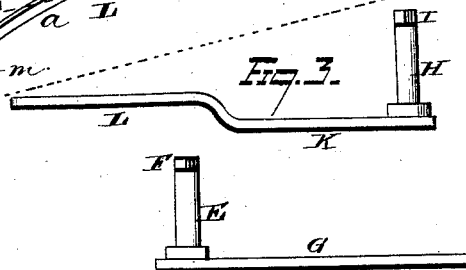
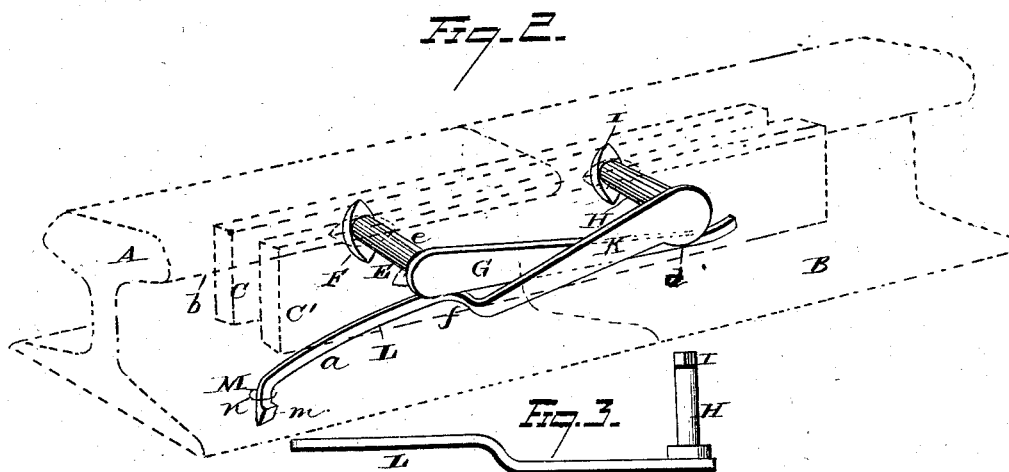
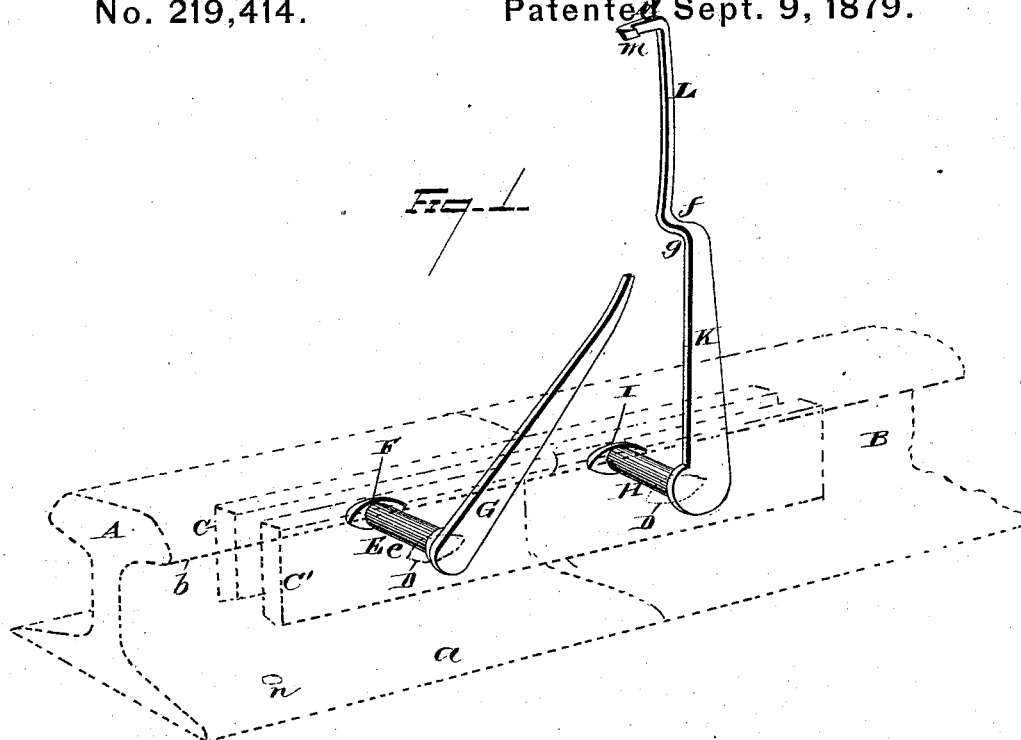


I. SHERCK & J. BATIG, Jr.  
 Locking Device for Railroad Fish-Plates.

No. 219,414.

Patented Sept. 9, 1879.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

ISAAC SHERCK AND JOSEPH BATIG, JR., OF FREMONT, ASSIGNOR OF ONE-HALF THEIR RIGHT TO GEORGE W. HEBERLING, OF FREMONT, OHIO.

## IMPROVEMENT IN LOCKING DEVICES FOR RAILROAD FISH-PLATES.

Specification forming part of Letters Patent No. 219,414, dated September 9, 1879; application filed May 8, 1879.

### *To all whom it may concern:*

Be it known that we, ISAAC SHERCK and JOSEPH BATIG, Jr., of Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Locking Devices for Railroad Fish-Plates; and we 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in locking devices for railroad fish-plates, the object being to provide a simple and durable locking device for the fish-plates of railroad rails, and one that may be supplied at a small initial cost.

Our invention consists in the combination, with a pair of fish-plates, of bolts provided with elongated heads at one end and with levers at the other end, one of said levers being constructed to interlock with the other lever and retain the same against displacement, and also to engage with the rail-flange, and thereby constitute a durable and efficient locking device for the meeting ends of the rails.

Our invention further consists in certain details of construction and arrangement of parts, as will hereinafter be described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of our locking devices in an unlocked position, the rails and fish-plates being shown in dotted lines. Fig. 2 is a similar view, illustrating the improvement in a locked position; and Fig. 3 shows the several parts of the locking device detached from the rails.

A and B represent the adjacent ends of two rails, and C C' are the fish-plates, the latter constructed to fit snugly against the web portions *a* of the rails, and to have a bearing against the under side of rail-treads *b* and rail-flanges *c*. Rails A B and the fish-plates are provided with elongated bolt-holes D, the same being arranged to register with each other when secured in place. E is a fastening-bolt, the shank *e* of which is of such size as to fit snugly within one of the bolt-holes D, and thereby prevent any vertical play or move-

ment of the rails. Bolt E is provided at one end with an elongated head, F, which may be of any desired form, but is preferably oval in form, as illustrated in the drawings. To the opposite end of bolt E is rigidly secured a lever or arm, G, which is tapered gradually from the bolt to its free end, said arm being of sufficient length so that when placed in a horizontal position it will extend slightly beyond the center of the bolt-hole in the opposite end of the fish-plate. The bolt E is secured in place by turning the arm or lever G upwardly until the elongated head F registers with the elongated opening or bolt-holes D in the fish-plate and rail, and the bolt can then be readily inserted in place. Then, by turning the lever G downwardly until its free end rests upon the flange of the opposite rail, the elongated head F will be turned at right angles to the elongated bolt-holes D, and thereby be prevented from displacement. H is a bolt constructed like bolt E, and provided with an elongated head, I, on one end, and on the opposite end with an arm, K. That portion of the arm K which is attached to the bolt H is formed with a flange, *d*, which overlaps the free end of the arm or lever G when the parts are secured in place, and effectually prevents the movement or accidental displacement of said arm G. The lever or arm K is formed with an angular bend, *f*. When the lever or arm K is forced downward it is necessary to force it outwardly or away from the rail, to allow the shoulder *g*, formed by the angular bend *f*, to ride over the arm G, and, as the arm K is composed of steel or other resilient material, the shoulder *g* springs back beneath the arm G, and is thereby securely held in place or prevented from vertical displacement; but to insure a perfect lock and undoubted security of the fastening devices, the arm K is furnished with an extension, L, which may be of reduced size, and the end of which is provided with a downward bend, M, the latter having a catch or hook, *m*, formed on the outer face thereof. Hook or catch *m* engages in an opening, *n*, formed in the flange, and as the resiliency of the arm tends to force the outer end thereof outwardly or away from the rail, it will be observed that it will be impossible to move the arm vertically until its extreme end has been forced in-

wardly to disengage the hook from the flange and then force the arm outwardly to disengage the shoulder *g* from the arm *G*. Thus the fastener is furnished with a double lock, and thereby prevented from any accidental displacement.

Our improved locking device being constructed without the employment of threaded bolts and removable nuts obviates all danger of stripping the bolt threads, and, further, obviates the trouble and expense ordinarily met with due to the rusting of the nuts fast to the bolts. In our improvement the rails are securely held against vertical movement, thereby preserving a smooth continuous trackway, and yet are allowed to freely expand and contract, as the elongated bolt-holes *D* enable the rails to move longitudinally to compensate for any contraction and expansion due to heat and cold. The holes in the fish-plates are gradually inclined, so that the fish-plates will be forced firmly against the sides or web portions of the rails when locked in place. In case the bolts or bolt-heads wear so as to cause lost motion, washers, springs, or equivalent means may be applied to compensate for any such lost motion.

It is evident that many slight changes in the construction and arrangement of parts may be resorted to without departing from the spirit of our invention—as, for instance, the levers or arms may be made separate from the bolts, and the latter constructed with a squared end, and the lever attached thereto by means of a pin or other fastening device; hence we would have it understood that we do not limit ourselves to the exact construction shown and described; but,

Having fully described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the adjacent ends of two rails and fish-plates overlapping the rail-joint, of fastening-bolts provided with elongated heads at one end and with levers or arms at their opposite ends, said levers being constructed to interlock and be prevented from accidental displacement, substantially as set forth.

2. The combination, with the adjacent ends of two rails and fish-plates overlapping the rail-joint, of fastening-bolts provided with elongated heads at one end, one of said bolts having an arm or lever secured thereto which extends beneath the fastening-bolt on the adjacent rail, and the bolt in the other rail provided with an arm having an offset which overlaps the end of the opposite bolt lever or arm, substantially as set forth.

3. The combination, with the adjacent ends of two rails and fish-plates overlapping the rail-joint, of fastening-bolts provided with elongated heads at one end, and their opposite ends with levers or arms, one of said arms being furnished with an offset which overlaps the extreme end of the other lever, with a shoulder which locks beneath said other lever, and with a spring-catch which engages with the rail-flange, substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 12th day of April, 1879.

ISAAC SHERCK.  
JOSEPH BATIG, JR.

Witnesses:

G. W. HEBERLING,  
Z. ROSS.