

S. M. CHASE & W. C. STOCKLIN.

RAILWAY SWITCH.

APPLICATION FILED JAN. 6, 1908.

Patented Dec. 29, 1908.

2 SHEETS—SHEET 1.

907,971.

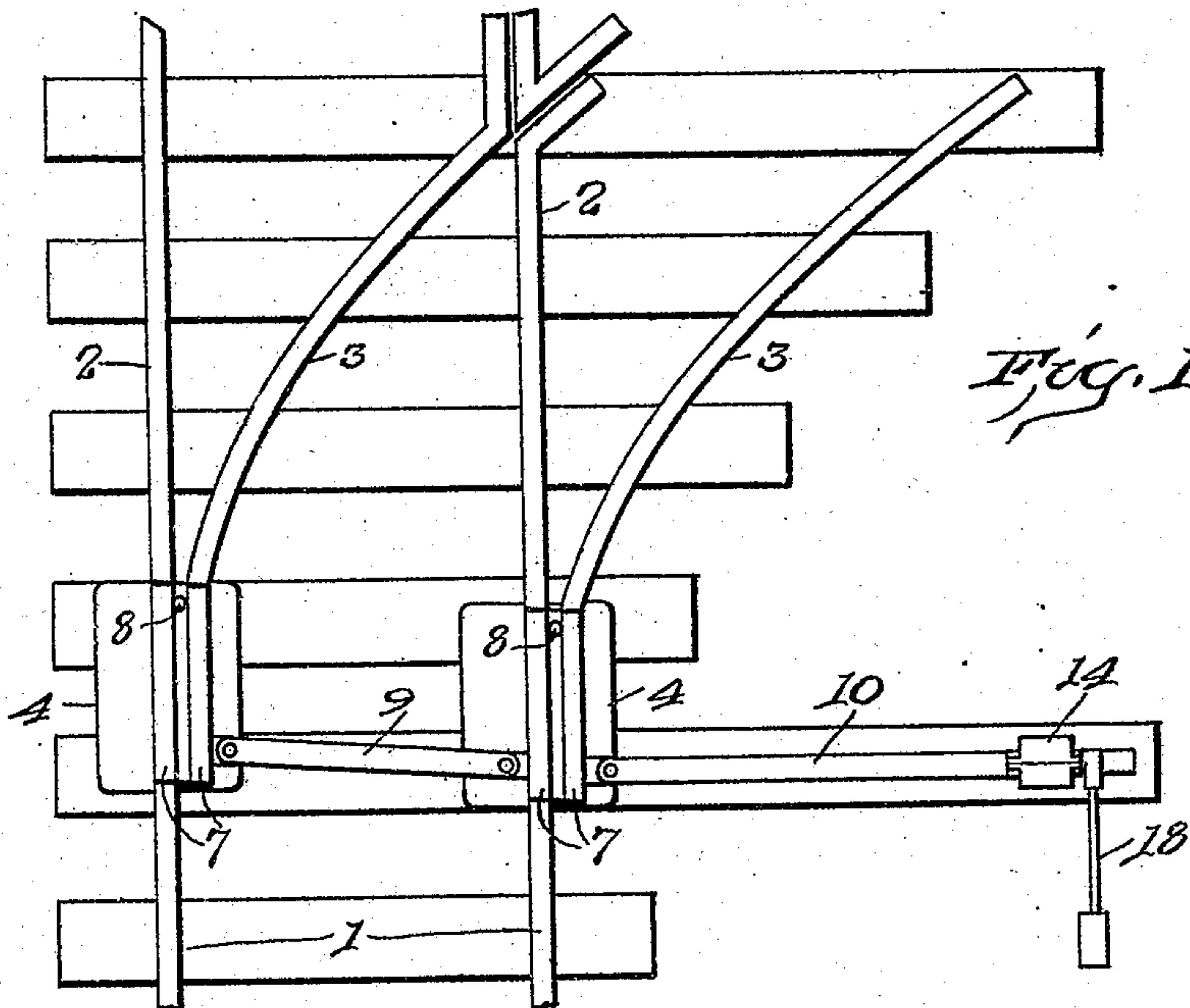


Fig. 1.

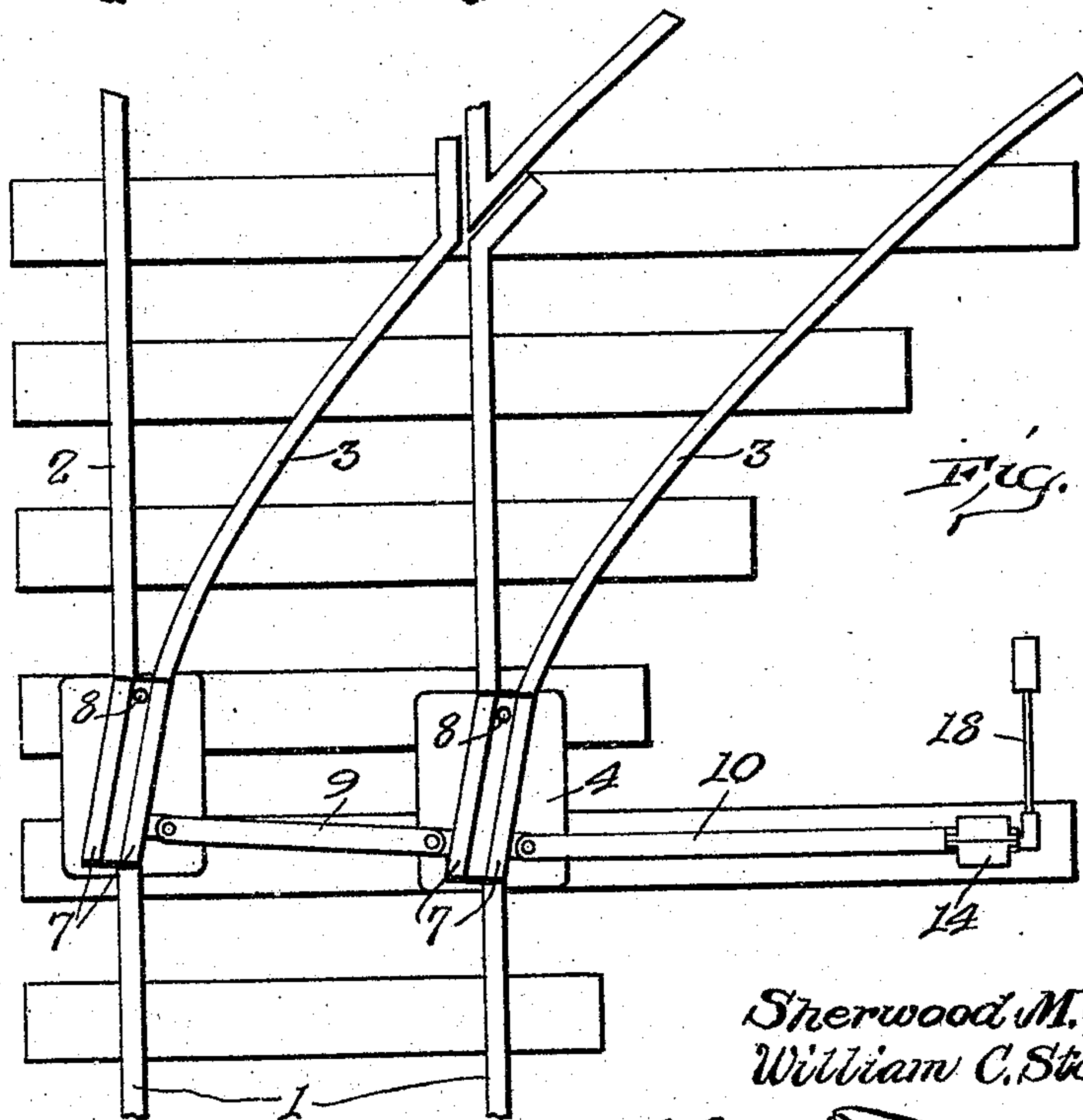


Fig. 2.

Witnesses

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Fig. 3.

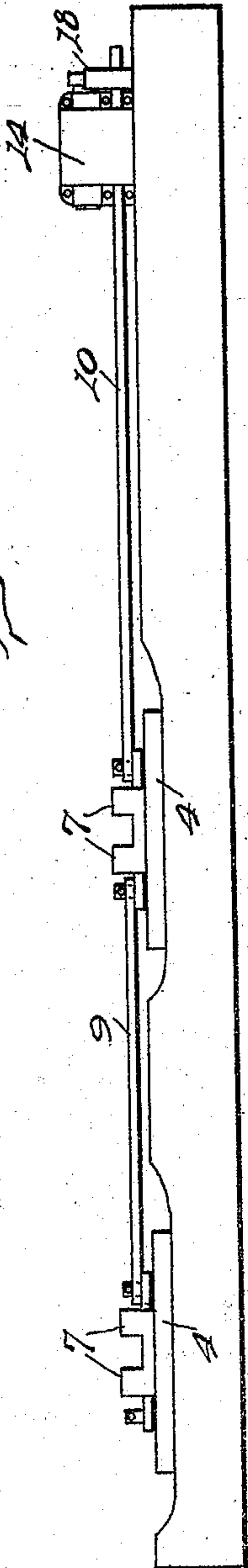


Fig. 4.

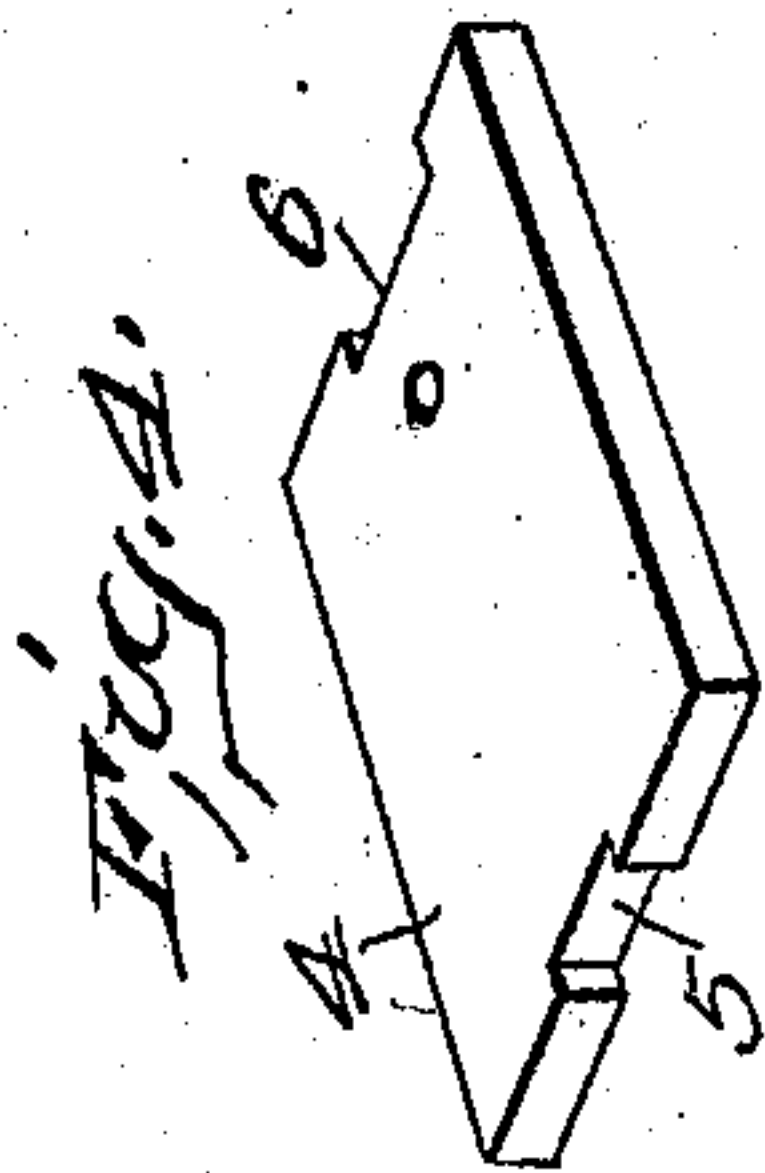


Fig. 5.

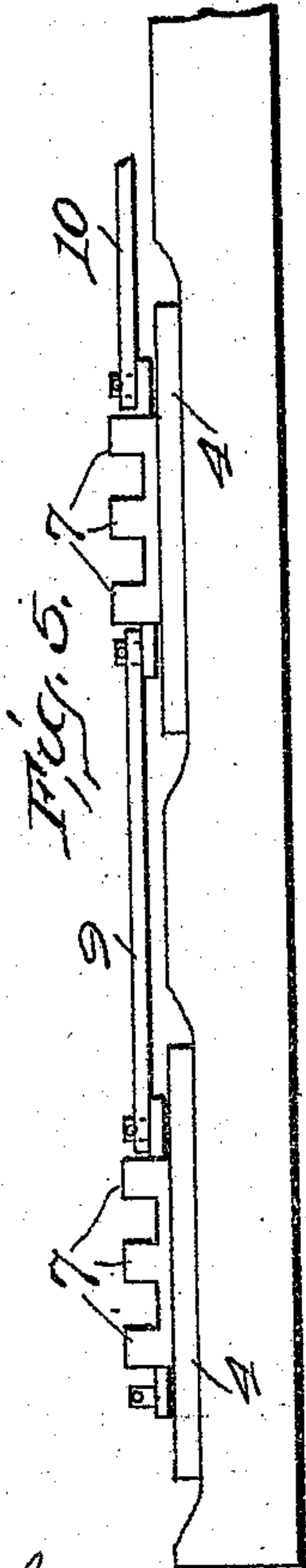


Fig. 7.

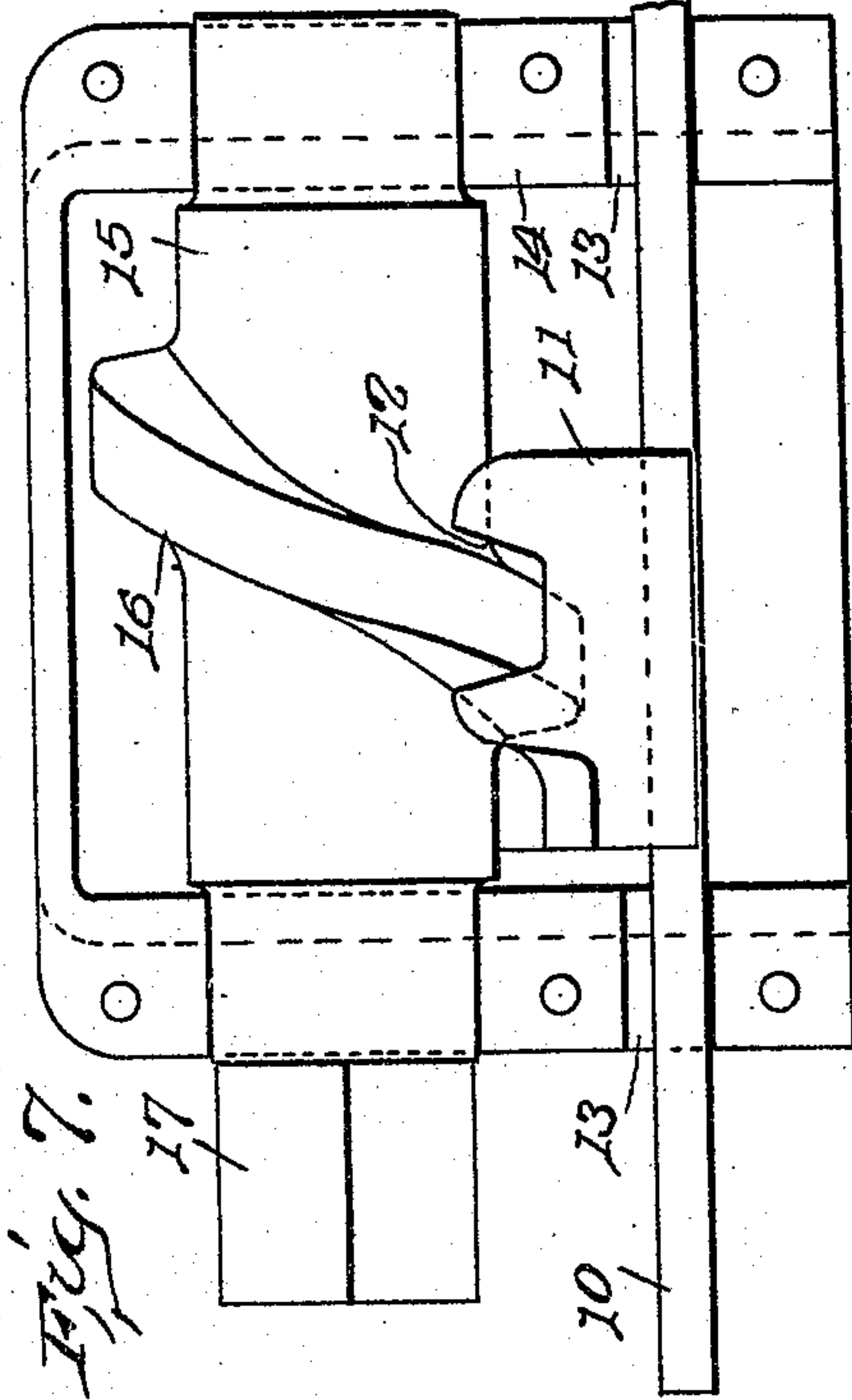
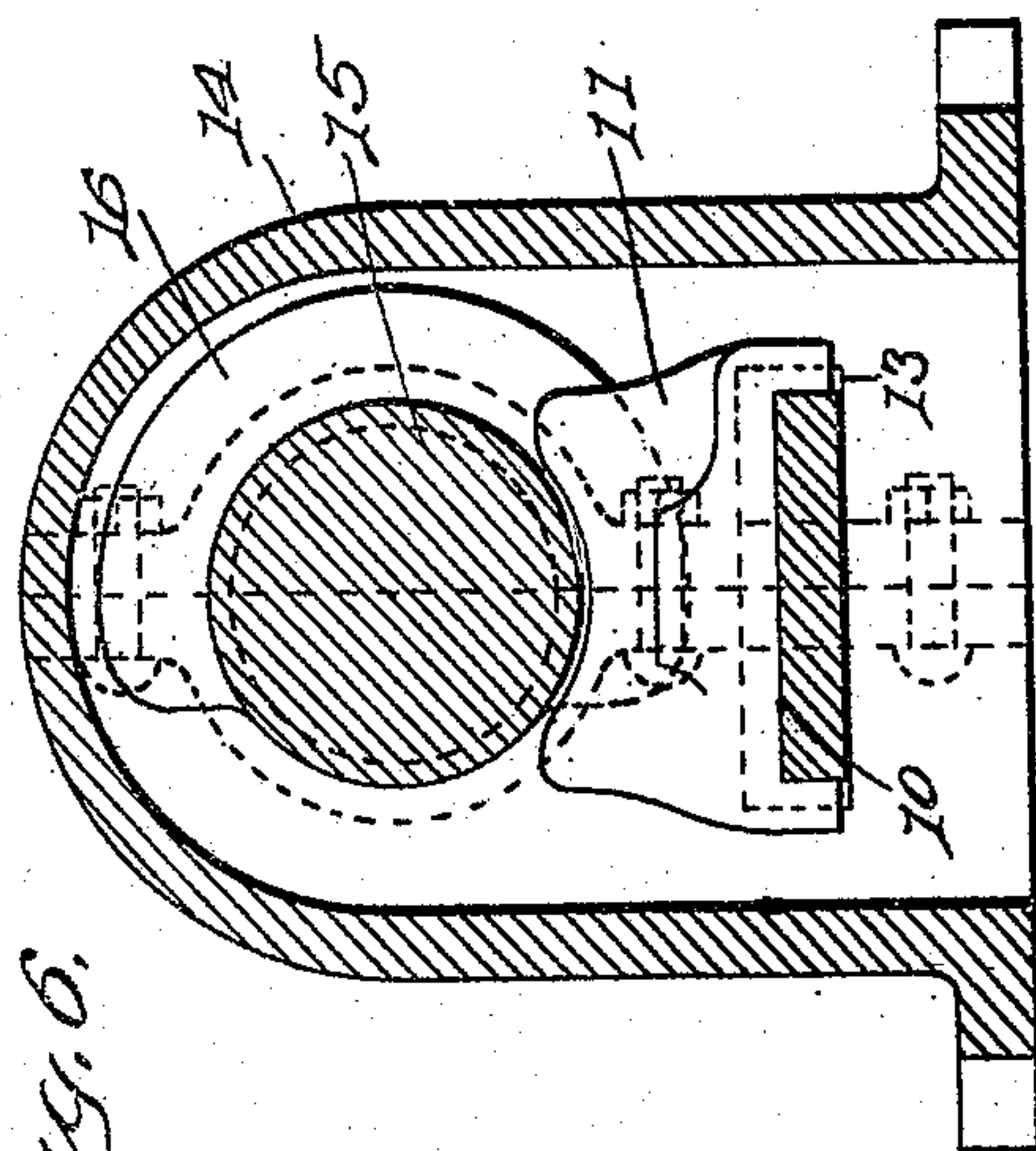


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

SHERWOOD M. CHASE AND WILLIAM C. STOCKLIN, OF COLUMBUS, OHIO, ASSIGNORS TO THE CHASE FOUNDRY AND MANUFACTURING COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

RAILWAY-SWITCH.

No. 907,971.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed January 6, 1908. Serial No. 409,392.

To all whom it may concern:

Be it known that we, SHERWOOD M. CHASE and WILLIAM C. STOCKLIN, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to railway switches, and the object of the invention is to provide such a switch which will be strong and durable and very simple in its construction and operation; which will provide, when in either
15 its open or closed position, a practically continuous rail having a bearing surface of uniform width; and to provide improved operating means for throwing said switch.

20 With these objects in view our invention consists in certain novel features of construction and in certain parts and combinations hereinafter to be described, and then more particularly pointed out in the claims.

25 In the accompanying drawings, Figure 1 is a top plan view of a switch embodying our invention, showing the same closed. Fig. 2 is a similar view with the switch open; Fig. 3 is an end elevation of the switch; Fig. 4 is a detail view of the base plate; Fig. 5 is an end
30 elevation of a slightly modified form of the switch; Fig. 6 is a transverse sectional view of the actuating means; and Fig. 7 is a side elevation of the same with one side of the casing removed.

35 In these drawings, in which we have shown the preferred form of our invention, the rails of the main track are divided into two portions, the portion 1 forming the approach to the switch and the portion 2 lying beyond
40 the switch. The rails 3 of the siding terminate near the portion 2 of the main track rails and preferably have their ends arranged in substantially the same transverse plane as the ends of the portions 2 of the main track
45 rails, but spaced a short distance from the same and occupying a fixed relation thereto. The adjacent ends of the portions 1 and 2 of each of the main track rails are spaced some distance apart and a plurality of rail sections are movably mounted adjacent thereto
50 and are adapted to be moved into such a position relatively to said rails as to connect the portion 1 of the main track rail either with the portion 2 of said main track rail or
55 with the siding rail 3, and, when so con-

nected, will form a practically continuous rail either for the main track or for the siding, as the case may be.

In the present instance, we have provided a suitable base plate 4 which is interposed between the adjacent ends of the portions 1 and 2 of the main track rail and which has its opposite ends recessed, as shown at 5 and 6, to receive the corresponding ends of the several rails and to hold the same in a fixed relation to said plate. The rail sections 7, which, in the present instance, are two in number, are preferably formed integral and are pivoted to said base plate at a point near one end thereof and near the end of the siding rail 3 and portion 2 of the main track rail, as shown at 8. The pivotal center 8 of the rail sections 7 being close to the end thereof, it will be seen that the corresponding ends of said rail sections will be practically stationary and will, at all times, be practically in
60 alinement with their respective track rails, that is, will occupy such a position relatively to said track rails that a car wheel will pass from said track rail to said rail section or vice versa, it not being necessary to this end that the rail section should continue in the same direction as the track rail so long as their adjacent ends are properly located relatively one to the other. The rail sections 7 are preferably of a slightly less length than that portion of the base plate 4 which lies between the recessed ends thereof, and, consequently, there will be a slight space between the ends of the rail sections 4 and the ends of the adjacent track rails, which space, while not sufficient to interrupt the practical continuity of the track, is sufficient to permit the rail sections to be moved about their pivotal center a distance sufficient to bring the other end of either of said rail sections into alinement with the portion 1 of the main track rail, thus, when the rail sections are in one position, forming a practically continuous main track, and, when the rail sections are in the other position, forming a practically continuous track to the siding, the bearing surface of either of said tracks being substantially uniform throughout their length. The movable rail sections in the two rails of the main track are substantially the same and are so connected one to the other as to move in unison, thus operating both sides of the switch simultaneously. This connecting means, as here shown, com-

prises a link 9 pivotally connected at each end to one of said rail sections.

The rail sections themselves may be moved in any suitable manner, it being common practice in the operation of industrial railways to operate the switch by shifting the points with the foot without the use of operating mechanism, but we have here shown a switch as provided with an improved mechanism for throwing the same. This mechanism preferably comprises a rod or bar 10 pivotally connected at one end to one of the rail sections and extending outwardly therefrom at substantially right angles thereto and having near its outer end a projection 11 provided on its upper surface with a recess 12. Those portions of the bar 10 lying on opposite sides of the projection 11 are slidably mounted in guideways 13 forming the lower portion of the casing 14, which is rigidly secured to a fixed support. The shaft 15 is journaled in the casing 14 above the bar 10 and extends substantially parallel with said bar. This shaft has a spiral rib 16 which is adapted to engage the recessed projection 11, and, when the shaft 15 is rotated about its longitudinal axis, to impart a longitudinal movement to the bar 10 and thus move the rail sections 7 from one position to the other. The shaft 15 preferably has one end extending beyond the casing, as shown at 17, and squared to receive the socket of a weighted operating lever 18, such as is commonly employed in connection with railway switches. The pitch of the spiral rib 16 on the shaft 15 is preferably such that the movement of said lever through a half revolution will move the bar 10 a distance sufficient to operate the switch.

While we have herein shown and described the invention as applied to a two way switch, it will be obvious that by supplying additional rail sections 7 that additional sidings may be connected to the main line and all operated by a single mechanism.

In Fig. 5 we have shown the apparatus as adapted for a three way switch. In this construction it will be necessary to so pitch the spiral rib 16 of the operating mechanism as to move the rail sections 7 through a greater distance, the switch being closed to both sidings when the operating lever 18 is in a substantially vertical position.

Thus, it will be seen that we have provided a switch which is extremely simple in its construction and operation and which is so constructed that there is no possibility of the parts jamming or becoming locked against movement; that when the switch is in any one of its positions, the track is practically a continuous one and has a uniform bearing surface; and further, that we have provided an improved operating mechanism for actuating said switch.

We wish it to be understood that we do not

desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. In a railway switch, the combination, with a divided main track rail, and a siding rail terminating adjacent to the end of one portion of said main track rail, of a pair of rail sections, a web extending between said rail sections and formed integral therewith, a support for said rail sections, a pivot pin carried by said support and extending through said web near one end of said rail sections, said rail sections being mounted between the parts of said main track rail and having their adjacent ends permanently in alinement with said siding rail and with the adjacent portion of said main track rail, respectively, and adapted to be moved to bring the other end of either of said rail sections into alinement with the other portion of said main track rail.

2. In a railway switch, the combination, with a divided main track rail, and a siding rail terminating adjacent to the end of one portion of said main track rail, of a base plate interposed between the ends of said main track rail and having recesses in the ends thereof to receive the corresponding ends of said rails, a pair of rail sections pivotally mounted on said base plate and having their adjacent ends permanently in alinement with said portion of the main track rail and with said siding rail, respectively, and adapted to be moved to bring the other end of either of said rail sections into alinement with the other portion of said main track rail.

3. In a railway switch, the combination, with a divided main track rail, and a siding rail terminating adjacent to the end of one portion of said main track rail, of a base plate interposed between the ends of said main track rail and having recesses in the ends thereof to receive the corresponding ends of said rails, a pair of rail sections pivotally mounted on said base plate and of a length less than the distance between the inner ends of said recesses, and having their adjacent ends permanently in alinement with said portion of the main track rail and with said siding rail, respectively, and adapted to be moved to bring the other end of either of said rail sections into alinement with the other portion of said main track rail.

4. In a railway switch, the combination, with a divided main track rail, of a base plate interposed between and in engagement with the ends of the two portions of said rail and forming stops therefor, a rail section pivotally mounted upon said base plate with one end in permanent alinement with the corre-

5 sponding end of one portion of said main track rail and adapted to be actuated to move the other end thereof into and out of alinement with the corresponding end of the other portion of said main track rail.

10 5. In a railway switch, the combination, with a divided main track rail, of a base plate interposed between the ends of the two portions of said main track rail and having recesses in the ends thereof to receive the corresponding ends of said rail, a rail section pivotally mounted on said base plate with one end in permanent alinement with the

corresponding end of one portion of said main track rail and adapted to be actuated 15 to move the other end thereof into and out of alinement with the corresponding end of the other portion of the main track rail.

In testimony whereof, we affix our signatures in presence of two witnesses.

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WILLIAM C. STOCKLIN.

Witnesses:

F. J. GLASS,
S. E. WILLIAMS.