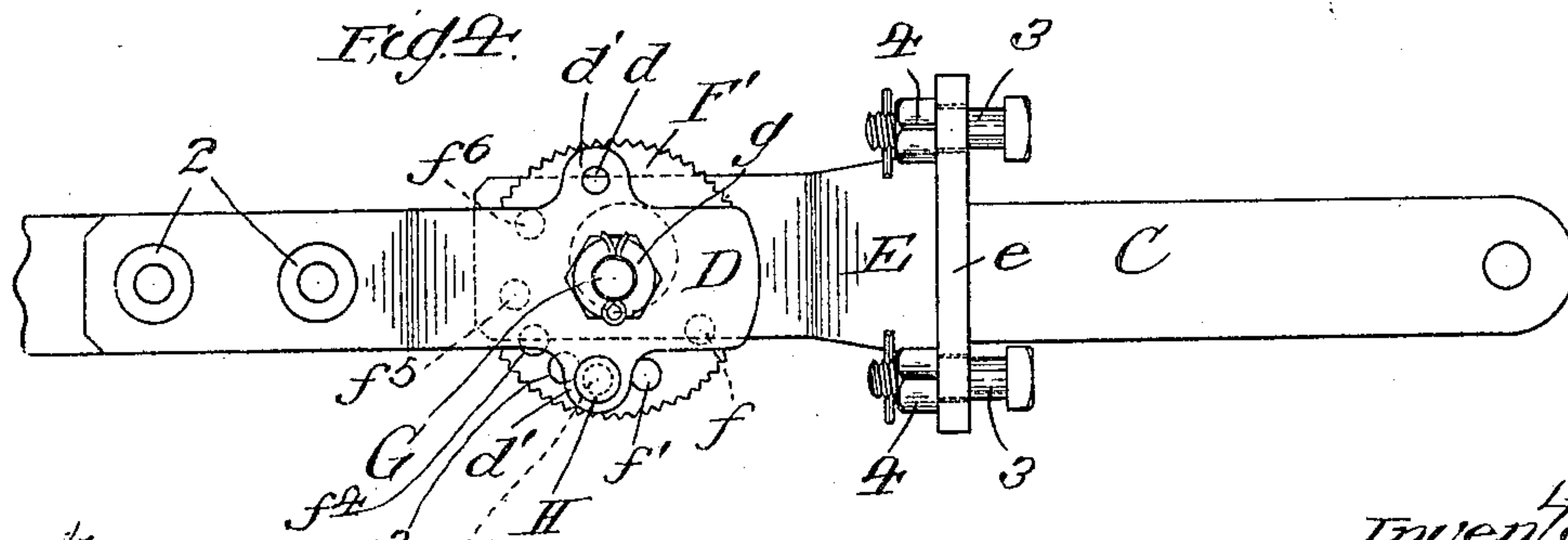
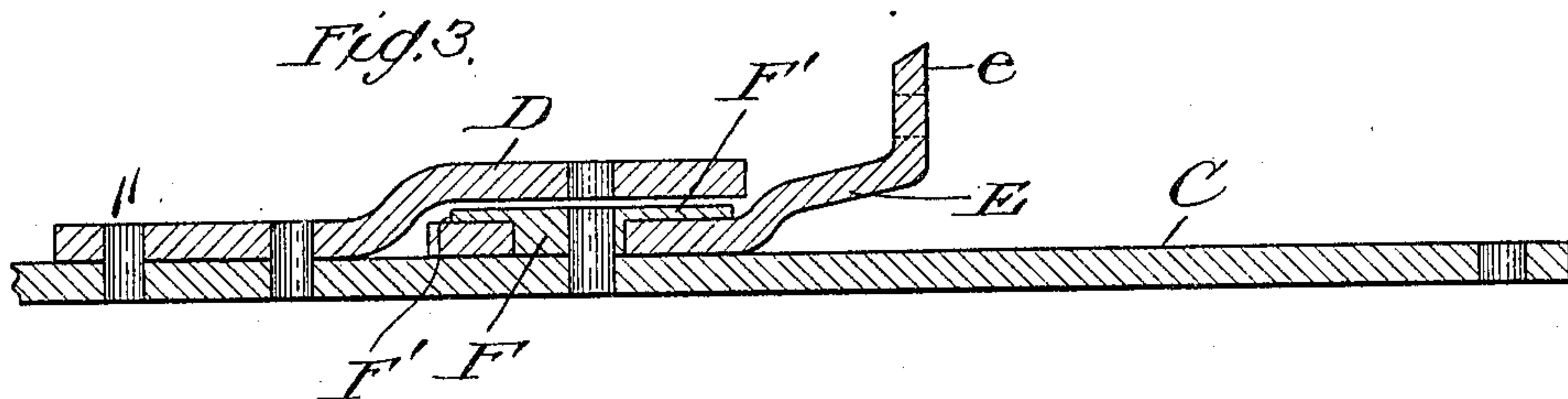
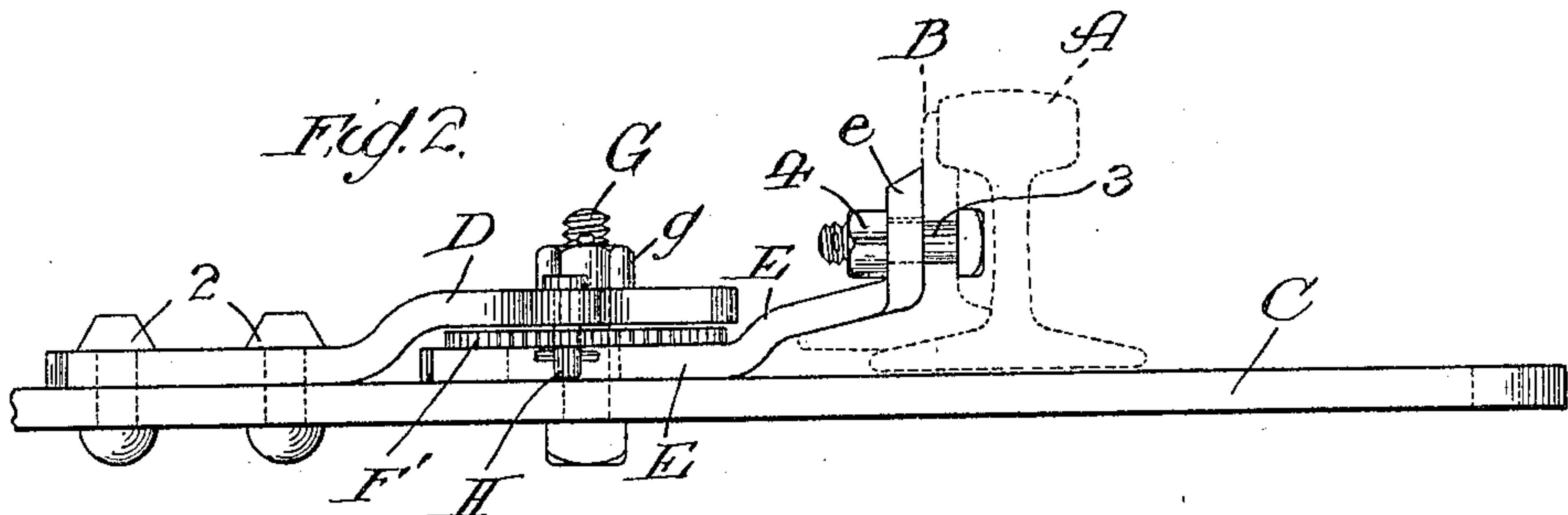
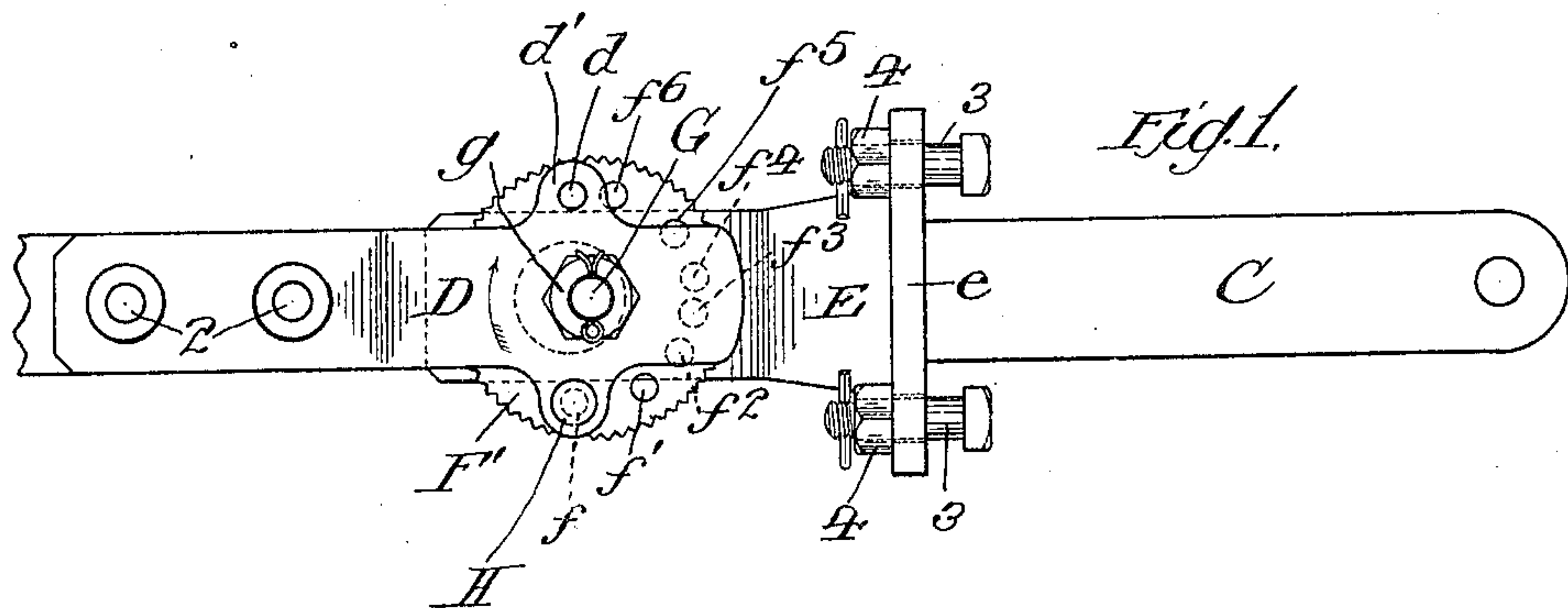


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PATENTED JUNE 5, 1906.

W. S. WESTON.  
RAILWAY SWITCH ROD.  
APPLICATION FILED MAR. 3, 1905.

2 SHEETS—SHEET 1.



Witnesses:  
Lillian Orentice  
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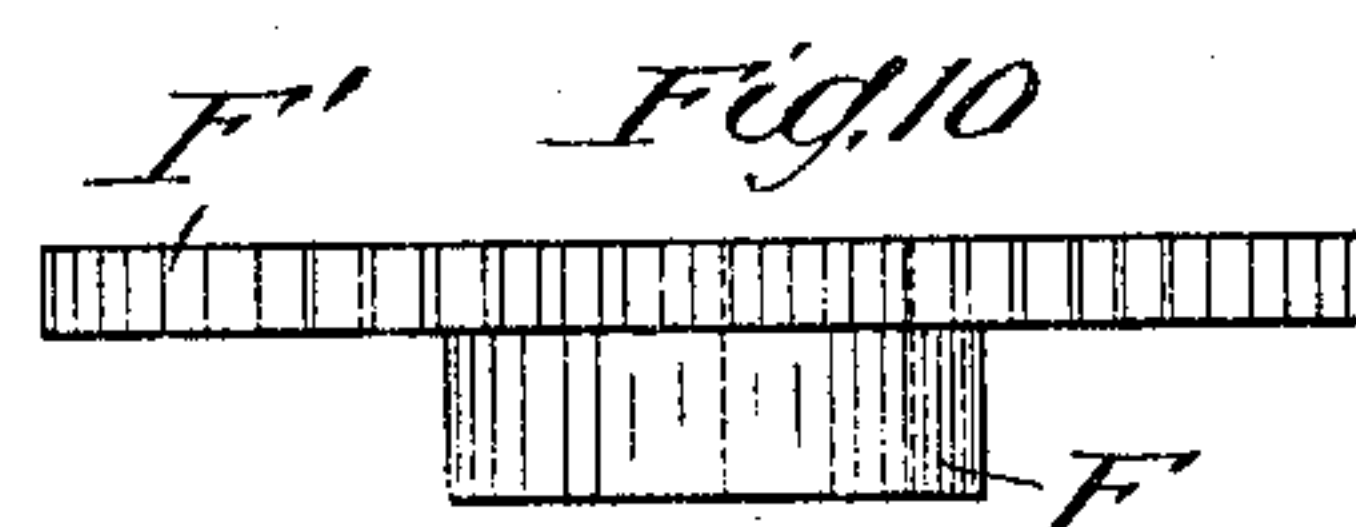
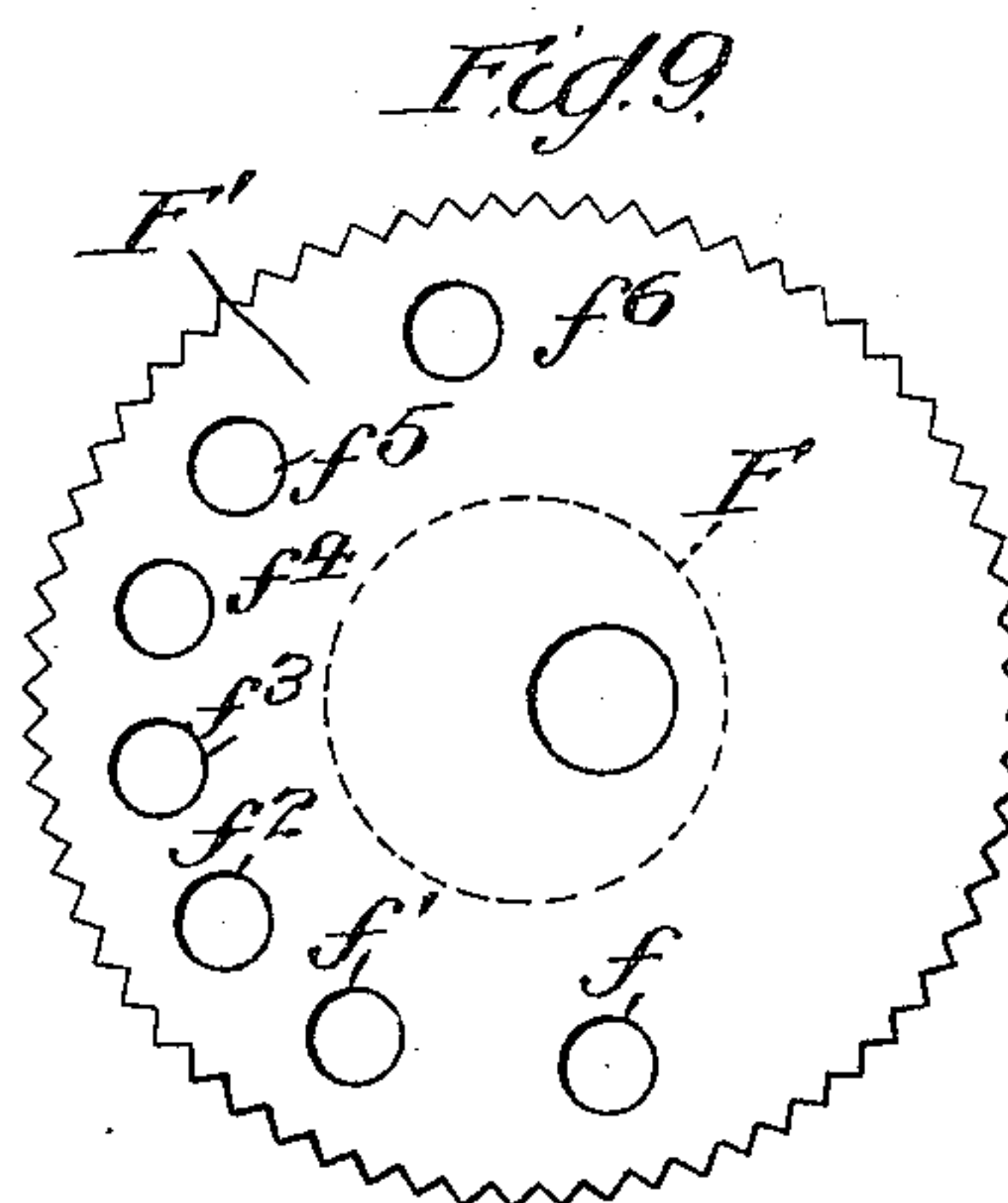
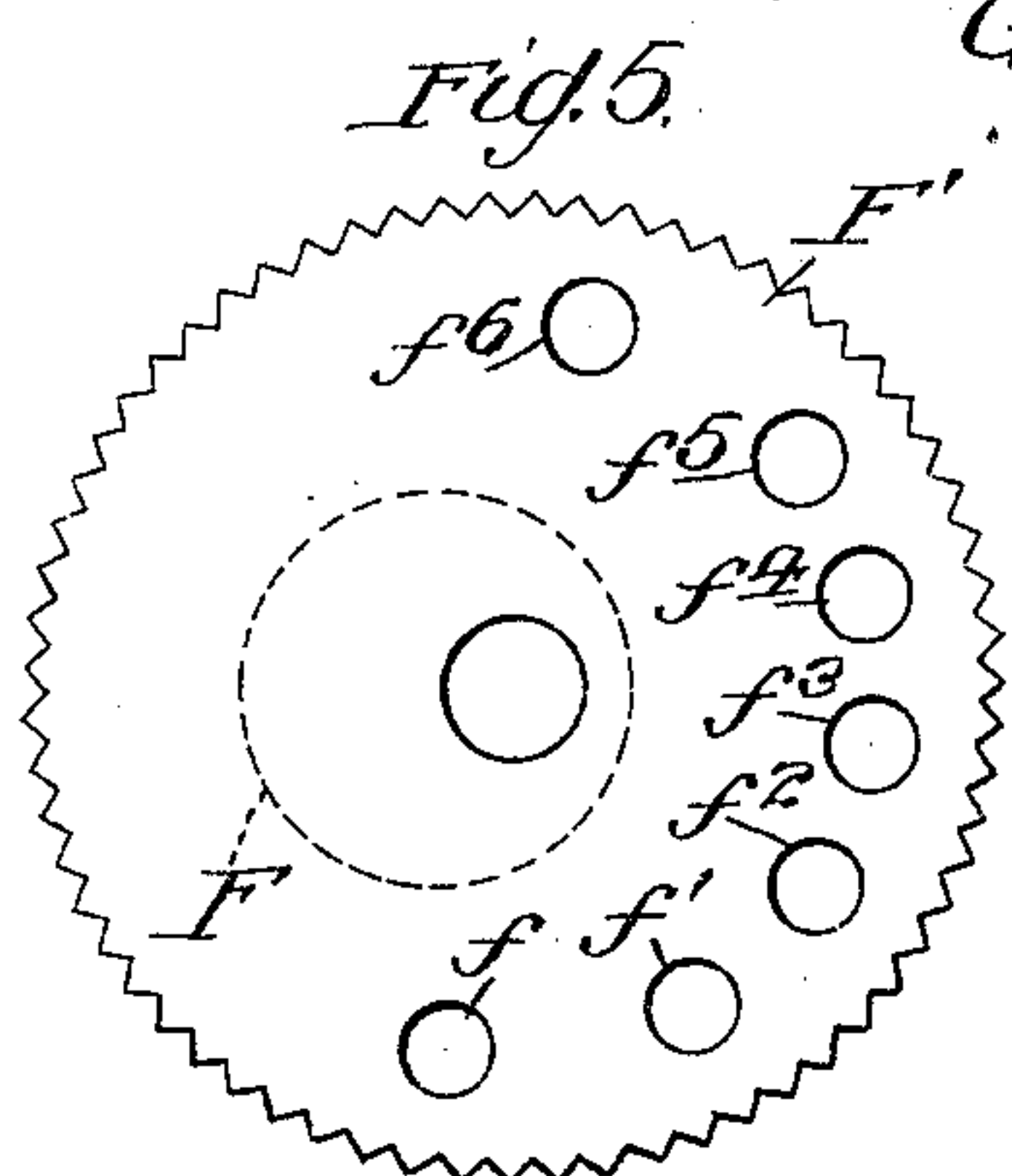
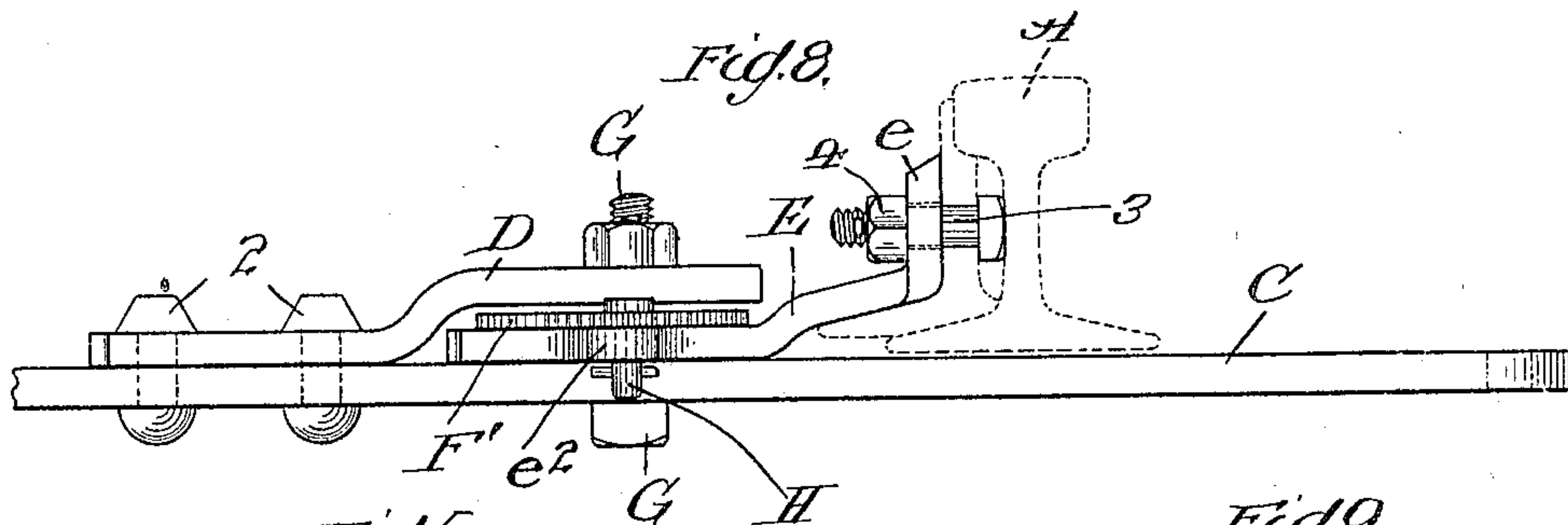
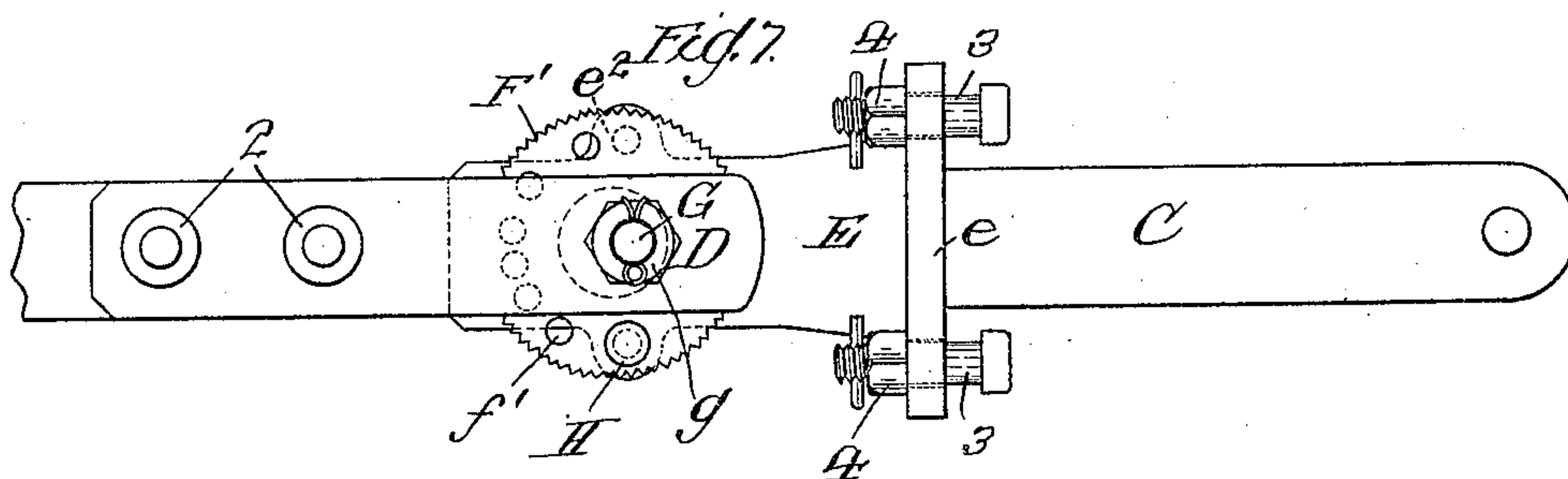
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

WILLIAM S. WESTON, OF CHICAGO, ILLINOIS, ASSIGNOR TO BUDA  
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ILLINOIS.

## RAILWAY SWITCH-ROD.

No. 822,413.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed March 3, 1905. Serial No. 248,245.

*To all whom it may concern:*

Be it known that I, WILLIAM S. WESTON, 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 Railway Switch-Rods, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The invention relates to that class of switch-rods that are provided with means for adjusting their length so that the switch-points may be held in snug relation with respect to the main-track rails; and the invention is designed more particularly as an improvement upon that type of adjustable switch-rods in which an eccentric is employed for effecting the required adjustments.

The invention consists in the features of improvement hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the claims at the end of this specification.

Figure 1 is a plan view of a switch-rod embodying my invention. Fig. 2 is a view in side elevation. Fig. 3 is a view in vertical longitudinal section with bolts removed. Fig. 4 is a plan view with clip in shifted position. Figs. 5 and 6 are plan and side views of disk and shifting eccentric. Figs. 7 and 8 are respectively plan and side views showing a modification of the invention. Figs. 9 and 10 are plan and side views of the disk and shifting segment shown in Figs. 7 and 8.

In the accompanying drawings, A designates one of the main-track rails, and B denotes one of the switch-points, to which the switch-rod will be connected. I have not deemed it necessary to illustrate the other track-rail or switch-point nor the parts connected thereto. The body C of the switch-rod is provided with an offset ear D. As shown, the ear D is formed separate from and connected to the body C of the switch-rod by rivets 2. Between the raised portion of the ear D and the body C of the switch-rod extends the inner end of the clip E, the outer end of this clip being formed with an angular upturned portion *e*, whereby it is connected to the switch-point B through the medium of the bolts 3 and nuts 4.

The inner end of the clip E is formed with a hole to receive the eccentric F, whereby the adjustment of the clip and of the switch-

point will be effected. Through the hole of the eccentric F and through holes formed in the body C of the switch-rod and in the ear D passes the pivot-bolt G, upon the upper threaded end of which sets the nut *g*, while the lower headed end of the bolt bears against the under side of the body C of the switch-rod.

The eccentric F is provided with a laterally-extending member F', that is preferably formed in the shape of a disk or flange, and by preference also this disk F' has its outer edge notched or corrugated to enable it to be readily grasped in order that the eccentric F may be turned when an adjustment of the parts is to be effected. The adjusting member or disk F' is preferably arranged between the clip and ear and extends laterally beyond the side edges thereof. It will thus be seen that by grasping the laterally-extending member F' the turning of the eccentric can be effected without the necessity of removing the pivot-bolt G. This is a feature of importance not only in that it enables the adjustment of the switch-point to be more quickly effected, but avoids the necessity of separating the parts.

In order to hold the eccentric in the different positions to which it may be turned, the laterally-extending member F' is provided with a plurality or series of stops. As shown, these stops are formed by making a series of holes in suitable number, as at *f, f', f<sup>2</sup>, f<sup>3</sup>, f<sup>4</sup>, f<sup>5</sup>, and f<sup>6</sup>*, in the laterally-extending member F', these holes being disposed differentially adjacent the edge of the member F'. To engage the stops with which the member F' of the eccentric is provided in order to hold the eccentric in fixed position after its adjustment has been effected, I prefer to employ a stop-pin H, adapted to enter the holes or cut-away spaces *f, f', &c.*, of the member F', and this stop-pin H preferably engages the ear D. In the preferred embodiment of the invention the ear D is provided at its sides with holes or cut-away spaces *d* to receive the stop-pin H, and preferably these holes *d* are formed in offset lugs or extensions *d'* of the ear D, that overlap the disk or member F'. When two holes *d* are employed, the stop-pin H may be moved from one to the other of these holes for a purpose to be presently stated.

By reference to Fig. 1 of the drawings it will be seen that the holes *f, f', &c.*, that form the stops in the member F', are disposed at different distances apart, the purpose of this



arrangement being to enable the clip to be adjusted to and locked at predetermined extents of movement, it being understood that as the eccentric F is turned in the direction of the arrow from the position shown in Fig. 1 its initial movement will effect a shorter outward shift of the clip E than will be effected as the eccentric approaches and recedes from a position at right angles to that shown in Fig. 1 of the drawings. It will also be seen that the distance from the hole or space  $f^6$  to the hole in the adjacent lug of the ear D is half the distance of the hole  $f'$  from the hole in the adjacent lug shown at the lower side of the ear in Fig. 1. Hence it will be understood that when it is desired to adjust the clip E outwardly, say, an eighth of an inch the stop-pin H will be withdrawn and the eccentric will be turned in the direction of the arrow until the hole  $f'$  is beneath the hole  $d$  in the adjacent lug of the ear D, after which the stop-pin H will be passed through the hole  $d$  and the hole  $f'$ . If, however, it is desired to move outward the clip E, say, one-sixteenth of an inch from the original position shown in the drawings, then the stop-pin H having been withdrawn the member F' of the eccentric will be turned in a direction opposite that indicated by the arrow in Fig. 1 until the hole  $f^6$  is beneath the hole  $d$ , shown at the upper side of the ear D in Fig. 1 of the drawings. It will thus be seen that by moving the stop-pin H from one side of the ear D to the other the same holes or stops  $f f'$ , &c., which thus register alternately with the holes  $d$ , can be used for locking the eccentric when it has been moved to different extents.

In the form of the invention above described the member F', whereby the eccentric F is shifted, is formed with a concentric hole, as illustrated in Fig. 5 of the drawings; but this is not essential, as will presently appear.

In the form of the invention illustrated in Figs. 7 to 10 of the drawings the clip E is mounted upon brace-rod C beneath the ear D, as in the construction hereinbefore described, and in this construction also the eccentric F is mounted within a hole formed in the clip E; but in this modified form of the invention the hole through which the bolt G passes is formed eccentric of the member F'. In this form of the invention also the clip E is formed with laterally-projecting lugs  $e^2$ , which are overlapped by the disk or member F' and which are provided with holes formed therein adapted to receive the retaining-bolt H, that will pass through holes  $f f'$ , &c., of the member F'.

The operation of adjusting the clip E will be readily understood; but it will be seen that instead of the member F' being locked to the ear D, as in the construction before described, it would be locked to the clip E. The result, however, will be the same in each construction—viz., the locking of the eccen-

tric in the position to which it may have been adjusted.

With each of the foregoing constructions also it will be seen that the shifting of the clip E to adjust the switch-point rail B can be readily effected without the removal of the bolt G, it simply being necessary to withdraw the locking-pin H and shift the eccentric by manipulation of its laterally-extending member F'. Pin H is held in place by a key extending through its lower end. (See Figs. 2 and 8.) It will be noted that the locking-pin H and the means for retaining it in place are entirely independent of the retaining-bolt G or of the nut thereon, so that the locking-pin may be removed or placed in position without disturbing the retaining-bolt or its nut. Moreover, the adjusting member F' for the eccentric extends laterally between the clip and ear and projects beyond the side edges thereof, so that it is readily accessible for adjusting the eccentric and so that it can be held in place by a locking-pin extending therethrough and through a laterally-projecting portion or lug upon one of the adjacent parts.

It is obvious that changes may be made in the details of structure without departure from the essentials of the invention.

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

1. The combination with a switch-rod, of means for adjustably connecting it to a switch-rail comprising an ear extending from the rod, a clip for connection with the switch-rail, having its inner end located between the switch-rod and the ear and provided with a hole, an eccentric within the hole of the clip, a bolt for connecting said eccentric to the rod, and means for adjusting and locking said eccentric comprising a member secured to said eccentric, and extending laterally therefrom between adjacent parts, and a device for securing said member to one of the adjacent parts.

2. The combination with a switch-rod, of means for adjustably connecting it to a switch-rail comprising an ear extending from the rod, a clip for connection with the switch-rail, having its inner end provided with a hole, an eccentric within the hole of the clip, a bolt for connecting said eccentric to the rod, and means for adjusting and locking said eccentric, comprising a member rigidly secured to said eccentric, extending laterally therefrom between the adjacent parts and projecting beyond the sides of said parts and an independently-movable pin for locking said member to one of the adjacent parts.

3. The combination with a switch-rod, of means for adjustably connecting it to a switch-rail comprising an ear extending from the rod, a clip for connection with the switch-rail, having its inner end provided with a



hole, an eccentric within the hole of the clip, a bolt for connecting said eccentric to the rod, means for adjusting said eccentric comprising a member secured to said eccentric and projecting laterally beyond the side of one of the adjacent parts, and means for locking said member to the other of the adjacent parts in order to hold said eccentric against rotation.

4. The combination with a switch-rod, of means for adjustably connecting it to a switch-rail comprising an ear extending from the rod, a clip for connection with the switch-rail, having its inner end secured to the rod and provided with a hole, an eccentric within the hole of the clip, a bolt passing freely through and connecting said eccentric to the rod, and means for adjusting and locking said eccentric, comprising a member secured to said eccentric and projecting laterally therefrom between said ear and clip and arranged to rotate in a plane parallel with the rod, and a series of stops and a removable pin to engage with said stops for locking the eccentric against rotation.

5. A switch-rod comprising a bar, an ear on the bar, a clip having one end bolted to the switch-rail and the other end adapted to be retained by said ear, a retaining-bolt fitted in the ear and passing through a large round hole in the clip, a nut on said bolt, a plate pivotally mounted on said bolt and having an eccentric portion rotatably fitting the said large round hole in the clip, and a removable pin independent of said retaining-bolt for releasing and then holding the said plate in any desired position after it has been rotated for the purpose of adjusting the relation between said ear and said clip, said pin being provided with means independent of the bolt and nut for holding it in place.

6. The combination with a switch-rod, of means for adjustably connecting it to a switch-rail comprising an ear extending from the rod, a clip for connection with the switch-rail, having its inner end located between the switch-rod and the ear and provided with a hole, an eccentric within the hole of the clip, a bolt for connecting said eccentric to the rod, and means for adjusting and locking said eccentric, comprising a member extending laterally from said eccentric and projecting laterally therefrom beyond the side edge of said clip, and provided with a series of stops, said ear being provided with a perforated side portion and a pin for engaging with the perforated side portion of the ear and with the stops of the member projecting from the eccentric.

7. The combination with a switch-rod, of means for adjustably connecting it to a switch-rail, comprising an ear on the rod, a clip for connection with the switch-rail, having its inner end provided with a hole, an eccentric within the hole of the clip, a bolt for

connecting said eccentric to the rod, said eccentric being provided with a laterally-projecting member having a series of stops, one of the parts adjacent said laterally-projecting member being provided at its opposite sides with perforations with which said stops alternately register, and a pin whereby either of said side perforations may be engaged with said stops to lock the eccentric in adjusted position.

8. The combination with a switch-rod, of means for adjustably connecting it to a switch-rail, comprising an ear extending from the rod, a clip for connection to the switch-rail, having its inner end provided with a hole, an eccentric located within the hole of the clip and provided at its top with a disk projecting laterally beyond the sides of the ear and whereby the eccentric may be adjusted, said disk being provided with a series of cut-away spaces forming stops, and a connection adapted to engage said stops and one of the adjacent parts.

9. The combination with a switch-rod, of means for adjustably connecting it to a switch-rail, comprising an ear extending from the rod, a clip for connection with the switch-rail, having its inner end located between the switch-rod and the ear and provided with a hole, an eccentric within the hole of the clip, a bolt passing through said eccentric and connecting it to the rod, said eccentric having a laterally-extending disk projecting beyond the sides of the clip and provided with a series of stops concentric with said bolt and means for connecting said disk to one of the parts between which it is arranged.

10. The combination of a switch-rod having an ear, a clip arranged between said ear and rod, a retaining-bolt extending through said parts, an eccentric on said bolt arranged within a hole in said clip, said eccentric having an adjusting member extending laterally therefrom between two of said parts and projecting beyond the side of one of the parts between which it is arranged and means for locking said adjusting member to the other of such parts, substantially as described.

11. The combination of a switch-rod having an ear, a clip arranged between said rod and ear, a connecting-bolt extending through said parts, an eccentric on said bolt and arranged within an opening in said clip, said eccentric having an adjusting member laterally extending therefrom between two of said parts and projecting beyond the side of one of the parts between which it is arranged, the other of such parts having laterally-projecting side portions and a removable pin for locking said adjusting member to said projecting side portions, substantially as described.

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