

(No Model.)

J. J. TURNER.  
RAILROAD SWITCH LOCK.

No. 536,670.

Patented Apr. 2, 1895.

Fig. 1.

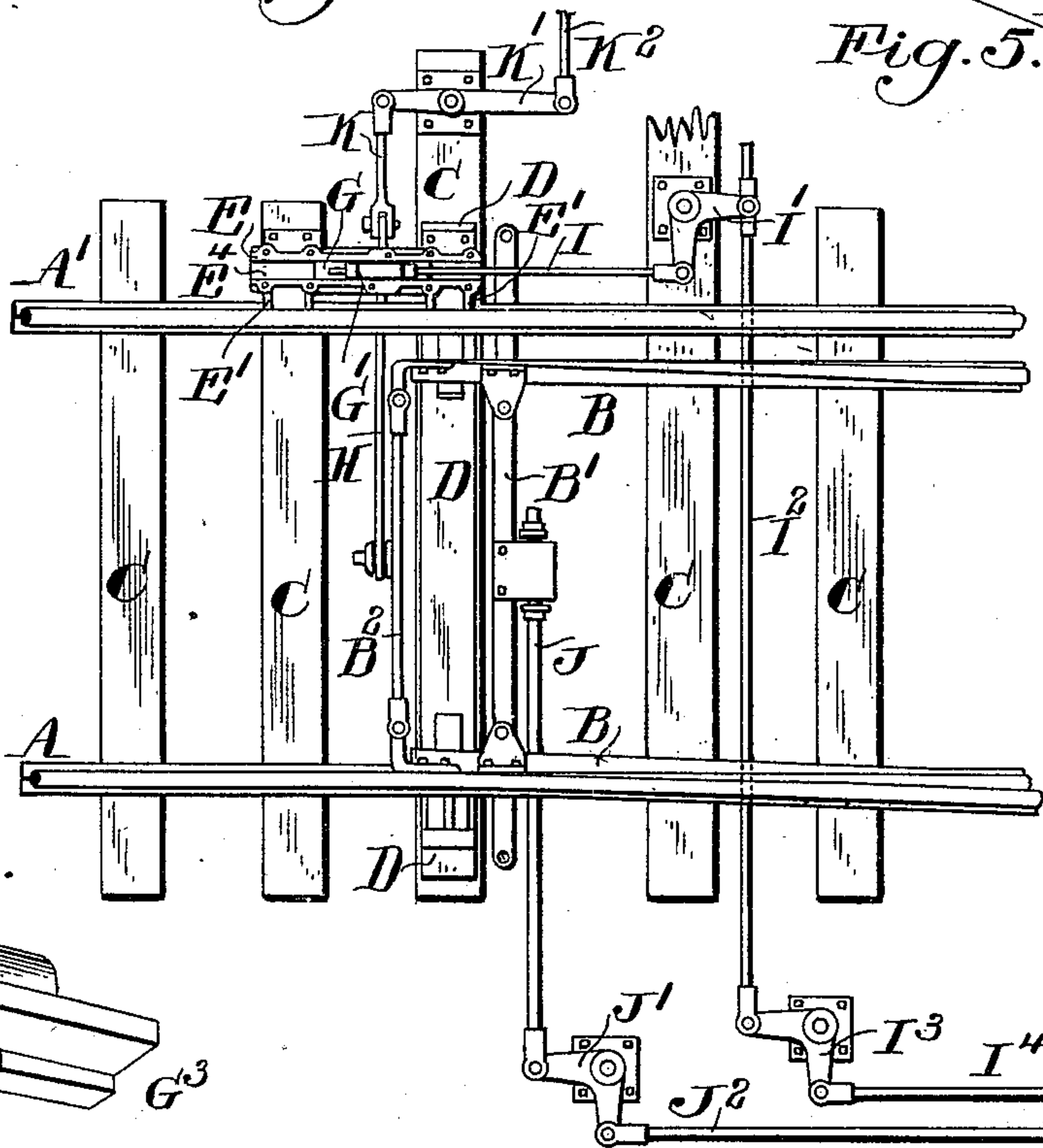
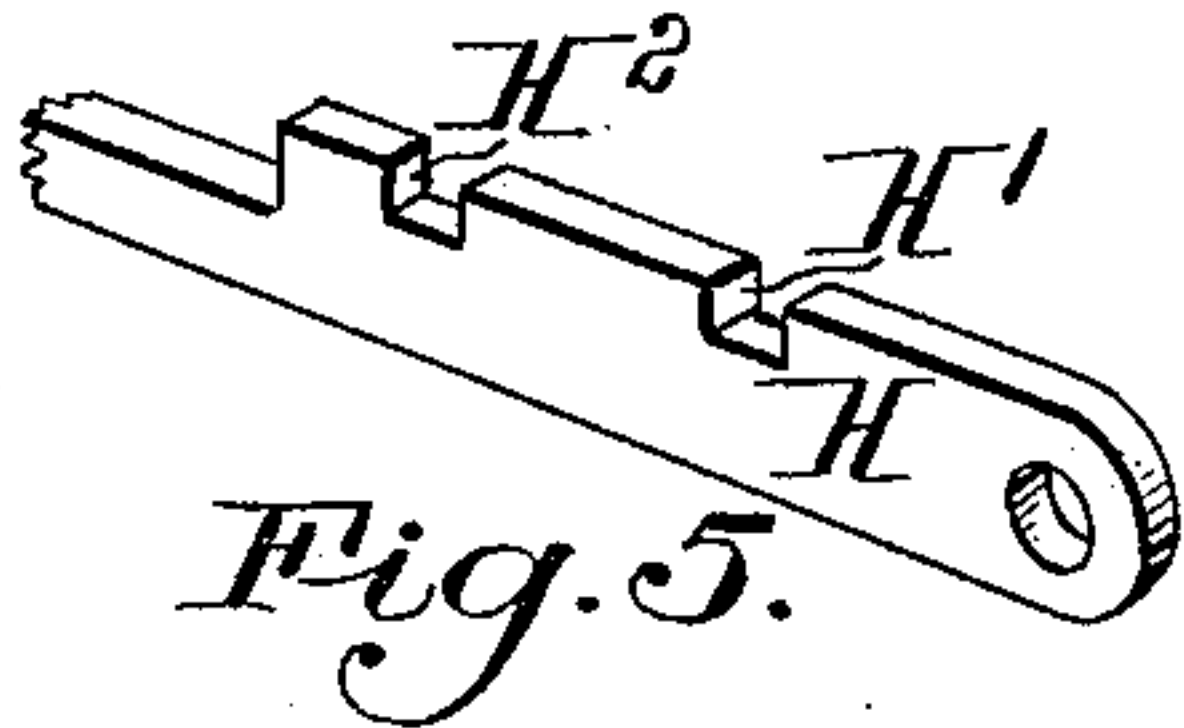


Fig. 6.

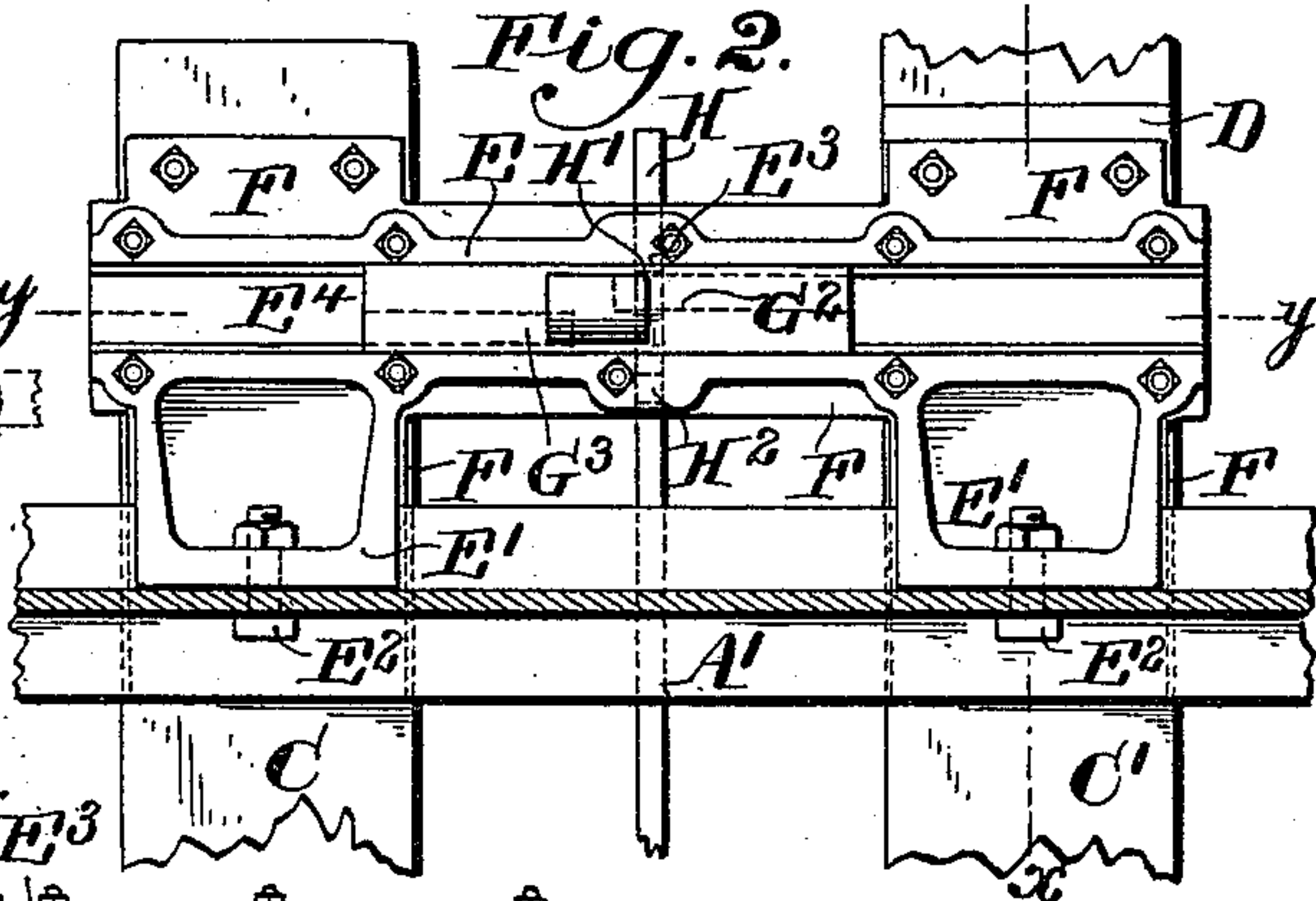
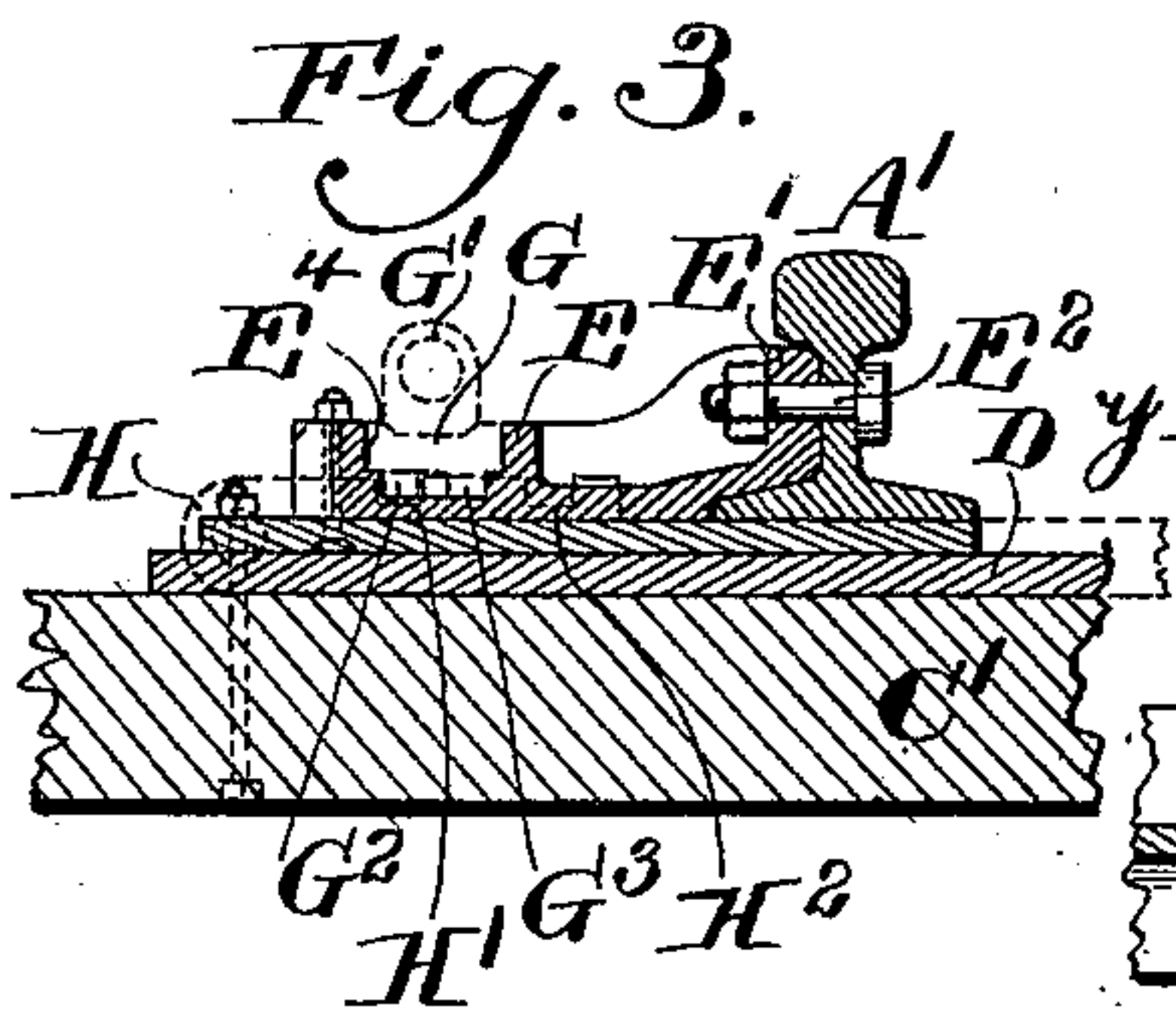
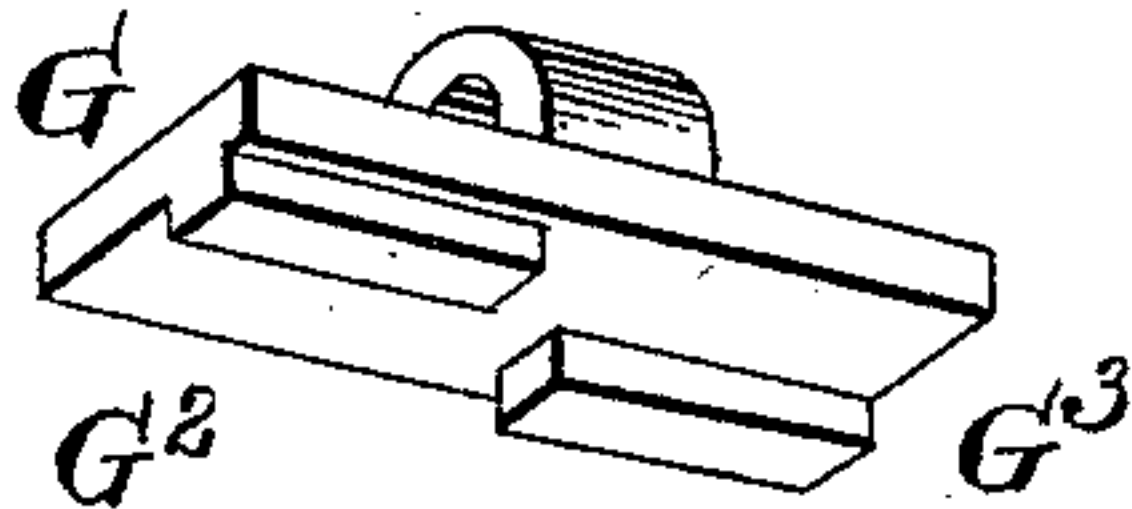
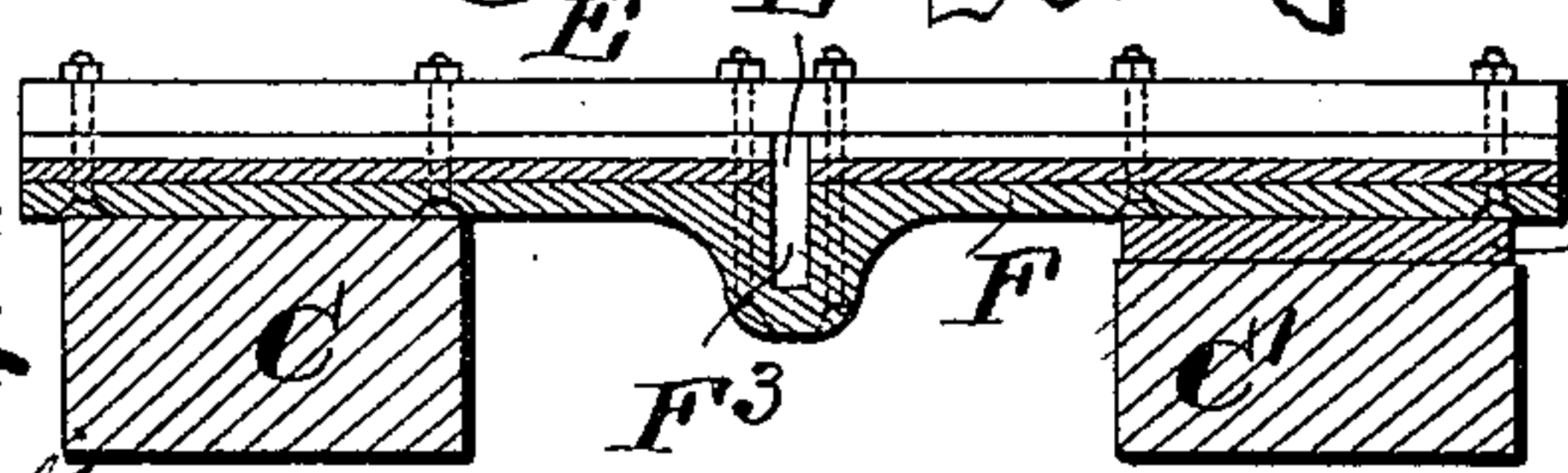


Fig. 4.



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# UNITED STATES PATENT OFFICE.

JAMES JEWETT TURNER, OF PITTSBURG, PENNSYLVANIA.

## RAILROAD-SWITCH LOCK.

SPECIFICATION forming part of Letters Patent No. 536,670, dated April 2, 1895.

Application filed December 27, 1894. Serial No. 533,061. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES JEWETT TURNER, a citizen of the United States, and a resident of Pittsburg, Allegheny county, State of Pennsylvania, have invented a certain new and useful Improvement in Railroad-Switch Locks, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to the devices used in connection with railroad switches and known as switch locks, their function being to lock the movable rails of the switch in position prior to the use of the switch, and also, as a rule, to prevent the setting of the switch signal to the point indicating safety in case, by reason of an improper setting of the switch, it cannot be locked in position.

As heretofore constructed the locking of the switch, and the setting of the signal has depended simply upon the bringing of the movable rails to their correct position, and the object of my invention is to make the locking of the switch depend not only upon the proper position of the movable switch rails, but also upon the proper position of the stock rail of the main track, in connection with which the switch rails operate.

In all switch locks the locking of the switch is effected by means of one or more movable members attached to and actuated by the movable rails of the switch, and one or more co-acting movable members actuated by a lever or other convenient device through what I may call the locking connection, the two members, or sets of members, making up the lock being formed and arranged so that they will only interlock in certain positions corresponding to the proper positions of the movable rails, and my invention consists in making the movable member or members actuated by the locking connection, preserve a fixed relation to the position of the stock rail whereby, in case the set rail is displaced, the said movable lock member will also be displaced, and thereby be rendered incapable of interlocking with the member actuated by the movable rails.

Reference being now had to the drawings which illustrate my invention, Figure 1, is a plan view of a switch and the switch lock con-

nected therewith; Fig. 2, a plan view on an enlarged scale of the lock, &c.; Fig. 3, a section on the line  $x-x$  of Fig. 2; Fig. 4, a section on the line  $y-y$  of Fig. 2; Fig. 5, a perspective view of the interlocking bar or member actuated by the movable switch rails, and Fig. 6, a perspective view of the movable bar or members of the lock which are actuated by the locking connection.

A and A' are the main or fixed rails of the track, A' indicating what I have referred to as the stock rail.

B B indicate the movable rails of the switch secured together as indicated by the connections B' and B<sup>2</sup>.

C C C' indicate the railroad ties, C' being that tie upon which the points of the switch move, and which as is usual, has a metal plate D secured upon its upper surface.

E is what I will call the lock-box its function being to guide the movable members of the switch and bring them into correct alignment with each other at proper times. This lock-box, in the construction shown, I provide with clamps E', adapted as shown to fit against the side of the stock rail, and to be secured thereto as by bolts E<sup>2</sup> so that the lock box preserves, and must preserve a fixed and positive position at all times with reference to the stock rail. A transverse slot E<sup>3</sup> is formed in the lock box for the passage of the movable lock member H actuated by the switch points, and a longitudinal slot or guide way E<sup>4</sup> which crosses and intersects the slot E<sup>3</sup> is also formed in the lock-box for the other movable member of the lock. As shown, a separate plate F is secured to the under side of the lock-box E having in it a slot F<sup>3</sup>, the function of which is to support the bar H and hold it in proper position in the slot E<sup>3</sup>.

G is a plate, secured to and movable longitudinally in the slot E<sup>4</sup> of the lock box, and having in the construction shown depending flanges G<sup>2</sup> G<sup>3</sup> which flanges constitute the locking bolts proper of this movable member of the lock. As shown, the bar or plate G is provided with a perforated lug G' by which connection is made with the locking connections indicated at I, I', I<sup>2</sup>, I<sup>3</sup>, and I<sup>4</sup>.

H is the movable lock member which is actuated by the switch points. As shown, it is



connected with the cross bar  $B^2$  and it extends through the slot  $F^3$  which holds it in place in the slot  $E^3$  of the lock-box. Its upper edge is provided with slots  $H'$  and  $H^2$ , corresponding  
 5 with the flanges or bolts  $G^2$  and  $G^3$  of the bar  $G$ , the arrangement being such that when the switch is in the position indicated in Fig. 1, the notch or slot  $H'$  will register with the depending flange or lock bar  $G^2$  so that a  
 10 movement of the locking connection will cause this bolt  $G^2$  to enter the slot  $H'$  and thereby lock the switch in position. When on the other hand the switch is thrown over in contact with the stock rail  $A'$  the slot  $H^2$   
 15 will register with the bolt  $G^3$  and the movement of the locking connections will cause these members to interlock and hold the switch in its new position. The motion of the switch points is brought about by a lever or  
 20 other actuating device connecting thereto connections  $J, J', J^2$ . As shown, connections  $K, K', K^2$ , extend from the end of the bar  $H$  and may be connected with any desired object to an interlocking system, and it will be un-  
 25 derstood that a signal or signals can be actuated from the locking connection  $J, J', J^2$ , &c., if desired.

From what has been said above it will be obvious that if the rail  $A'$  becomes displaced  
 30 the lock-box  $E$  and the bolts connected therein must also necessarily become displaced, so that the bolts will not register with the slots  $H'$  and  $H^2$  of the bar  $H$  when the switch is thrown to one position or the other. Conse-  
 35 quently it will be impossible to lock the

switch, and a grave danger is thus entirely obviated.

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

1. In combination with a railroad switch a switch lock consisting of a movable member as  $H$  actuated by the movements of the switch rails, a movable member as  $G$  actuated by a locking connection, said movable members  
 45 being formed and arranged to interlock and prevent movement of the switch only when the movable switch rails are in operative positions, and a guide for the movable member actuated by the locking connection secured  
 50 to the stock rail of the main track whereby the said movable member is caused to move laterally in case of a movement of said stock rail and an interlocking of the movable mem-  
 55 bers thereby prevented.

2. In combination with a railroad switch a lock box as  $E$  firmly secured to the stock rail of the main track, a lock bar  $H$  passing transversely through said lock box and actuated by the movable rails of the switch, and a lock-  
 60 ing bolt or bolts as  $G^2, G^3$  guided in the lock box and actuated by a locking connection, all substantially as described, and so that no locking of the switch can take place when the stock rail is displaced.

JAMES JEWETT TURNER.

Witnesses;

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CHARLES A. GEEGAN.