

P. E. AUSTIN.
FEED DEVICE FOR POWER PRESS.

No. 108,312.

Patented Oct. 18, 1870.

Fig. 1.

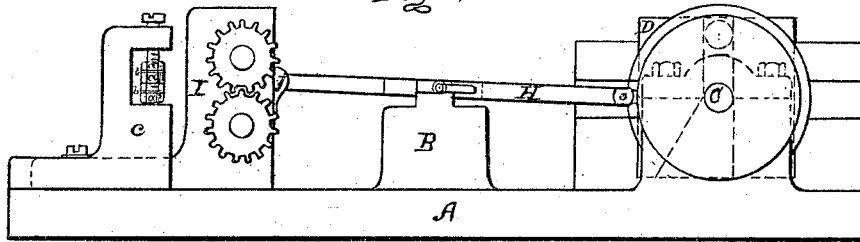


Fig. 2.

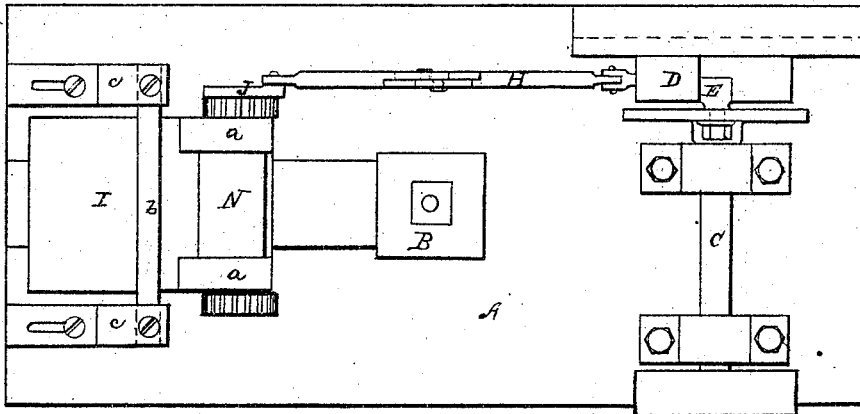


Fig. 3.

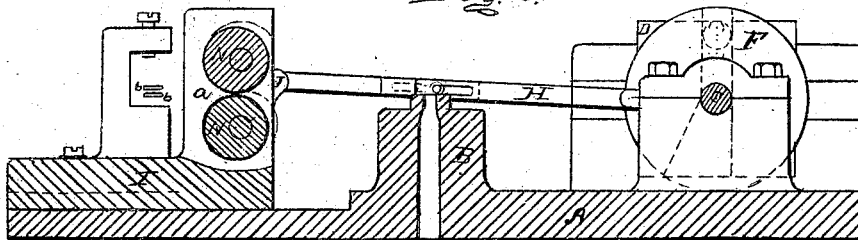
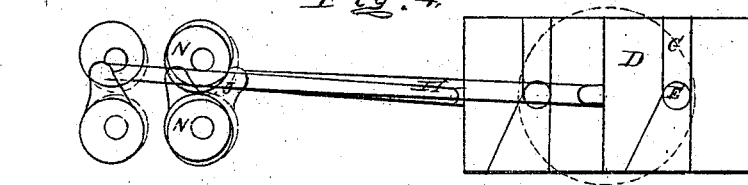


Fig. 4.



Witnesses

Chas. H. Webb
H. H. Blackman

Phineas E. Austin
by atty's *Sanford & Prescott* Inventor

United States Patent Office.

PHINEAS E. AUSTIN, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO HIMSELF AND LEANDER BUELL, OF SAME PLACE.

Letters Patent No. 103,312, dated October 18, 1870, antedated October 1, 1870.

IMPROVEMENT IN FEED DEVICES FOR POWER-PRESSES.

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

To all whom it may concern:

Be it known that I, PHINEAS E. AUSTIN, of New Haven, county of New Haven and State of Connecticut, have invented a new and useful Improvement in Feed for Power-Presses; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon; said drawings constitute part of this specification, and represent in—

Figure 1, a side view of my improved feed; in

Figure 2, a top or plan view of the same; in

Figure 3, a longitudinal section, showing the rolls (as grasping the metal;) and in

Figure 4, the eccentric rolls and slide, in the two positions which they assume when the crank is on its extreme centers, both forward and back.

Similar letters of reference, when they occur in the separate views, indicate like parts.

My invention relates to an improvement in an intermittent feed for power-presSES, and consists in a device for grasping the metal and drawing it forward a given distance under the die, and returning over the said metal to the starting point without altering its position.

I obtain this result by means of a set of eccentric or cam-rollers, which are held upon a slide, and operating in connection with a rod which first closes the said rolls upon the metal, and afterward operates the slide.

My invention is not only adapted to power-presSES, but to other machines where this style of feeding device is used.

The particular advantage of my improvement is that by its use I am enabled to operate upon the heated metal as easily, and with the same accuracy, as can now be done upon cold metal, thus adapting a common power-press to forming hot-pressed nuts as readily and easily as in a machine exclusively for that purpose, thereby doing away with the great expense of that class of machinery.

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

A is a bed-plate, placed upon the bed-piece of the press, and constructed to fit under or around the die B.

I is a slide, which rests in bearings in the bed-plate A.

Upon this slide are placed standards *d d*, which sustain the eccentric rolls N N.

The said eccentric rolls are geared together, and upon one a crank, J, is fastened.

To the crank J one end of the connecting-rod H is

attached, while the other is connected with the driving-shaft by means of the disk or crank F.

The rod H may be made in the form shown in figs. 1, 2, and 3, in two parts, and held together by a bolt or pin, fast in one portion of the rod, the said bolt or pin working in a slot in the other part of the rod, thus allowing one end of the rod to move a given distance without imparting motion to the other end. The object of this is to give lost motion for a certain portion of the revolution, and gain time for the operation of the press.

The slide D is furnished with a groove, G, the upper portion of which is formed with the two sides parallel with each other. In the lower portion, one of the sides diverges at a given angle, thus forming a groove, which is wider at the bottom than at the top, as shown in fig. 4.

The roller E, upon the disk or crank F, travels in the said groove, and operates the slide D and connecting-rod H thereto attached, when the roller E is brought into the lower portion of the groove G. The slide remains stationary when the said roller is traveling across the wide portion of the groove, and in this way the lost motion is gained.

b b are springs, held in proper supports *c c*, and are placed over the slide I and back of the eccentric rolls. The object of these springs is to guide and hold the metal as it is being operated upon by the rolls.

This completes the construction of my improvement.

The operation is as follows:

The metal to be operated upon is first introduced between the springs *b b*, and passed forward and between the eccentric rolls N N, as they stand open, as shown in red, fig. 4. When this is done the machine is set in motion.

The revolution of the driving-shaft O imparts motion, by means of the crank or disk F, to the connecting-rod H, causing it to advance, which operates the crank J, and revolves the two eccentric rolls N N (they being geared together) until they strike the metal. This prevents a further revolution of the rolls N N; but as the connecting-rod H continues to advance, the rolls N N and the slide I are drawn forward, as shown in black, fig. 4, to the full length of the stroke, together with the metal which is grasped between the said rolls. When in this position, sufficient lost motion must be given to allow the press to perform its work.

In receding, the connecting-rod H first operates upon the crank J and forces it back, thus opening and releasing the rolls N N from the metal, and afterward force the rolls and slide I back to their original position in readiness for the next operation.

While I prefer to employ two eccentric rolls N N, it will be observed that a stationary bed may be employed in place of one of the rolls, and the work clamped between the said stationary bed and eccentric roll. I therefore wish to be understood as claiming such a stationary, as a proper equivalent or substitute for one of the rolls N N.

Having thus fully described my invention,

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

The combination of the eccentric rolls N N, crank J, slide I, rod H, and crank F, substantially in the manner herein set forth.

Witnesses: PHINEAS E. AUSTIN.

RUFUS H. SANFORD,

FRANK PRESCOTT.