(No Model.) 2 Sheets—Sheet 1.

E. H. HORNADAY.

DANGER SIGNAL FOR RAILWAY CROSSINGS.

No. 584,507. Patented June 15, 1897.

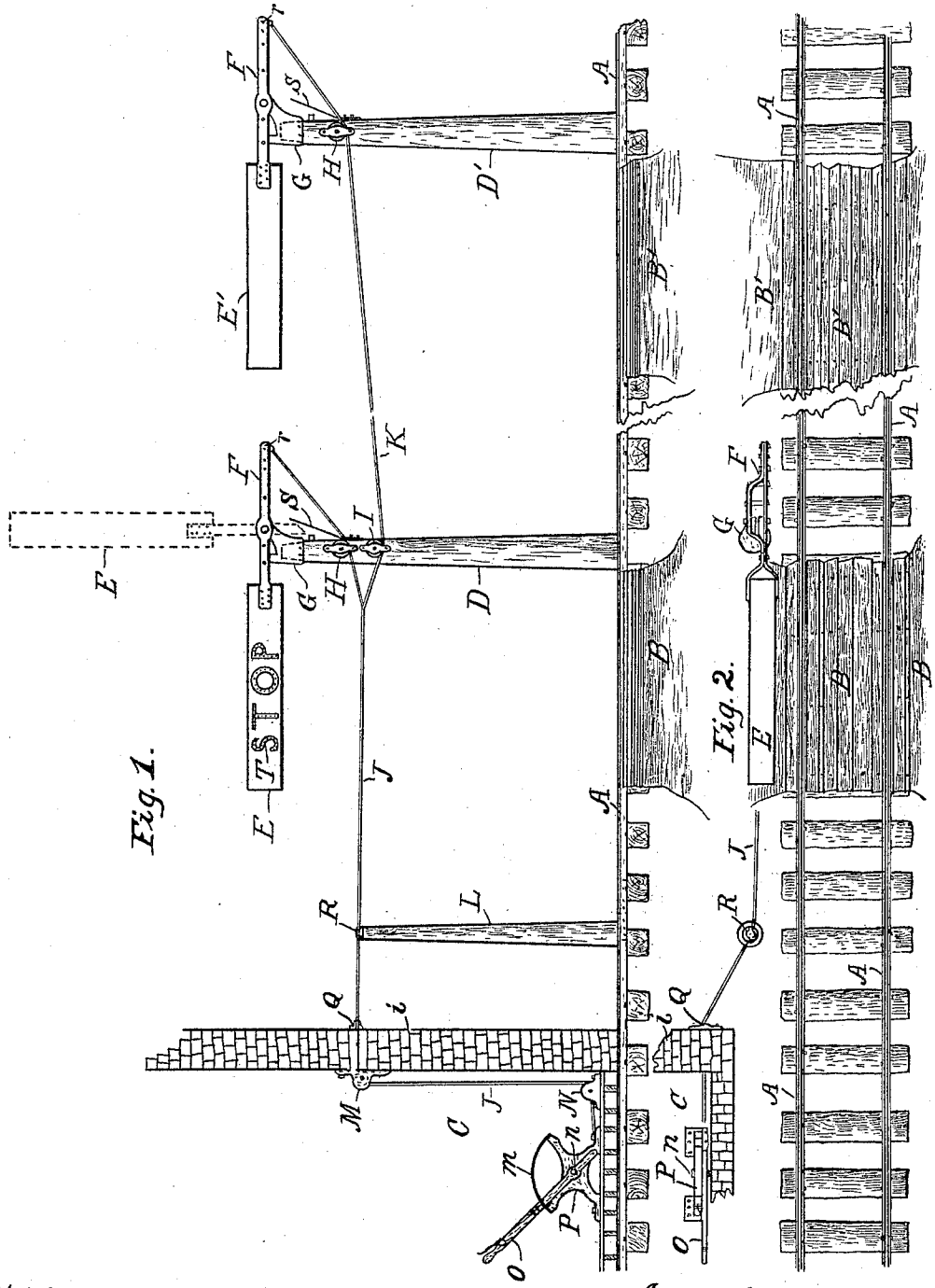

Fig. 1.

Fig. 2.

Witnesses:
Chas. L. Moore.
F. M. Silvius.

Inventor:
E. H. Hornaday.
By E. D. Silvius & Co.
Attorneys.

(No Model.) 2 Sheets—Sheet 2.

E. H. HORNADAY.

DANGER SIGNAL FOR RAILWAY CROSSINGS.

No. 584,507. Patented June 15, 1897.

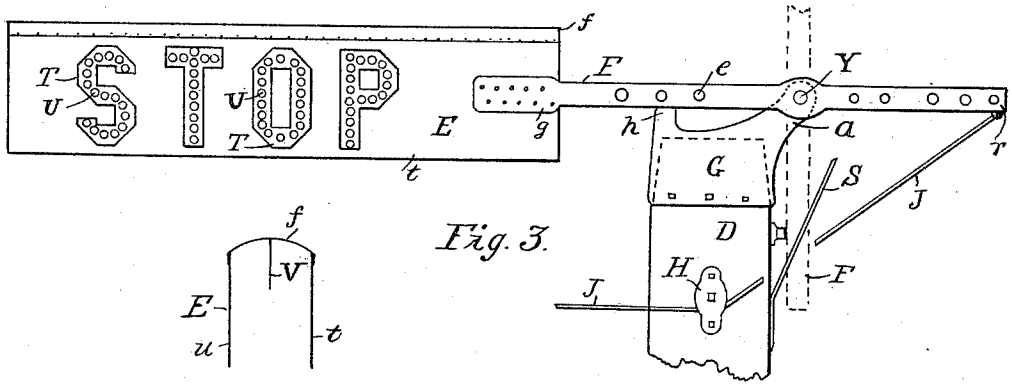

Fig. 3.

Fig. 4.

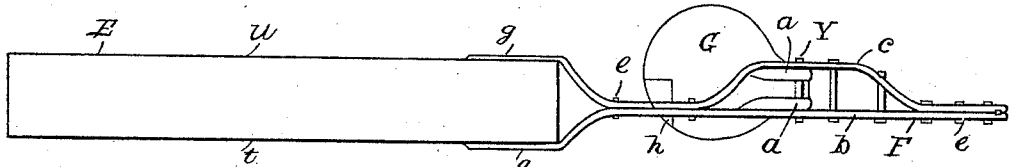

Fig. 5.

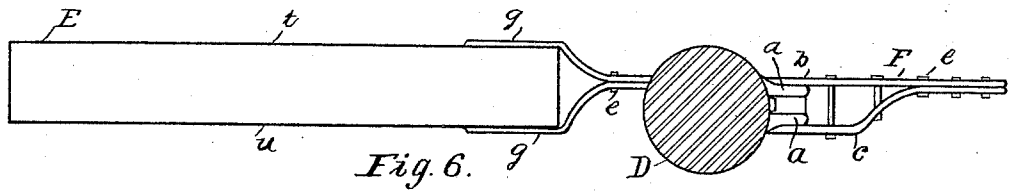

Fig. 6.

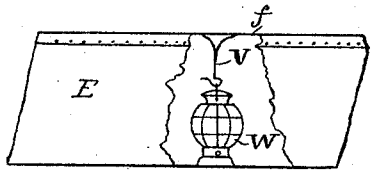

Fig. 7.

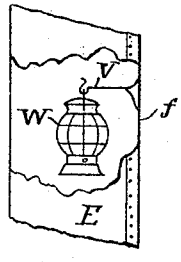

Fig. 8.

Witnesses:
Chas. L. Moore
F. M. Silvius.

Inventor:
E. H. Hornaday.
By C. F. Silvius & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

EDOM H. HORNADAY, OF CARTERSBURG, INDIANA.

DANGER-SIGNAL FOR RAILWAY-CROSSINGS.

SPECIFICATION forming part of Letters Patent No. 584,507, dated June 15, 1897.

Application filed April 8, 1897. Serial No. 631,255. (No model.)

To all whom it may concern:

Be it known that I, EDOM H. HORNADAY, a citizen of the United States, residing at Cartersburg, in the county of Hendricks and State of Indiana, have invented certain new and useful Improvements in Danger-Signals for Railway-Crossings; 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 of reference marked thereon, which form a part of this specification.

My invention relates to that class of signals which are designed to be used at public highways where they cross railways to serve as a warning when trains on the railway are approaching; and it consists in a movable indicating sign device peculiarly mounted and in the various parts and combination of parts entering into the construction thereof, as will be more fully described hereinafter.

The object of my invention is to provide a danger-signal of this class which may be so cheaply constructed as to be adapted for use both day and night at outlying crossings where complicated and expensive signals would be a hardship to operate.

A further object is to provide means whereby said signal may be operated from small railway-stations without additional expense for attendance or by unskilled crossing-watchmen.

I attain these objects in my invention, which is, furthermore, durable and economical in use.

Referring to the drawings, Figure 1 represents a side elevation; Fig. 2, a plan view, and Figs. 3, 4, 5, 6, 7, and 8 detail views.

In the drawings, A designates a railway; B B′, highways crossing the railway; C, a station or other suitable building to guard the operating-lever; D D′, signal-posts; E E′, the signal-arm; J, the operating-cable, and O the operating-lever.

In Figs. 1 and 2 the view is broken away, separating one crossing and its signaling devices from the other, indicating that a second, third, or any number of signal-posts and apparatus may be placed at a like number of crossings separated from each other—as, for instance, village streets. Each set of apparatus is a duplicate of the first, except that on the last post of the series I omit the pulley I, which is on all others. The station C or other suitable building may be located at any distance from the highway at which the signals could be practically operated. It is preferable that a station-agent, who would be advised of the time that not only regular but special and delayed trains should pass, should control them. Where no station is convenient, a crossing-watchman may operate my signals to protect a large number of crossings.

In constructing my invention the post D may be suitably hewn or obtained in the vicinity of the crossings to be equipped, and a metallic fulcrum-cap G is secured to the top of the post, covering the end to prevent decay of the wood, the latter being sized down to fit into the socket provided in the cap. Where but one crossing is protected, I attach a sheave-pulley H to the side of the post near the top, and a like pulley is attached to each additional post in a series. When a number of crossings are equipped, I attach a second pulley I to each post in the series except to one farthest from the station. The cap G has at one side at the top a divided pair of ears *a a*, extending upwardly and outwardly over the side, and on the top at the opposite side is a raised rest *h*, the ears and rest being preferably cast integrally with the cap. The lever F, to which the arm E is attached, is pivoted at Y to the ears *a a*, and the cable J or K is attached to the lever at the end *r*. The posts are planted erect in the earth near the railway and at the side of the highway opposite the building from which they are operated.

The signal-arm E is composed of two metallic side plates *t u* and an arched top *f*, riveted together. The side plates are separated sufficiently to admit a lantern W, which is hung upon a hook V, attached to the top *f*, for use at night. Each side plate has a suitable warning-sign T painted on the outside, and the letters forming the sign have perforations U through the plate, the perforations being close together, so as to themselves form the letters through which the light from the lantern may be seen at night. The arm E is

suitably attached rigidly to the ends *g g* of the bars *b e*, forming the lever F. These bars are held rigidly together by bolts *e*, so that they may be disconnected readily for repairs should either be damaged by abuse or accident. A leaf-spring S is suitably attached to the side of the post, so that when the signal-arm is in a vertical position, indicating a clear road, the lever presses against the spring, the tension on the cable compressing it against the post. When the tension on the cable is released, the spring promptly forces the arm over from the vertical position, and it then drops to a horizontal position by the force of gravity.

In the building, preferably the railway-station house, is situated a stand P, which may be adapted to either be secured to the floor or to a wall. A lever O is fulcrumed at *n* and has a suitable latch operating in connection with a sector *m*. The opposite end of the cable J is attached to the lower end of the lever O, the cable in entering the building passing over suitably-arranged guide-pulleys, as Q M at the wall *i* and N at the floor. In some cases I also use a similar pulley R on a post L. The cable K is suitably joined to the cable J near the posts. It will be understood that the signal-arm E reaches partly over the highway parallel to the railway and is situated sufficiently high to permit loaded wagons to pass under the cables. Intermediate posts L are placed at suitable distances to support the cable. In some cases I place the cable in a boxed trench instead of upon posts, in which case I modify slightly the position of the guide-pulleys.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a danger-signal arm consisting of a pair of parallel sides forming sign-boards and secured to a lever pivotally mounted upon a suitable post, said sides each having on the outside face thereof a suitably-lettered caution-sign, perforations in said sides through the letters forming said sign, and arranged to form letters corresponding to the letters on said sides, a lantern detachably hung between said sides so that the light therefrom shall be reflected outward through said perforations, a cable operatively connected to said lever, sheaves adapted to guide said cable, and a lever connected to the opposite end of said cable by which said arm may be operated, substantially as shown and described.

2. In a danger-signal, the combination of the posts, the caps having the ears mounted at the top thereof, the lever pivoted to said ears, the arms composed of the lettered and perforated sides secured to said lever, the lantern between said sides, the guide-sheaves, the cable running over said sheaves and attached to said levers, the lever connected to the opposite end of said cable and adapted to operate said arms, substantially as shown and described.

3. In a danger-signal, the combination of the post, the cap mounted thereon, the lever pivoted to said cap, the signal-arm comprising the parallel sides and secured to said lever, the lettered signs on said sides, the perforations in said sides forming letters corresponding to the letters on said sides, the lantern hung between said sides, with means for operating said arms, substantially as shown and described.

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

EDOM H. HORNADAY.

Witnesses:
E. T. SILVIUS,
WM. H. PAYNE.