C. A. HOWARD.

Nut-Locks.

No. 144,905. Patented Nov. 25, 1873.

Fig. 1

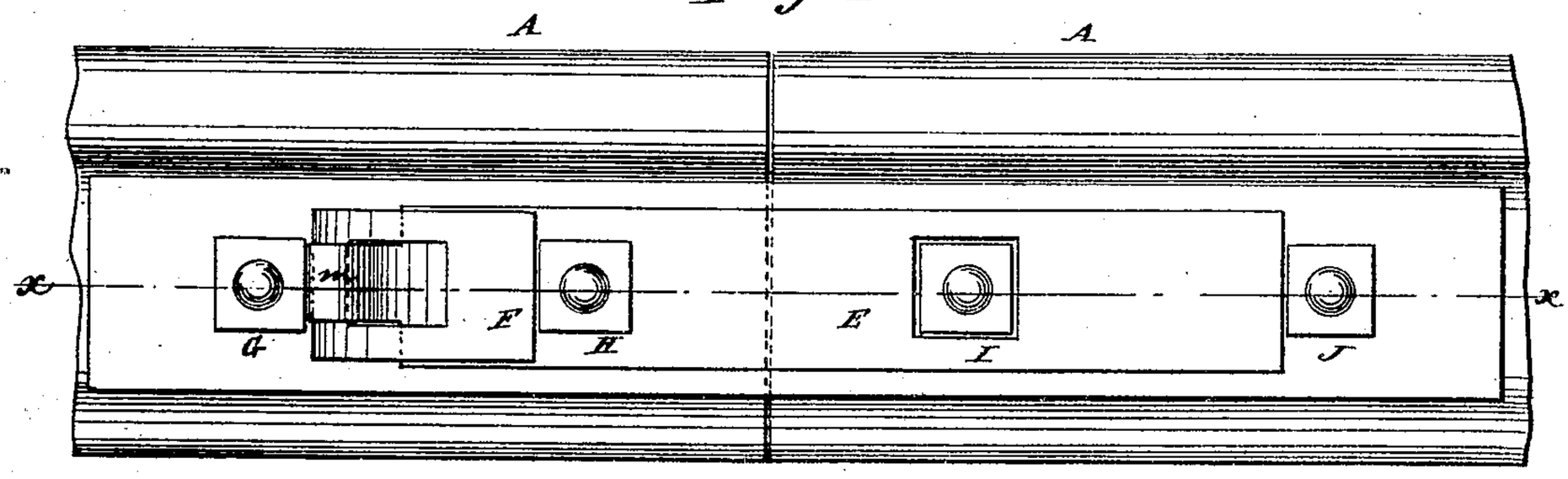
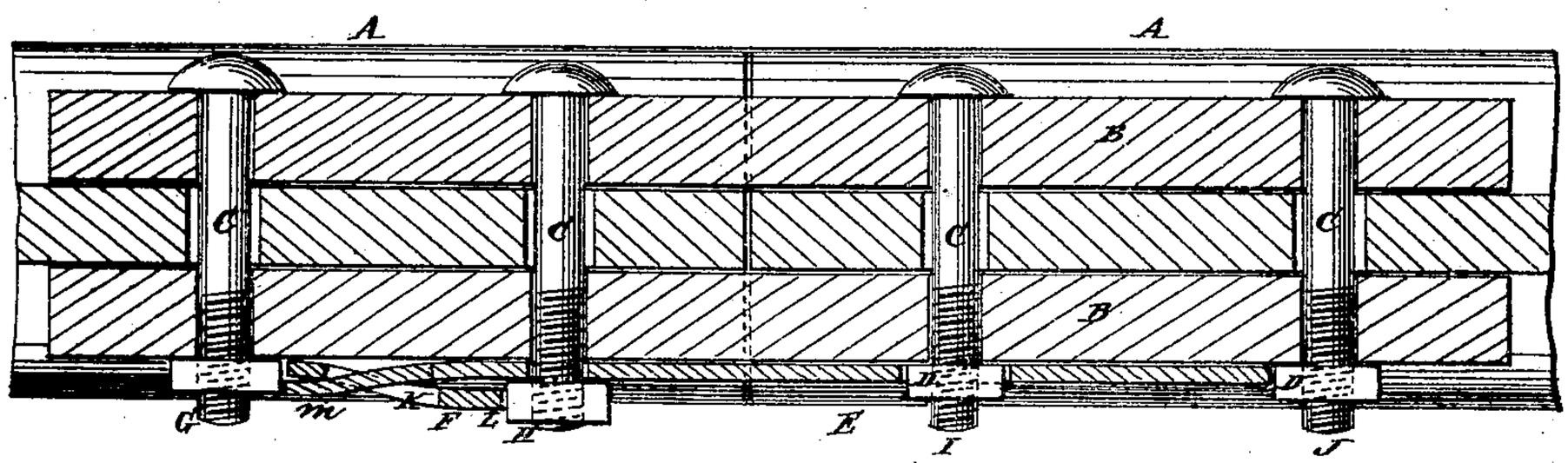


Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES A. HOWARD, OF PONTIAC, MICHIGAN.

IMPROVEMENT IN NUT-LOCKS.

Specification forming part of Letters Patent No. **144,905**, dated November 25, 1873; application filed June 28, 1873.

To all whom it may concern:

Be it known that I, CHARLES A. HOWARD, of Pontiac, in the county of Oakland and State of Michigan, have invented a new and useful Improvement in Nut-Locks, of which the following is a specification:

The invention will first be described and then pointed out in the claim.

In the accompanying drawing, Figure 1 represents a side view of a rail-joint secured by fish-plates, the bolt-nuts of which are locked according to my invention. Fig. 2 is a horizontal longitudinal section of Fig. 1 taken on the line *x x*.

Similar letters of reference indicate corresponding parts.

A A are the rails. B are the fish-plates. C are the bolts; G H I J, the nuts. E is the spring-plate and F is the lock-plate. As seen in the drawing, four nuts are locked by this device. These nuts are marked G, H, I, and J. This is the number of bolts usually employed for securing fish-plates to rail-joints, but I do not, of course, confine myself to any particular number of nuts above two, as this locking device may be applied to more nuts, and, with a slight modification, it may be applied to nuts of bolts passing through wood. In this case, and when applied to a single nut, the spring-plate would have a lip formed by bending the end to enter the wood, and the lock-plate is applied substantially as shown in the drawing. In the present instance, the end of the plate E locks the nut J. The nut I is inclosed by a square hole in the plate. The nut H is locked by the lock-plate F, and the nut G by the end of the spring-plate E or the end of the lock-plate F, or by both, as seen in the drawing. The end of the plate E extends sufficiently far to form a spring, and is reduced in width, so that it passes through slot or hole K in the locking-plate, and the two plates are arranged as seen in Fig. 2.

By raising the end L of the lock-plate to a right angle the nut H is unlocked and the spring-plate can be removed without difficulty.

The tension of the spring *m* of the spring-plate E holds the locking-plate in place and renders the device very efficient for locking into.

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

The combination of the interlocking-plates E F with the nuts G H, the extension *m* of the plate E, forming the spring, and the plate F interposed between the said nuts, substantially as described.

CHARLES A. HOWARD.

Witnesses:

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