

No. 894,583.

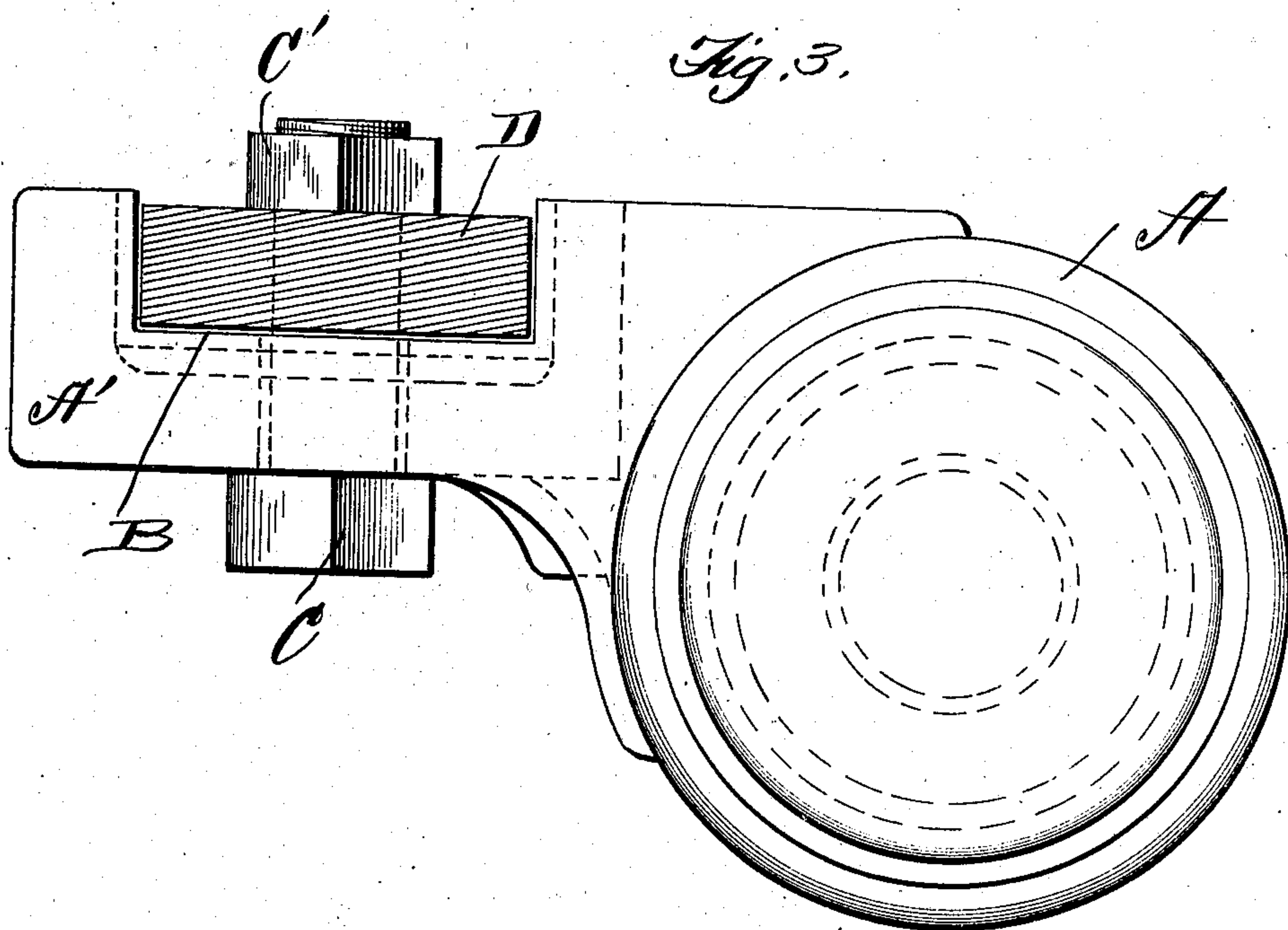
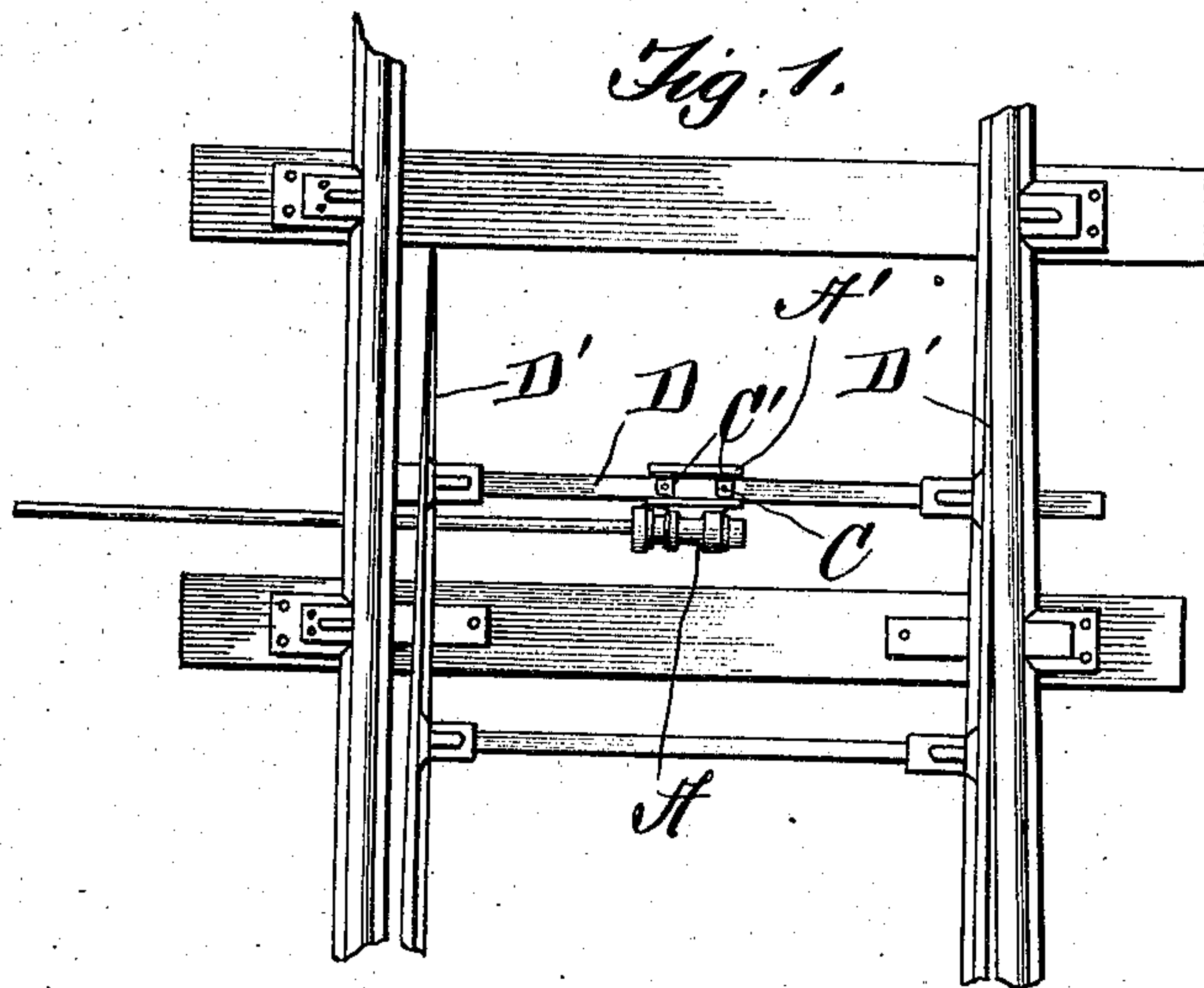
W. F. BOSSERT.

PATENTED JULY 28, 1908.

ADJUSTABLE CONNECTION FOR SWITCH POINTS.

APPLICATION FILED OCT. 24, 1907.

3 SHEETS—SHEET 1.



Witnesses

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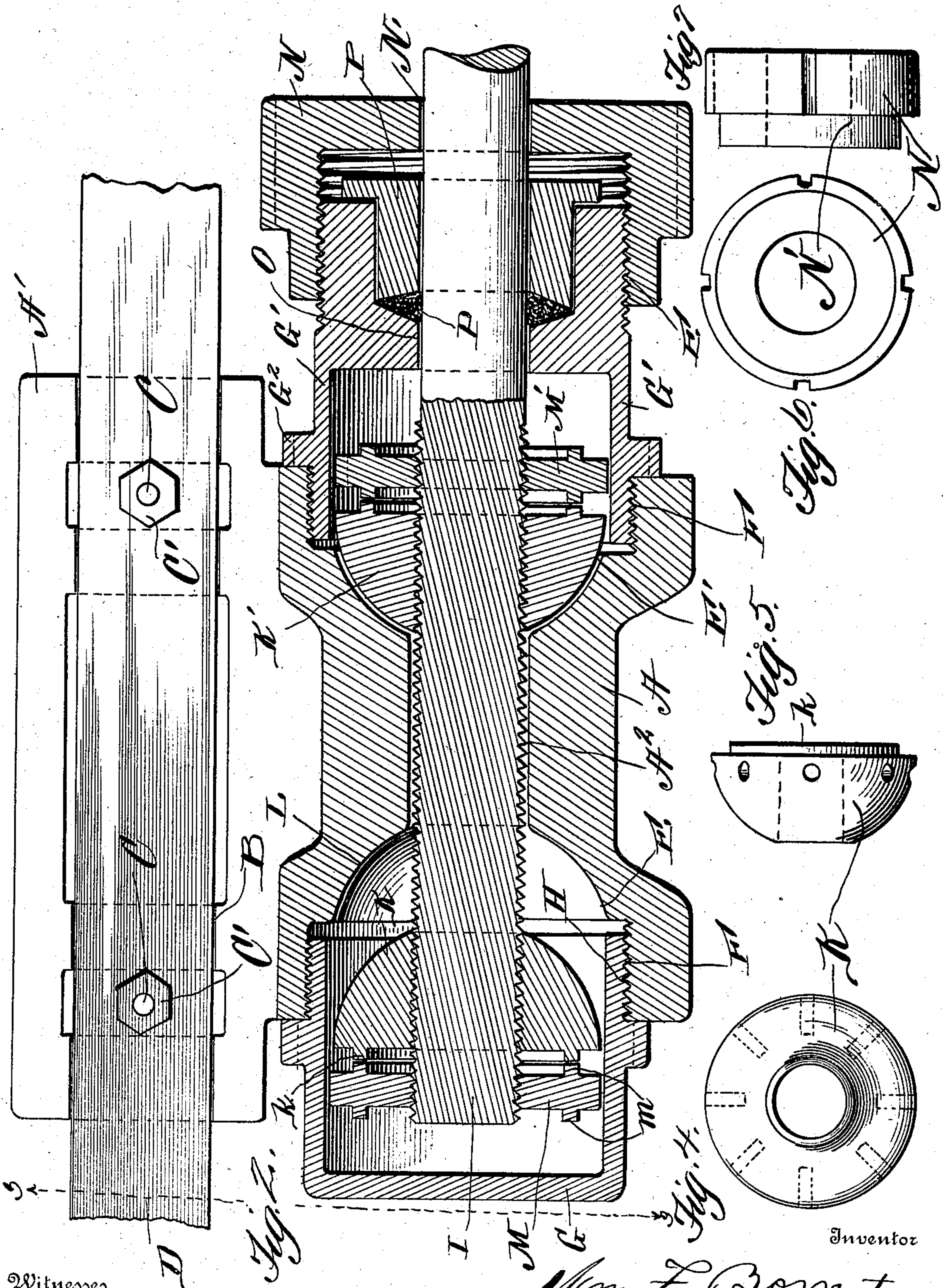
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3 SHEETS—SHEET 2.



Witnesses

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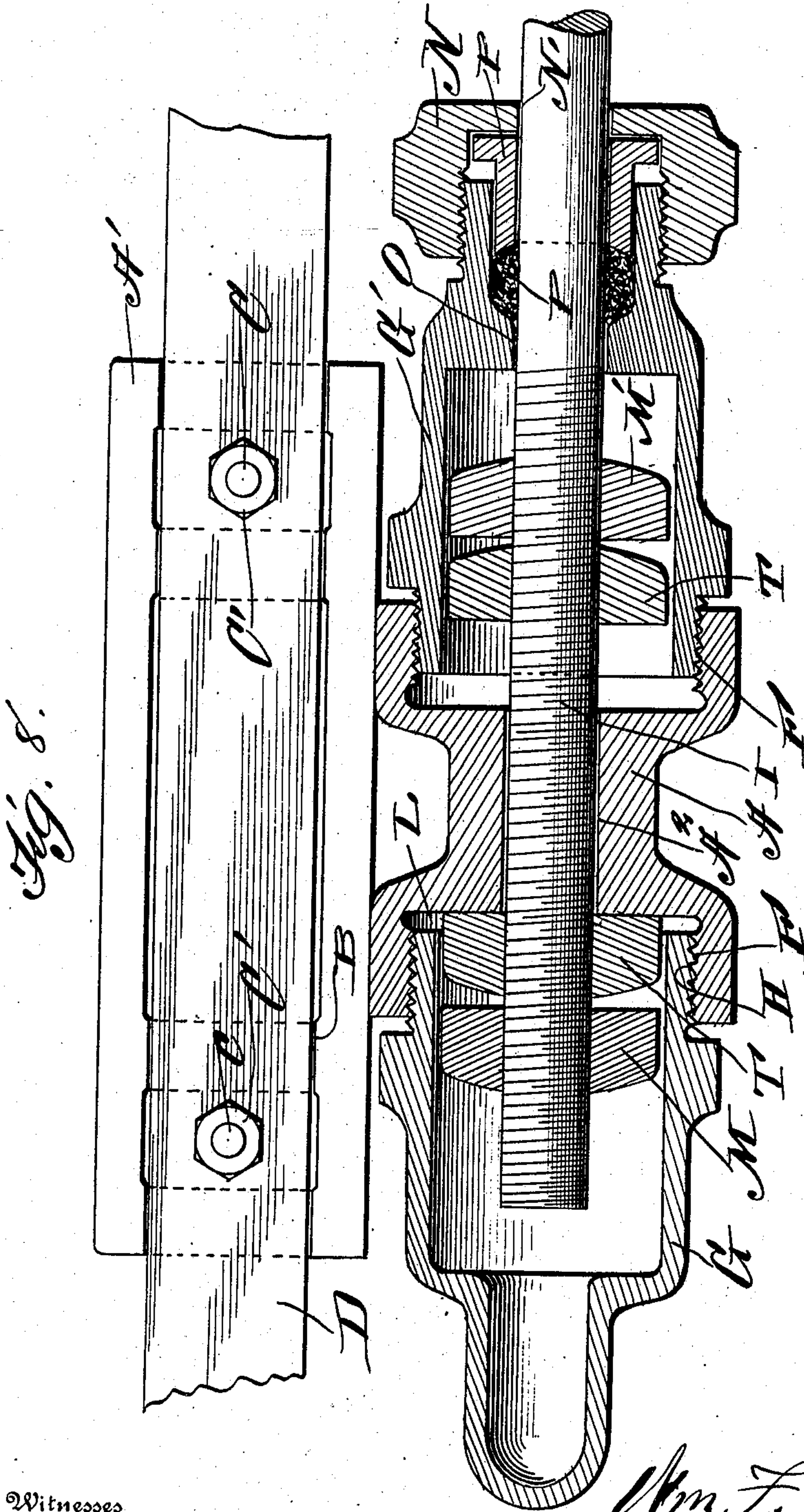
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3 SHEETS—SHEET 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM F. BOSSERT, OF UTICA, NEW YORK.

ADJUSTABLE CONNECTION FOR SWITCH-POINTS.

No. 894,583.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed October 24, 1907. Serial No. 398,996.

To all whom it may concern:

Be it known that I, WILLIAM F. BOSSERT, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Adjustable Connections for Switch-Points; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in adjustable connections for switch points in relation to the stock or main rails of a railway in connection with the operating pipe lines or rods for operating signals actuated simultaneously with the movement of the switch points. In all so-called interlocking arrangements of switch points or signals operated in connection with a block system, a precise amount of effective and ineffective movement is necessary in order to bring switch points or signals to their exact positions to accomplish the interlocking of the same.

The invention comprises further means whereby the operative mechanism for throwing the bar which connects the switch points may be suitably housed, thereby preventing ice, cinders or other foreign matter from lodging about the surfaces of the moving parts of the apparatus and which would interfere with the effective operation of the parts.

The invention comprises various details of construction, combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

My invention is illustrated in the accompanying drawings, in which:—Figure 1 is a plan view showing the application of the invention to switch points of a railway. Fig. 2 is a longitudinal sectional view through the housing of the apparatus and adjustable elements contained therein. Fig. 3 is a cross sectional view on line 3—3 of Fig. 2. Fig. 4 is a detail view of an adjusting nut. Fig. 5 is a side view of the details shown in Fig. 4. Figs. 6 and 7 show a face and edge view of an adjusting nut, and Fig. 8 is a sectional view showing a modification of my invention in

which angular outlined nuts are utilized instead of semi-spherical ones, shown in Fig. 2 of the drawings.

Reference now being had to the details of the drawings by letter, A designates the body portion of a casing which may be of any suitable shape, either round or angular, and is provided with a lateral extension A', shown clearly in Figs. 2 and 3 of the drawings, and said lateral extension is provided with a longitudinal groove or recess B formed in the upper surface thereof and is adapted to receive headed bolts C passed through registering apertures in the bottom of said recessed portion of the extension of the casing and also the switch bar D, which latter is adapted to fasten to the switch points D' in the manner shown in Fig. 1 of the drawings, whereby the latter may be thrown simultaneously in corresponding directions. Suitable burs or nuts C' are fitted upon the threaded end of said bolt, whereby the switch bar may be securely held in place. The end of the body portion of said casing, which in the drawings is shown of cylindrical form, has enlarged or chambered portions designated respectively by letters E and E' and the outer portion of the inner surface of each chamber is provided with screw threads F for the reception of the threaded cap G and an extension cap G' respectively, which caps have exterior threads H for engagement with said threads F. The central portion of the casing A has a contracted opening A² parallel with the longitudinal recess in the lateral projection A' and through which central opening a rod or bar I is adapted to pass and which latter is to be connected with the mechanism for operating signals, etc. Said rod I is threaded at one end to receive the adjusting nuts K and K' which in the drawings are shown as semi-spherical and provided with interior threads, the convexed surface of said nuts being adapted to bear against a concaved abutment surface L intermediate the marginal ends of said contracted aperture and the threaded portion of the casing, as shown clearly in Fig. 2 of the drawings. M and M' designate two locking nuts mounted upon threaded rod I, the former of which locking nuts is provided with annular ribs *m* upon opposite faces thereof, the inner of said ribs being adapted to bear against an annular rib *k* formed upon the flat outer surface of the adjusting nut K. Said extension cap G' has an annular flange G² adapted to abut against the adjacent end

of the casing with which the extension cap has threaded connection. Said extension cap G' has a chambered portion to allow for the adjustment of the nuts K' and M' located therein and has a contracted opening O formed therein to receive the rod I. N designates a nut which is centrally apertured as at N' to receive the rod I and has threaded connection with the circumference of the extension cap G' and intermediate said nut N and a recessed portion formed in the outer end of the extension cap a suitable gland P is mounted, and intermediate the inner end of said gland and the bottom of the recess in which the same is located a suitable packing P' is positioned to exclude any chance of moisture entering the casing.

In Fig. 8 of the drawings, I have shown a sectional view of a slight modification of my invention, in which angular outlined nuts T are utilized instead of the semi-spherical nuts illustrated in Fig. 2 of the drawings and in said modification the bearing or abutment surfaces of the casing are parallel with the faces of the nuts.

It will be noted from the foregoing, when taken in connection with the drawings, that a double chamber is thus formed at one end of the casing, one compartment of the chamber being adapted for the reception of the adjusting and lock nuts, while the other compartment forms a stuffing box in which the gland is mounted.

By the provision of the apparatus shown and described, it will be noted that the threaded end of the rod which is adapted to be connected to the signaling apparatus is confined within the housing as shown in such a manner as to exclude the admittance of dirt or any other foreign matter which might prevent injury to any parts of the apparatus, the rod passing through a suitably packed gland, the parts being readily adjusted by the removal of one or the other of the caps. The caps G and G' being provided with chambered portions will allow the adjusting and lock nuts to be moved freely in one direction or the other. These chambers, it will be understood, are provided for the purpose of excluding the admittance of any foreign matter which might interfere with the adjustment of the bar with relation to the switch points and signaling mechanism and will admit of ready inspection and readjustment.

What I claim to be new is:—

1. An adjusting connection for operating switch points, comprising a casing the outer surface of the ends of which form abutments, means connected to the casing for attachment to the switch points, a movable operating member mounted within the casing, adjusting nuts upon said member adapted to cooperate with the abutments to limit the longitudinal movement of said member, as set forth.

2. An adjusting connection for operating switch points, comprising a casing the outer surface of the ends of which form abutments, means connected to the casing for attachment to the switch points, a movable operating member mounted within the casing, adjusting nuts mounted upon a threaded portion of said member and adapted to cooperate with the abutments to limit the movement of said member in opposite directions, and locking means for holding said nuts in adjustment, as set forth.

3. An adjusting connection for operating switch points, comprising a casing the outer surface of the ends of which form abutments, said casing having a lateral projection, a switch point connecting bar fixed to said projection, a movable operating member mounted within the casing, adjusting nuts mounted upon threaded portions of said member and adapted to cooperate with said abutment to limit the movement of said member in opposite directions, as set forth.

4. An adjusting connection for operating switch points, comprising a casing the outer surface of the ends of which form abutments, said casing having a lateral projection, a switch point connecting bar fixed to said projection, a movable operating member mounted within the casing, adjusting nuts mounted upon threaded portions of said member and adapted to cooperate with said abutment to limit the movement of said member in opposite directions, set nuts mounted upon the threaded members and adapted to hold the adjusting nuts from movement in one direction, as set forth.

5. An adjusting connection for operating switch points, comprising a casing the outer surface of the ends of which form abutments, said casing having a lateral projection which is longitudinally recessed or channeled, a switch point operating bar seated in said recess and fastened therein, a movable operating member mounted within the casing, adjusting nuts mounted upon the threaded portion of the member and adapted to cooperate with said abutments to limit the movement of the member in opposite directions, as set forth.

6. An adjusting connection for operating switch points, comprising a casing the outer surface of the ends of which form abutments, a movable operating member mounted within the casing, a bar fixed to a projection of the casing and adapted for connection to the points of a switch, adjusting nuts mounted upon the threaded portion of said member, caps fitting over said adjusting nuts and inclosing the same within recesses in the ends of the casing, as set forth.

7. An adjusting connection for operating switch points, comprising a casing with a lateral projection, a switch point operating bar fixed to said projection, said casing hav-

ing recessed ends, a movable operating member mounted within the casing, the outer surfaces of the ends of the casing having abutments, adjusting nuts upon said member, a cap having threaded connection with one end of the casing and inclosing one of said adjusting nuts, a second cap fitted to the opposite end of the casing and through which said member has an adjustable movement, as set forth.

8. An adjusting connection for operating switch points, comprising a casing with a lateral projection, a switch point operating bar fixed to said projection, said casing having recessed ends, a movable operating member mounted within the casing, the outer surfaces of the opposite ends of the casing forming abutments, adjusting nuts upon said member, a cap having threaded connection with one end of the casing and inclosing one of said adjusting nuts, a second cap fitted to the opposite end of the casing and through which said member has an adjustable movement, a nut over the end of the cap through which said member passes, and a gland interposed between the nut and adjacent cap, as set forth.

9. An adjusting connection for operating switch points, comprising a casing with a lateral projection, a switch point operating bar fixed to said projection, said casing having threaded ends, a movable operating member mounted within the casing, the outer surfaces of the opposite ends of the casing forming abutments, adjusting nuts mounted upon the threaded portion of said member, lock nuts mounted upon the threaded member and having annular ribs upon the opposite faces thereof, and threaded caps fitted to the casing, as set forth.

10. An adjusting connection for operating switch points, comprising a casing with a lateral extension, a switch point operating bar fixed to said projection, said casing having a central aperture parallel with said bar, the

outer surfaces of the opposite ends of the casing being recessed forming concaved abutments, a movable operating member passing through said opening, semi-spherical adjusting nuts mounted upon the threaded portion of said member and adapted to conform to the curvature of said abutments, as set forth.

11. An adjusting connection for operating switch points, comprising a casing with a lateral extension, a switch point operating bar fixed to said projection, said casing having a central aperture parallel with said bar, the outer surfaces of the opposite ends of the casing being recessed at its ends and forming concaved abutments, a movable operating member passing through said opening, semi-spherical adjusting nuts mounted upon the threaded portion of said member and adapted to conform to the curvature of said abutments, caps fitted to the ends of the casing and inclosing said adjusting nuts, as set forth.

12. An adjusting connection for operating switch points, comprising a casing with a lateral extension, a switch point operating bar fixed to said projection, said casing having a central aperture parallel with said bar, the outer surfaces of the opposite ends of the casing being recessed at its ends and forming concaved abutments, a movable operating member passing through said opening, semi-spherical adjusting nuts mounted upon the threaded portion of said member and adapted to conform to the curvature of said abutments, locking nuts mounted upon the threaded portion of said member, and caps inclosing the adjusting and lock nuts, as set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM F. BOSSERT.

Witnesses:

CLARENCE C. BOFF,
WM. MARTIN.