J. Baldwin.

Bolt.

No. 76,380, Patented Apr. 7. 1868.

Fig. 1.

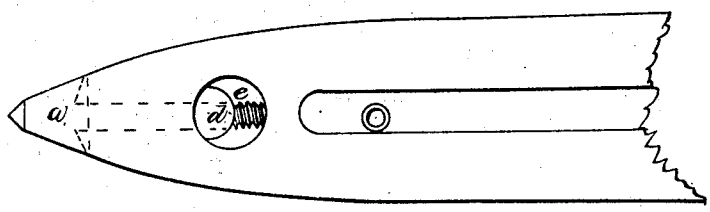


Fig. 2.

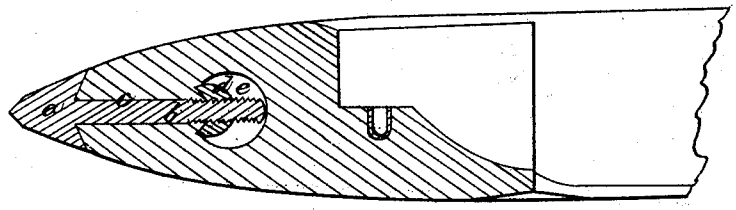
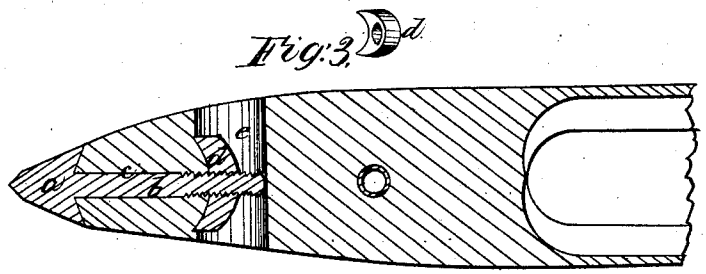


Fig. 4

Fig. 3.



Witnesses;
Edward Griffith.
Damma K. Kemon.

Inventor:
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by his Attorney.
Frederick Curtis

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United States Patent Office.

JAMES BALDWIN, OF MANCHESTER, NEW HAMPSHIRE.

Letters Patent No. 76,380, *dated April* 7, 1868.

IMPROVEMENT IN NUT FOR JOINT-BOLT.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, JAMES BALDWIN, of Manchester, in the county of Hillsborough, and State of New Hampshire, have invented an Improved Joint-Bolt Nut; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, making part of this specification, and in which—

Figure 1 is a side elevation,

Figure 2 a longitudinal and vertical section, and

Figure 3 a horizontal section of a portion of a shuttle, showing the application of my invention.

Figure 4 is a perspective view of my invention.

This invention consists in making the inner face of a screw-nut concave, in order to circumscribe and contract the wood about its bolt, for the twofold purpose of preventing the nut from slipping, and to prevent splitting or breaking away of the wood about such bolt and nut.

My invention has particular reference to the class of nuts known as "joint-bolt" nuts, or those which are inserted within a mortise made in the wood composing the frame, or other object secured by such nut, the sides of the mortise preventing the turning round of the nut while screwing in the bolt. It is a matter of considerable time and labor to make these rectangular mortises, and in time the nut tears away the wood and leaves nothing to prevent its rotation.

In the accompanying drawings, which represent one end of an ordinary shuttle, to which my invention is applied, to show one form of its application, "the shuttle-lip" is shown as composed, in the ordinary manner, of a conical block, *a*, of metal, having a screw-shank or bolt, *b*, extending into a hole, *c*, bored longitudinally into the nose of the shuttle. The nut which constitutes the subject of this invention is shown, in the present instance, at *d*, as oblong or elliptical in form, and with its inner face concave to a sufficient extent to produce a somewhat sharp edge. A circular transverse hole or passage, *e*, is bored laterally through the shuttle, and intersecting the bolt-hole *c*, before mentioned, into which the nut *d* is pushed lengthwise until it comes within the path of the bolt or shank *b*, which is to be screwed into it, the relative size of the hole *e* being such as to prevent rotation of the nut until its inner face comes in contact with the wood. The turning of the bolt in the right direction draws the nut tightly up to the wood. Its concavity compresses the wood immediately about such bolt, while its sharp edge cuts into the wood, and prevents rotation of it, at the same time preventing liability of the wood to split. In the present instance it is made oblong or elliptical, in order to conform in shape to the inner surface of the circular passage or hole *e*, as the combination of the elliptical-shaped boundary of the face of the nut with the concavity of such face produces the exact outline necessary to fit said passage *e*, as will readily be seen by referring to the accompanying drawings.

The circular hole *e* is bored into the wood in much less time than is now occupied in forming the rectangular mortise, and, in addition to this, the outer end of such hole is filled up more expeditiously and in a more perfect manner than in a rectangular one.

I claim as my invention—

A joint-bolt nut, having a concave face, essentially in manner and for the purpose as herein shown and described.

JAMES BALDWIN.

Witnesses:

JAMES F. BALDWIN,

JOHN C. LITTLEFIELD.