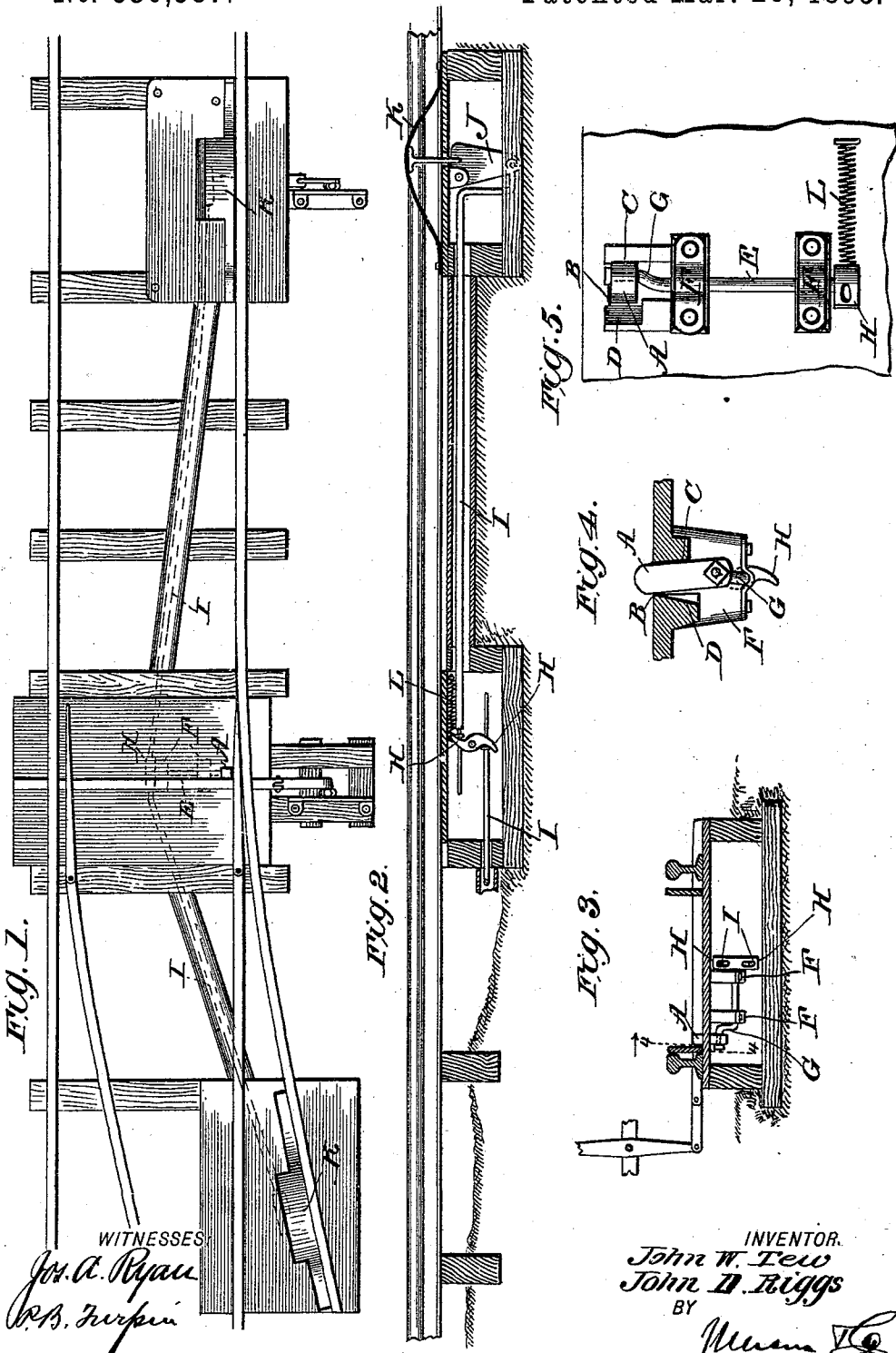


(No Model.)

J. W. TEW & J. D. RIGGS.
AUTOMATIC SAFETY LOCK FOR SWITCHES.

No. 536,587.

Patented Mar. 26, 1895.



UNITED STATES PATENT OFFICE.

JOHN W. TEW, OF ROME, GEORGIA, AND JOHN D. RIGGS, OF SELMA, ALABAMA.

AUTOMATIC SAFETY-LOCK FOR SWITCHES.

SPECIFICATION forming part of Letters Patent No. 536,587, dated March 26, 1895.

Application filed August 13, 1894. Serial No. 520,189. (No model.)

To all whom it may concern:

Be it known that we, JOHN WASHINGTON TEW, of Rome, in the county of Floyd and State of Georgia, and JOHN DILL RIGGS, of Selma, in the county of Dallas and State of Alabama, have invented a new and useful Improvement in Automatic Safety-Switch Locks, of which the following is a specification.

This invention is an improvement in rail road switches and particularly in that class of such switches designed to prevent unauthorized persons from throwing the switch and the present invention relates especially to the parts immediately connected with the switch locking projection.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a plan view, Fig. 2 a longitudinal section, and Fig. 3 a cross section, of a switch embodying our invention. Fig. 4 is a detail section on about line 4-4 Fig. 3. Fig. 5 is a detail inverted plan view.

The present invention is an improvement upon the devices shown in our former patent, No. 502,149, dated July 25, 1893, and as in such patent we provide a lock projection or bolt which projects normally in position to lock the switch and preferably alongside of one of the movable switch sections as shown to lock such section and its mate from movement. As in our said former patent we provide tripping or contact plates connected with the bolt operating devices so that when a locomotive is run upon and depresses either of such plates the bolt will be withdrawn when the switch may be thrown by hand or in any other desired manner.

The present invention relates particularly to improvements in the devices for operating the bolt and which we will now describe.

The bolt A plays in a guide B formed with a stop wall C and an opposite inclined wall D.

The shaft E is journaled in bearings F F and is provided with a crank G supporting the bolt A. It is to be noticed that the guide B is so arranged with respect to the shaft and its crank that when the bolt is projected or in locked position the crank is thrown past its center so that it is locked as against down-

ward pressure. This is most clearly shown in the detail sectional view and will be readily understood. At the same time the shaft may be turned freely to withdraw the bolt. The crank G is at one end of the shaft and at its other end the shaft has reversely projected arms H H connected with the operating devices which are preferably as shown rods I extending in opposite directions and connected with the bell crank levers J operated by the tripping plates K.

The bearings F F are between the crank and the projecting arms and are arranged one near to the arms and the other near the crank thus operating to prevent any endwise movement of the shaft.

A spring L actuates the shaft to normally project the bolt to locked position the spring being preferably connected with one of the arms H, as shown.

It will be seen that the construction is simple, easily applied, possesses no parts likely to get out of order and operates to secure a quick and certain release of the bolt when desired.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a switch substantially as described the combination of the locking bolt, the shaft having a crank supporting said bolt and provided with reversely projected arms, bearings for said shaft, and operating devices connected with said reversely projected arms substantially as and for the purposes set forth.

2. In a switch the combination of the locking bolt, the shaft provided at one end with the crank supporting the locking bolt and at its other end with the reversely projected arms, the bearings for said shaft arranged between such crank and arms and near thereto whereby the shaft is held from longitudinal movement and the operating devices connected with said reversely projected arms substantially as and for the purposes set forth.

3. In a switch the combination of the bolt, the shaft having a crank supporting said bolt and guide devices for said bolt arranged with respect to the shaft and its crank substantially as described whereby when the bolt is in locked position the crank will be thrown past its center substantially as and for the purposes set forth.

4. In a switch the combination of the bolt
the guide for said bolt having a stop side or
wall and an opposite inclined side or wall the
shaft having a crank supporting said bolt and
5 devices for operating said shaft substantially
as set forth.

5. The improvement in switches substan-
tially as described comprising the bolt, the
guide therefor having a stop side or wall and
10 an opposite inclined side or wall the shaft
having a crank arm supporting said bolt and
a pair of reversely projecting arms, the bear-
ings for said shaft arranged between and near
to the arms and crank whereby the shaft is
15 held from longitudinal movement and oper-
ating devices substantially as set forth.

6. The improvement in switches herein de-
scribed consisting of the bolt the shaft hav-
ing a crank supporting said bolt and reversely
projected arms, the guide for said bolt ar- 20
ranged with respect to the shaft and crank
substantially as described whereby when the
bolt is in locked position the crank will be
past its center, the tripping or contact plates
and intermediate connections between the 25
same and the arms of the shaft substantially
as set forth.

JOHN W. TEW.
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Witnesses:

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