F. E. WEED & R. MESSINGER.

DEVICE FOR CLAMPING THE BOLTS ON FISH-PLATES OF RAIL-ROAD-RAILS.

No. 193,388. Patented July 24, 1877.

Fig: 1

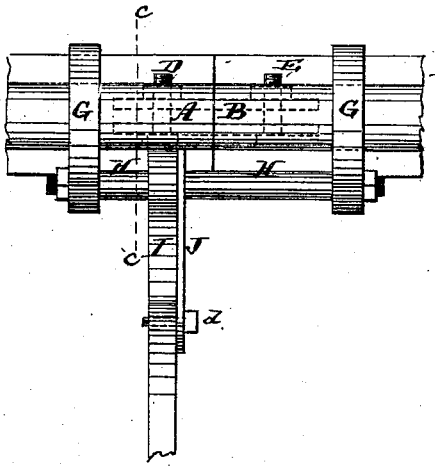


Fig: 2.

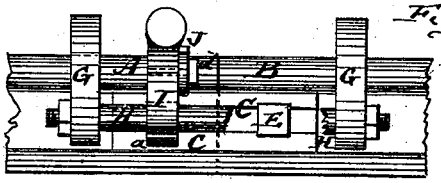
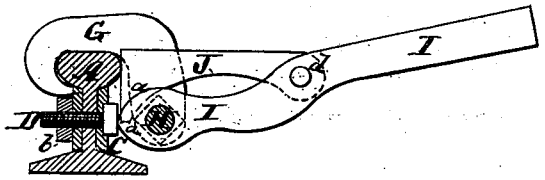


Fig: 3.



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UNITED STATES PATENT OFFICE.

FRANCIS E. WEED AND REINHOLD MESSINGER, OF NEW CANAAN, CONN.

IMPROVEMENT IN DEVICES FOR CLAMPING THE BOLTS ON FISH-PLATES OF RAILROAD-RAILS.

Specification forming part of Letters Patent No. **193,388**, dated July 24, 1877; application filed June 7, 1877.

To all whom it may concern:

Be it known that we, FRANCIS E. WEED and REINHOLD MESSINGER, both of New Canaan, county of Fairfield, and State of Connecticut, have invented a new and Improved Device for Clamping Bolts on Fish-Plates, of which the following is a specification:

Figure 1 is a top view of our improved bolt-clamping attachment; Fig. 2, a side view, partly in section, of the same; Fig. 3, a cross-section of the same on the line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to a new means for clamping the bolts which are used for attaching fish-plates to railroad-rails, so that such bolts may be permanently and securely held while the nuts are being applied to them. Heretofore it was necessary that, whenever a nut was to be applied to a bolt, one end of the bolt be held secure by one person, while another person applied the nut to the other end; but by our invention the bolt will be properly held secure without requiring the aid of an additional attendant.

Our invention consists, principally, in the combination of a hook, which is adapted to catch over the railroad-rail, with a lever pivoted to the hook, and provided with a cam projection and a locking attachment, whereby said lever can be crowded against the plate, all as hereinafter described.

The invention also consists in making said lever adjustable between two such hooks, as hereinafter more fully pointed out.

In the accompanying drawing, the letters A and B represent the contiguous ends of two railroad-rails. C is the fish-plate by which the two rails are to be held together. D and E are the two bolts, which, passing through the fish-plate and rails, serve to properly connect these pieces. There are, usually, four such bolts applied to every fish-plate; but our invention is applicable to every style and kind of fish plate and bolt.

In the form in which we have represented our invention, the same is shown to be provided with or constructed of two hooks, G G, which are adapted and shaped to fit over the treading portion of the rails, in the manner indicated in Fig. 3, and which are united at their lower parts by a rod or bar, H. This rod or bar serves as a fulcrum for the lever I, which is pivoted thereto, and capable at the same time of sliding thereon. This lever has its shorter end *a* formed more or less eccentric or cam-shaped, as in Fig. 3, and it serves, when swung down, as in Fig. 3, to bear with its cam end tightly against the head of one of the bolts D E, and to thus hold such bolt tight while the nut *b* is being applied to its other end, all as clearly indicated in Fig. 3. The distance between the two hooks G G should be such as to enable the lever I to be moved into line with all the bolts of one fish-plate without disturbing the hooks G G during the fastening of one plate; but the invention, as far as the locking-lever J is concerned, is also applicable and eminently useful if the lever is not made to slide at all, and, in fact, two hooks, G G, are not necessary, as the invention will be very efficient if the lever I is pivoted directly to one such hook, although it is preferable to have the two hooks, as, in that case, their upper parts will not in the least interfere with the application of the nuts. If but one hook is used, such single hook would have to be brought nearly into line with the bolt to be fastened, and may, therefore, render the application of the nut less convenient.

An additional feature of the improvement consists in the use of a locking-lever, J, which is pivoted to the lever I by a pin, *d*, and which, when thrown against the rail, as in Fig. 3, will serve to lock the lever against the head of the bolt, and to consequently render the assistance of any one for holding the lever I in place absolutely unnecessary.

We claim as our invention—

1. The combination of the two hooks G G and the connecting bar or rod H with the lever I, which is capable of vibrating and sliding on said rod or bar H, substantially as specified.

2. The combination of the hook G and pivoted cam-lever I with the locking-lever J, substantially as and for the purpose specified.

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