

No. 679,625.

Patented July 30, 1901.

J. KAISER & W. STOCKER.

RAIL JOINT.

(Application filed Apr. 30, 1901.)

(No Model.)

Fig. 1.

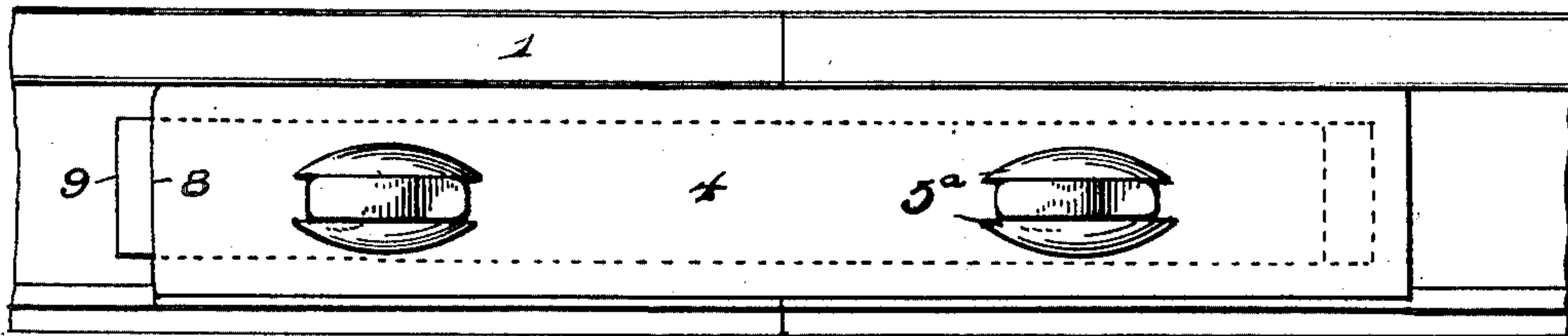


Fig. 2.

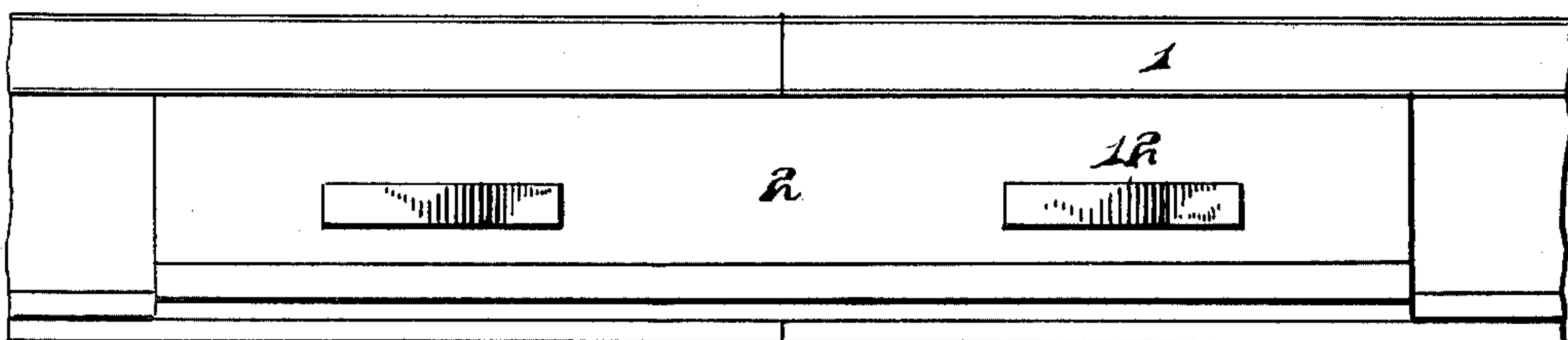


Fig. 3.

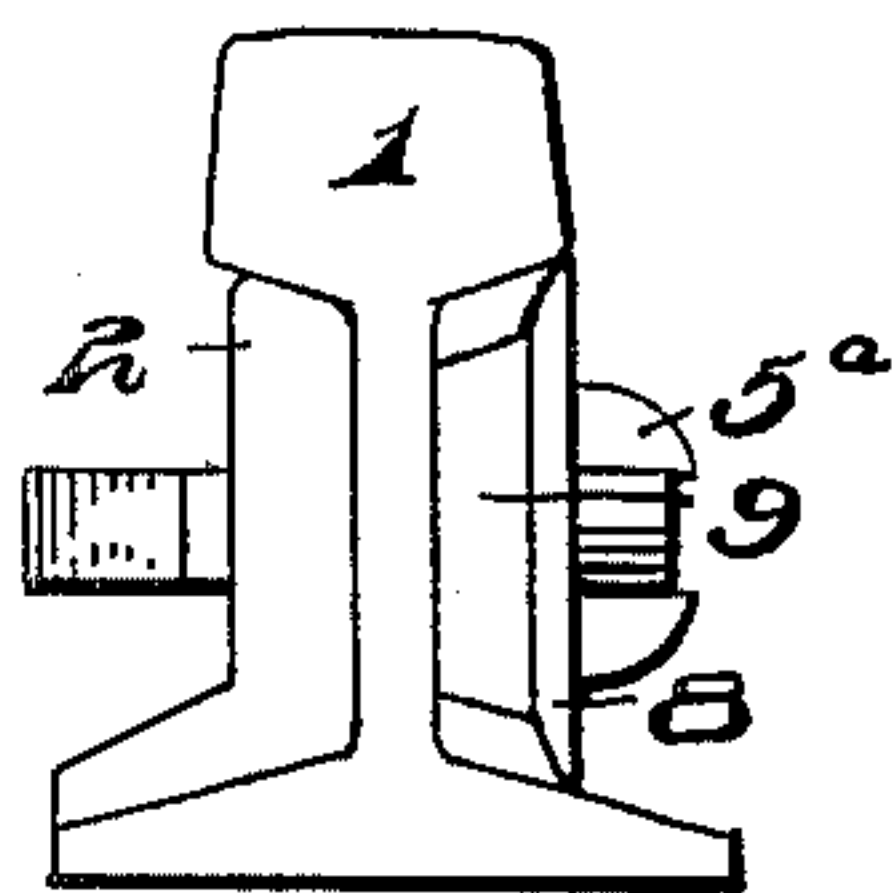


Fig. 4.

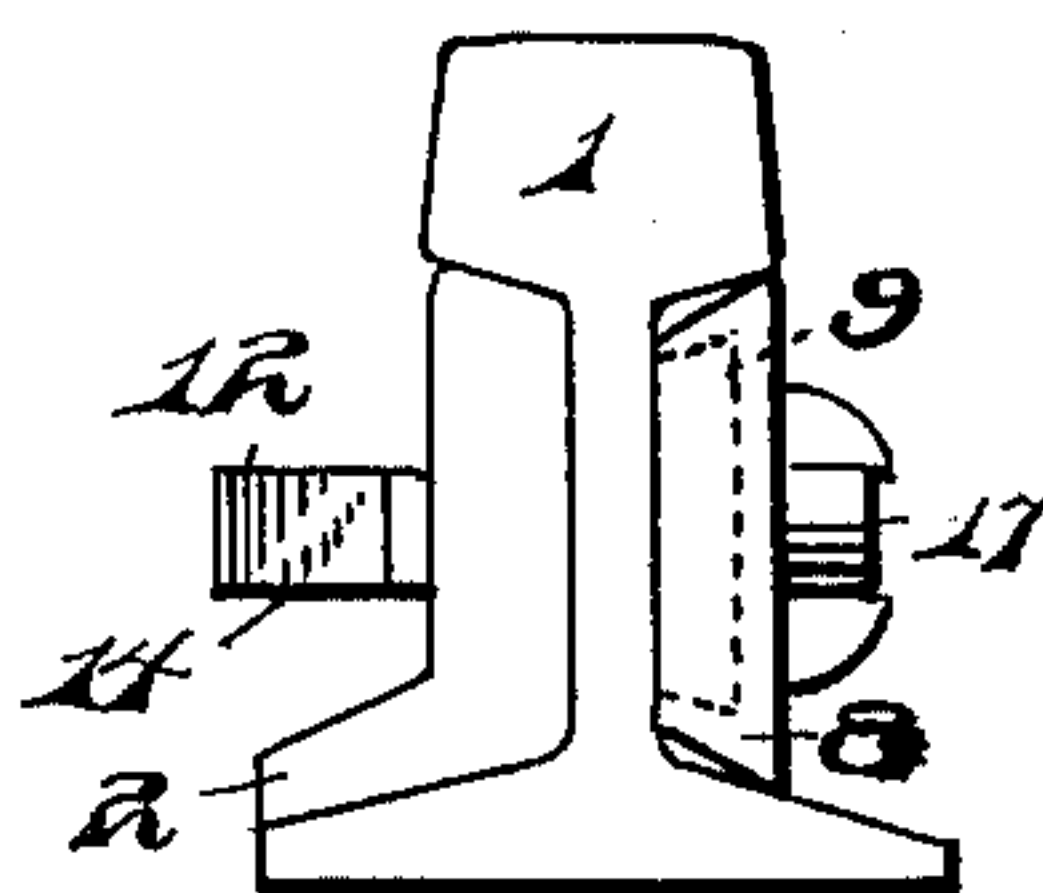


Fig. 5.

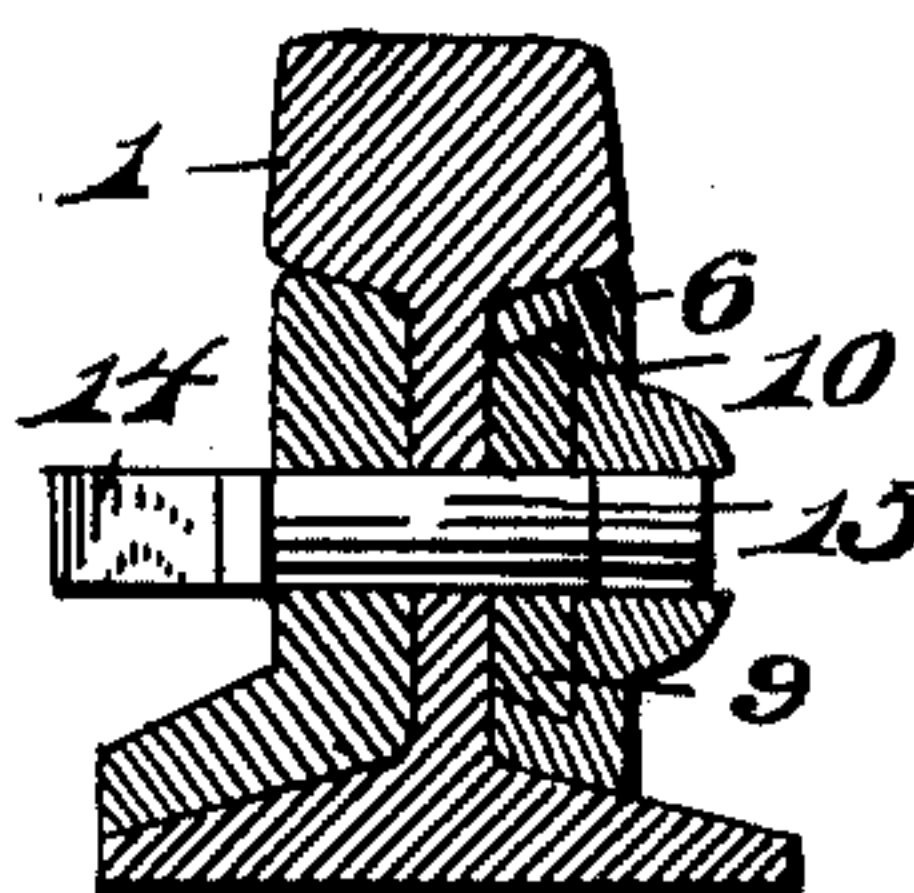


Fig. 6.

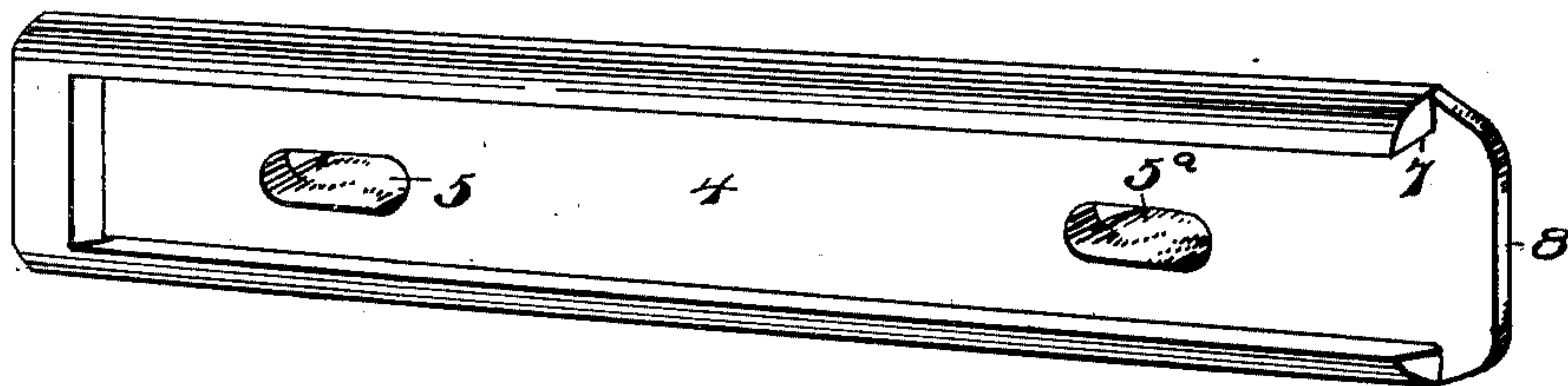
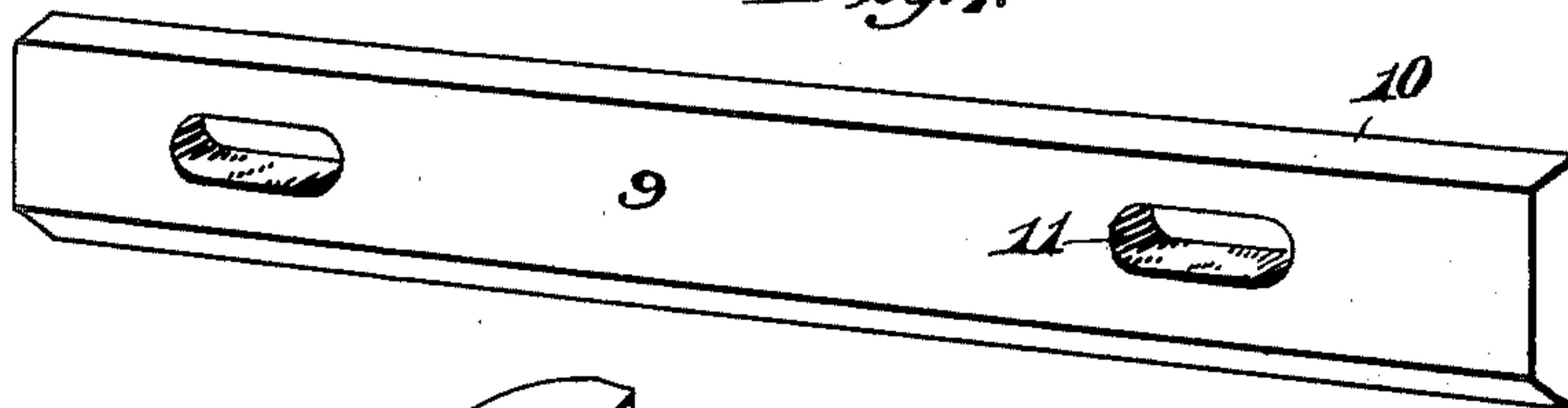


Fig. 7.



Witnesses:

J. P. Appleman
C. C. Potter

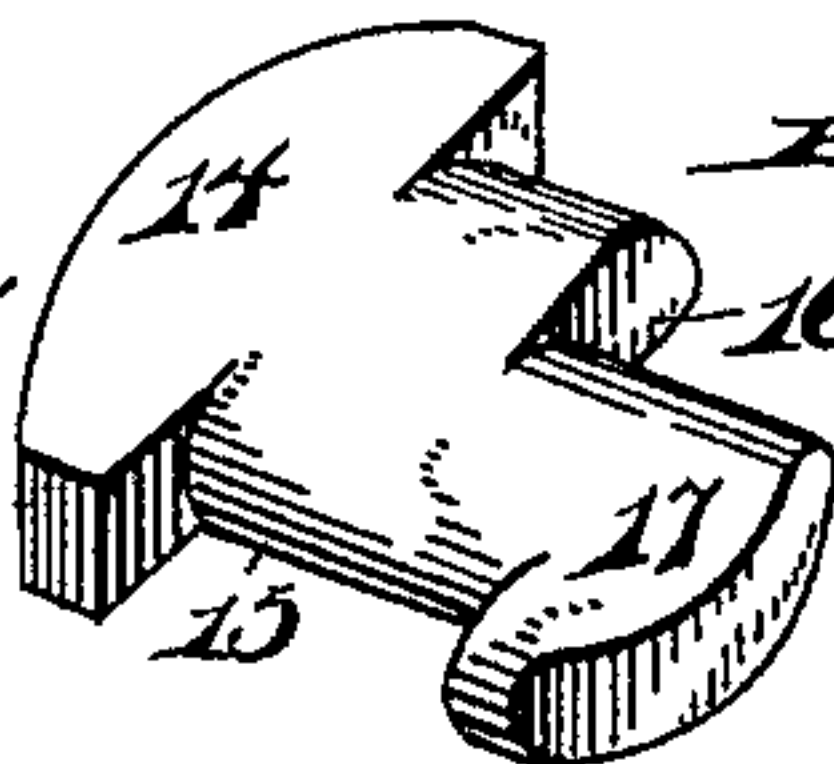


Fig. 8.

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JOHN KAISER AND WILLIAM STOCKER, OF PITTSBURG, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 679,625, dated July 30, 1901.

Application filed April 30, 1901. Serial No. 58,213. (No model.)

To all whom it may concern:

Be it known that we, JOHN KAISER and WILLIAM STOCKER, citizens of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, 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.

This invention relates to certain new and useful improvements in rail-joints, and has for one object the provision of novel means whereby two sections of rails are securely joined together without the use of threaded nuts and bolts.

Another object of the present invention is to construct a rail-joint of the above-described character that can be easily applied to the rails, securely locked thereto, and readily removed therefrom when desired.

The present invention resides in the application of the ordinary fish-plate, a locking fish-plate, in combination with a peculiar-shaped key, all of which construction will be hereinafter more fully described and specifically pointed out in the claims.

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—

Figure 1 is a side elevation of two sections of rails joined together by our improved rail-joint. Fig. 2 is a side elevation of the reverse side of the rail, showing the ordinary fish-plate. Fig. 3 is an end view thereof before the locking fish-plate is in a locked position. Fig. 4 is a similar view showing the locking fish-plate as it appears when in a locked position. Fig. 5 is a vertical sectional view. Fig. 6 is a perspective view of a portion of the locking fish-plate. Fig. 7 is a similar view of the locking-plate which is adapted to slide in said locking fish-plate. Fig. 8 is an enlarged perspective view of the key.

In the drawings the reference-numeral 1 indicates the rails, and 2 represents the ordinary fish-plate applied to one side of the rails,

this fish-plate having elongated openings to receive a key.

The reference-numeral 4 represents a locking fish-plate having elongated openings 5 formed therein.

The reference-numeral 5^a indicates integral lugs formed on the outer face of the fish-plate 4 and extending on the upper and lower sides of the elongated openings 5. This fish-plate 4 is also provided with flanges 6, formed on the inner face of the locking fish-plate, these flanges being slightly beveled on their inner face, as shown at 7, and forming a dove-tailed guideway. The said locking fish-plate 4 has an extending end 8, which when the parts are placed in proper position is bent over and forms locking means.

The reference-numeral 9 is a locking-plate having beveled edges 10, which are adapted to engage the beveled wall 7 of the flanges 6. This locking-plate has also formed elongated openings 11, which correspond with the elongated openings 5 on the locking fish-plate.

The reference-numeral 12 represents a key having a head 14 and shank 15, which is elliptical in cross-section, and a shoulder 16, extending in alinement with the head 14, this key also carrying a contracted head portion 17.

The operation of our improved rail-joint is as follows: The two rails are placed together in the usual manner, and the ordinary fish-plate 2 is applied to one side of the rails. The key 12 is then placed through the openings of the fish-plate and extends through the web of the rail, the shoulders of the head 14 resting against the fish-plate 2. The shank 15 passes through the fish-plate and through the web of the rail. The locking fish-plate 4, carrying the locking-plate 9, is then applied to the other side of the rails, allowing the contracted head portion 17 to engage in the enlarged openings 11 and 5. The locking-plate is then in a position as shown in Fig. 1 of the drawings, and when moved longitudinally to the position at the end of the locking-plate abuts against the end of the recess formed in the locking fish-plate, when the same will be locked upon the key, the contracted head portion 17 engaging the locking fish-plate in such a manner that it will form

a secure connection of the parts. The extending portion 8 of the locking fish-plate is then bent over, as shown in Fig. 4 of the drawings. This will prevent any movement
 5 of the locking-plate, and the same will be rendered practically inaccessible. When it is desired to remove the rail-joint, the end 8 is bent up, the locking-plate moved longitudinally, and the joint may then be taken apart.
 10 The lugs 5^a, carried by the locking fish-plate, are designed to protect the head 17 of the key from being broken or tampered with.

It will be noted that our improved rail-joint provides a locking fish-plate which may be
 15 modified in various forms, and it will also be noted that various other changes may be made in the details of construction without departing from the general spirit of our invention.

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

1. In a rail-joint, the combination of the rails having elongated bolt-openings, and a
 25 fish-plate having elongated openings registering with the openings in the rails, of a locking fish-plate also provided with elongated openings, flanges carried on the inner face of the said locking fish-plate, lugs carried on the outer face of the said plate above
 30 and below the openings, a locking-plate provided with elongated openings, said locking-plate engaging the inner face of the locking fish-plate and being held by the flanges of said locking fish-plate, and bolts engaging in
 35 the openings in said plate and rails, said bolts having a head on each end, substantially as described.

2. In a rail-joint, the combination with the
 40 rails having elongated bolt-openings, and a fish-plate having elongated openings, of a locking fish-plate having elongated openings, a locking-plate held against the inner face of the locking fish-plate, said locking-plate hav-

ing elongated openings and being capable of 45 longitudinal movement, and bolts headed on both ends for engagement through the elongated openings for securing the plates in position, substantially as described.

3. In a rail-joint, the combination with the 50 rails, and a fish-plate, of a locking fish-plate, flanges made integral with the inner face of said locking fish-plate, a locking-plate held against the inner face of said locking fish-plate, by said flanges and slidable thereon, 55 and bolts passed through said plates and rails and held by said locking-plate, substantially as described.

4. In a rail-joint, the combination with the 60 rails, and a fish-plate, and a locking fish-plate having bolt-openings, lugs on the outer face of said locking fish-plate above and below the bolt-openings, flanges formed on the inner face of said locking fish-plate, a locking-plate 65 held against the inner face of the locking fish-plate by said flanges, bolts passed through the plates and rails and held by said locking-plates, and an extension carried by the locking fish-plate adapted to be bent over to retain the locking-plate in the locked position, 70 substantially as described.

5. In a rail-joint, the combination with the rails, and a fish-plate, of a locking fish-plate, a locking-plate slidably held on the inner face 75 of the locking fish-plate, bolts engaging through said plates and rails and locked therein by the locking-plate, and means carried by the locking fish-plate for holding the locking-plate in locked engagement with the bolts, 80 substantially as described.

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

JOHN KAISER.
 WILLIAM STOCKER.

Witnesses:
 JOHN NOLAND,
 H. C. EVERT.