W. R. McCOLLOM.

RAILROAD SWITCH STAND LATCH.

APPLICATION FILED MAR. 7, 1908.

903,304. **Patented Nov. 10, 1908.**

Fig. 1.

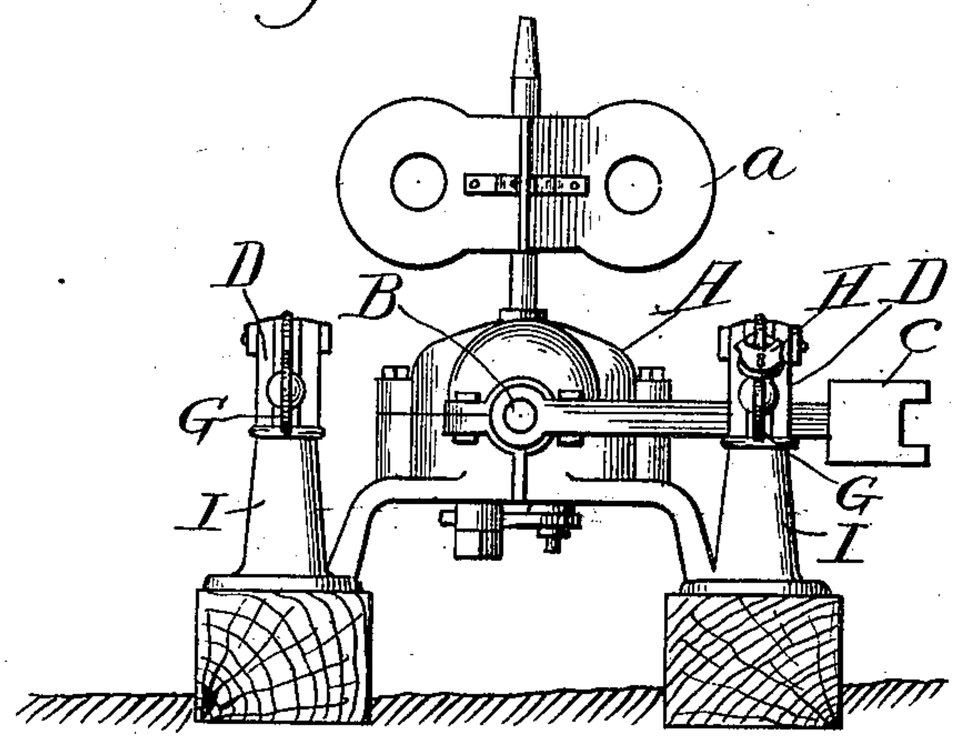


Fig. 2.

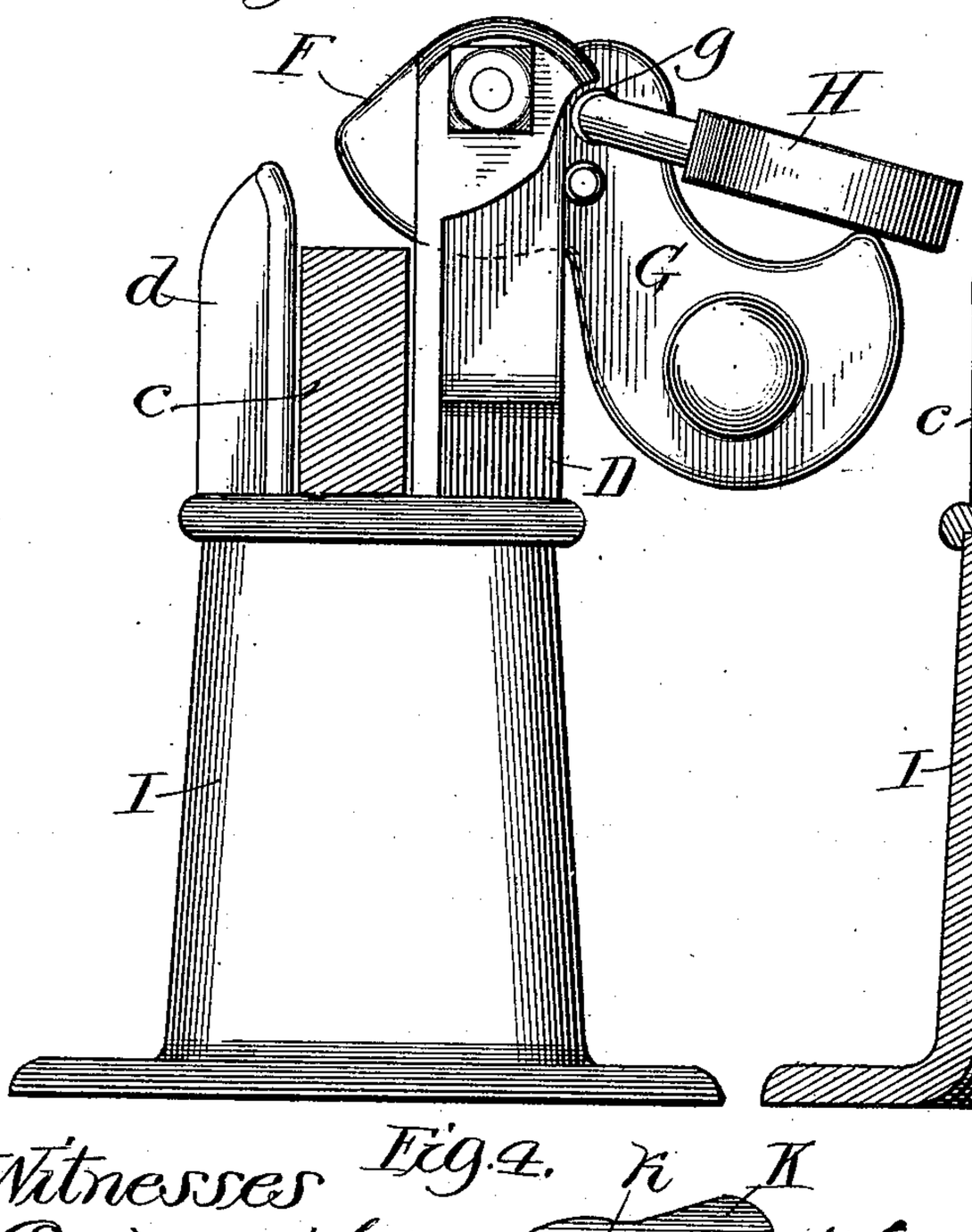


Fig. 3.

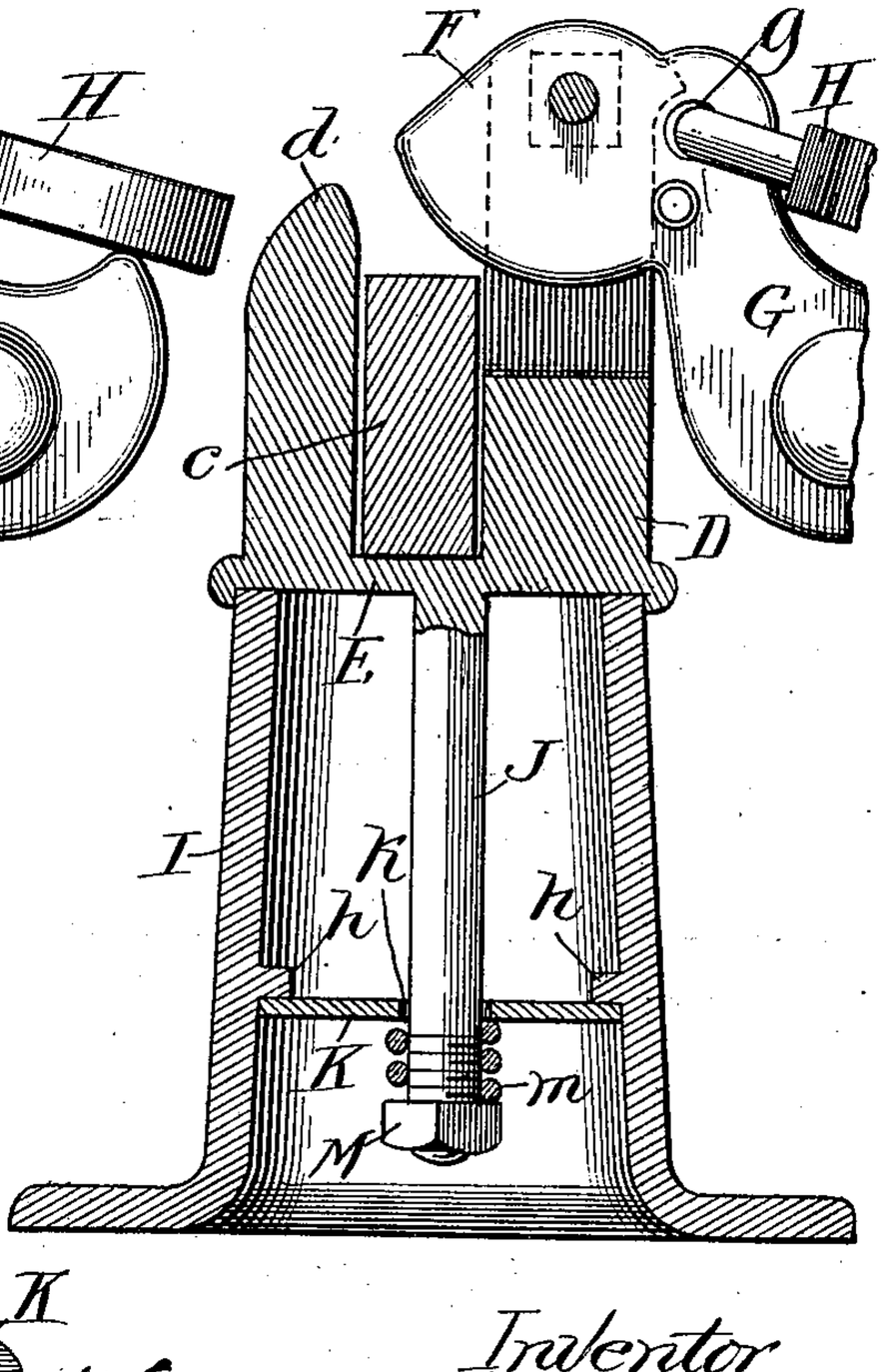
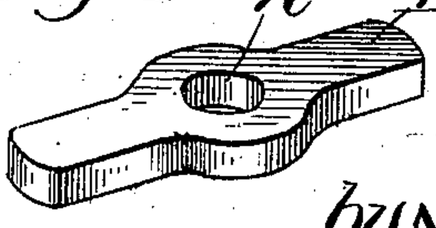


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM R. McCOLLOM, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO JOE LE PENSKE, OF CHICAGO, ILLINOIS.

RAILROAD-SWITCH-STAND LATCH.

No. 903,304. Specification of Letters Patent. Patented Nov. 10, 1908.

Application filed March 7, 1908. Serial No. 419,810.

To all whom it may concern:

Be it known that I, WILLIAM R. McCOLLOM, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railroad-Switch-Stand Latches, of which the following is a clear, full, and exact description.

My invention relates to latches for locking railroad switch levers, and its object is to so anchor this latch to its support, that when the cars run over the switch when the latter is in the wrong position, the latch will be wrenched free without breaking anything excepting a piece of metal, designed for this special purpose, and permit the switch lever to automatically move to the limit of its movement in the opposite direction, and thus avoid destroying the same and damaging the switch or the operating mechanism connected therewith. And a further object is to prevent injury to the cars, which, heretofore, when moving into the switch when the latter is in the wrong position, frequently became derailed and hopelessly wrecked, and caused great damage either to the cars, the road-bed, ties and rails. This I accomplish by the means hereinafter fully described, and as particularly pointed out in the claims.

In the drawings:—Figure 1 is a front elevation of a switch lever and stand having my improvement applied thereto. Fig. 2 is a side view on a larger scale, of one of the switch lever latches mounted on my improved support. Fig. 3 is a vertical central section of the same, and Fig. 4 is a detail view showing the retaining bridge in perspective.

In the drawings, A represents the case inclosing the mechanism for throwing a railway switch. This mechanism comprises an alternating rotary signal, *a*, of suitable design, and a horizontal shaft B, the end of which extends through its bearings in the case, and has a lever C secured thereon. The length of this lever C is such as to permit efficient manual power to be exerted to turn the shaft B and throw the switch and operate the signal. It is usually provided with a weight *c* on its end, and its normal position is substantially horizontal, as shown in Fig. 1 of the drawings. When in this position, said lever is at the limit of its movement, either in one direction or in the other, and it rests between a couple of lugs *d*, D, which are, preferably, cast in one piece with and arises from a plate E. Lug D is slightly higher than lug *d* and its upper portion is bifurcated to permit of a dog *f* being pivoted between the resulting arms thereof. This dog or latch comprises a segment-shaped head the nose of which is kept normally over the entrance of the space between the lugs, and it is provided with an extension G, that extends in the opposite direction from said nose, and is, preferably, provided with an opening *g*, near lug D, for the reception of the yoke of a padlock H, when it is desired to prevent meddlers from withdrawing the lever from between the lugs, substantially as shown in the drawings.

The edges of plate E are flanged downwards and assist in retaining said plate upon the upper edges of a hollow base I, which latter has its lower edges flanged outwards and secured by bolts or otherwise, to the ends of the ties, in such position that the lever, when it is thrown to a horizontal position will enter the space between lugs *d*, D. The plate E is provided with a downwardly extending bolt J, that, preferably, depends centrally into base I, and has its lower end extend through an opening *k* in the center of a bridge K, which latter consists of an independent bar of comparatively soft or brittle metal, such for instance, as a gray iron casting, which is of such length that when in proper position its ends come under flanges *h*, *h*, projecting inwards opposite each other from the inner surface of base I. Below bridge K, the bolt is screw-threaded, and has a spiral coil spring *n* surrounding it, which is retained and made to bear upwards against said bridge to keep it in place, by means of a nut M, and thus lock plate E and the latch mechanism connected therewith securely upon base I.

In operation suppose a car should move into the switch when the latter is in the wrong position, the wheels would enter the reëntrant angle between the switch points, and the rails of the main track and force the switch points and the rails of the main track apart, and permit the cars to remain on the track. To permit this, something connected with the switch or its operating or locking mechanism must give, and allow the switch lever to automatically move to the limit of its movement in the opposite direc-

tion. This the bridge K permits, by breaking when subject to the excessive strain put upon it by the efforts of the switch lever to reverse its position. For ordinary use the bridge K will be of sufficient strength to resist the strain of the traffic passing over the main track or the switch, and the vibrations caused by the same will be taken up by the spring *n*, but when, by accident or carelessness, a car or train of cars pass over the switch when in the wrong position or attempts to run off the switch when it is open, the bridge breaks and the lever will move to the limit of its movement in the opposite direction and carry the latch mechanism with it, thus avoiding the danger of a wreck, or injury to the track, and at the same time exposing the fact that some one has been careless.

By my invention none of the parts of the latch are injured, and all that is necessary to restore the latch to its original position is to remove the latch from the lever, and lock it on its base again by placing a new bridge therein, in the manner explained.

What I claim as new is:—

1. The combination with a switch lever, of a latch and breakable means for anchoring the latch in position.

2. The combination with a railroad switch lever, of a latch, a support therefor and breakable means situated within said support for anchoring said latch in position.

3. The combination with a railroad switch lever, of a latch, a base-plate upon which the same is secured, a hollow support upon which said base-plate is mounted, and breakable means for anchoring said base-plate on said hollow support.

4. The combination with a railroad switch lever, of a latch, a base-plate upon which the same is secured, a bolt extending centrally down from said plate, a hollow support upon which said base-plate is mounted and into which said bolt extends, and breakable means for anchoring said plate on said support.

5. The combination with a railroad switch lever, of a latch, a base-plate upon which the same is secured, a bolt depending centrally down from said plate, a hollow support, upon which said base-plate is supported and into which said bolt extends, a bridge extending from side to side of said support which opposes the withdrawal of said bolt.

6. The combination with a railroad switch lever, of a latch, a base-plate upon which the same is secured, a bolt depending centrally down from said plate, a hollow support upon which said base-plate is supported and into which said bolt extends, a bridge extending from side to side of said support having an opening therethrough down through which said bolt extends, and a nut on the lower end of said bolt engaging said bridge.

7. The combination with a railroad switch lever, of a latch, a base-plate upon which the same is secured, a bolt depending centrally down from said plate, a hollow support upon which said base-plate is supported and into which said bolt extends, a bridge extending from side to side of said support having an opening down through which the lower end of said bolt passes, a nut on said lower end and a spring interposed between said nut and bridge.

In testimony whereof I have hereunto set my hand and seal this 10th day of February, A. D., 1908.

WILLIAM R. McCOLLOM. [L. S.]

Witnesses:

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