



No. 625,961.

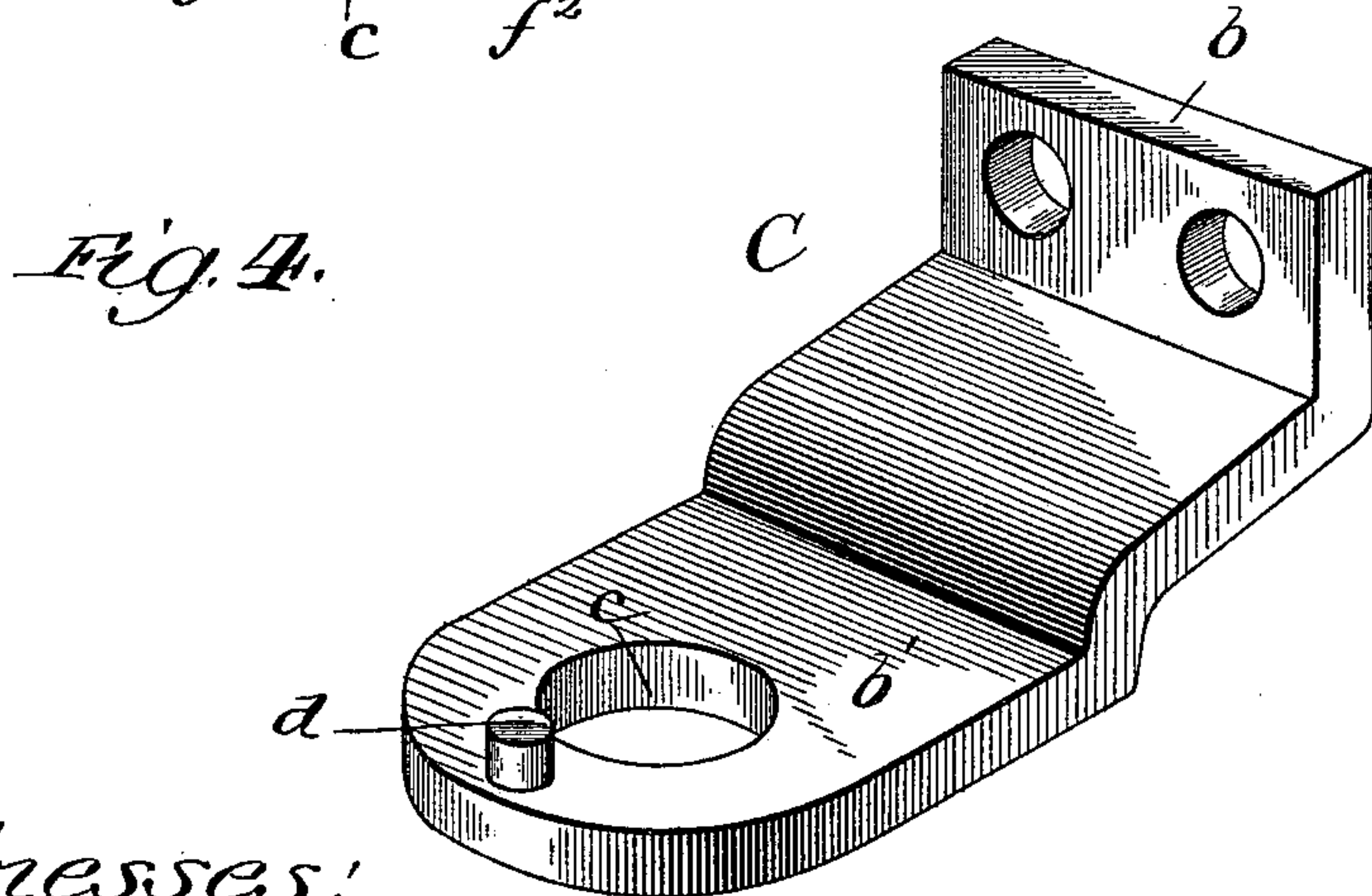
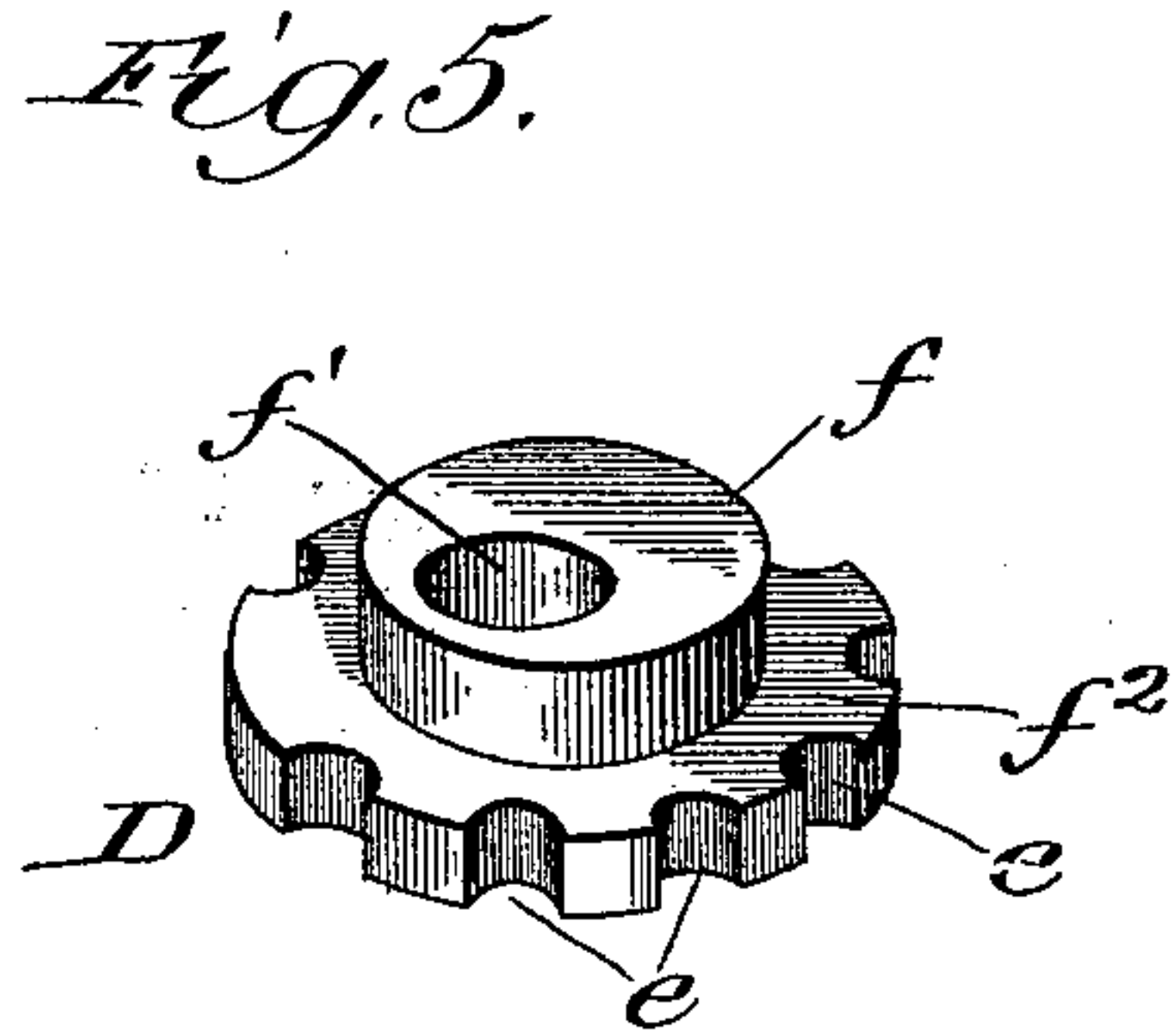
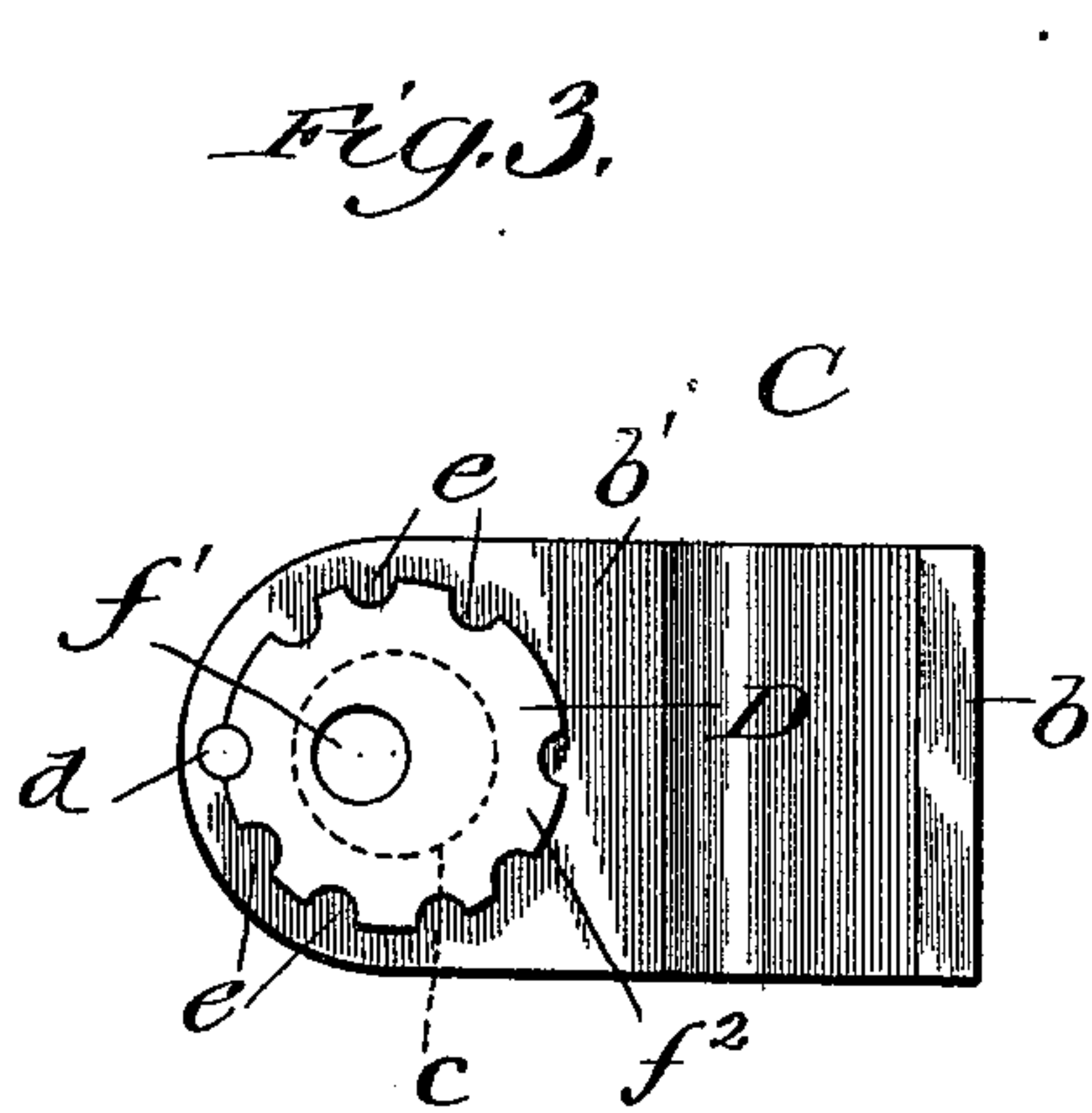
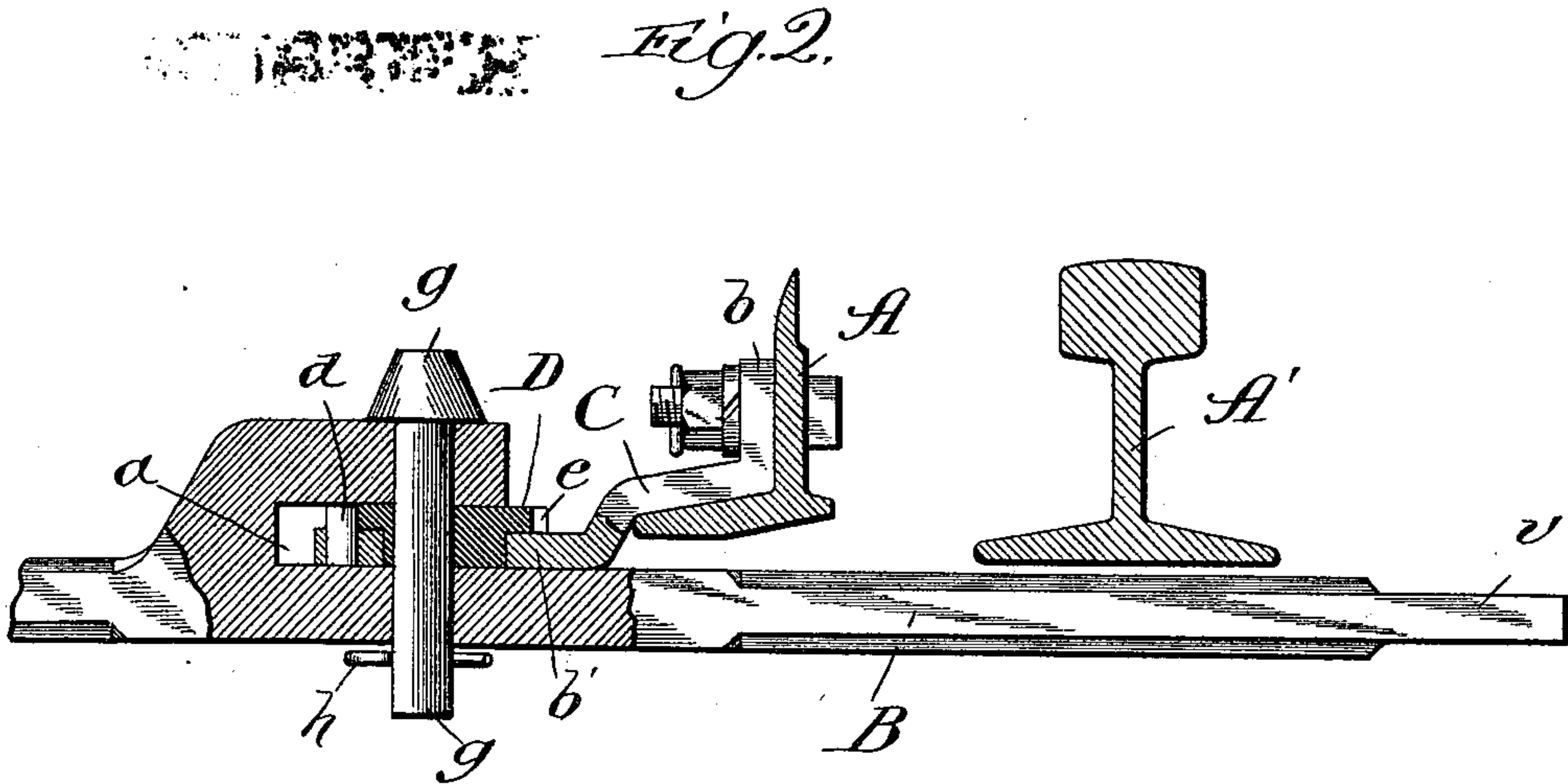
Patented May 30, 1899.

A. A. STROM.  
RAILWAY SWITCH.

(Application filed Feb. 11, 1899.)

(No Model.)

2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

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## RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 625,961, dated May 30, 1899.

Application filed February 11, 1899. Serial No. 705,241. (No model.)

*To all whom it may concern:*

Be it known that I, AXEL A. STROM, a citizen of the United States, residing at Austin, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Railway-Switches, of which the following is a specification.

My invention relates particularly to an improvement in the connecting means between switch-rails.

The point of a split-switch rail is formed by planing off a full-sized rail, thereby removing the hard scale thereon from the surface of the point-rail which bears against the side of the main rail and subjecting the point to material wear under the continued vibratory rubbing against the main rail to which it is subjected by car-wheels passing over it.

The primary object of my improvement is to provide novel means for readily adjusting the switch-rails to take up the wear referred to as occasion requires; and my further object is to enable this wear to be taken up without requiring to that end resetting of the tie-bar so far ahead or behind the line upon which it is originally adjusted as to bring it into undesirably close proximity to a tie at either side of that line.

Referring to the accompanying drawings, Figure 1 is a plan view of a section of a railroad-track containing a split switch equipped with my improvement; Fig. 2, a section taken at the line 2 on Fig. 1, viewed in the direction of the arrow and enlarged; Fig. 3, a plan view of the clip detail containing the adjustable eccentric for connecting the tie-bar with the clip and through the medium of the clip with a switch-rail; Fig. 4, a perspective view of the clip provided with the opening in its tailpiece to receive the rotary eccentric and with a stop for locking the eccentric in adjusted position, and Fig. 5 a bottom perspective view of the eccentric.

A A are the connected rails of a split switch in position relative to the track-rails A' A'. The switch-rails are connected by one or more tie-bars B, terminating at their opposite ends in sockets *a a* to embrace clips C, rigidly fastened through their head portions *b b* to the inner sides of the switch-rails

at opposite points. Each clip contains in its tail portion *b'* a circular opening *c*, adjacent to which is provided a stop-stud *d*. This stop-stud is permanently secured to the tail portion of the clip by being immovably fixed in an opening or recess in the latter, as shown. Such construction precludes the possibility of the stud becoming loosened and displaced under the vibration of the rails. In the opening *c* is rotatably seated an eccentric D, comprising a circular body *f*, fitting the clip-opening and containing an eccentric-opening *f'*, the body *f* being encircled concentrically by a flange *f'*<sup>2</sup>, containing at intervals about its edge recesses or notches *e*, each adapted to be engaged with the stud by adjusting accordingly the eccentric, and thereby lock it in its adjusted position. The bifurcated end or socket on the end of a tie-bar embraces the tail portion of a clip, thereby embracing also and confining in its bearing the eccentric, and the tie-bar, clip, and eccentric are pivotally connected together by a pin *g* passing through them and which is shown to be fastened against withdrawal by a cotter *h*.

In Fig. 1 two tie-bars B are shown, connecting the switch-rails at different points and each provided at its opposite ends with my improvement, which, however, relates to the eccentric connection between a tie-bar and switch-rail whether applied to only one or to several of the latter and to one or both ends of a tie-bar. The forward tie-bar B (shown in Fig. 1) is shown as extended at one end, at *v'*, below the bases of the adjacent rails, for the usual purpose of holding there down the switch-rail, and as extended at its opposite end, at *v*, for coupling with the connecting-bar of a switch-stand.

Access to an eccentric D in use may readily be had by removing the respective pin *g* and disconnecting the tie-bar to permit the eccentric to be taken out of the opening *c* and reset therein, with a notch *e* engaging the locking-stud *d* to the required adjustment in case of wear on the point-rail. The opening *f'* being eccentric to the flange *f'*<sup>2</sup>, turning the eccentric D in one direction—say toward the right—the extent of one or more notches *e* sets the opening *f'* and accordingly the re-



spective end of the tie-bar that much closer to the switch-rail, which under the normal throw of the switch-stand will thus be brought, notwithstanding the wear upon it, to bear against the side of the adjacent rail A', and this however many of the notches e may be turned for effecting the adjustment without setting the tie-bar unduly far beyond the line through its longitudinal center in its position of original setting.

While it would be within my invention to provide my improved eccentric-adjusting means only at one end of a tie-bar, it is preferred to provide it at each end, as shown, to maintain the transverse setting of the tie-bar. Each eccentric D is shown to be provided in its flange  $f^2$  with nine notches, each adapted to compensate for a variation of one-sixteenth of an inch due to wear on a point-rail, so that the two eccentrics may be used to take up one inch of wear on both point-rails. Of course, however, the number of notches and size of the eccentrics may be provided according to desire or particular requirement.

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

1. The combination with a switch-rail and its tie-bar, of means for adjustably connecting the rail and bar comprising a clip having an opening, an eccentric rotatably seated in said opening and pivotally connected with the tie-bar, notches about the eccentric, and a permanently-fixed stop on one of the said

parts for engaging one of said notches to lock the eccentric in its position of adjustment within said opening.

2. The combination with a switch-rail and a tie-bar therefor provided with a jaw, of means for adjustably connecting the rail and bar comprising a clip having an opening, an eccentric rotatably seated in said opening and having pivotal connection with the tie-bar, notches about the eccentric, and a permanently-fixed stop on one of the said parts for engaging one of said notches to lock the eccentric in adjusted position within said opening, the eccentric being confined in the clip-opening by being embraced by the said jaw.

3. In combination with a switch-rail and a tie-bar therefor provided with a jaw, of means for adjustably connecting the rail and bar comprising a clip having an opening and a permanently-fixed stop adjacent to said opening, an eccentric rotatably seated in said opening and provided in its periphery with notches any one of which may be brought into engagement with the stop to lock the eccentric in adjusted position, the eccentric being confined in the clip-opening by being embraced by the jaw, and a pin passed through the jaw and eccentric to afford a pivot for the latter.

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In presence of—

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