No. 705,566. Patented July 29, 1902.

C. R. EDWARDS.

RAIL JOINT.

(Application filed Mar. 10, 1902.)

(No Model.)

Fig. 1.

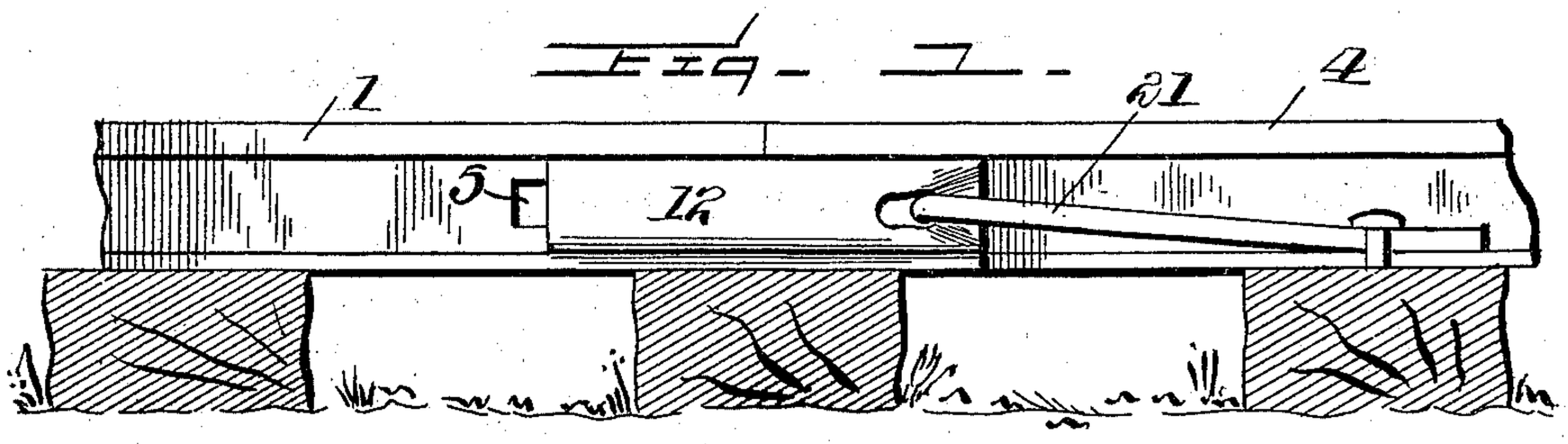


Fig. 2.

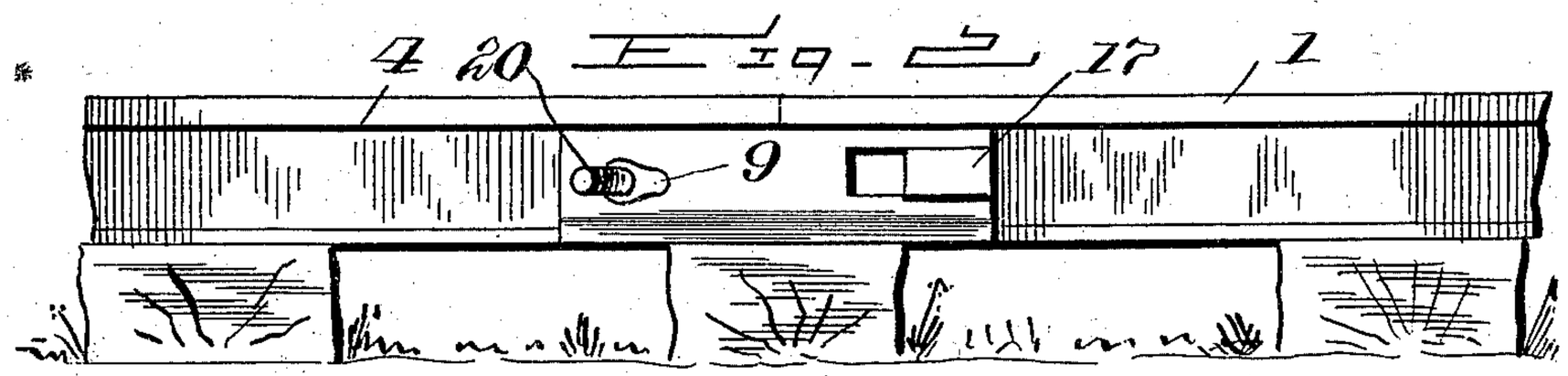


Fig. 3.

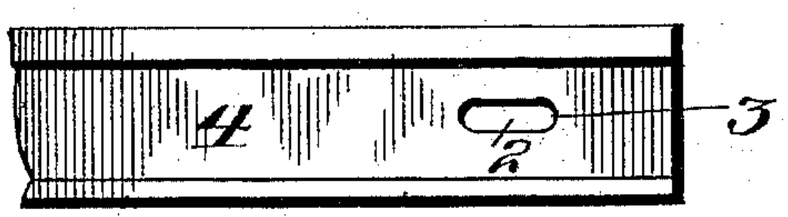


Fig. 4.

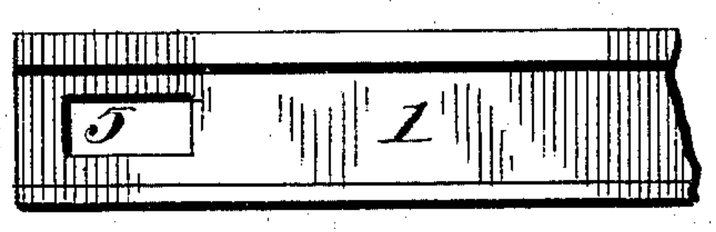


Fig. 5.

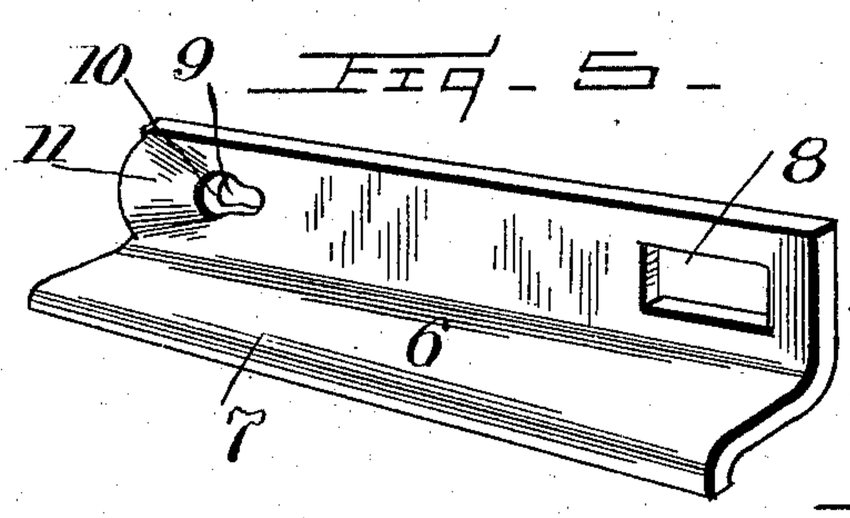


Fig. 6.

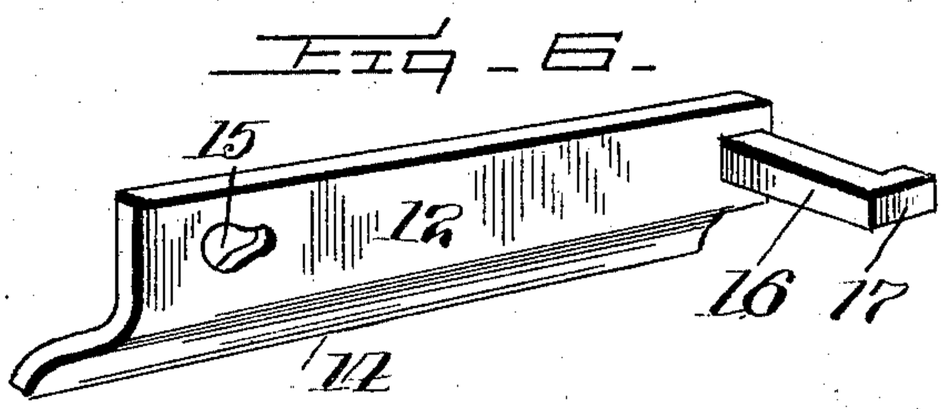
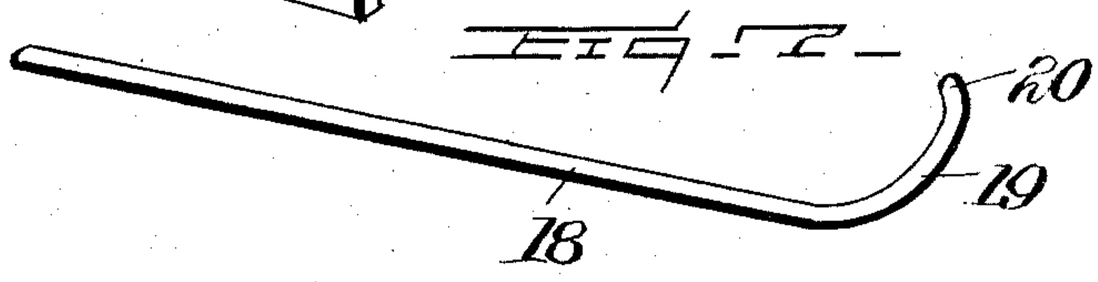


Fig. 7.



Witnesses:
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E. E. Potter.

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UNITED STATES PATENT OFFICE.

CHARLES R. EDWARDS, OF PITTSBURG, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 705,566, dated July 29, 1902.

Application filed March 10, 1902. Serial No. 97,463. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. EDWARDS, a citizen 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 its object the provision of novel means whereby the rails are securely held together in such a manner as to prevent the same from parting and present a joint that will be strong and durable and comparatively inexpensive to manufacture.

Another object of my invention is to provide a rail-joint wherein the use of nuts and bolts will be entirely dispensed with and that the rails will be securely fastened together by the use of a locking-lever.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts, to 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 like parts throughout the several views, in which—

Figure 1 is a side elevation of the inner side of my improved rail-joint. Fig. 2 is a side elevation of the outside of my improved rail-joint. Fig. 3 is a side elevation of the end of one of the rails. Fig. 4 is a similar view of the adjoining rail. Fig. 5 is a perspective view of the inner fish-plate. Fig. 6 is a similar view of the outer fish-plate. Fig. 7 is a perspective view of the locking-lever.

In the drawings, 1 represents one of the rails having an aperture 5 therein, said aperture being rectangular in shape.

The reference-numeral 4 indicates the adjoining rail, having in the web thereof an aperture 2, said aperture being elongated and having round ends 3.

Reference-numeral 6 indicates the inner fish-plate, which carries the ordinary outwardly-extending flange 7, the fish-plate proper carrying an aperture 8, said aperture conforming in shape to the aperture 5 in the web of the rail 4. In the other end of the fish-plate 6 is an aperture 9, said aperture being elongated in shape, the forward end of which is circular in form, as indicated at 10. Adjacent to said aperture is the raised wedge-shaped portion 11, said portion acting as a lock for the locking-lever, to be hereinafter described.

Reference-numeral 12 represents the outer fish-plate, carrying a flange 14, substantially the same as the fish-plate 6, said fish-plate 12 having an aperture 15 in the end thereof, said aperture conforming in shape to the aperture 9 of the fish-plate 6. The forward end of the fish-plate 12 carries an outwardly-projecting arm 16, integrally formed at right angles to the fish-plate 12, the arm 16 having a projection 17 formed at a right angle to the arm 16, said projection extending in a parallel of the fish-plate 12. It will be noted that when these fish-plates are placed on each side of the rail the opening 15 will correspond to the openings 9 of the fish-plates 12 and 6, respectively, and the projection 16 will be seated through the aperture 5 of the rail 1 and thence through the aperture 8 of the fish-plate 6. The fish-plate 6 is then moved backwardly, causing the projection 17 of the fish-plate 12 to become firmly locked, as shown in Fig. 2 of the drawings, thus securing the forward ends of said fish-plates firmly.

In Fig. 7 I have shown a perspective view of the locking-lever 18, said locking-lever having one end thereof bent substantially at a right angle, as indicated at 19, the outer end thereof being slightly bent forward, as indicated at 20. When this locking-lever is inserted through the apertures 15 of the fish-plate 12, the aperture 2 of the rail 4, and the aperture 9 of the fish-plate 6, the same is pressed down to the position shown in Fig. 1 and indicated at 21. The outer end 20 of the curved portion 19 engages the raised portion 11 of the fish-plate 6, thereby forcing the fish-plates firmly against the rails and wedging the same together, this movement being performed and accomplished by means of the raised portion 11 performing the function of a wedge. The locking-lever 18, when placed

in position shown in Fig. 1 and indicated at 21, may be secured down by any suitable means, the means in the drawings showing the use of a spike, which securely holds the locking-lever in its locked position.

The many advantages obtained by the use of my improved rail-joint will be readily apparent from the foregoing description, taken in connection with the accompanying drawings, 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 fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a rail-joint, the combination of fish-plates, one fish-plate carrying a projecting arm and having an aperture therein, and a fish-plate having apertures therein, said projecting arm extending through one of the apertures of the last-named fish-plate, and a locking-lever having one end of its ends projecting through the other apertures of the fish-plates for securing the same together, substantially as described.

2. In a rail-joint, the combination with the rails having apertures therein, of fish-plates arranged on opposite sides of the rails, one of said fish-plates carrying a projecting arm and provided in its opposite end with an aperture, the other fish-plate having an aperture therein and formed on its outer face with a raised portion, said projecting arm passing through one of the apertures in the rail and the adjacent fish-plate, a locking-lever in engagement with the other aperture of the fish-plates, and means for securing said locking-lever in a locked position, substantially as described.

3. In a rail-joint, the combination of a rail having an aperture therein, a fish-plate carrying a projecting arm and having an aperture therein, a fish-plate having apertures therein, said fish-plate carrying on its outer edge a raised portion, said raised portion performing a function of a wedge, a locking-lever, said locking-lever carrying a curved portion bent substantially at a right angle and having its end slightly inclined upwardly, and means for securing said locking-lever and fish-plates together, all parts being arranged and operating substantially as described.

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

CHARLES R. EDWARDS.

Witnesses:
JOHN NOLAND,
E. E. POTTER.