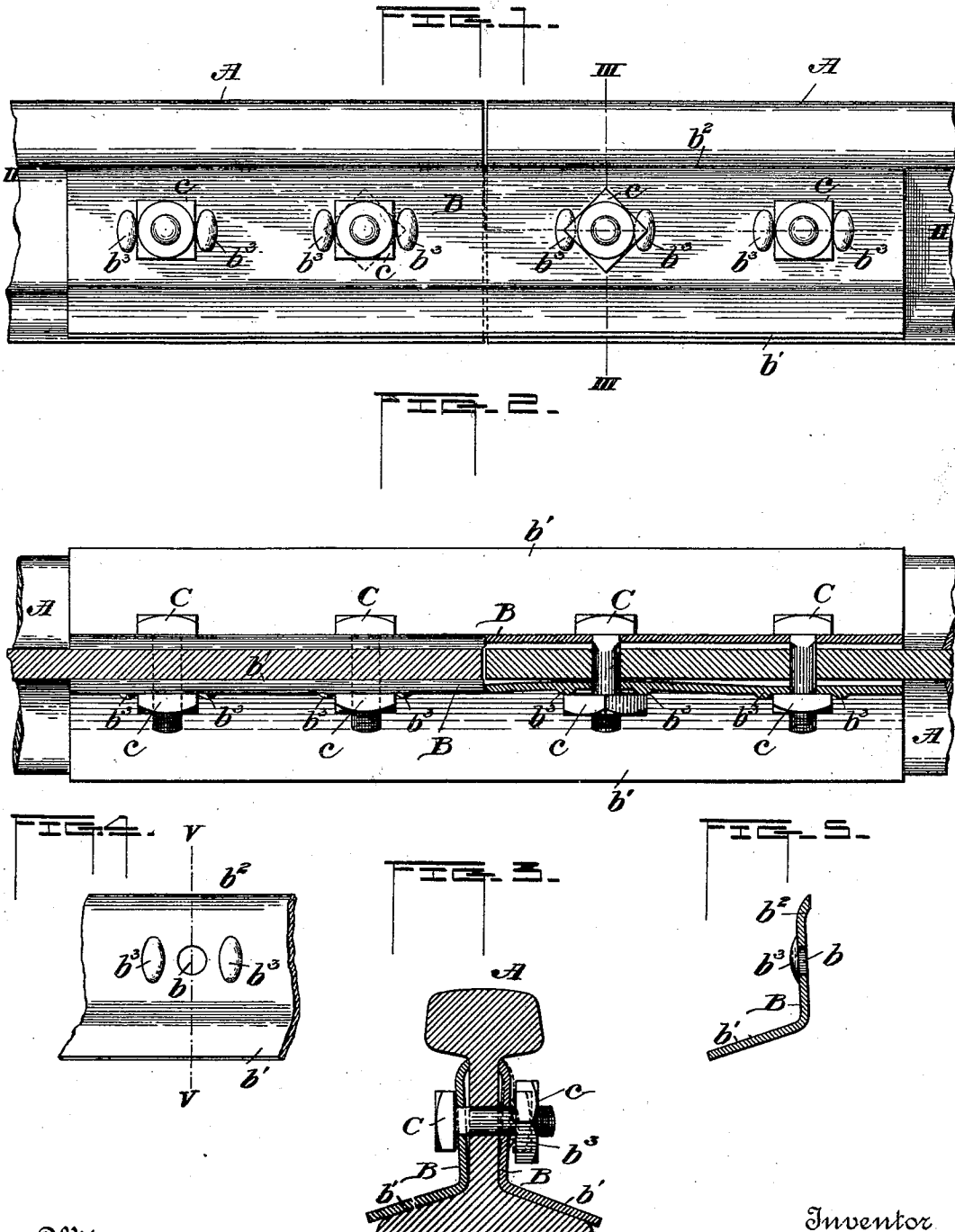


(No Model.)

J. J. BENTLEY.
NUT LOCK.

No. 520,512.

Patented May 29, 1894.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH J. BENTLEY, OF SADORUS, ILLINOIS.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 520,512, dated May 29, 1894.

Application filed November 9, 1893. Serial No. 490,435. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. BENTLEY, a citizen of the United States, residing at Sadorus, in the county of Champaign and State of Illinois, have invented certain new and useful Improvements in Nut-Locks; and I 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 appertains to make and use the same.

This invention relates to improvements in nut-locks, and more particularly to such as are employed in securing the fish-plates or rail-joints of railroad rails, though not restricted to any particular use.

The primary object of the invention is to provide simple, efficient, and inexpensive means for holding the nuts and bolts of rail-joints in normal position, and to prevent the nuts from working loose and dropping off when subjected to sudden shocks or the tremulous motion caused by a passing train.

The invention will first be described with reference to the accompanying drawings, which form a part of this specification, and then pointed out in the claim at the end of the description.

In the drawings, Figure 1 represents a side elevation of a rail-joint embodying my invention. Fig. 2 is a longitudinal section taken on the line II—II of Fig. 1. Fig. 3 is a transverse section taken on the line III—III of Fig. 1. Fig. 4 is a detail perspective view of a portion of one of the fish-plates, and Fig. 5 is a cross-section taken on the line V—V of Fig. 4.

A, A, may denote the usual steel railroad rails having the fish-plates B, B, secured thereto by means of suitable bolts and nuts so as to connect the adjacent ends of the two rails. Said plates are perforated as at b , b , to receive the bolts C, C, which pass through said perforations and corresponding openings in the web of the rails, and the bolts are provided with nuts c , c , on their screw-threaded ends. The plates are further provided with pendent flanges b' , adapted to rest upon the foot or base of the ordinary T-rail, as shown, and their vertically disposed sides may be formed with a slight inward turn or bend, as

at b^2 , which will cause the plates to set out from the web of the rail sufficiently to enable them to slightly yield or spring inward toward the rail when the nuts are screwed down tightly so as to force them against the rail. At either or both sides of the perforations b , are enlargements or protuberances b^3 , which rise from the surface of the plate with a gradual ascent or at a slight angle so that when the nuts are turned so as to ride up the incline and over the protuberance they will be thrown out slightly from the surface of the plate (the latter springing sufficiently to permit) and on passing the protuberance will be prevented from further rotation either forward or back without the aid of a wrench. These protuberances are preferably formed upon the plates in forging so as to constitute integral parts thereof and avoid any liability to become broken or detached, as would be the case if made separable therefrom.

In use the plates are applied to the rails, as shown, the bolts are inserted through said plates and through the web of the rail, and the nuts are screwed upon the bolts, by means of a wrench or other suitable device, and as said nuts are brought into contact with the protuberances they will ride up the inclined faces of the latter, causing the fish-plates to spring or yield inwardly (as indicated by full lines in Fig. 2) and when their angular portions have passed said protuberances said plates will resume their normal position while the nuts will remain confined between said protuberances and cannot be unscrewed without the application of a wrench or other suitable device for this purpose. By these means all danger of the bolts and fish-plates becoming disconnected by sudden shocks or the jar or tremulous motion caused by a moving train will be avoided.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

A combined nut-lock and securing device for railroad rails, comprising an angular fish-plate having a vertically disposed side, and provided with a series of perforations along its median line; the said vertical side having its upper edge slightly turned inwardly to

form a yielding surface or spring, protuberances located on opposite sides of the perforations between the same and adjacent thereto and formed integrally with the fish-plate,
5 the said protuberances having inclined surfaces extending in both directions in the plane of rotation of the nut, a bolt or bolts passing through such perforations and provided with nuts thereon adapted after securing the bolt

to be confined by contact with said protuberances, substantially as described.

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

JOSEPH J. BENTLEY.

Witnesses:

ALONZO UPP,
W. S. NICHOLS.