

# D. Dick, Cotton Press.

No. 5,850.

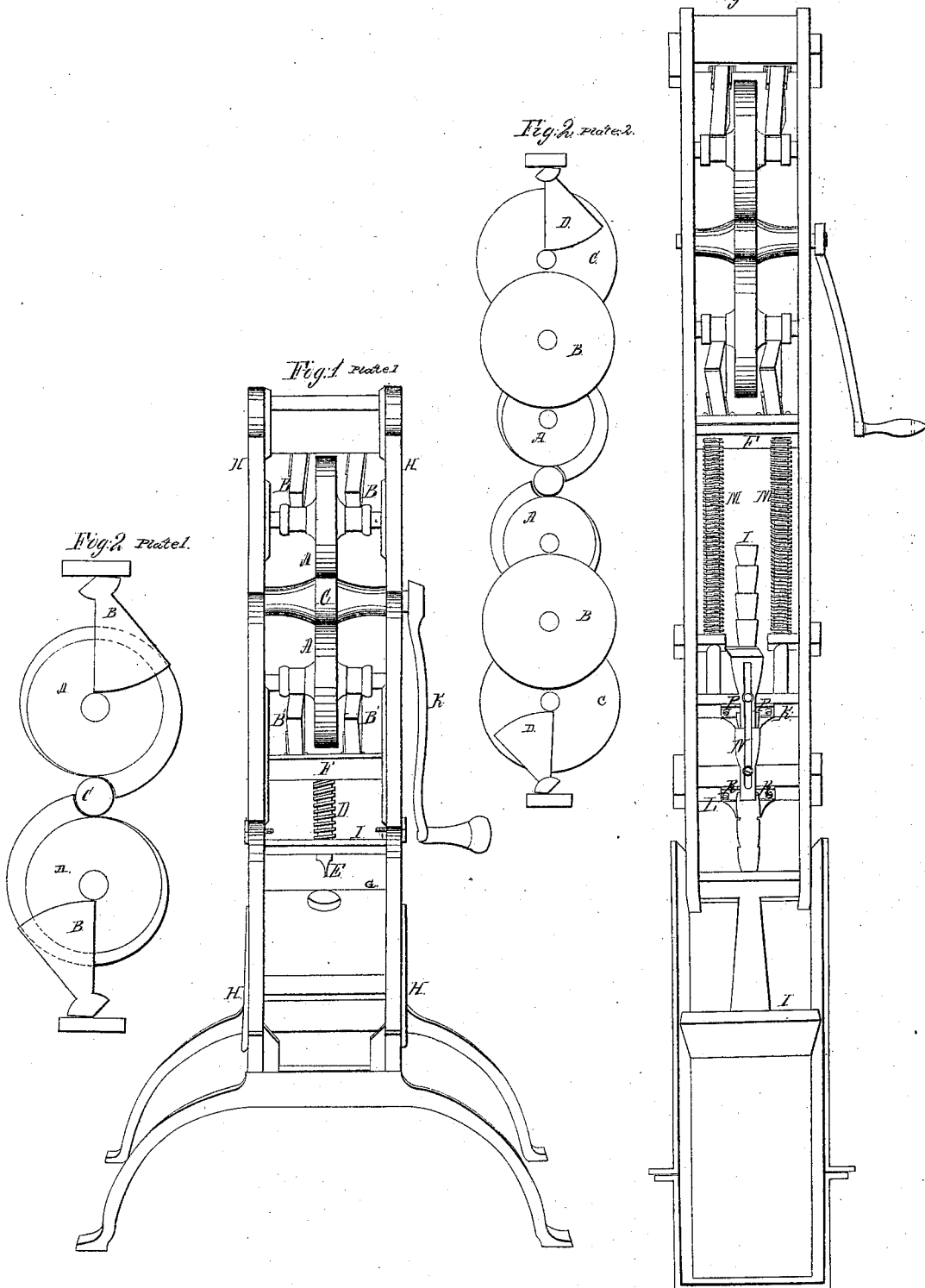
Patented Oct. 17, 1848.

Fig. 1 plate 2.

Fig. 2 plate 2.

Fig. 1 plate 1.

Fig. 2 plate 1.



# UNITED STATES PATENT OFFICE.

DAVID DICK, OF MEADVILLE, PENNSYLVANIA.

## IMPROVEMENT IN PRESSES.

Specification forming part of Letters Patent No. 5,856, dated October 17, 1818.

*To all whom it may concern:*

Be it known that I, DAVID DICK, of Meadville, in the county of Crawford and State of Pennsylvania, have invented a new and useful machine, which I denominate the "Eccentric Wheel and Sector Anti-Friction Press;" and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, Plate 1, is a perspective view, and Fig. 2 is a side sectional view. Plate 2, Fig. 1 is a perspective of the same, with the attachment of a ratchet-piston with its accompaniments; and Plate 2, Fig. 2 is a side view of another method of operating the machine in connection with the ratchet-piston.

A A, Plate 1, Fig. 1, are two eccentric wheels. B B B' B' are four sectors on which the axes of the eccentric wheels A A revolve. C is a center wheel placed between and in contact with the wheels A A. F is a follower on which the sectors B' B' have their bearing. D is a piston attached to the follower and surrounded by a helical spring. I is a cross-bar through which the piston passes, and on which the helical spring presses. H is the frame inclosing all.

When put in operation, the center wheel, C, is made to revolve by means of the lever K, which carries or causes the eccentric wheels to revolve right and left, and consequently, after having made one revolution, by virtue of their eccentricity, the follower, with its attachment, is forced down the distance of the sum of the eccentricity on each of the wheels A A. After operation the helical spring at D forces or returns all the moving parts to their original position before operation.

Plate 2, Fig. 1 is a perspective view of the press as before described, with the addition of a ratchet-piston and its accompaniments, illustrating the mode or plan of applying the press to the compressing of such yielding substances as require a greater amount of traverse than can conveniently be obtained by one revolution of the eccentric wheels. Thus I is a ratchet-piston. K is a follower through which the piston I passes. L is a permanent bar through which, also, the piston I passes.

M M are two columns surrounded with helical springs, connecting the follower K with the follower F. P P are a pair of dogs or catches attached to the follower K, and R R are another pair of dogs or catches attached to the bar L. At the commencement of the operation the dogs P P are closed into a pair of the notches in the piston I. One revolution made of the eccentric wheels of the press puts down the follower K, with the piston, the distance of one pair of notches. The dogs R R close into the notches as soon as a pair of the notches get below the bar L, and prevent the return of the piston. The follower F then moves back as the press is relaxed, carrying with it the follower K, until the dogs P P close into another notch. The two followers F and K are again forced down until the dogs R R close into another pair of notches, and thus the operation proceeds until the piston has passed through the distance containing the notches. N is a movable double wedge which is situated between the two pairs of dogs, by which, when forced forward, the dogs are forced out of the notches of the piston to admit of its return.

Fig. 2, Plate 2, is a varied plan for operating the press in connection with the ratchet-piston, the advantage of which is that the press can be operated with a continuous motion (without relaxing at every pair of notches) until the piston has passed through the whole extent of it. Thus the axes of the wheels A A bear on the periphery of the wheels B B, and the axes of the wheels B B bear upon the periphery of the wheels C C, the axes of which bear on the face of the sectors D D. Thirty-six revolutions of the eccentric wheels A A produce six revolutions of the pairs of wheels B B, six revolutions of the pairs of wheels B B produce one revolution of the wheels C C, and one revolution of the wheels C C transfers the sectors D D the length of their arc right and left. Thus thirty-six notches of a ratchet-piston may be passed by the time the sectors D D have changed their position the length of their arc.

I do not claim the invention of the eccentric wheel, nor the invention of the eccentric wheel to be put in motion by a roller revolving in contact with its periphery; but

What I claim as my invention is—

1. The combination of the two eccentric wheels A A with the center wheel or roller, C, by which a double traverse of the follower is produced by revolving the one center wheel or roller, C.
2. The combination of the eccentric wheels

A A with the friction-relieving sectors B B B, Plate 1, all combined in the manner and for the purposes herein set forth.

DAVID DICK.

Witnesses:

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