(No Model.)

J. H. YOUNG.

RAILROAD CROSSING SIGNAL.

No. 401,323. Patented Apr. 9, 1889.

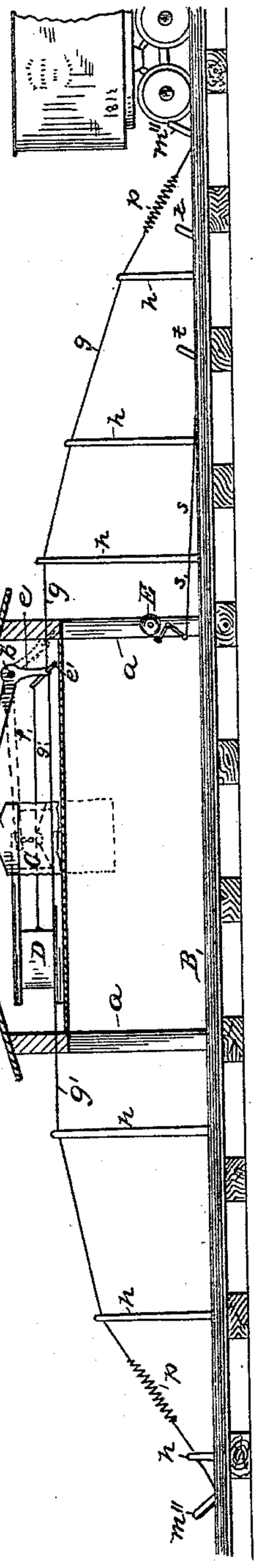

Fig. 1.

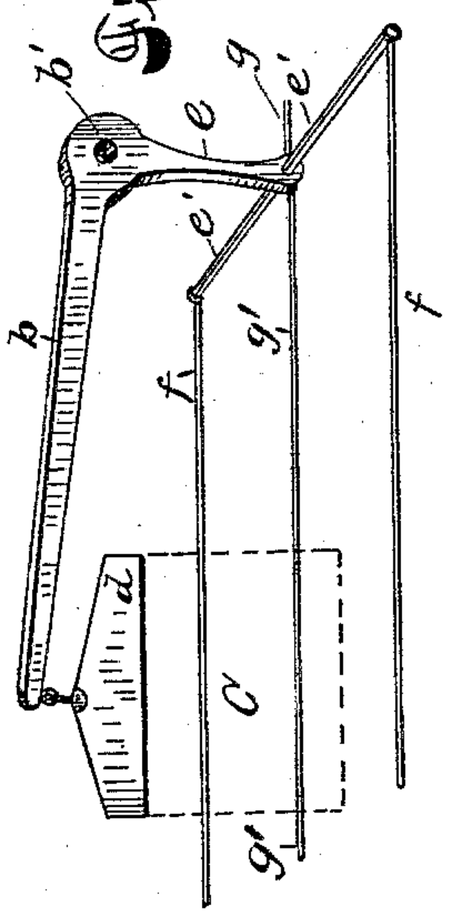

Fig. 3.

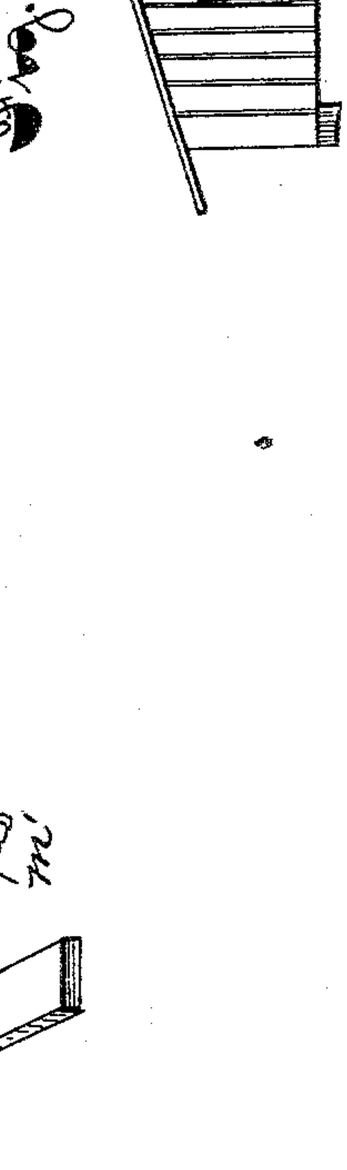

Fig. 4.

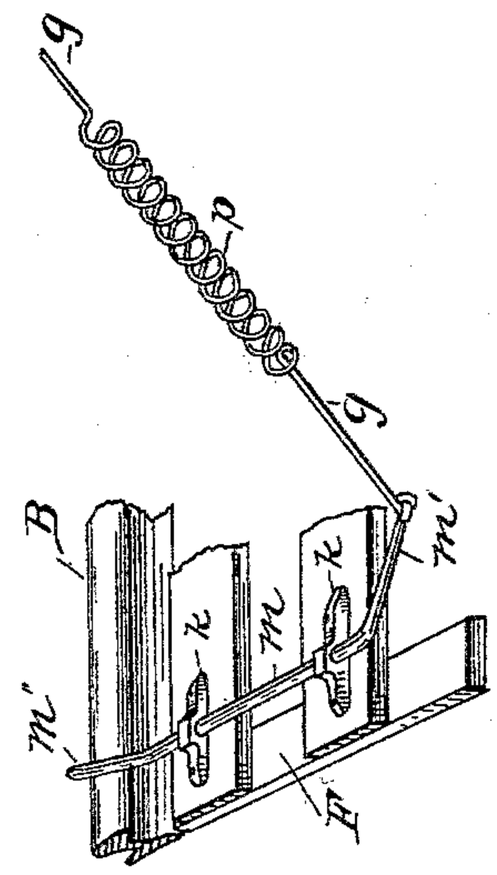

Fig. 2.

Witnesses.
H. D. Healy.
C. P. Bailey.

Inventor.
Jacob H. Young,
By his Attys.
J. R. Drake.

UNITED STATES PATENT OFFICE.

JACOB H. YOUNG, OF LANCASTER, NEW YORK.

RAILROAD-CROSSING SIGNAL.

SPECIFICATION forming part of Letters Patent No. 401,323, dated April 9, 1889.

Application filed October 25, 1888. Serial No. 289,129. (No model.)

To all whom it may concern:

Be it known that I, JACOB H. YOUNG, a citizen of the United States, residing at Lancaster, in the county of Erie and State of New York, have invented certain new and useful Improvements in Devices for Railroad-Crossing Signals; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of this invention is to automatically display and withdraw a red flag and colored lights operated in a raised frame at railroad-crossings by the passing of car-wheels on the railroad-track; and the invention as constructed and applied will be understood by reference to the following specification and claims.

In the drawings, Figure 1 is a side elevation of a railroad-crossing signal-frame in connection with a railroad-track, one side of upper part of frame removed to show the working of the devices; Fig. 2, detail perspective of one of the bent levers at side of track; Fig. 3, perspective detail of flag, arm, and wires for raising and lowering flag; Fig. 4, top of raised frame or signal-box detached.

A represents the top or signal-box, standing on posts *a a*, at a roadway crossing the track B. It is constructed with a slanting roof, *c*, which covers the flag, lights, and working parts. It has two sides, on which will be painted "Railroad-Crossing" or "Lookout for the Engine," &c.

The working parts are as follows: *b* is an arm pivoted at *b'* in the end of the signal-box A, as shown in Fig. 1. From its other end depends the signal-flag C, which is held stiffly by a head-piece, *d*, and a wire edge or frame. The pivoted end *e* of the arm *b* extends down a little and has a cross-arm, *e'*, attached. To the ends of this are fastened rods *f f*, which are each attached to a slide, D, one on each side of the box A, (only one side shown,) which, when drawn, uncovers a colored light set behind the slide. (Light not shown.)

To the center of the cross-piece *e'* and to the arm *e* are fastened strong wires or cables *g g'*, which extend out of the ends of the box A and on posts *h h h* alongside the track B to a sufficient distance—say, a quarter of a mile—where they run down and are connected to the ends *m'* of bent arms *m*, which work in bearings *k k*, fastened to frames F, (see Fig. 2,) alongside of the rail. The end *m''* of the arm is bent at a different angle from the other end, *m'*, and stands up above and touching the rail B, so that when a train comes along the wheels strike the arm *m''*, and consequently draw back and down the bent arm *m'* and with it the wire *g*, which pulls the cross-piece *e'* and end *e* of lever, and drops the arm *b* and flag C', as shown in dotted lines, Fig. 1. At the same time the rods *f f* are pulled back by the same action, and thus draw back the slides D, uncovering the colored lights set behind them at night, when the flag cannot be seen. A cable, *g'*, similar to *g*, is fastened to the cross-piece *e'*, in the box A, and runs therefrom through and out of the box at the opposite end, passing through loops on posts *h h* and down to the ground by the side of the track B, where it is attached to exactly the same device as at the other end, only the lever *m''* is reversed in position. As soon as the train strikes this end *m''*, it is pushed down and draws the cable *g'*, which pulls the slide D back, covering the light, and, pulling forward the cross-piece *e*, raises the flag. This describes only the single track; but the operation would be the same on a double track, only doubling and changing the direction of the appliances heretofore described. It is so simple as to be thoroughly understood at a glance.

In addition a gong or bell, E, is attached to the post *a* or box A and the hammer pivoted thereto, its other end attached to a long wire, *s*, running therefrom, and also at the side of the rail B, and attached to devices similar to that described for operating the flag and slide-cables, and having one or more short upright levers, *t t*, (see Fig. 1,) standing up above the tread of the rail, so that the wheels as they rapidly strike them will push them down and draw the wire back, and thus force the hammer to repeatedly strike the gong E until the train passes.

The springs *p p* will be arranged in connection with the cables *g g'* and the wire *s* to

take off the shock of the striking-wheels and prevent breaking.

I claim—

1. In combination with a railroad-crossing signal-stand, *a a*, having a roofed box, A *c*, the flag-arm *b*, pivoted at *b'*, with the flag C *d* depending from the outer end, the rod *e* of the arm *b*, having the cross-piece *e'*, the cables or wires *g g'*, connected to the rod *e* and attached to the bent levers *m m' m''*, adapted to be operated by wheels of passing trains, throwing the flag up or down, substantially as specified.

2. In combination with a railroad-crossing signal-stand, *a a*, having the box A *c*, the flag-arm *b*, pivoted at *b'*, with the flag C *d* depending from the outer end, the rod *e*, forming part of the arm *b*, and having the cross-piece *e'*, with wires *g'*, connected to the rod *e*, and rods *f f*, connected to the cross-piece and to the slides D, the wires *g g'*, connected to bent levers *m m' m''* at both extremes of the wires at the track side, adapted to be operated by wheels of passing trains, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB H. YOUNG.

Witnesses:
J. R. DRAKE,
GEO. A. BURNETT.