(No Model.)

J. E. CAMPBELL.

NUT LOCK.

No. 583,248. Patented May 25, 1897.

FIG. 1.

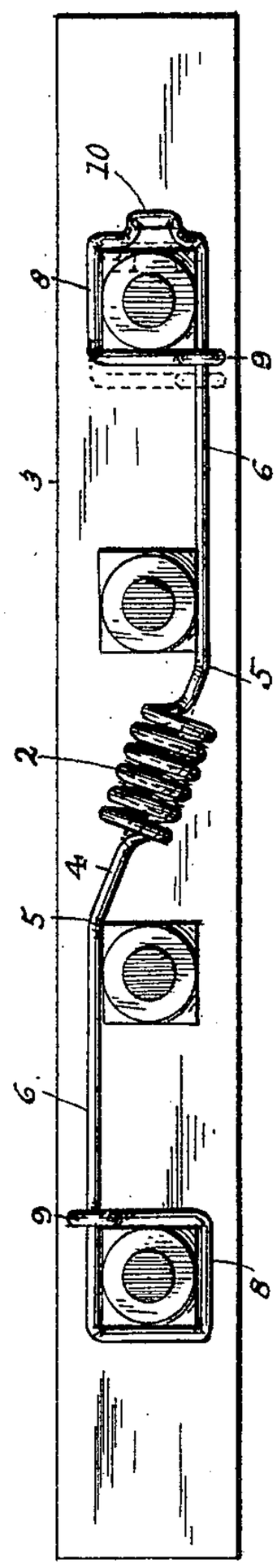
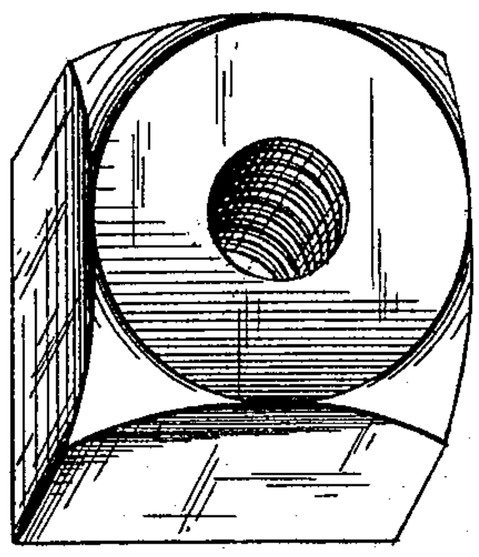


FIG. 2.



WITNESSES

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JOSEPH E. CAMPBELL, OF FAIRFAX, VIRGINIA, ASSIGNOR OF ONE-HALF TO JAMES B. KIDWELL AND E. R. SWETNAM, OF SAME PLACE.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 583,248, dated May 25, 1897.

Application filed November 16, 1896. Serial No. 612,255. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH E. CAMPBELL, a citizen of the United States, residing at Fairfax, in the county of Fairfax and State of Virginia, 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 nut-locks, and is especially designed for use upon the nuts of railway fish-plates.

The object of the invention is to provide a simple, durable, and efficient nut-lock formed, preferably, in one piece and adapted to simultaneously engage each and all of the nuts of a rail-joint and to sustain itself in place by reason of its resiliency. The nut-lock also has provision whereby it may be readily connected to and disengaged from the nuts as required.

The invention consists in an improved nut-lock embodying certain other novel features and details of construction, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation showing the application of the improved nut-lock to a railway-joint. Fig. 2 is an enlarged detail perspective view of the nut *per se*.

Similar numerals of reference designate corresponding parts in both figures in the drawings.

The nut-lock contemplated in this invention is preferably constructed in one piece from a wire blank. This piece of wire may be of any suitable gage and should be resilient. It is provided about centrally with one, two, or more coils 2, which are arranged at its entire length against the adjacent fish-plate. (Indicated at 3.)

The terminal portions of the blank are extended obliquely from opposite sides of the coils 2 to form the inclined portions 4, and each terminal is bent at the point 5 and extended longitudinally, so as to pass beneath the nut of the bolt passing through the end aperture in the rail. This horizontal portion (indicated at 6) is extended sufficiently to pass under the next or second nut from the end of the rail and is then bent into an open rectangular form, as indicated at 8, so as to snugly embrace and extend around said nut. The opposite terminal is extended in a plane parallel to the first-named terminal, passing over both of the nuts of the adjoining rail and provided similarly to the first-named terminal with a rectangular loop which embraces or extends around the second nut from the end of that rail. Finally the extremities of the terminals of the wire are wrapped or coiled around the horizontal portions, as indicated at 9.

After the several nuts have been tightened the rectangular portion at one end of the nut-lock is slipped over one of the end nuts and the horizontal portion 6 caused to bear against one of the flat surfaces of the next nut. The inclined portion of the lock, with the centrally-located coils, are then interposed between the inner nuts and the remaining horizontal portion 6 caused to pass under or over the nut at the contiguous rail. Finally the remaining rectangular portion 8 at the end of the nut-lock is forced over the remaining nut, the central coils enabling the lock to be extended longitudinally sufficiently to permit such operation. In order to facilitate the slipping of the final rectangular portion over the last nut, said portion is provided with a bail-shaped offset 10, adapted to receive the point of a spike or other pointed instrument, which may be used as a pry against the farther edge of the nut, so as to obtain the required purchase for stretching the nut-lock so that it may be engaged with the last nut. This offset also enables the nut-lock to be detached in the same manner by using a pointed instrument as a pry and the edge of the nut as a fulcrum in a manner that will be readily understood. By reference to Fig. 1 it will be noticed that the tendency of the nut-lock to contract in length after it has been applied to the nuts serves to turn the nuts tighter, and this operation is the same upon each and every nut. This adds materially to the value of the nut-lock and prevents any possibility of the ends working loose. By reason of the nuts being held perfectly tight at all times the liability of the threads on the bolts becoming stripped or worn by the constant loosening and tight-

ening of the nuts is entirely overcome, and the threads of both the nuts and bolts are preserved in perfect condition. The normal length of the nut-lock is indicated by dotted lines in Fig. 1, and after the nut-lock has been moved into its operative position so as to embrace the last nut it will be apparent that the tendency of the central coils to contract will cause both of the rectangular end portions of the nut-lock to bind firmly and frictionally against the terminal nuts, thereby obviating any liability of the nut-lock becoming displaced.

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

1. A nut-lock for rail-joints, comprising a longitudinally-extensible strip having an inclined portion intermediate its ends extending obliquely between the inside nuts, terminal portions extending in parallel planes and arranged to bear upon the nuts of one rail on one side and upon the nuts of the other rail on the opposite side, and rectangular loops at the ends of the parallel terminal portions adapted to fit over and embrace the outside nuts, substantially as and for the purpose described.

2. A nut-lock consisting of a longitudinally-extensible strip having its end portions bent to embrace the outer nuts and formed at intermediate points to bear against the inner nuts, the central portion of the strip being provided with one or more coils arranged at one side of the normal plane of the strip, substantially as and for the purpose described.

3. A nut-lock consisting of a longitudinally-extensible strip having rectangular end portions for embracing the spaced nuts, one of said end portions being offset to receive the point of a pry, substantially as and for the purpose described.

4. A nut-lock consisting of a longitudinally-extensible strip having rectangular end portions for embracing the spaced nuts and having a length normally less than the distance between said nuts, one of said end portions being provided with a bail-shaped offset, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOSEPH E. CAMPBELL.

Witnesses:

JAMES B. KIDWELL,

E. R. HOLBROOK.