

U. B. Vidal,

Lock Nut.

No. 103,689.

Patented May 31, 1870.

Fig. 1.

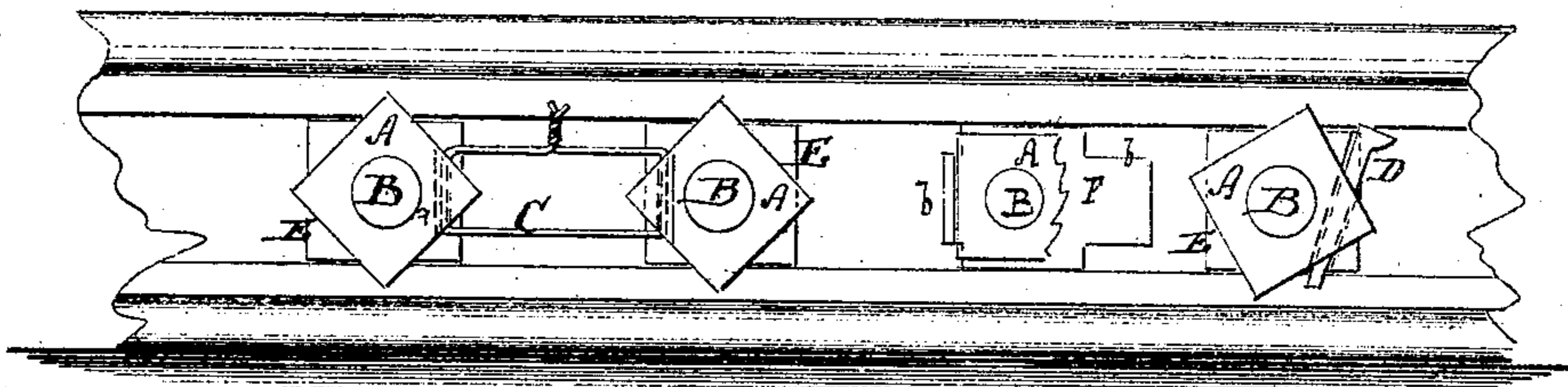


Fig. 2.

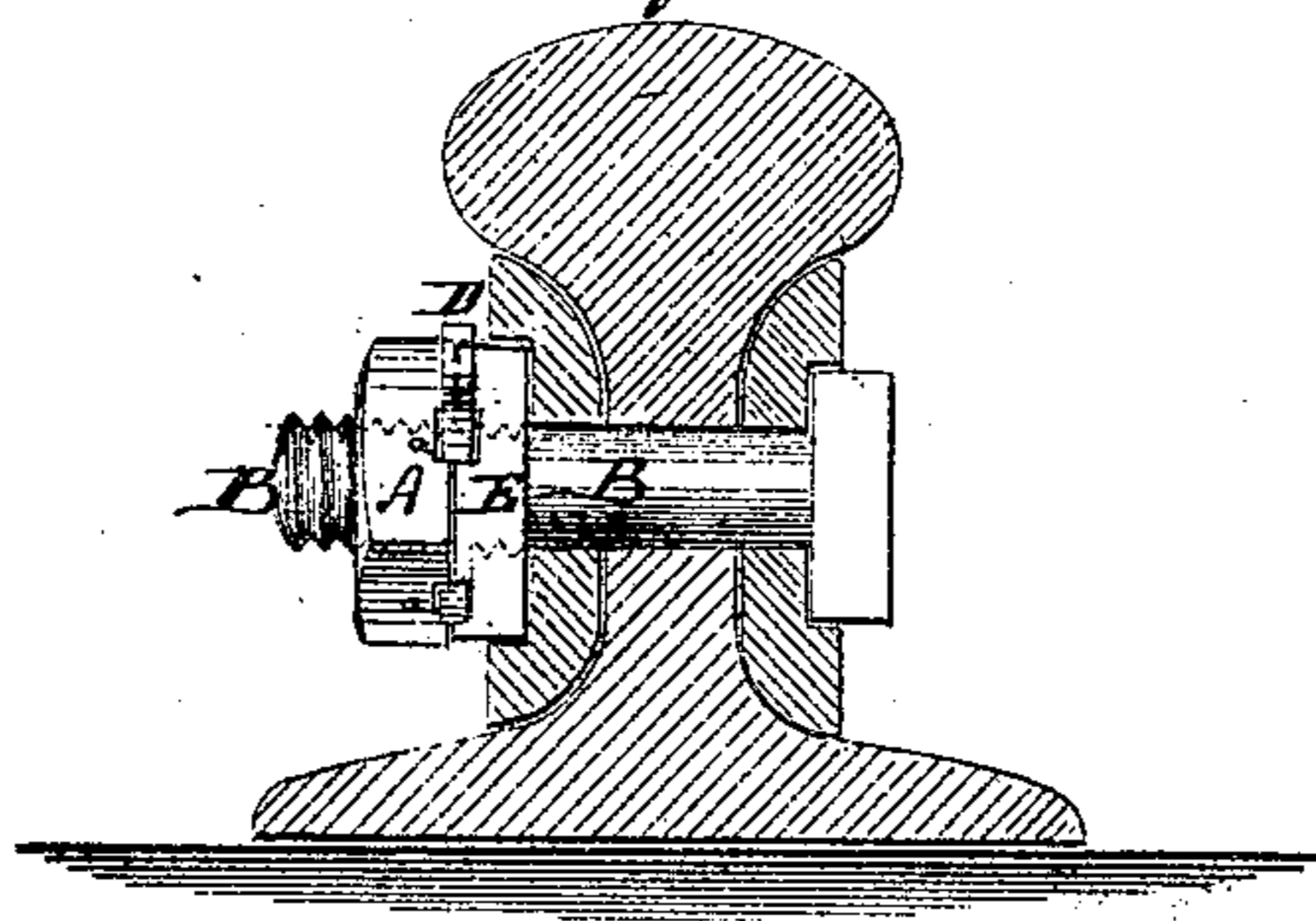


Fig. 3.

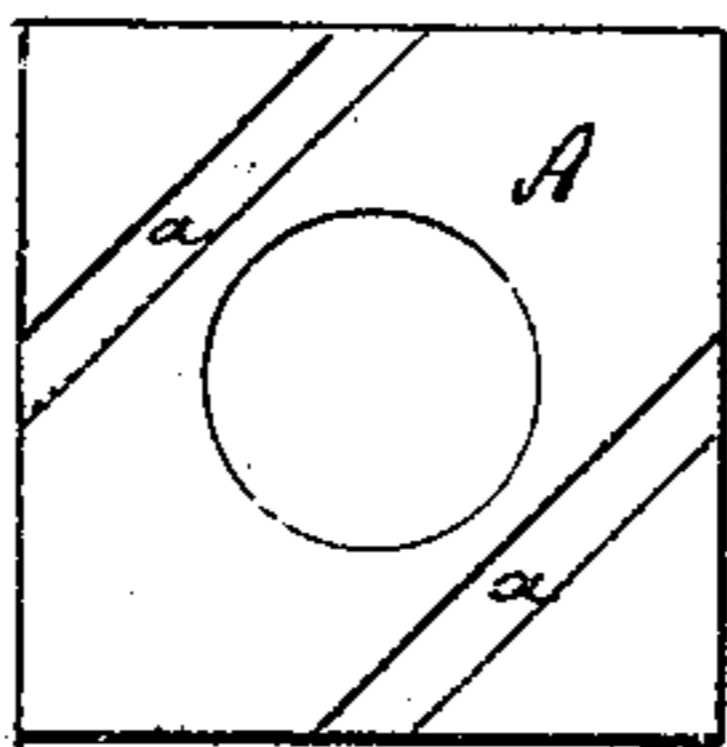
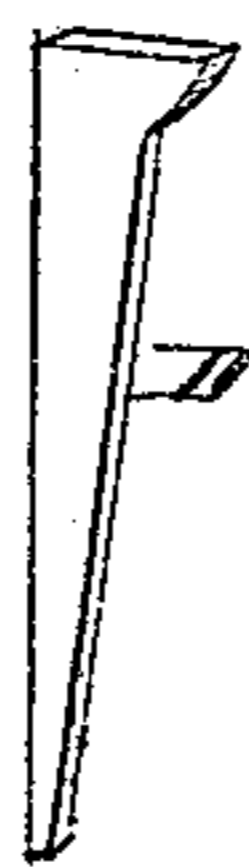


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

ULYSSES B. VIDAL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN LOCK-NUT.

Specification forming part of Letters Patent No. **103,689**, dated May 31, 1870.

To all whom it may concern:

Be it known that I, ULYSSES B. VIDAL, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Lock-Nut; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

Figure 1 represents a face view of a fish-bar provided with my improved lock-nut. Fig. 2 is a side view of the nut. Fig. 3 is a back view of the same. Fig. 4 is a perspective view of the locking-key.

Similar letters of reference indicate corresponding parts.

My invention relates to lock-nuts; and consists in locking two nuts together by means of a wire passed through grooves on their inner faces and twisted together at their ends or fastened in any suitable manner.

A in the drawing represents a nut of suitable size and shape. Its back or inner face has one or more grooves, *a*, as in Fig. 3, which may be arranged diagonally, as shown, or in any other suitable direction, reaching from one edge of the nut a suitable distance toward or to another edge. The grooved nut is locked so that it cannot work loose on its bolt B by being tied to another similar nut, as in Fig. 1, the wire C, which connects the two nuts, pass-

ing through the grooves *a* in their inner faces, as indicated. Neither of the nuts can then be turned.

The nuts may also be locked by means of keys D D to soft-metal washers E, which are placed against their inner faces and counter-sunk or otherwise prevented from turning on the fish-plate or other article to which the bolt is secured.

The key D, being wider than the depth of groove *a*, forms a parallel groove in the washer and locks the nut completely to the same.

Where the bolts are secured to wooden or other soft articles the washers are not required, as the keys can lock the nuts directly to the article.

A plate, F, may, if desired, be placed into a groove of the fish-plate and under the nut, and leave its ends turned up along the edges of the nut, as indicated in Fig. 1. Thereby the bolt will also be effectually locked.

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

Two nuts, A A, recessed on their inner faces, combined with a locking-wire, C, applied as shown in Fig. 1 of drawing.

ULYSSES B. VIDAL.

Witnesses:

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