

No. 714,365.

J. P. COLEMAN.
CLIP FOR DETECTOR BARS.
(Application filed July 24, 1902.)

Patented Nov. 25, 1902.

(No Model.)

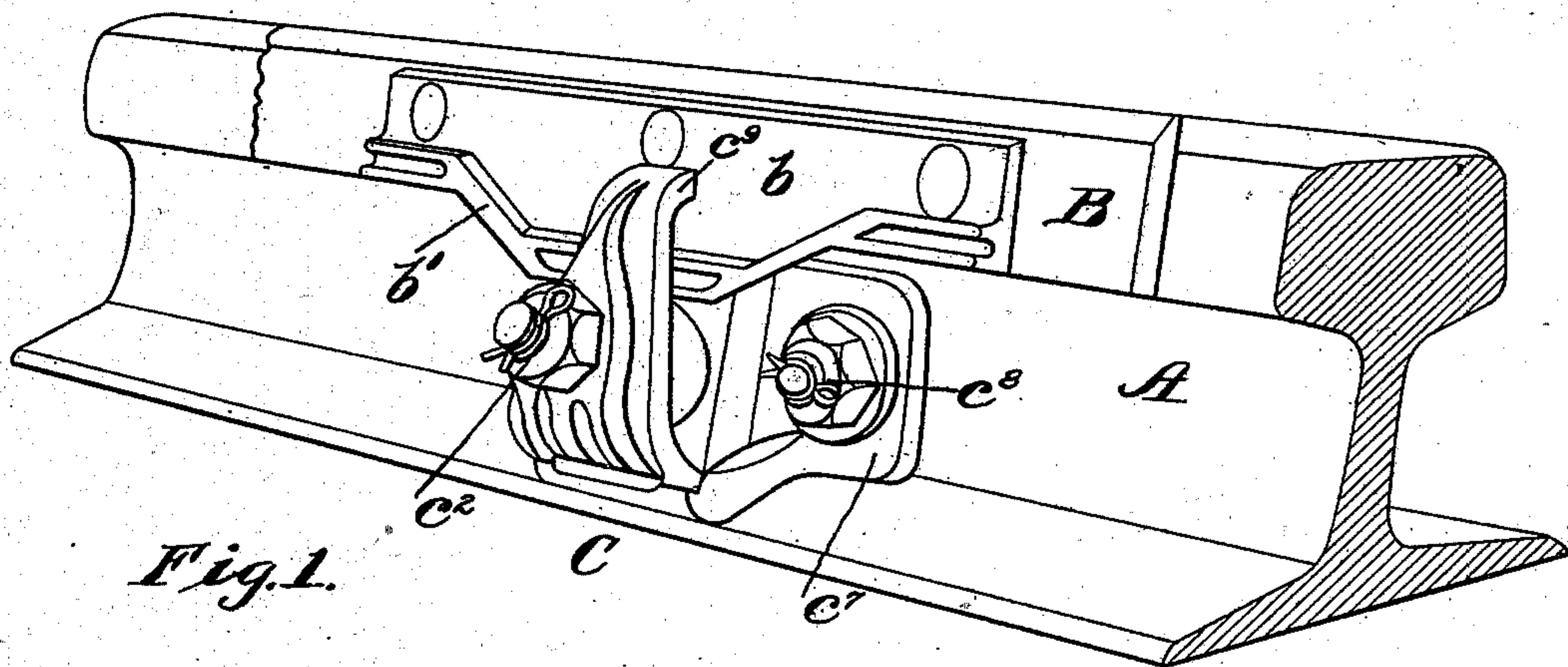


Fig. 1.

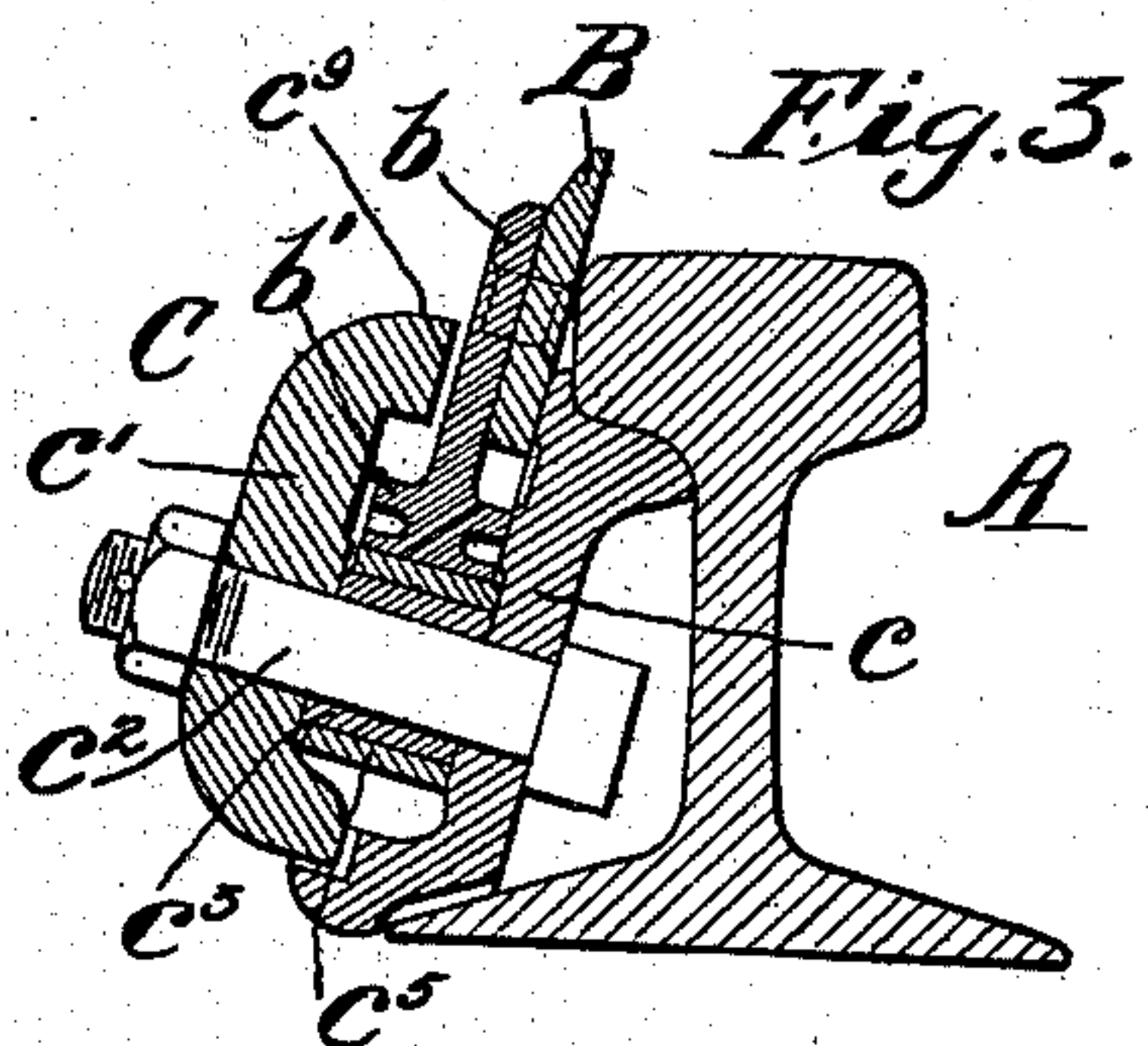


Fig. 3.

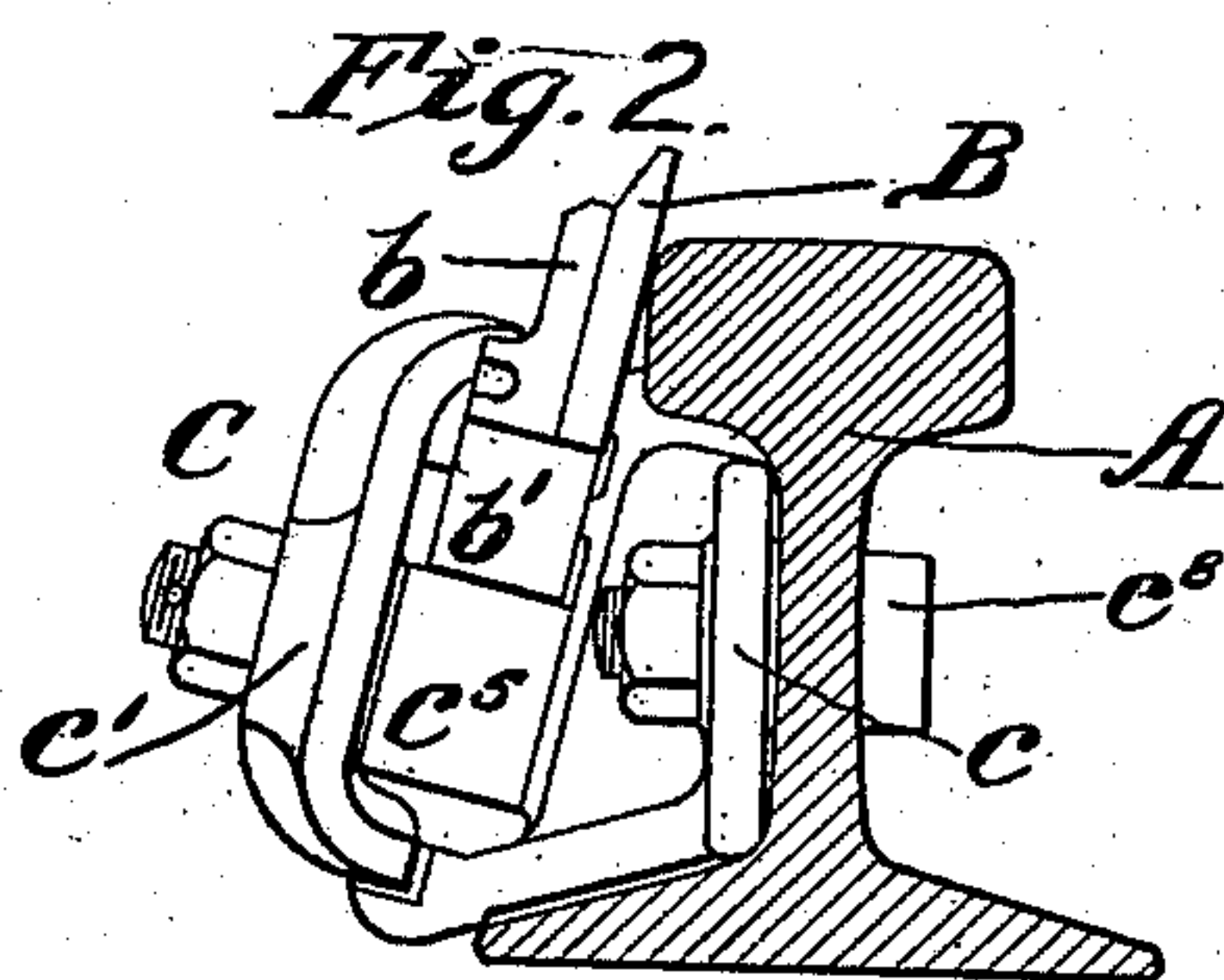


Fig. 2.

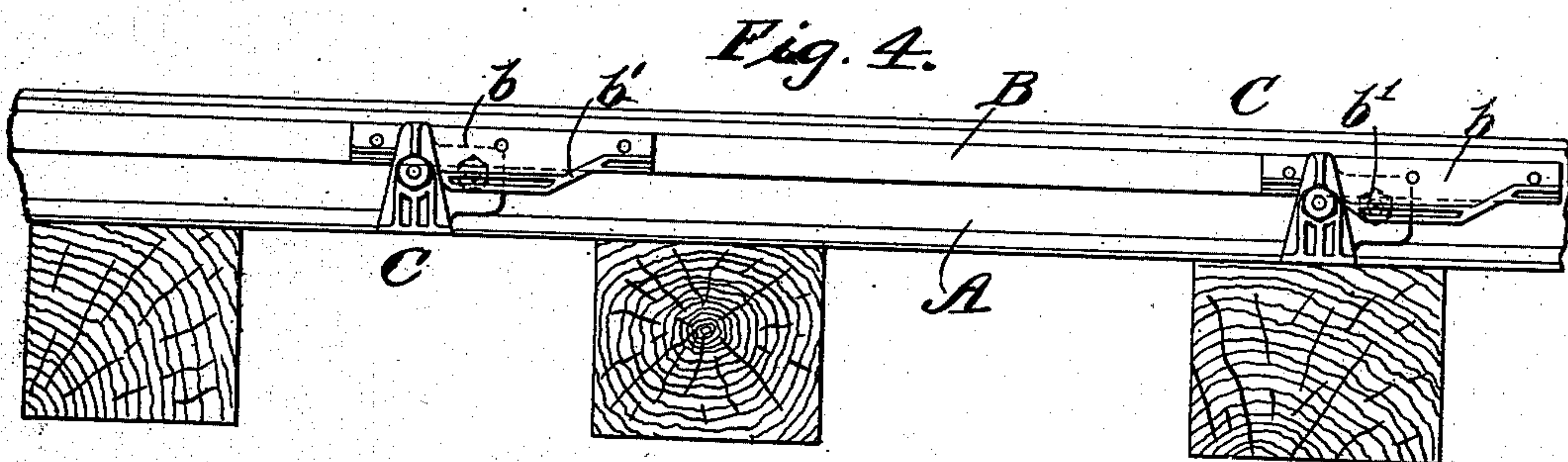


Fig. 4.

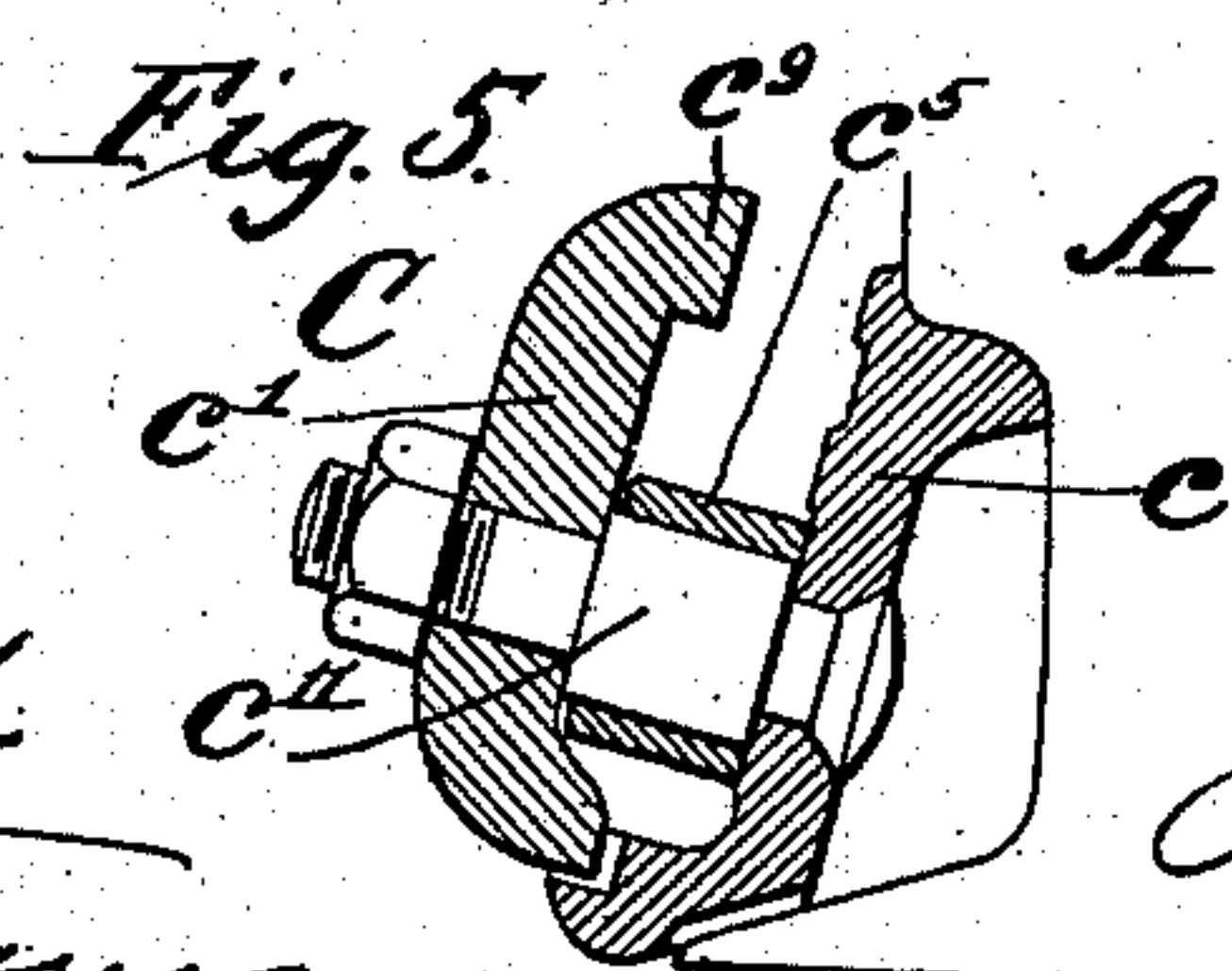


Fig. 5.

WITNESSES:

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CLIP FOR DETECTOR-BARS.

SPECIFICATION forming part of Letters Patent No. 714,365, dated November 25, 1902.

Application filed July 24, 1902. Serial No. 116,815. (No model.)

To all whom it may concern:

Be it known that I, JOHN PRESSLEY COLEMAN, a citizen of the United States, residing at Edgewood, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Clips for Detector-Bars, of which the following is a specification.

My invention relates to clips or brackets for detector-bars employed in connection with railway-switches.

I will describe a clip or bracket embodying my invention and then point out the novel features thereof in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a part of a railroad-rail, a part of a detector-bar, and a clip or bracket therefor, the latter embodying my invention. Fig. 2 is an end elevation of Fig. 1. Fig. 3 is a vertical transverse section. Fig. 4 is a side elevation. Fig. 5 is a detail sectional view illustrating a modification.

Similar letters of reference designate corresponding parts in all of the figures.

A designates a railroad-rail.

B designates a detector-bar, which may be of any desired length. It is arranged along one side of the head of rail A, and it may be connected with any desired mechanism which will move it longitudinally in order that it may perform its ordinary functions.

b designates what may termed a "motion-plate." Any number of such plates may be connected to the detector-bar B. Each plate is riveted or otherwise secured to the detector-bar, and each plate is provided with a cam-surface b' , by means which when the cam-surface engages a relatively stationary part cause the detector-bar to move obliquely in a vertical plane, next in a horizontal plane, and again obliquely in a vertical plane. The cam-surface b' is here shown as consisting of a rib formed integral with the plate B and having a horizontal middle portion, an inclined portion at each end of the horizontal middle portion, and a horizontal portion at the end of each inclined portion. The cam-surface b' may also be conveniently formed on the detector-bar, and thus do away with the plate B.

C designates a clip or bracket. Any desired number of clips or brackets may be employed. A function of the clip C is to support the detector-bar in its movements and to hold it in its proper position alongside the rail. The clip C is here shown as comprising two main parts c c' , which are independent of each other and detachably connected together by a bolt and nut c^2 . The two parts are spaced apart by suitable means in order that a recess may be provided to receive the detector-bar. In Fig. 3 a collar or washer c^3 is employed, while in Fig. 5 a shouldered bolt c'' is employed.

c^5 designates a roller loosely mounted on the washer c^3 or upon the shoulder or enlarged part of the bolt c'' and serving as an antifriction-surface, over which the cam-surfaces of the motion-plate move. The part c is preferably so formed at its upper and lower edges as to fit under the head of the rail and on top of the flange on one side of the web, and it is provided with end portions c^7 , by means of which and bolts and nuts c^8 it is secured to the web of the rail A. It is also preferably provided with a pocket or recess to receive the head of the bolt c^2 . The lower edge portion of the part c' engages with the bars upon the part c , and its upper edge portion is projected into close proximity to the detector-bar in order that it will prevent the detector-bar falling away from the rail. It is also provided with a lug or projection c^9 , which engages with the cam-surface on the motion-plate to insure the detector-bar being depressed or guided downward. After it has reached the height of its movement the lug also acts to retain the detector-bar in the recess of the clip.

The operation of the herein-described devices will be readily understood. In the normal position of the detector-bar (see Fig. 4) it is supported by having an end horizontal portion of each of its cam-surfaces engaging the rollers c^5 of the clips. When the detector-bar is moved longitudinally, the inclined portions of the cam-surface engage with the rollers and cause the detector-bar to move upward in an oblique direction. This upward movement of the detector-bar is con-

tinued until the inclined parts of the cam-surfaces have passed the rollers. The detector-bar then moves in a horizontal direction so long as the horizontal middle portion 5 of the cam-surfaces are in engagement with the rollers, and then downward again in an oblique direction when the second inclined portions of each cam-surface come into engagement with the rollers. This above-described operation will only take place when 10 no train is upon the rail-section along which the detector-bar is arranged.

The advantages of the form of clip herein described will be apparent to those skilled in 15 the art.

What I claim as my invention is—

1. A clip for detector-bars comprising two independent parts, one of which parts is provided with means whereby it may be connected 20 with the web of the railroad-rail, and a bolt for detachably connecting said parts together.

2. A clip for detector-bars comprising two independent parts, one of which is provided 25 with means whereby it may be connected with the web of the railroad-rail and with a pocket or recess, and a bolt for detachably connecting the said two parts together and

having its head located in said recess or pocket. 30

3. A clip for detector-bars comprising two independent parts, one of which is adapted for connection with the web of a railroad-rail, a bolt for connecting the two parts, means carried by said bolt for spacing said 35 two parts, and an antifriction-surface carried by said spacing means.

4. The combination with a detector-bar having a motion-plate secured thereto which motion-plate is provided with a cam-surface, 40 and a clip for said detector-bar, said clip comprising two independent parts, one of which is adapted for attachment to the web of a railroad-rail and the other of which parts is provided with a projection for coacting 45 with the said cam-surface, means for spacing said two parts to receive the detector-bar, and an antifriction-surface over which said cam-surface travels.

In witness whereof I have signed my name 50 to this application in the presence of two subscribing witnesses.

JOHN PRESSLEY COLEMAN.

Witnesses:

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