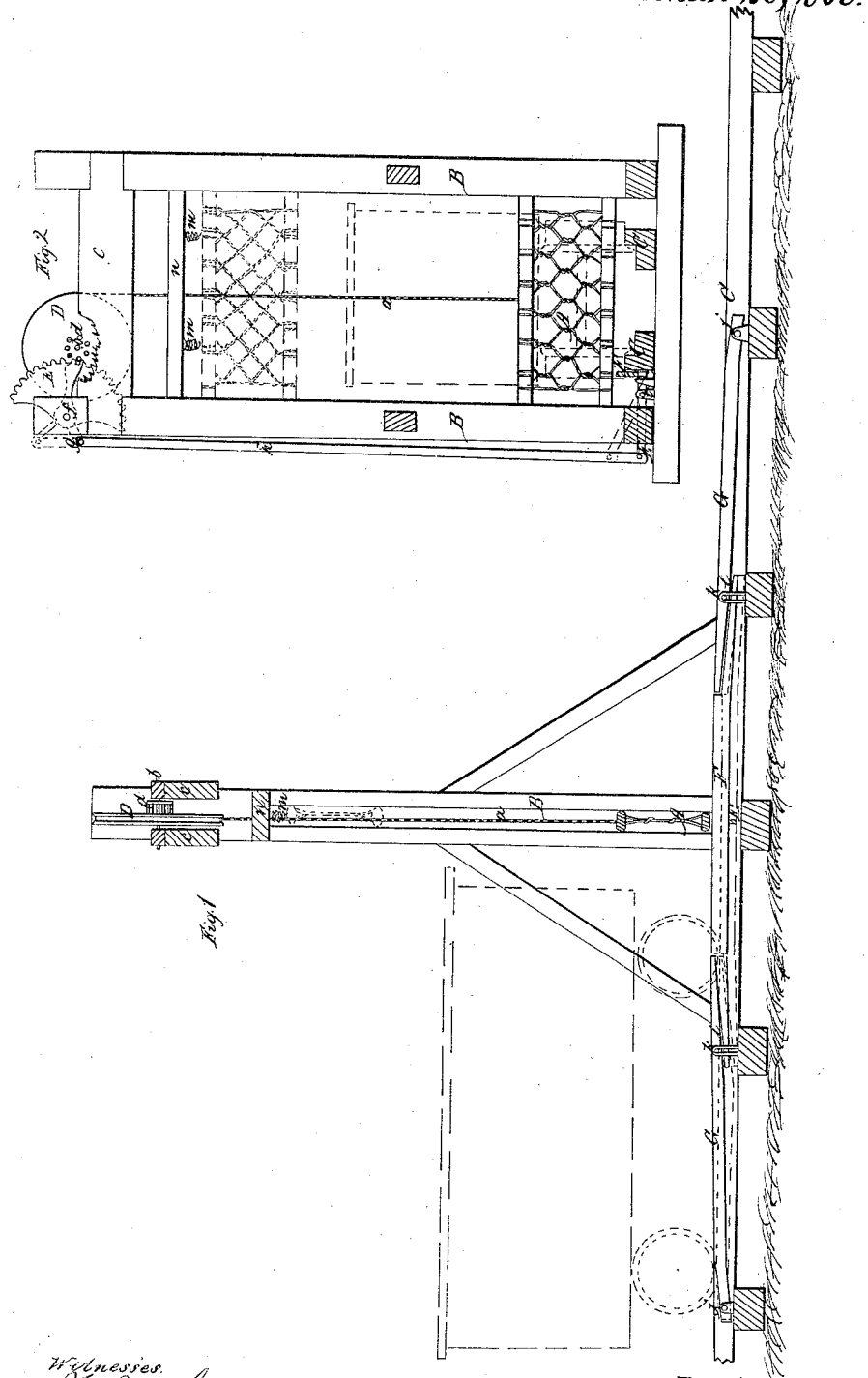
O. Sherwood, Jr.

Railroad Gate.

No. 27,575. Patented Mar. 20, 1860.



Witnesses.
H. W. Coombs
E. M. Hughes

Inventor.
O. Sherwood Jr.
per Munn & Co Attorneys

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

O. SHERWOOD, JR., OF INDEPENDENCE, IOWA.

RAILROAD-GATE.

Specification of Letters Patent No. 27,575, dated March 20, 1860.

To all whom it may concern:

Be it known that I, O. SHERWOOD, Jr., of Independence, in the county of Buchanan and State of Iowa, have invented a new and Improved Railroad-Gate; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which,—

Figure 1, represents a longitudinal vertical section of this invention. Fig. 2, is a transverse vertical section of ditto.

Similar letters of reference in both views indicate corresponding parts.

Many if not a majority of all the rail-road disasters are caused by cattle running on the track. To prevent this evil, gates are placed across the track on crossings on all such spots, when cattle might have a chance to get on the same. Such gates must necessarily be made selfacting so that no extra person is required to open and close them, and in order to effect this in a simple and compact manner, I have combined two hinged additional rails with a lever that connects by means of a rod and by a toothed segment with a pulley, from which the gate is suspended by means of a rope or chain, so that as soon as the additional rails are depressed by the weight of the cars, the gate is raised and kept up, until the last wheel of the train has passed from the additional hinged rails, when it descends by its own gravity and closes the track.

To enable those skilled in the art to fully understand and use my invention I will proceed to describe its construction and operation with reference to the drawings.

The gate A slides up and down between the posts B, and in order to make it as light as possible, it is constructed of wire grating, but, it must be remarked, that the gate can be balanced in such a manner, that it takes but little power to raise it.

The posts B are erected on either side of the track, so that the gate when down, stands right across the rails C. The gate is suspended from a rope or chain *a*, the upper end of which is fastened to the circumference of a pulley D, which is mounted on an axle *b* the bearings of which are in the cross bars *c*, which unite the upper ends of the posts B.

The axle *b* is rotated by means of a pinion *d* which is firmly secured to the same on the side of the pulley D, and which gears into a toothed sector *e* that turns on a pivot *f*, in one of the posts B. An arm *g* extends from the sector *e* on the opposite side of the pivot *f*, and this arm connects by means of a rod *h*, with the long arm of a lever E, which is fulcrated in a standard *i*, that is secured to one of the sleepers or cross ties of the road. The short arm of said lever catches under a flat bar F, the upper edge of which projects somewhat beyond the upper surface of the rail, to the side of which it is attached. The ends of this bar extend under the ends of the additional rails G, which are hinged to the side of the rails by means of pivots *j*, and which are guided in their up and down motion by staples *k* which form guides for pins *l*, and the ends of the bar F, as well as of the hinged rails G are so shaped that the upper edge of said bar forms a continuous line with the upper edges of the hinged rails. The hinged ends of these rails are below the upper surface of the rail to which they are attached, but their upper edge rises gradually above the surface of said rail, until they reach the level of the upper edge of the bar F. The proportion between the two arms of the lever E and between the length of the arm *g*, and radius of the sector *e* and between the diameter of the pinion *d*, and that of the pulley D, is such that a small downward motion of the bar F, is sufficient to raise the gate to the required height.

When the train arrives, the wheels of the engine or of the front car pass on one of the hinged rails and the bar F is gradually depressed and the gate rises up to such a height, that the train passes through unobstructed. The gate however, must be made to rise with considerable velocity, which would cause the same to strike with considerable force against any obstruction with which it might come in contact and as it would, impelled by the velocity which it acquires during its ascend, continue to move, up even after the pulley ceases to move, I

have arranged the spiral springs *m* on the under side of the cross-bar *n* in such a position, that the gate in its ascent strikes against the same, whereby its force is broken without injury.

As soon as the last wheel of the last car of the train passes from the hinged rail, the gate begins to descend by its own gravity, and the track is closed immediately after the train has passed.

This gate is very simple in its construction, and all its parts are so arranged that they are not liable to get out of order, so that it can be erected and maintained with little expense.

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

The arrangement of the pulley D, pinion *d*, toothed sector *e*, and lever E, in combination with the hinged rails G, bar F, and gate A, constructed and operating substantially as and for the purpose described.

O. SHERWOOD, JR.

Witnesses:

JAMES JAMISON,

A. B. LEWIS.