

No. 672,870.

Patented Apr. 23, 1901.

J. BOOTH.
RAIL JOINT.

(Application filed Feb. 18, 1901.)

(No Model.)

Fig. 1.

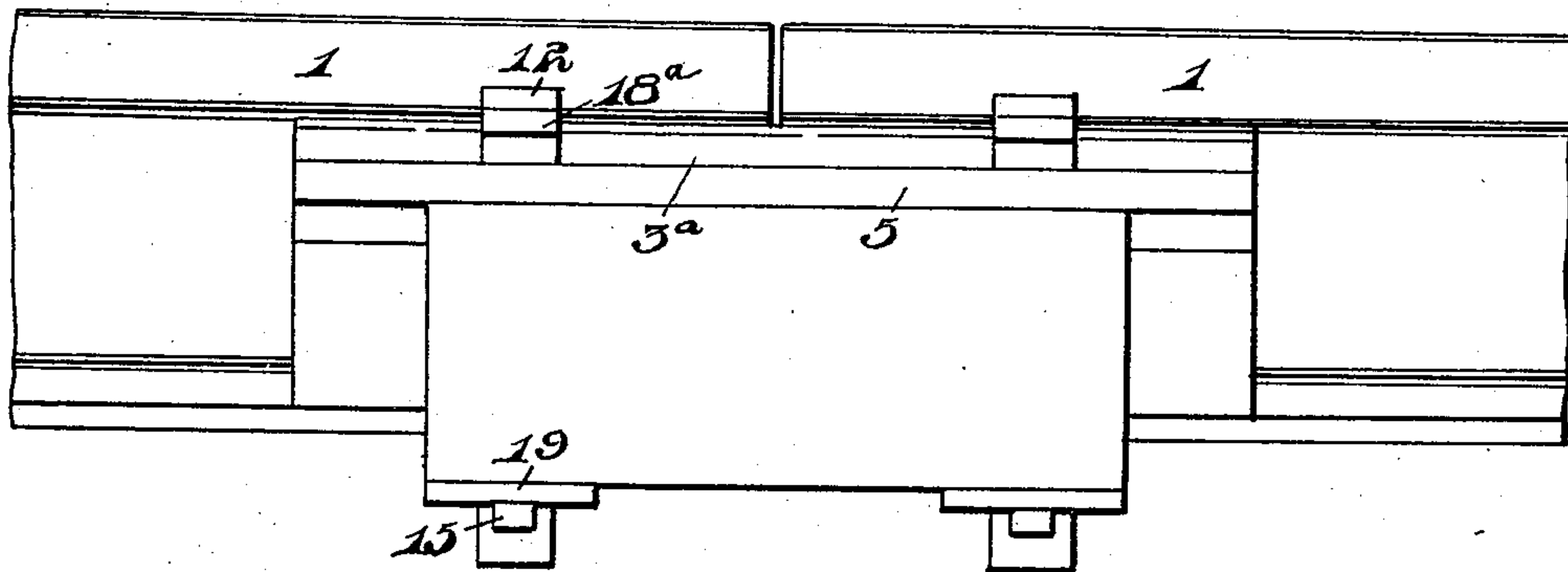


Fig. 2.

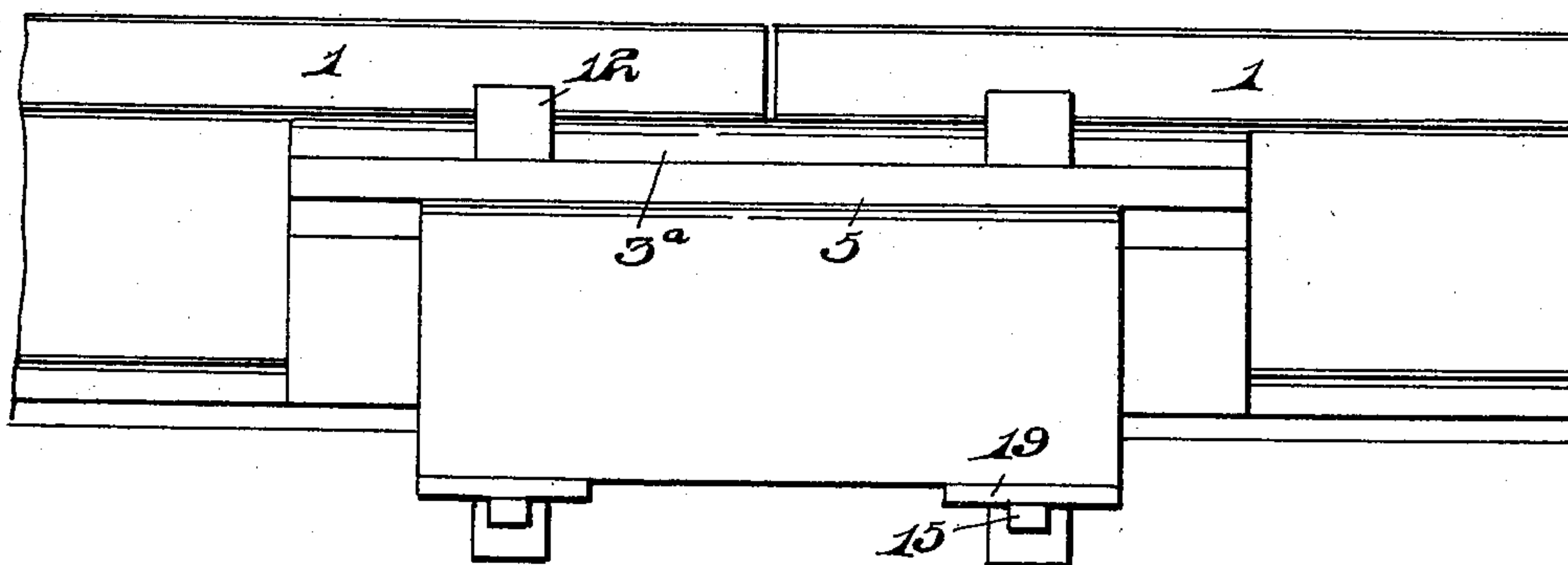


Fig. 3.

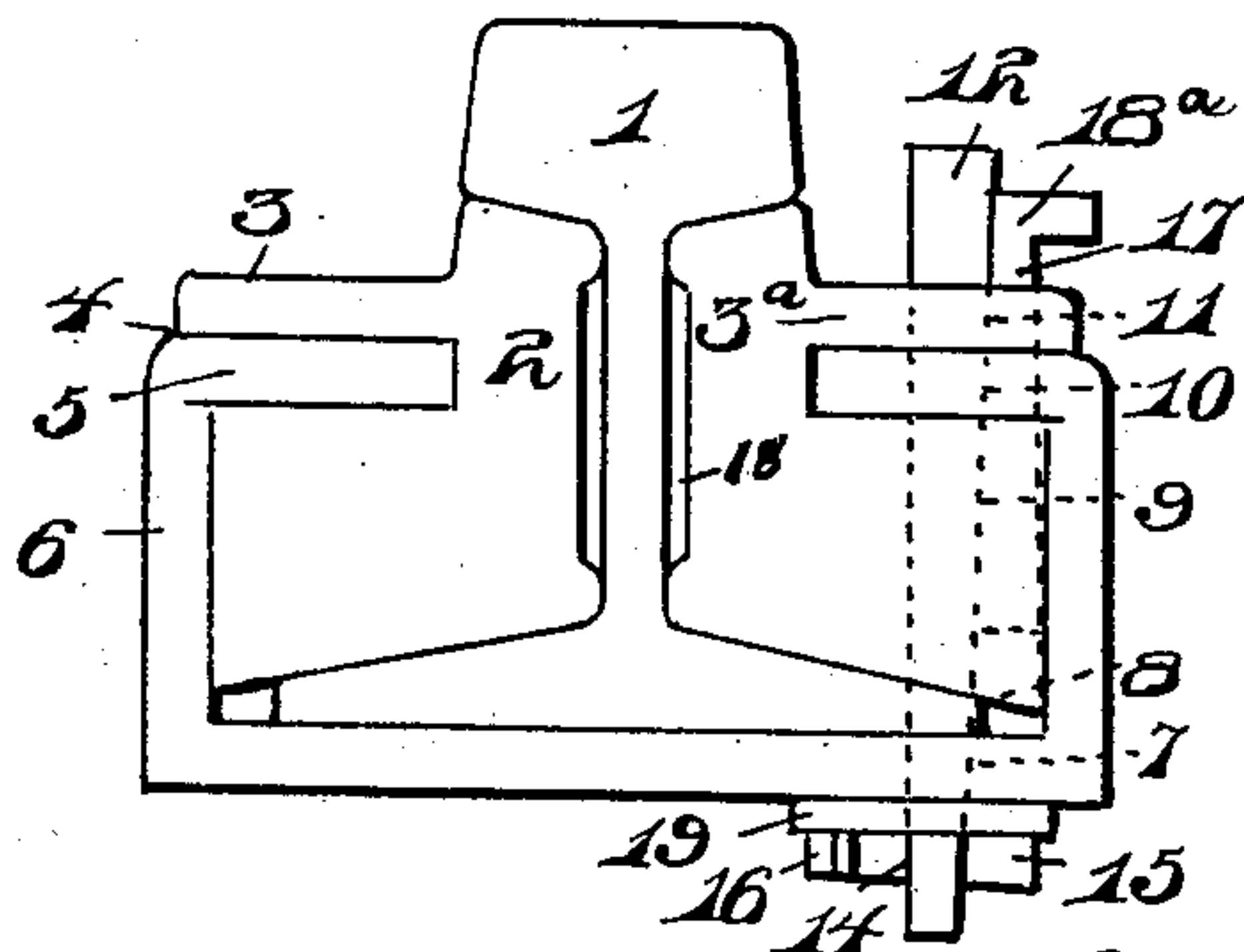


Fig. 4.

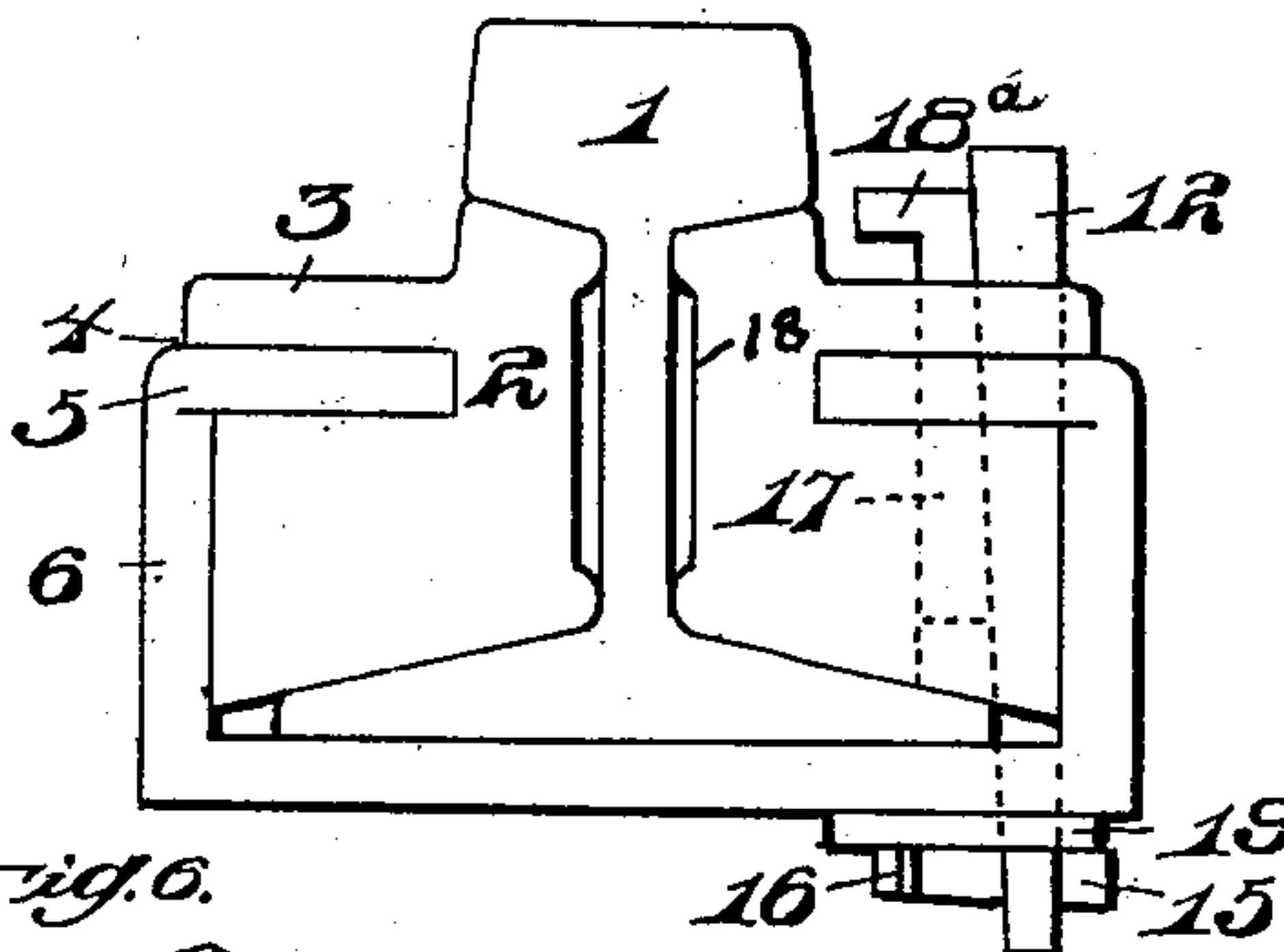


Fig. 5.

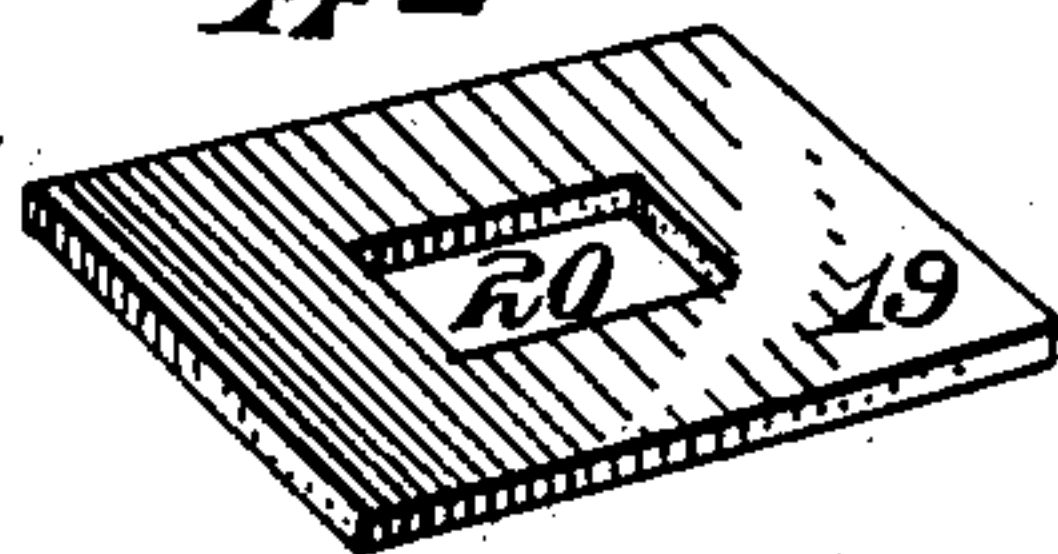


Fig. 6.

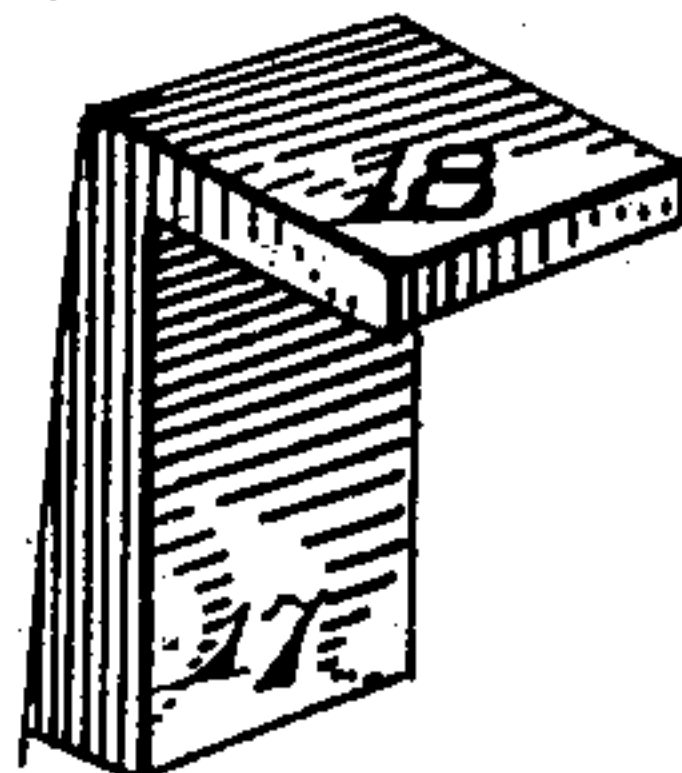
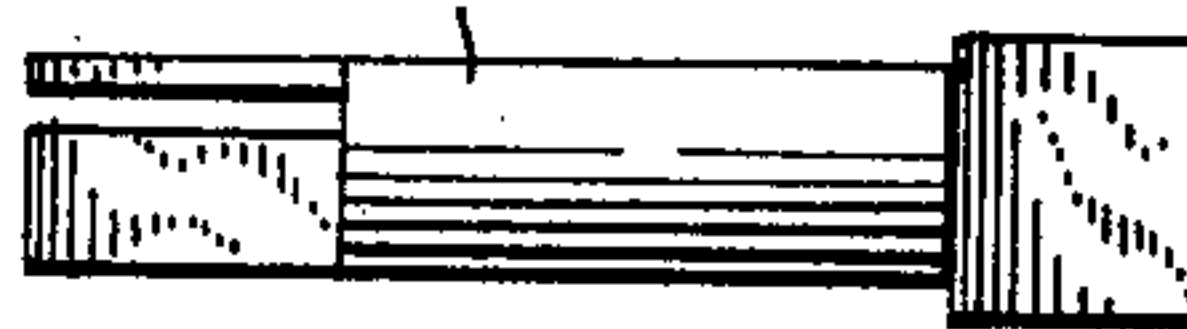


Fig. 7.



Witnesses

J. R. Heffelman,
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Fig. 8.



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UNITED STATES PATENT OFFICE.

JAMES BOOTH, OF EAST LIVERPOOL, OHIO.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 672,870, dated April 23, 1901.

Application filed February 18, 1901. Serial No. 47,818. (No model.)

To all whom it may concern:

Be it known that I, JAMES BOOTH, a citizen of the United States of America, residing at East Liverpool, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in rail-joints, and more particularly to that class of rail-joints wherein the use of nuts and bolts is entirely dispensed with.

15 The invention has for its object to provide novel means whereby rails are easily joined together and held firmly and rigidly in position, but allowing for the usual expansion and contraction that is incident to rails of this class.

The invention further aims to construct a rail-joint that will be extremely simple in construction, strong, durable, and highly efficient in its use.

25 With the above and other objects in view the invention consists in the novel combination and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claims.

30 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate corresponding parts throughout the several views, in which—

35 Figure 1 is a side elevation of my improved rail-joint. Fig. 2 is a similar view of a modified form of my invention, showing the same applied to the old style of rail. Fig. 3 is an end view as shown in Fig. 1 of the drawings. Fig. 4 is a similar view as shown in Fig. 2 of the drawings. Fig. 5 is a perspective view of the securing-plate. Fig. 6 is a perspective view of the wedge. Fig. 7 is a side elevation of the key. Fig. 8 is a perspective view of the locking-key.

40 In the drawings the reference-numeral 1 indicates the rails, and 2 the fish-plates, having side extensions 3 3^a formed integral therewith, a space 4 being formed between said extensions and the top of the fish-plate to re-

ceive an inwardly-extending portion 5 of the chair 6, which engages the sides of the fish-plate and the base of the rail 1, this chair having formed therein an opening 7, a like opening 8 being formed in the base of the rail. An opening 9 is formed in the side of the fish-plate, an opening 10 in the inwardly-extending portion 5, and an opening 11 in the extension 3^a. These openings 7, 8, 9, 10, and 11 are adapted to receive a locking-wedge 12. This locking-wedge at its lower extremity is also formed with an opening 14 to receive a locking-key 15, having split ends 16, which pass through said locking-wedge 12. The locking-wedge 17, carrying a head 18^a, is also arranged in the openings 9, 10, and 11, and is placed adjacent to the wedge 12, forming a locking means. Recesses 18 are formed in the interior sides of the fish-plates, which when placed in position are adjacent to the web of the rail. The reference-numeral 19 indicates a plate having formed therein an opening 20, which is placed under the chair to receive the end of the locking-wedge 12, and the locking-key 15 is placed beneath the under face of the said plate in order to secure the parts more firmly in position.

The manner of applying my improved rail-joint is as follows: The chair is placed in proper position in the usual manner and the fish-plates then slid in endwise, the inwardly-extending portion engaging in the recesses and inclosing the fish-plates and lower portion of the base of the rail. The wedge 17 is then placed in position, and the wedge 12 is then placed through the opening, as shown in Fig. 3 of the drawings, in case the rail-joint is used for new rails having the openings arranged in the base thereof. The plate is then secured to the lower end of the wedge 12 and the key inserted through the opening formed in the wedge. The ends of said locking-wedge are then turned or bent outwardly, so as to form a perfect lock, which will tend to clamp and retain the rails in a rigid position.

In case it is desired to use my improved rail-joint upon the old style of rails the wedge 17 is placed upon the reverse side of the wedge 12, as shown in Fig. 4 of the drawings, and the key 17^a (illustrated in Fig. 7) may then be

passed through suitable openings formed in the free fish-plate and rail and the free ends of the locking-bolt bent outwardly to firmly hold and retain the rail in proper position and prevent the latter from "creeping."

In view of the foregoing description the many advantages obtained by the use of my invention will be readily apparent, and it will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a rail-joint, the combination with the rails, fish-plates having outward extensions, a chair adapted to engage the under face of said outward extensions, a locking-wedge passing through suitable openings in the fish-plate and chair, a wedge adapted to engage said locking-wedge, and locking means arranged at the lower portion of said locking-wedge to retain

the parts in a locked position, substantially as described.

2. In a rail-joint, the combination of rails, fish-plates, outwardly-extending portions formed integral with said fish-plates, a chair adapted to carry inwardly-extending portions adapted to engage the under face of said outwardly-extending portions of the fish-plates, a locking-wedge secured in suitable openings, a plate secured in the lower portion of said locking-wedge, a split key secured in the lower extremity of said locking-wedge, and a wedge arranged adjacent to the locking-wedge, all parts being arranged and operating substantially as herein set forth.

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

JAMES BOOTH.

Witnesses:

G. Y. TRAVIS,
W. G. DORFF.