S. A. BRUMBAUGH.

NUT-LOCK.

No. 172,960. Patented Feb. 1, 1876.

*Fig: 1.*

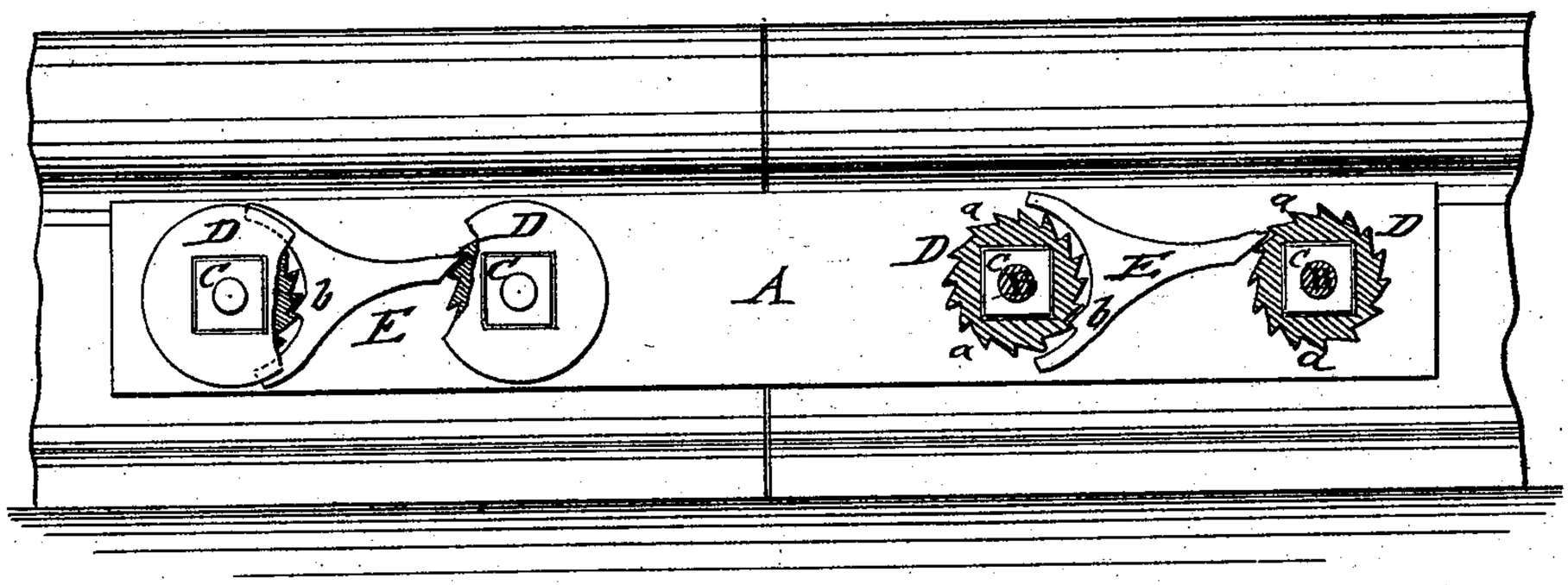
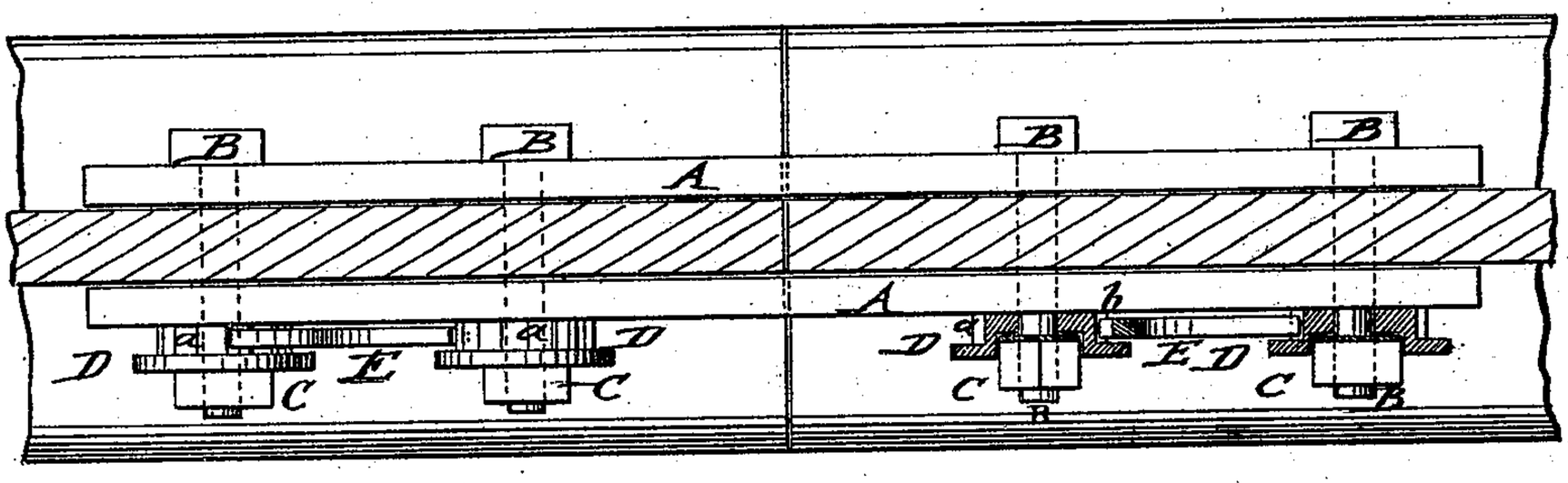



*Fig: 2.*




WITNESSES:

Chas. Nida

John Gouchals

INVENTOR:

S. A. Brumbaugh

BY Munn & Co

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

SAMUEL A. BRUMBAUGH, OF HARRISBURG, PENNSYLVANIA.

## IMPROVEMENT IN NUT-LOCKS.

Specification forming part of Letters Patent No. **172,960**, dated February 1, 1876; application filed January 7, 1876.

*To all whom it may concern:*

Be it known that I, SAMUEL A. BRUMBAUGH, of Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented a new and Improved Nut-Lock, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a sectional side elevation of my improved nut-lock as applied to a rail-joint fish-plate, and Fig. 2 a sectional top view of the same.

Similar letters of reference indicate corresponding parts.

My invention relates to an improved nut-lock for the fish-plates, railway-joints, and for other purposes in which the nuts are exposed to vibratory strain; and the invention consists of screw-bolts with nuts which are set into recesses of washer-plates provided at the under side with ratchet-teeth. The washers of two adjoining nuts are connected by a key that enters the ratchets by a point and tooth at diagonally opposite ends, and locks thereby the nuts.

In the drawing, A represents a rail-joint fish-plate, or any other part of machinery that is to be firmly locked; B, the connecting-bolts, and C, the screw-nuts that are countersunk into correspondingly-recessed washers D. The washers D are provided at the lower side facing the fish-plate with ratchet-teeth *a*, cast or otherwise applied thereto. A key, E, extends from one washer to the other, being made of arc shape at one end, so as to encircle the ratchet of one washer, by whose overlapping flange and raked tooth the key is retained. The opposite end or point of the key E enters the teeth of the adjoining washer. The arc-shaped end of the key is further provided with a projecting tooth, *a*, which is nearer to one end of the same, so as to be diagonal to the point of the key.

When the key is applied, the nut and washer to which the arc-shaped part of the key is applied is screwed up tight, until the point of key rests on the outer teeth of the adjoining washer, which is then screwed up as tightly as possible, so that the point of key catches at inside of a tooth of the same. The washer that engages the point of key is then slightly unscrewed, which forces the tooth of the arc-shaped end of the key in diagonal direction into the first washer, as shown in Fig. 1, so as to produce the perfect locking of the nuts, of which one serves to hold the other rigidly in position.

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

A nut-lock for fish-plates of rail-joints, &c., composed of a connecting-key, locking with an arc-shaped and toothed end into the toothed and recessed washer of one screw-nut, and by its pointed opposite end diagonally to said projection or tooth into the toothed and recessed washer of the countersunk screw-nut of the adjoining bolt, substantially in the manner and for the purpose set forth.

SAMUEL A. BRUMBAUGH.

Witnesses:

S. S. BARRETT,

C. H. KEMP.