(No Model.)

J. W. HENTZ.

GUARD FOR CABLE CROSSINGS.

No. 507,497. Patented Oct. 24, 1893.

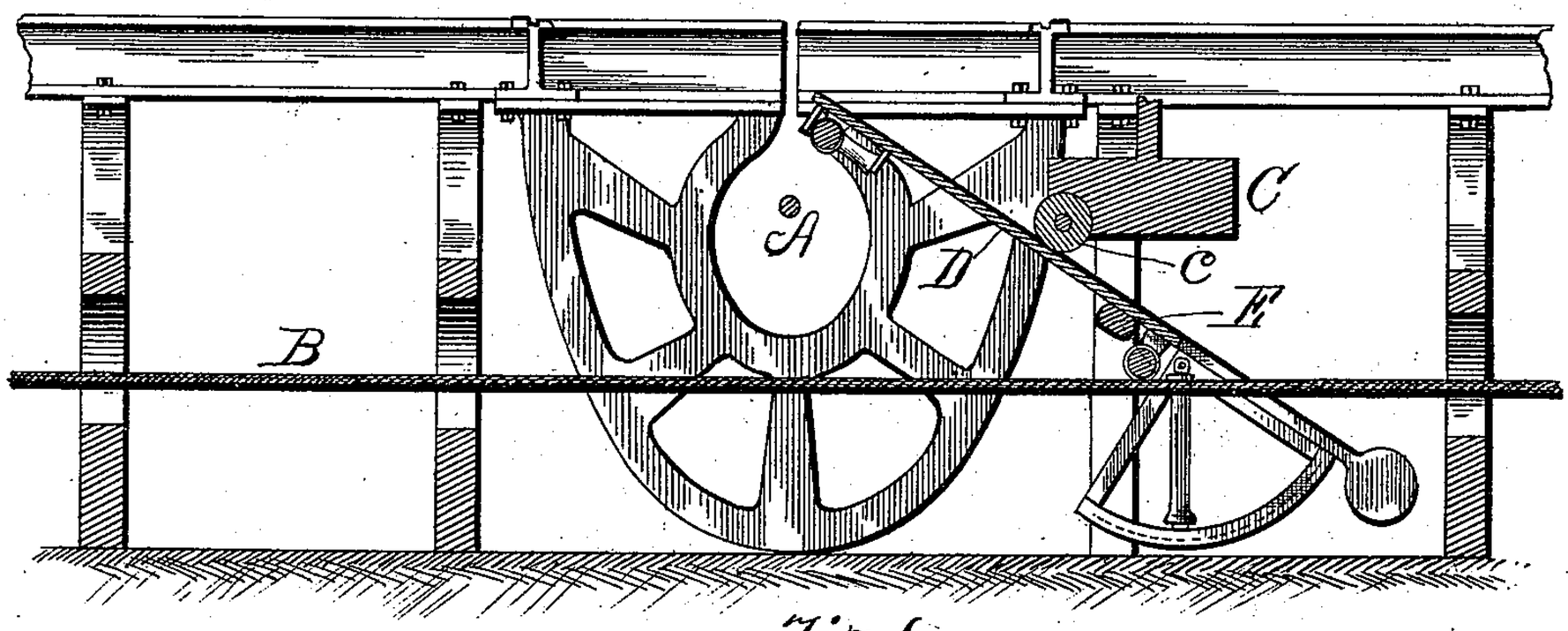


Fig. 1.

Fig. 2.

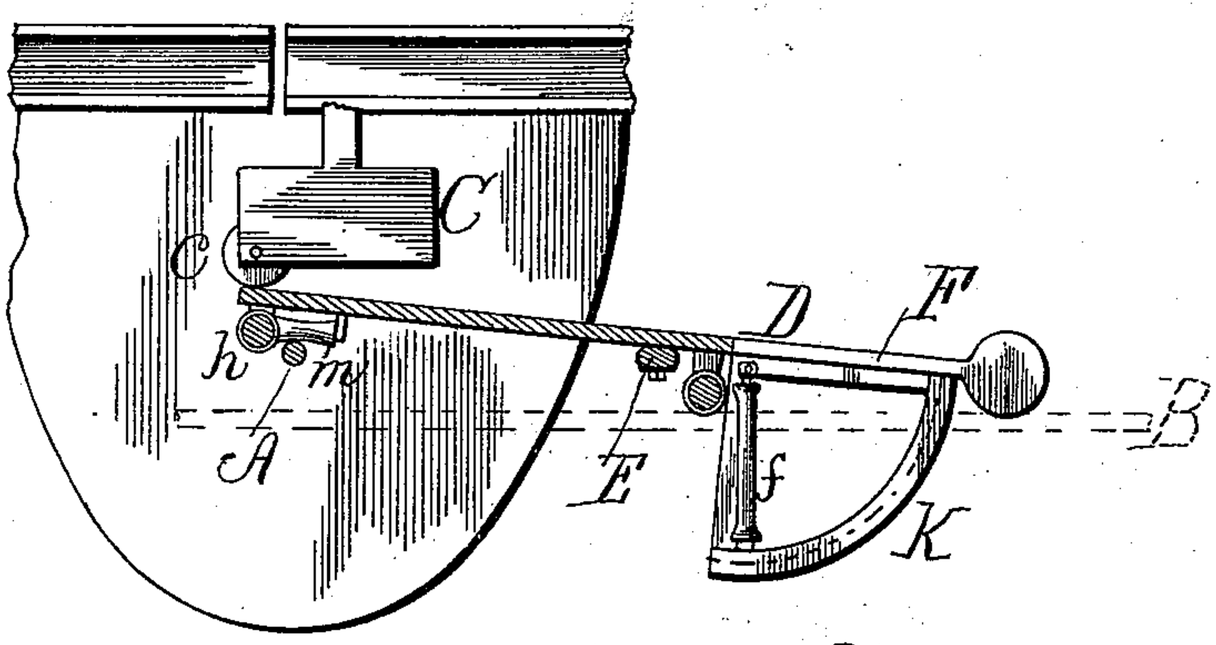
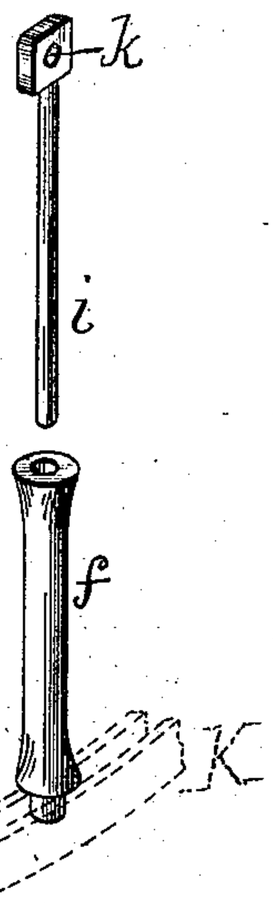
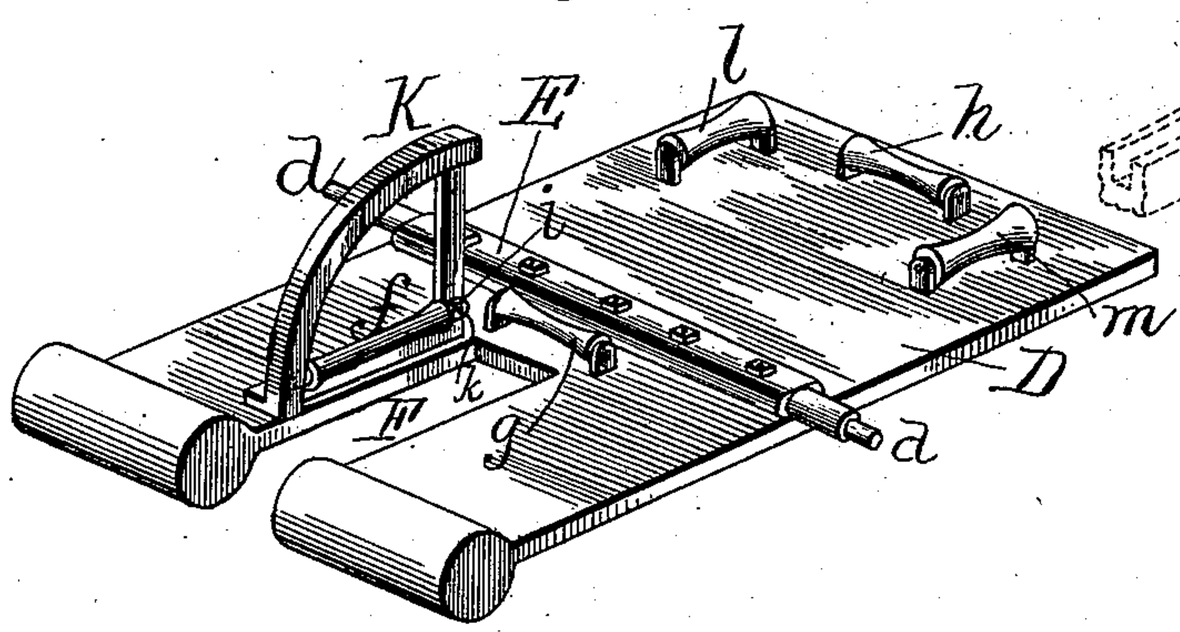


Fig. 3.

Fig. 4.





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UNITED STATES PATENT OFFICE.

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GUARD FOR CABLE-CROSSINGS.

SPECIFICATION forming part of Letters Patent No. 507,497, dated October 24, 1893.

Application filed September 14, 1892. Serial No. 445,836. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. HENTZ, a citizen of the United States, residing at Carroll P. O., in the city of Baltimore and State of Maryland, have invented certain new and useful Improvements in Guards for Cable-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 is in the nature of a shield or guard for cable crossings.

At the points of intersection of cables for street and other railways it is necessary that one of the crossing cables pass under the other and for this purpose the lower cable is depressed just before it reaches the upper one, and again raised to its proper level after it passes it. This is done in any preferred manner, generally by pulleys properly arranged, and the grip for the lower cable is necessarily released from it just before reaching the upper or crossing cable. The grip being run at about the level of the upper cable it becomes necessary to provide some means to depress the upper cable while the crossing grip is passing it.

It is the object of my invention to furnish a depressing device which shall be cheap and simple while lasting and thoroughly effective.

With this object in view my invention consists in the improved construction, arrangement and combination of parts hereinafter fully described and afterward specifically pointed out in the claims.

In the accompanying drawings Figure 1 is a cross section through the upper cable and longitudinal section along the lower cable showing the shield or depressor in its raised position with the grip of the lower cable about to ride over it. Fig. 2 is a detail on the same plane, with the crossing grip just over the upper cable, the shield holding it in its depressed position. Fig. 3 is a perspective view of the bottom of the depressor or shield. Fig. 4 is a view of one of the swinging rollers and its shaft or pivot pin, separated.

Like letters of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings A is the upper cable, or the one which is entitled to the right of way, and B, the lower cable, which is depressed by pulleys at each side of the point of crossing (not shown.)

C represents the grip for cable B, having at its front lower corner a roller or rollers *c*.

D is the shield or depressor, which is secured to cross shaft E having journals *d* on its outer ends to rest in suitable bearings in the conduit. It is provided with a notch or open slot F in the center of its lower portion. The shield swings on the journals *d* in the path of the grip C, the lower portion straddling the cable B, which passes through slot F. The upper portion of the shield, above the journals, in its inoperative position, lies inclined forward and upward, in the path of grip C, while the lower portion, below the journals, is weighted and therefore keeps the shield in this position when it is not in operation. When the grip passes over the upper portion of the shield, the roller *c* is in contact with it, and presses the upper end down upon the upper cable A, depressing it from the position shown in Fig. 1 to that shown in Fig. 2, out of the path of the grip which passes freely over it. As soon as the grip has passed over it, the upper cable is released by the shield being raised to its upper position by the gravity of the lower weighted end.

Grooved pulleys or rollers *g*, *h*, are mounted in brackets to the front face of the shield in line with cable B, so that there cannot possibly be any other than rolling contact between the cable B and the bottom of the depressor or shield, a roller *f* serving the same purpose with relation to the sides of the notch or open slot F, preventing abrasion or wear of the cable by contact with said sides.

The pulleys *f* are mounted on each side of the notch F, upon shafts *i* which shafts are pivoted at their upper ends at *k*, to brackets or frames K attached to shield D at the sides of notch F, the said brackets being a segmental structure, the curved portions being grooved (see dotted lines in Figs. 1, 2, and 4) to receive, guide and support the outer ends of rollers *f*, so that said rollers may always hang in a vertical position no matter what po-

sition the shield may be in. In such position, there will be no tendency to rub the cable, which will always pass at right angles to the rollers.

There is a segmental frame at each side of the notch F, but as they are identical in construction, only one of them is shown in the drawings.

Grooved rollers *l*, *m*, mounted in brackets on the face of the shield, lie in the track of the upper cable A and form the only points of the contact between that cable and the shield during the operation of depressing. These rollers, *l* and *m* are larger at the upper or forward ends than at their lower or rear ends, the purpose of this construction being to prevent, in some degree, the lateral displacement of cable A, when being depressed, the surfaces of the rollers being brought near to a horizontal line thereby.

Having thus fully described the construction and operation of my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The shield or depressor D provided with cross shaft E having journals *d* at its ends, and having the slot or notch F and rollers *f*, as and for the purpose set forth.

2. The shield or depressor D having journals at *d* and provided with a notch F to straddle the cable, in combination with rollers *g* and *h* mounted in brackets on the face of the shield, and roller *f* in line with said rollers *g* and *h* and in the path of the straddled cable, as set forth.

3. In combination with a pivoted shield or depressor, rollers *l*, *m*, journaled in the path of cable A, and having their forward ends of greater diameter than their rear ends for the purposes set forth.

4. The pivoted cable shield having notch F, and rollers *f f* mounted on shafts pivotally attached at the sides of said notch, for the purpose set forth.

5. The combination with shield having notch F, of the segmental frames secured to the under side of the shield at the sides of the notch, and the rollers *f* pivotally attached to said segmental frames, as set forth.

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

JAMES W. HENTZ.

Witnesses:
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