

A. H. MERRIMAN.
POWER-PRESS.

No. 170,101.

Patented Nov. 16, 1875.

Fig. 2.

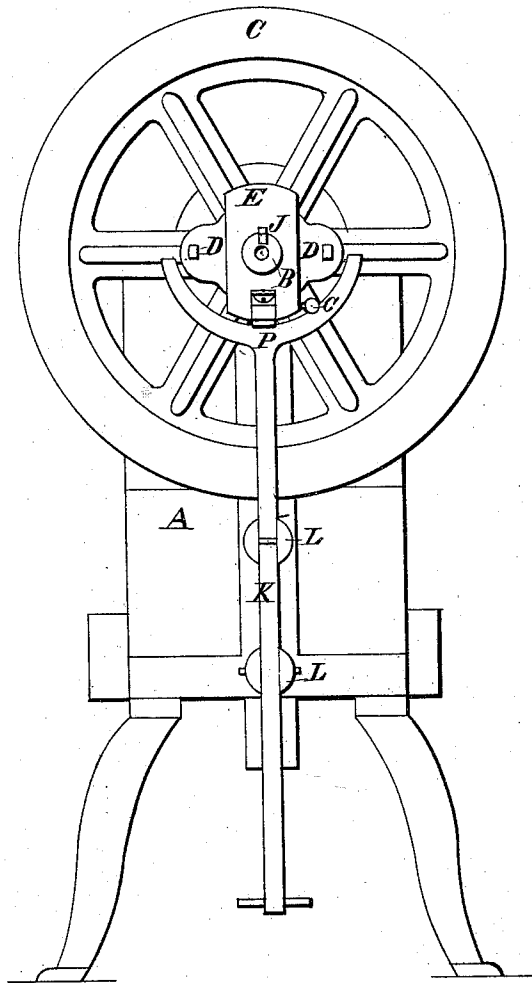
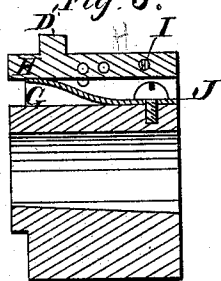


Fig. 3.



Witnesses
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ALANSON H. MERRIMAN, OF WEST MERIDEN, CONNECTICUT.

IMPROVEMENT IN POWER-PRESSES.

Specification forming part of Letters Patent No. **170,101**, dated November 16, 1875; application filed October 22, 1875.

To all whom it may concern:

Be it known that I, ALANSON H. MERRIMAN, of West Meriden, county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Power-Press; and to enable others skilled in the art to make and use the same, I will proceed to describe, referring to the drawings, in which the same letters indicate like parts in each of the figures.

In the accompanying drawings, Figure 1 is a side elevation of the body of the press, one leg being removed to show the foot-lever device for operating the clutch, and a central section view of the balance-wheel and clutch device. Fig. 2 is a back-end elevation. Fig. 3 is a central section of the clutch-collar.

A is the body of the press. B is the operating-shaft, fitted into the head of the press in the common way. C is the balance-wheel, fitted closely, and turning freely upon the shaft B, having a clutch-dog, D, secured firmly into the end of its hub.

I propose to use one or more of these clutch-dogs D, the object of which is to save time in making connection; as, for instance, if there should be a slow motion or revolution of the balance-wheel, and the latch is pressed inward instantly after passing the dog D, (when there is but one,) there will be nearly one revolution of the wheel lost time. If there be two dogs, D, there could not be over one-half revolution of the wheel lost time; and if there were three, there could not be over one-third revolution of the wheel lost time. But, with a quick motion of the wheel, it is believed one dog, D, will work the best.

E is a clutch-collar, fitted and secured firmly upon the shaft B by a key, F, in close proximity to the hub of the balance-wheel. This collar may be made round in its diameter; but I preferably flatten, or form parallel sides, and turn down a necking, E', on one end—that next to the balance-wheel—to form a pathway for the clutch-dog D to revolve in. In one edge of this collar is formed a groove, G, into which is fitted a vibrating latch, H, hinged near the outer end by a pin, I. Underneath this latch, upon the bottom and near the outer end of the groove, is secured a spring, J, which serves to press out

the inner end of the latch, so that the dog D, by the revolution of the balance-wheel, will come in direct contact with the end of the latch, and cause the shaft to revolve with the balance-wheel.

The head of the screw which secures the spring J also serves as a detent, to prevent the dog D' being thrown out too far.

K is a treadle-lever, secured by a pin in a stud, L, and vibrates in the end of a slitted stud, L', and is limited in its vibrating movement (back and forth) by pins in the stud L'. b is a pull-spindle, hinged to the lever K, just below the stud L, horizontally back through a bracket, c. A spiral spring, a, is placed onto the inner end of this spindle. One end of said spring bears against the bracket c, and the other end against the screw-threaded collar d, fitted to the screw on the spindle b, by means of which the force or power of the spring is increased or diminished.

On the upper end of this lever K is formed a circular guide, P, the diameter of which is larger than the diameter of the clutch-collar, and the bottom of its circle, directly under the shaft, is arranged closely to the clutch-collar, so that the dog D' on the latch H, when the pressure is removed from the treadle, and the upper end of the lever is thrown back by the action of the spring a on spindle b, will strike the edge of the guide P, and be depressed into the groove and out of contact with the dog D in the hub of the balance-wheel, thus disengaging the clutch, and holding it until the pressure is again produced upon treadle of the lever.

When it is desirable to lock the latch in its depressed condition, as shown in the guide in Fig. 2, a pivot is inserted through the collar and latch, or by turning the set-screw c into an orifice in the latch.

While in this locked condition, it will be impossible by the revolution of the wheel to cause a movement of the shaft.

Thus, it will be seen that, by pressing down the treadle, (after the latch is unfastened,) the dog D will come in contact with the end of the latch H, and cause the shaft to revolve with the balance-wheel; and when the pressure is removed from the treadle, the pull-rod and spring will throw back the upper end of

the lever and guide directly in contact with the dog D', and bring the common tool-stock always in an elevated position.

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

The combination and arrangement, in a power-press, of the clutch-collar E, latch H, spring J upon the shaft B, dog D, one or

more, in the hub of wheel C, guide P, and lever K, substantially as and for the purpose set forth.

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