(No Model.)

# H. JOHNSON.

## DETECTOR BAR CLIP.

No. 441,798. Patented Dec. 2, 1890.

*Fig. 1.*

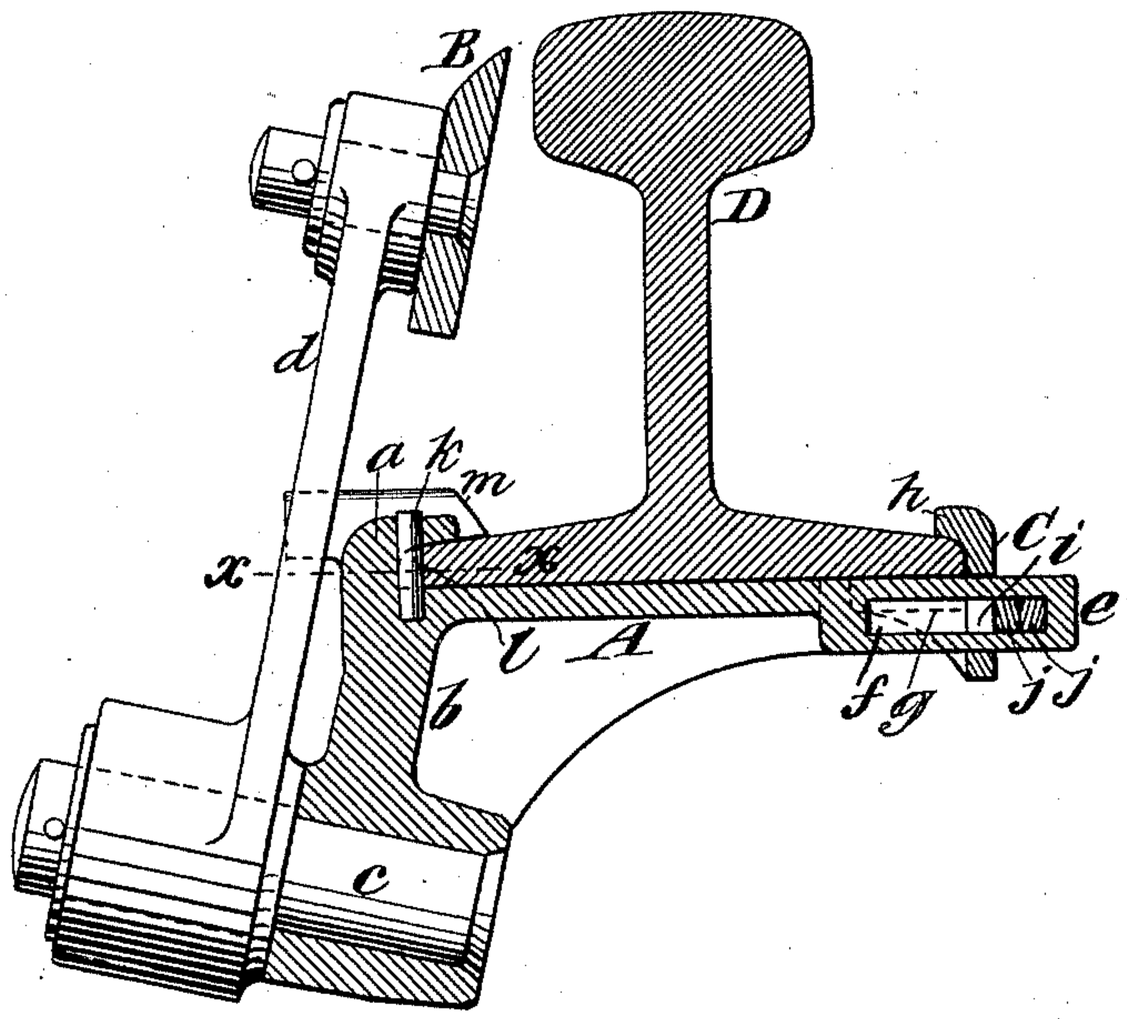
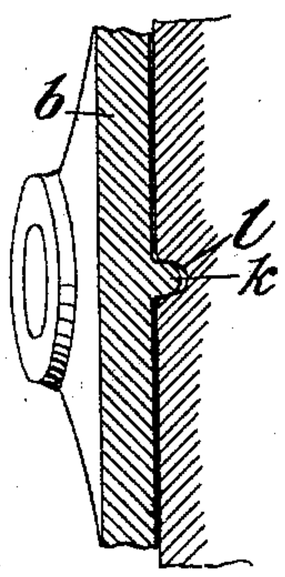



*Fig. 2*

*Fig. 4.*



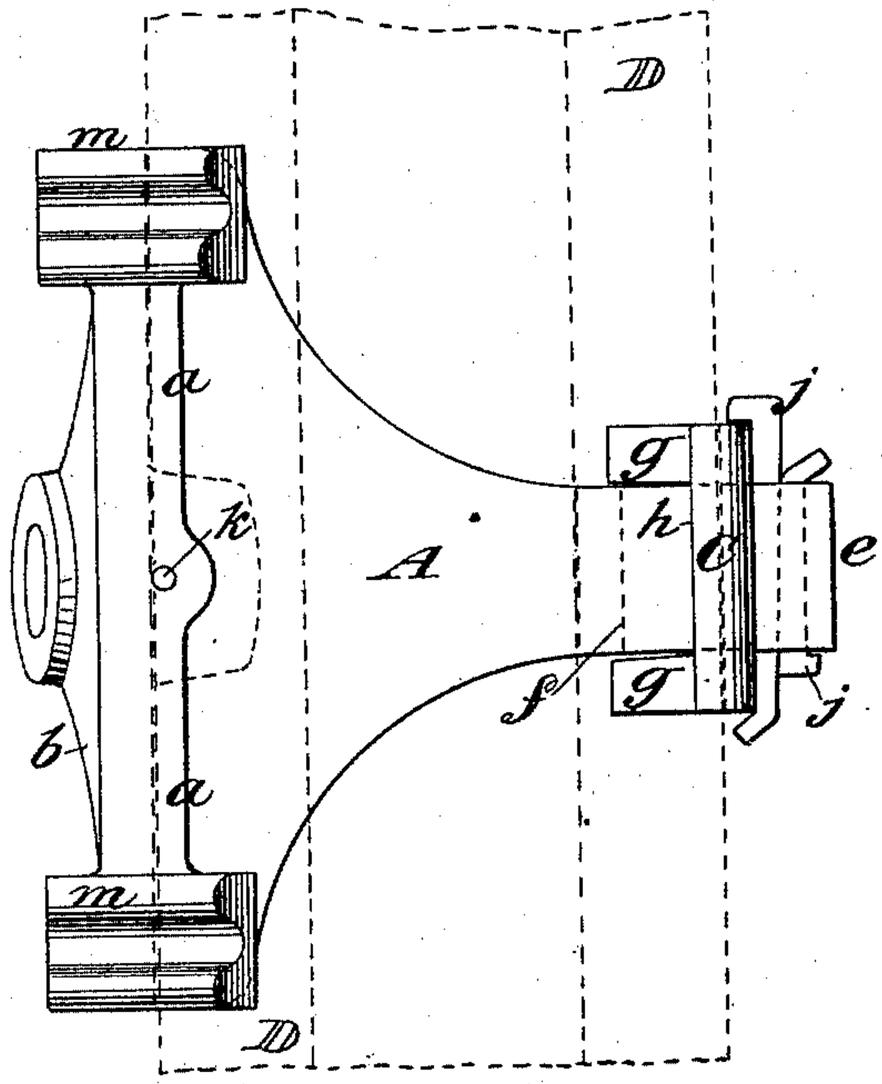
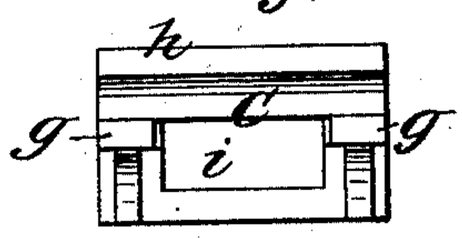




*Fig. 3.*

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# UNITED STATES PATENT OFFICE.

HENRY JOHNSON, OF RAHWAY, NEW JERSEY.

## DETECTOR-BAR CLIP.

SPECIFICATION forming part of Letters Patent No. 441,798, dated December 2, 1890.

Application filed March 29, 1890. Serial No. 345,833. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY JOHNSON, of Rahway, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Detector-Bar Clips, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to the clips employed for attaching to rails what are known as "detector-bars," employed in connection with switch and signal apparatus on railways.

I will proceed to describe my invention with reference to the drawings, and afterward point out its novelty in claims.

Figure 1 is a transverse sectional view of a rail, a detector-bar, and a clip, by which the said bar is secured to the rail and which embodies my invention. Fig. 2 is a plan of the same, the rail being represented in dotted outline. Fig. 3 is an inside face view of what is hereinafter termed the "hooked clamping-piece." (Shown in Figs. 1 and 2.) Fig. 4 represents a horizontal section of a portion of the clip and a portion of the base of the rail taken in the line *x x* of Fig. 1 and illustrating a modification of a part of my invention.

Similar letters of reference designate corresponding parts in all the figures.

The clip consists of two principal members. One of these members is a base-plate A, having a hooked jaw *a* and having dependent from it on the same side of the said jaw *a* a bracket *b*, for holding the pin *c*, upon which oscillates the arm *d*, which supports the detector-bar B. The jaw *a* is adapted to fit one edge of the flange of a rail D, as shown in Figs. 1 and 2, while the upper face of the plate A lies flat against the base of the rail. The opposite side of the base-plate A to that on which the jaw *a* and the bracket *b* are situated is prolonged in such form and manner that when the plate is applied to the rail, as above mentioned, it projects beyond the opposite edge of the rail, as shown at *e* in Figs. 1 and 2. This prolonged part has a slot *f* (see Fig. 1) provided through it in a horizontal direction and substantially parallel with the jaw *a*. The other member of the clip is a hooked clamping-piece C, consisting of a block having upon it feet or projections *g* to fit under the base of the rail on opposite sides of the projection *e* of the base-plate and having a hooked jaw *h* to lap over the opposite edge of the rail to that which is engaged by the hooked jaw *a*, as shown in Figs. 1 and 2. The said block or clamping-piece has provided in it a slot *i*, for the passage through it of the projection *e* of the base-plate. The base-plate A being applied to the rail from one side thereof with its hooked jaw *a* overlapping the edge of the rail-flange and the hooked clamping-piece C being slipped over the projection *e* of the base-plate far enough to bring its hooked jaw *h* over the edge of the flange on the other side of the rail, the clip is tightened by the insertion of one or more keys or wedges *j j* through the slot *f* of the base-plate outside of the clamping-piece C, as shown in Figs. 1 and 2, and the clip is thus made to firmly clamp the rail. The wedges or keys may be secured by turning their ends over the sides of the clamping-piece C and the projection *e*, as shown in Fig. 2.

In order to provide for more effectively than can be done by mere clamping, against the movement of the clip upon the rail lengthwise of the latter, I employ a locking-key in or on the base-plate, on that side thereof on which is the jaw *a*, to engage with an opening or notch in the rail-base. In Figs. 1 and 2 this locking-key consists of a pin K, which is inserted into a hole drilled through the jaw *a* and through the rail-flange to receive it. In the example shown in Fig. 4 this locking-key consists of a projection *k*, provided within the jaw *a*, and entering a notch *l*, provided in the top of the rail-base. It may be here mentioned that the projections *m* (shown in Figs. 1 and 2, at opposite ends of the hooked jaw *a* are intended to serve as stops to limit the movement of the arm *d* of the detector-bar.

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

1. The combination, with a base-plate having on one side a dependent bracket and a hooked jaw to engage with one edge of a rail while said plate lies under the base thereof, and having on the other side a transversely-slotted projection to project beyond the opposite side of the rail, of a hooked clamping-piece slotted for the passage of the said projection, and a key passing through the slot of said projection outside of said clamping-piece, substantially as herein set forth.

2. The combination, with a detector-bar clip consisting of two members having hooked jaws to engage with opposite sides of the base of a rail, of a key provided in one member to engage with a notch in the edge of the rail, substantially as and for the purpose herein set forth.

3. The combination, with a rail and a base-plate extending across the under side of and projecting beyond the base of the rail, and having on one side a hooked jaw to engage with one side of the rail and a dependent bracket, and having on the other side a projection beyond the rail, of a hooked clamping-piece engaging with the other side of the rail and with said projection, and a locking-key inserted through the jaw of the said base-plate and through an opening in the rail-flange, substantially as and for the purpose herein set forth.

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