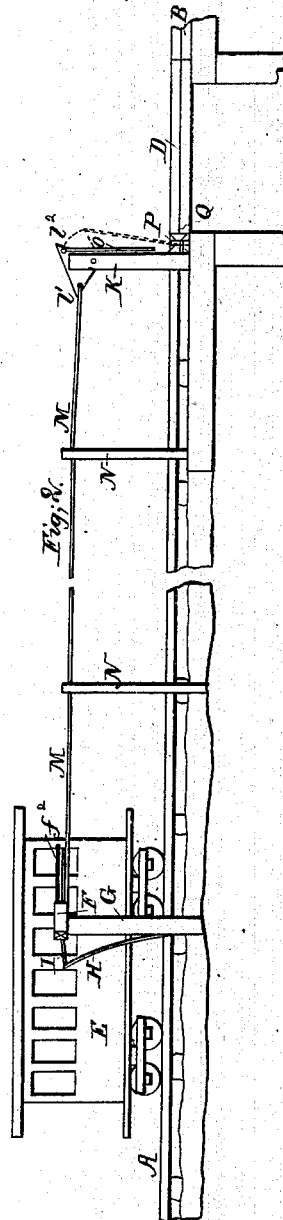
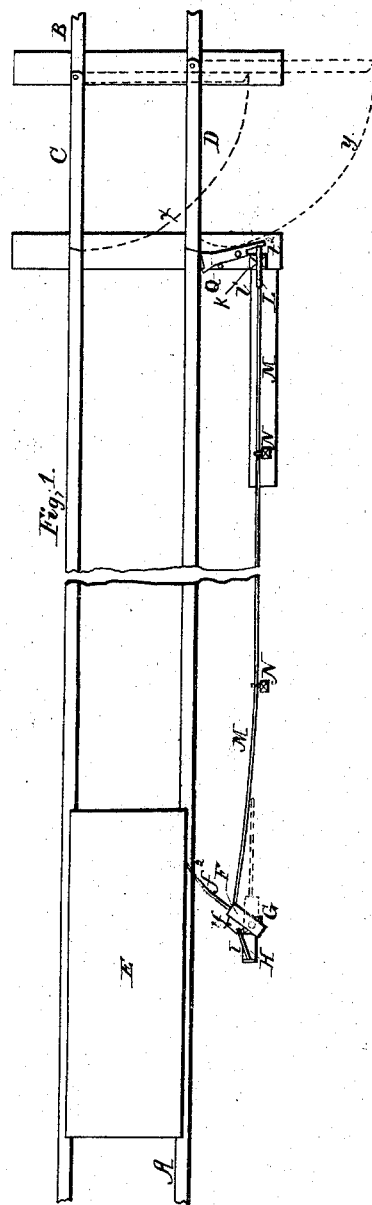


C. P. MORTON.
ALARM FOR RAILROADS.

No. 47,215.

Patented Apr. 11, 1865



Witnesses;
Prof. Morton
C. P. Morton.

Inventor;
C. P. Morton

UNITED STATES PATENT OFFICE.

C. P. MORTON, OF CHESTER, PENNSYLVANIA.

IMPROVEMENT IN ALARMS FOR RAILROADS.

Specification forming part of Letters Patent No. 47,215, dated April 11, 1865.

To all whom it may concern:

Be it known that I, C. P. MORTON, of Chester, in the county of Delaware and State of Pennsylvania, have invented a new and useful Improvement in Alarms for Railroad Draw-Bridges; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan view, and Fig. 2 a side elevation of the same applied, like letters of reference indicating the same parts when in both figures.

The object of my invention is to produce an unavoidable and effective alarm or warning to the engineer and conductors of a train of railroad-cars in motion of an open condition of the "draw" of a distant bridge either at night or day or during a thick fog.

It consists, substantially as hereinafter described, of an adjustable arm having elastic fingers, and so connected with the distant bridge that in opening the draw the said arm will be turned into such a position across a part of the track that a passing train will necessarily impinge and rub or rattle along against the said fingers or their equivalents so as to produce the alarm or warning required.

In the drawings, A B represent the railroad-track; C D, the bridge-draw closed, and E a passenger-car as moving toward the bridge-draw and impinging or rubbing against the fingers of the arm F. The arm F is adapted to turn horizontally upon the top of a post, *g*, which is fixed vertically in the ground and at a short distance from the one side of the track, and also at a sufficient distance—say a mile or less from the draw C D. Fixed to the side of this post *G* is a strong spring, *H*, the upper end of which is connected by a chain or rod, *I*, to a projection, *f'*, which is fixed on the inner side of the arm F, so that the said spring will at all times tend to draw the arm F around, over, and across part of the said track. Opposite to the parting-joint of the draw C D another vertical post, *K*, is erected, and upon its upper end a strong bell crank, *L*, is secured in a vertical position, and so as to turn freely upon the pivot which secures it in the post, and one of its arms, *l'*, is connected to the projection *f'* of the arm F by means of a strong

rod or wire, *M*, supported in eyes loosely upon a series of posts, *N N*, erected at sufficient distances apart along near the one side of the track A B and between the posts *G* and *K*, while the other arm, *l''*, of the said crank has attached to it a pendent rod, *O*, which has a hook or loop at its lower end, which is adapted to catch over the projecting end of a strong pin or bolt, *P*, which is fixed horizontally in the lower part of the post *K* when the draw is locked. Between this post *K* and the parting-joint of one side of the draw C D an adjustable stop, *Q*, is secured by a pivot, so that it may be either turned horizontally aside from the joint to allow the draw to be opened in the direction of the dotted lines *x y*, Fig. 1, or be turned so that its inner end will abut against the said joint and keep the draw firmly closed, as occasion may require. The opposite end of this stop *Q* fits with its side against the side of the post *K* when the draw is locked by it, as described, and receives through it the bolt or pin *P*, so that the latter will project just far enough through the said stop to afford a sufficient catch pin for the hook or loop on the lower end of the pendant *O*, and the pendant *O* is of such a length that when it is attached over the hook or pin the arm F will have been drawn parallel with the track or out of reach of the train. The fingers *f'* in the end of the arm F consist of a series of separated, slender, elastic strips of tough wood or delicately thin plates of spring-steel, which will readily yield to the pressure of the passing window-frames or other projecting parts of the sides of the locomotive and cars, and without breaking the windows cause a sufficient noise or rattling to quickly alarm or warn the engineer and conductors that the draw is open, and therefore that the train should be stopped.

Operation: When the draw C D is closed and locked by the stop *Q*, as described, the loop of the pendant *O* must be slipped over the projecting end of the bolt or pin *P*, which operation of the bridge-tender will draw forward and secure the arm F in a position parallel with the track A B, and therefore out of reach of a passing train, and before the draw C D can possibly be reopened the said loop of the pendant *O* must and will be pushed off of the said pin or bolt *P* by the necessary movement of the stop *Q* in releasing the parting-joint of the draw, and consequently the trac-

tion of the spring H will then immediately bring the arm F into a position to be impinged against by the passing train, and thus produce the alarm or warning required.

This alarm, if kept in proper order, will effectually deprive the engineer and conductors of a train of any excuse of the nature of inefficiency in the alarm to render them fully aware of an open draw; and, being entirely elevated above the ground, it is not liable to be injuriously effected by snow and ice on the latter, and the working parts or joints may be easily protected from rain by capping the supporting-posts.

As a weight suspended by a chain attached to the arm F and passing over pulleys will effect the same result as the spring H, I do not intend to confine myself to the use of the spring for the purpose; neither do I intend to confine

myself to the precise construction and arrangement of the different devices described for connecting the arm F to the draw or bridge, as these may be varied without affecting the general result; but,

Having fully described my improvement and shown its utility, what I claim as new therein, of my invention, and desire to secure by Letters Patent, is—

The combination of the arm F, spring H, projections f' f'' , with the rod M and bell-crank L, so constructed and arranged as to operate in connection with the draw-bridge O D in the manner and for the purpose herein described.

C. P. MORTON.

Witnesses:

BENJ. MORISON,
W. H. MORISON.