J. P. EDWARDS, W. N. B. EDMONSTON & W. PORTER.

NUT-BLANK MACHINE.

No. 173,921. Patented Feb. 22, 1876.

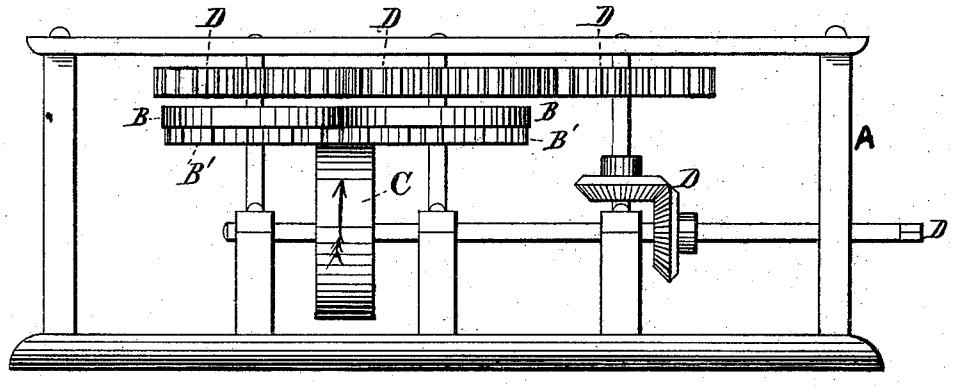

Fig 1

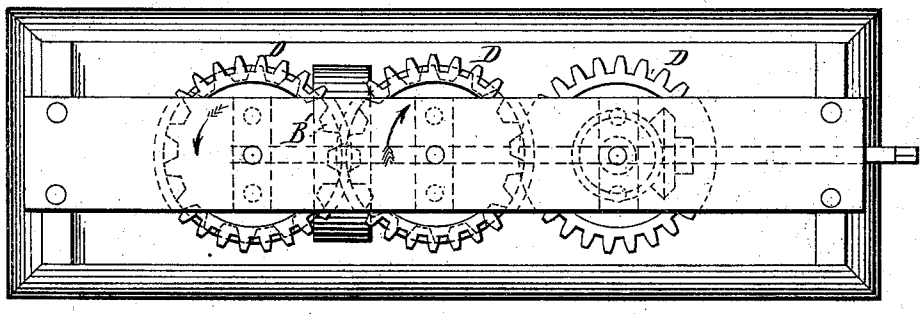

Fig 2

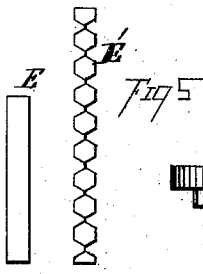

Fig 5

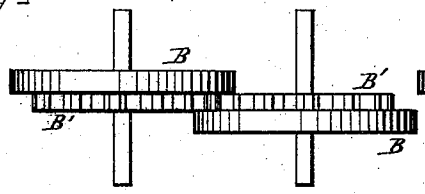

Fig 3

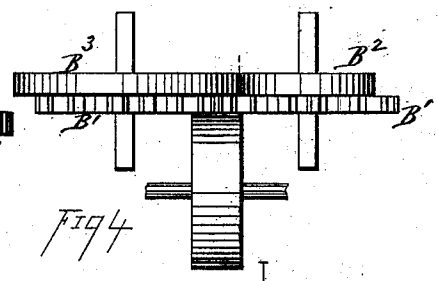

Fig 4

Witnessis

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UNITED STATES PATENT OFFICE.

JOHN P. EDWARDS, WILLIAM N. B. EDMONSTON, AND WILLIAM PORTER, OF CLEVELAND, OHIO.

IMPROVEMENT IN NUT-BLANK MACHINES.

Specification forming part of Letters Patent No. **173,921**, dated February 22, 1876; application filed May 24, 1875.

To all whom it may concern:

Be it known that we, JOHN P. EDWARDS, WILLIAM N. B. EDMONSTON, and WILLIAM PORTER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Nut-Blank Machines; and we 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improved machine for making nut-blanks; and consists in rolling the same in a manner and by rolls constructed substantially as hereinafter set forth and claimed.

In the drawings, Figure 1 is a view, in elevation, of a machine embodying our invention. Fig. 2 is a plan view of same; Fig. 3, a variation of same; Fig. 4, another variation. Fig. 5 represents a bar as it appears before it is rolled, and as it appears after it is rolled.

A is a suitable frame-work for supporting the two vertical rolls B. C is a horizontal roll. D is a suitable gearing, whereby the said vertical rolls B and horizontal rolls C are made to roll in close contact with each other, as indicated by the arrows. B′ are notches formed in the under side of the vertical rolls B. These notches or recesses B′ correspond to the sides of the nut-blanks that are to be formed. The roll C is smooth, but rolls in close contact with the under surfaces of the wheels B.

The operation of the device is as follows:

A bar, E, Fig. 5, is inserted between the vertical rolls B. The rolls C will maintain the said bar E in close contact with the wheels B, and prevent the metal from spreading downward as it is acted upon by the rolls B. The rolls B grasp the bar and draw it through, forming indentations in the said bar, permitting it to retain a small thickness of metal between the nut-blanks, sufficient to hold them together. The action of the notches on the rolls B cause the bar E to emerge from the rolls in the shape shown at E′, Fig. 5—that is, it retains the same thickness, but is elongated in the direction of its length, and the different nut blanks can then be readily clipped off and finished.

In rolling out the bar E in the machine shown in Fig. 1 trouble may be experienced, owing to a fin forming either between the smooth portions of the rolls B or on the under surface of the said rolls B, above the rolls C. In order to avoid the upper fin the rolls may, if desired, be formed as shown in Fig. 4.

In Fig. 4 the smooth portion of the rolls B^2 is recessed in on the angular or die portion B^1, and the notch or die portion B^1 passes beneath the smooth portion B^3 of the other roll, which projects out beyond the angular or die portion.

By this means it will be seen that the fin that might otherwise be formed by the device shown in Fig. 4 is avoided.

So also the lower fin—that is, the one that may form immediately over the roll C—might at the same time be dispensed with by making rolls as shown in Fig. 3, the smooth portion of one roll preventing the lower fin, while the smooth portion of the other roll prevents the formation of the upper fin.

In the last-named case (shown in Fig. 3) the roll C is dispensed with, as it would be impossible for the bar E to come in contact with it.

It is, however, deemed not necessary to employ the variations shown in Figs. 3 and 4, if particular care is taken in the adjustment of the rolls B and C. (Shown in Fig. 1.) The rolls B are made removable, so that other rolls for making different sizes of nuts may be inserted. So, also, the rolls themselves may be made slightly adjustable, so that they can be brought nearer to or farther from each other and from the rolls C, as necessity may require.

We are not aware that a machine for making nut-blanks has ever before been made whereby a bar is rolled out between vertical rolls; nor are we aware that such a machine has ever before been made wherein two vertical rolls have been combined with one horizontal roll.

What we claim as new, and desire to secure by Letters Patent, is—

1. In a machine for making nut-blanks, the combination of the two vertical die-rollers B, substantially as and for the purpose described.

2. The combination of the vertical die-rolls B and horizontal roll C, the whole forming a machine whereby the bar E is drawn into the form of a nut-bar, E′, substantially as and for the purpose described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN P. EDWARDS.
WILLIAM N. B. EDMONSTON.
WILLIAM PORTER.

Witnesses:
H. T. HOWER,
FRANCIS TOUMEY.