(No Model.)

2 Sheets—Sheet 1.

C. H. WESTON.

TOGGLE PRESS.

No. 276,108. Patented Apr. 17, 1883.

Fig. 2.

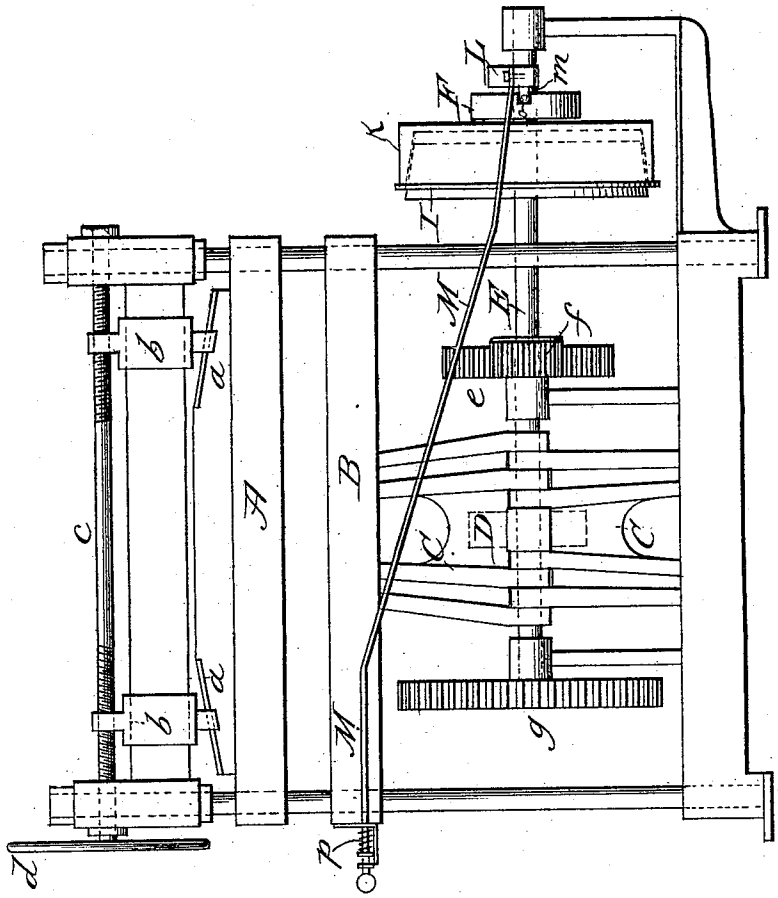
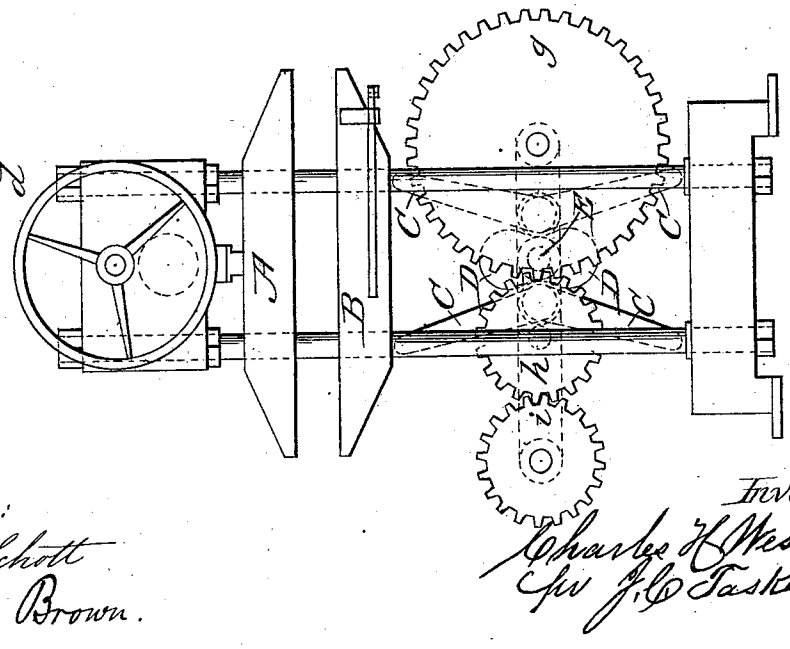


Fig. 1.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

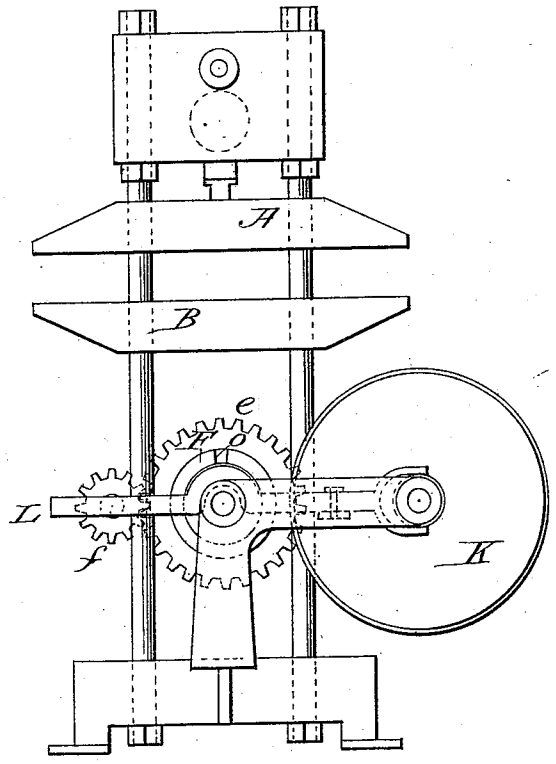


Fig. 5.

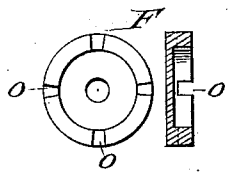
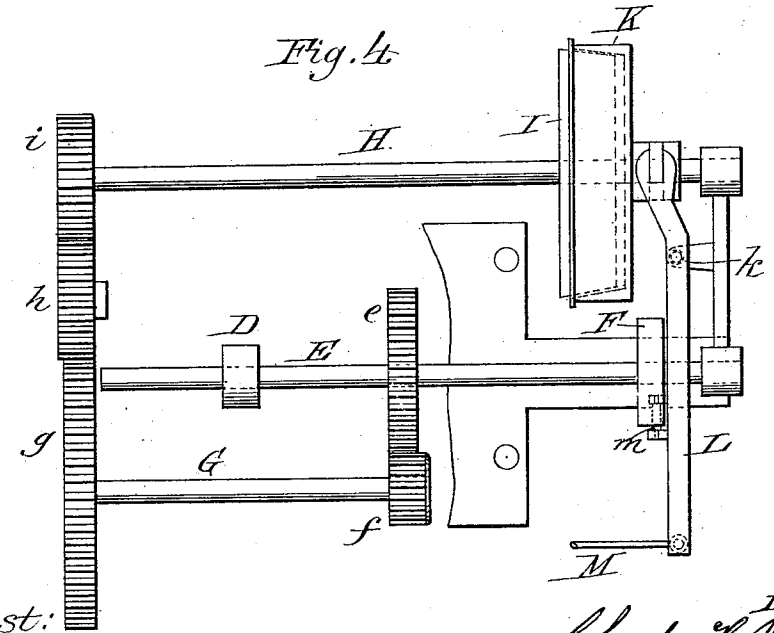


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES H. WESTON, OF YARMOUTH, MAINE.

TOGGLE-PRESS.

SPECIFICATION forming part of Letters Patent No. 276,108, dated April 17, 1883.

Application filed March 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. WESTON, a citizen of the United States, residing at Yarmouth, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Toggle-Presses; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of toggle-presses in which the toggles are extended by the pressure of a cam; and it consists in mechanism for starting and stopping the press, whereby it is alternately opened and closed at each quarter-revolution of the cam, as hereinafter more fully set forth.

In the annexed drawings, illustrating my invention, Figure 1 is an end view of a double toggle-press provided with my improved mechanism for starting and stopping the same. Fig. 2 is a side elevation of the same. Fig. 3 is an end elevation. Fig. 4 is a plan view, and Fig. 5 represents a plan and section of the stopping-plate.

Like letters of reference designate like parts.

The upper plate, A, of the press is adjusted by means of the inclined planes *a a*, hangers *b b*, screw-rod *c*, and wheel *d* in the usual manner. The lower plate, B, is raised by the double toggles C C, that are extended by a cam, D, on a shaft, E, which also carries a gear, *e*, and a stop-plate, F, said shaft passing between the knees of the toggles, and being actuated as hereinafter explained. Motion is communicated to the shaft E by a pinion, *f*, meshing with the gear *e*, said pinion or gear *f* being mounted on a shaft, G, carrying a gear, *g*, which meshes with a gear, *h*, that is journaled to the frame of the press and in turn meshes with a gear, *i*, on the driving-shaft H. This driving-shaft H carries a tight pulley, I, to which power is applied by belting on a hollow loose pulley, K, that is connected with a shipper, L, which is pivoted at *k*. The shipper L is provided with bearings for a roller, *m*, or similar device for catching into one of a series of notches, *o*, formed in the face of the stopping-plate F, four of said notches being preferably provided, so that the cam-shaft E will be stopped at each quarter-revolution. The roller *m*, or equivalent catching device, is held to its engagement with the notched stopping-plate F by means of a rod, M, that connects one end of the shipper L with some fixed part of the press, said rod M being provided with a spring, *p*, or its equivalent.

The press is started by the operator pushing on the end of the rod M, which forces one end of the shipper L outward, disengaging the roller *m* from the notch in the stopping-plate F, thus leaving the cam-shaft E free to rotate, the other end of the shipper L at the same time forcing the hollow pulley K onto the fast pulley I, carried by the shaft H, thereby causing the same to revolve and transmit motion through the gears *i*, *h*, *g*, *f*, and *e* to the cam-shaft E with the effect of imparting a partial rotation to the cam D, so as to actuate the toggles and raise the lower press-plate. As soon as the press is started the rod M is relieved of pressure, and when the shaft E, with its cam D and stopping-plate F, has made a quarter-revolution, one of the notches *o* in the face of said stopping-plate will be presented to the roller *m*, carried by the shipper L, and be forced into engagement therewith by the tension of the spring *p*, carried by the rod M, which at the same time causes the shipper L to disengage the pulleys I and K, thus stopping the press at each quarter-revolution of the cam. When the cam D has been rotated sufficiently to again bring its long diameter into a vertical line the weight of the plate B, resting on the toggles, causes them to bend, so as to open the press.

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

1. In a toggle-press, the combination, with the toggles C C, and shaft E, carrying cam D and notched stopping-plate F, of the shipper-bar L and spring-rod M, substantially as described.

2. In a toggle-press, the combination, with the cam-shaft E and stopping-plate F, having

notches *o o*, of the shipper-bar L, carrying roller *m*, and the rod M, provided with spring *p*, substantially as described.

3. In a toggle-press, the combination of the plates A B, toggles C C, shaft E, carrying cam D and notched stopping-plate F, the shipper L, carrying roller *m*, the spring-rod M, pulleys A and K, shafts H G, and gears *e f g h i*, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. WESTON.

Witnesses:
WM. H. WESTON,
R. HARDING.