(No Model.)

# J. N. BRADFORD.

## NUT LOCK.

No. 271,026. Patented Jan. 23, 1883.

Fig. 1.

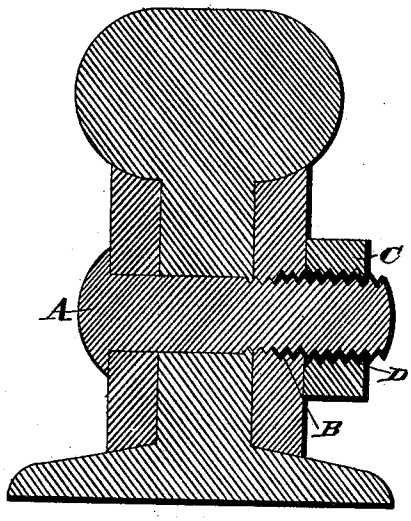
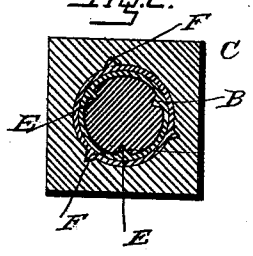



Fig. 2.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES N. BRADFORD, OF BAY CITY, MICHIGAN.

## NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 271,026, dated January 23, 1883.

Application filed December 8, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES N. BRADFORD, of Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Nut-Locks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to means for locking or holding nuts in place upon threaded bolts—such as the bolts connecting the fish-plates of railway-rails—or for other purposes; and it consists in providing the outside threads of the bolt and the inside threads of the nut with a thin coating of tin, solder, or similar metal which is fusible at a low degree of heat, and uniting the bolt and nut by fusion of their respective coatings, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 represents a longitudinal sectional view of a bolt and nut of my improved construction. Fig. 2 is a cross-section through the bolt and nut.

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

The letter A denotes the bolt, which may be of any desired size and construction, according to the purpose for which it is to be used. The threaded end of the bolt is longitudinally grooved at E, dipped or immersed in melted tin, solder, or other metal fusible at a low degree of heat, which is permitted to harden upon it in such a manner as not to destroy or interfere with the outline of the threads. This coating of fusible metal is indicated by the letter B.

C is the nut, the threads of which are in like manner longitudinally grooved at F, provided with a thin coating of fusible metal, D, following their outline.

Prior to screwing the nut upon the bolt it is heated to the melting degree of the fusible metal, thus, as it is screwed upon the bolt-threads, fusing the metal with which these are coated, and causing, as the fused metal again hardens, a metallic union between the nut and the bolt, so as to bind them firmly together. To remove the nut a hot wrench or spanner must be used, so that by heating the nut in the act of removing it the fusible coatings B and D will again melt, and thus dissolve the metallic union between the bolt and the nut.

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

The bolt A, having longitudinal grooves or channels E, and a coating, B, of fusible metal, covering the threads and filling said grooves or channels, substantially as and for the purpose herein shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JAMES N. BRADFORD.

Witnesses:
D. C. SMALLEY,
JOSEPH HEWITT.