J. R. BLAKESLEE.

Improvement in Machines for Making Nuts.

No. 129,520. Patented July 16, 1872.

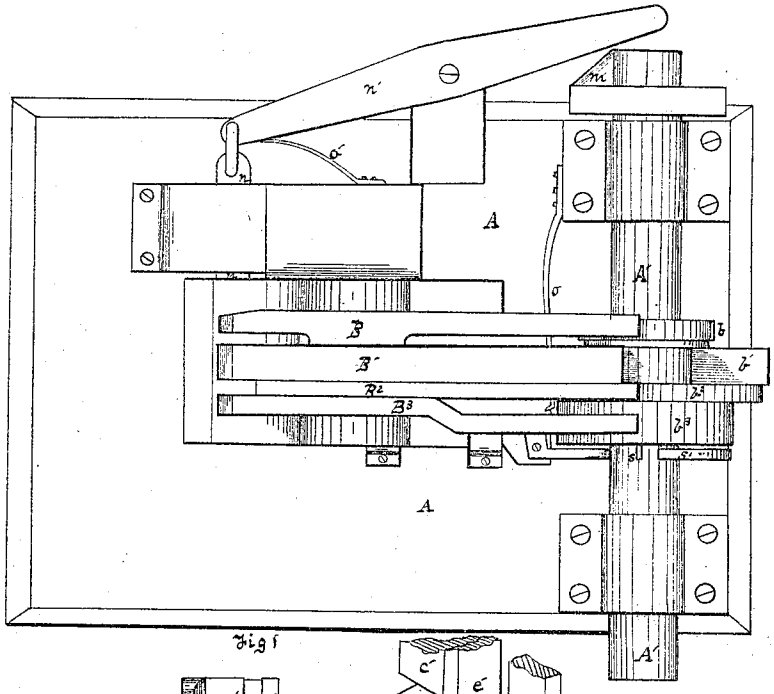


Fig 1

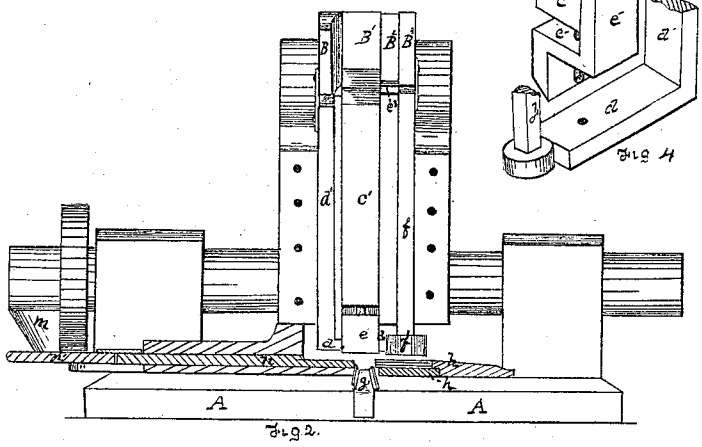


Fig 2.

Fig 4

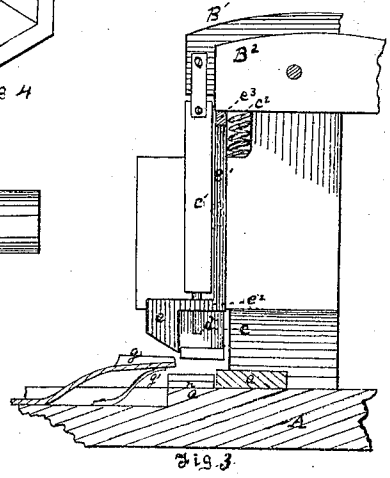


Fig 3

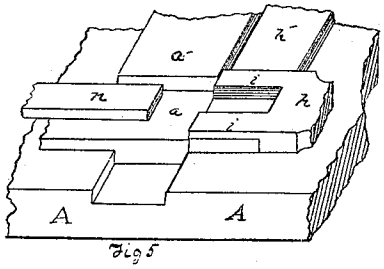


Fig 5

Witnesses

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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

JOHN R. BLAKESLEE, YOUNGSTOWN, OHIO.

IMPROVEMENT IN MACHINES FOR MAKING NUTS.

Specification forming part of Letters Patent No. 129,520, dated July 16, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, JOHN R. BLAKESLEE, of Youngstown, in the county of Mahoning and State of Ohio, have invented a new and useful Improvement in Nut-Machines; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of my improved machine. Fig. 2 is a front elevation with the end cap removed. Fig. 3 is a longitudinal vertical section through the die-box. Fig. 4 is an enlarged rear perspective view of the vertically-moving operative devices; and Fig. 5 is an enlarged perspective view of the remaining operative devices.

Like letters of reference indicate like parts in each.

My improvement relates to the construction of a machine for making nuts, in which, by means of certain features of construction and combination, as presently to be described, the work is facilitated and cheapened.

To enable others skilled in the art to make and use my improvement, I will proceed to describe its construction and mode of operation.

The operative devices are arranged in or on any suitable frame or foundation, A. Power may be communicated to the dies in any known way, one of which is shown in the drawing, by means of a shaft, A′. On this shaft is a series of cams, eccentric, or tripping-arms, b b^1 b^2 b^3, according to the kind of motion desired, whether sudden or progressive. Under the punch is a die-box, composed in part of a bottom plate a, and a back die, a^1,. Immediately in front of this die-box is a guide, g, having a trough-like form, such that, when the heated bar is fed along therein, its forward end will be guided over the bottom plate a and against the back die a^1, and in proper position to be acted on, as hereinafter described. Immediately, then, the knocking-arm b, through the lever B, causes a stem, d', to be depressed. This stem has a lateral holding and swaging arm, d, at its lower end, which comes directly over the bottom plate a, and constitutes the top-plate of the die-box. As it comes down it presses the forward end of the bar down and holds it securely in place with any desired degree of pressure while being cut and punched. Then the cam b^1, operating through the lever B^1 and stem c^1, forces downward a punch, c, to punch an eye in the forward end of the bar. In the rear of this stem c^1 is a stem, e^1, which at its lower end has an arm, e^2, projecting forward under the end of the stem c^1. The punch c operates through this arm, e^2, and on the outer end of the arm is a downwardly-projecting shear, e, which, being depressed by the end of the stem c^1 bearing the arm e^2, comes down on the guide g, depresses it and the spring g', by which it is held up, and cuts off the nut or nut-blank from the inner end of the bar, and then retains its position for a little time, and in so doing constitutes the front wall of the die-box. As soon as the punch has done its work a spring, c^2, bearing against the under side of the forward end of the lever B^1 withdraws the punch from the nut. During this time the top plate d and the front shear e remain in position, the latter being held down by the forward end of its lever B^2 bearing on a shoulder or projection, e^3, of the stem e^1. While this operation has been going on the inner end of the slide u has constituted the fifth side of the die-box. A separate slide, operated from the rear, may constitute the sixth side, if a close die-box be desired; but I do not consider it necessary to the successful operation of the machine.

As the motion continues, the rear ends of the levers B B^2 are left free. Then the spring g' operates to raise the guide g and shear e. The top die d is raised in the same manner, or by the preponderance of weight in the rear end of its lever B. Next, a laterally-acting cam, m, on the outer end of the shaft A′, acting through a lever, n', causes the slide u to advance, and slides the nut along the bottom plate a into a recess of suitable size, which is formed by the plate h. This recess has a sliding bottom, h', and is directly under a stamp, f, attached to a stem, f'. This stamp is operated from a knocking arm, b^3, on the shaft A′, through a lever, B^3, so as to stamp the face of the nut to any desired form, plain, convex, concave, or washer-shaped. As soon as the stamping is done a pin, s, engages an arm, s', which extends back from the slide h', so as to withdraw the slide from under the nut

and allow it to fall through a hole in the bed A of the machine, ready for market. The slide is carried forward again by a spring, *o*, and a like spring, *o'*, brings back the slide *u*, so that the devices are in position for making another nut. The plate *h* forming the recess may be attached to the swage *f*, so that the two shall constitute a single device; but in such case the swage and the side pieces *i i* forming the recess should be hung to one stem, and a separate stem work down through it with which to discharge the nut after it has been swaged.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine for making nuts, I claim the stem *d'* and laterally-projecting arm *d*, for holding and swaging the bar, in combination with a die, *a*, and downwardly-projecting shear *e*, for cutting off the nuts, substantially as described.

2. In a machine for making nuts, I claim the stem *d'* and laterally holding and swaging arm *d*, in combination with the shear *e* and punch *c*, arranged in respect to each other, substantially as described, whereby the holding, swaging, and cutting-off and punching of the nut is effected without removal from its seat, as set forth.

In testimony whereof I, the said JOHN R. BLAKESLEE, have hereunto set my hand.

JOHN R. BLAKESLEE.

Witnesses:

JOHN H. THORN,

A. S. NICHOLSON.