

United States Patent Office.

PLATT C. INGERSOLL, OF GREEN POINT, NEW YORK, ASSIGNOR TO HIMSELF
AND HORACE F. DOUGHERTY, OF SAME PLACE.

Letters Patent No. 98,385, dated December 28, 1869.

IMPROVEMENT IN MECHANICAL MOVEMENTS FOR ACTUATING 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, PLATT C. INGERSOLL, of Green Point, in the county of Kings, and State of New York, have invented a new and useful Improvement in Mechanical Movements for Actuating Presses, and other purposes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a longitudinal vertical section of a baling-press, having my improvement applied to it;

Figure 2, a plan of the same; and

Figure 3, an end elevation thereof.

Similar letters of reference indicate corresponding parts.

Referring to the accompanying drawing—

A represents the frame of the press;

B, its cap or cover, made removable, on throwing down or back swinging locking-straps C C; and

D, the follower, that may be guided in its up-and-down play by means of end projections or extensions *a a* of it, arranged to fit vertical slots *b b* in the frame.

Secured to the frame, on opposite sides of it, are brackets E E, which serve to form bearings for shafts *c c* of double or divided ratchet-wheels F F, having a chain-pulley or barrel-body, G, in between, and connected with or forming part of them.

H H are levers, working on the shafts *c c* as a fulcrum, and carrying pawls I I, that, as the levers are depressed, serve to give motion to the ratchet-wheels F F, which are locked, or prevented from working backward, by check-pawls I' I', excepting when it is required to run the follower D down or back, when the pawls I I may be thrown out of gear, by pulling on cords *d d*.

The lift of the follower D, through the levers H H, pawls I I, and ratchet-wheels F F is effected by the agency of chains J J, working round sheaves or pulleys, substantially as follows:

Said chains, which have their one end hanging loose, are passed up around the chain-pulleys or bodies G G,

down and around sheaves or pulleys K K, secured to the follower, and up to links or hooks L L, which is the arrangement represented at the left-hand of figs. 1 and 2; or, instead of the chains being hitched on to the upper hooks L L, they may be passed around a loose pulley, M, arranged on either spindle *c*, and be hitched or hooked to the follower, as at *e*, which is the arrangement shown in fig. 3, and at the right-hand of figs. 1 and 2.

Of course, this latter arrangement increases the power of the press, and may be employed with advantage toward the close of the pressing-stroke, while a quicker and less powerful action may be previously used, by adopting the first-mentioned arrangement, which may be readily changed, when required, to increase the power, by unhitching the chains from the hooks L, passing them around the pulleys M, and fastening them, as at *e*, to the follower.

Again, when required to work the press still quicker, as on starting it, the same may be done by a mere direct pull on the loose ends of the chains, instead of working the press by the levers H H.

Thus, not only is there secured to the press a wide range of motions, as regards its speed or power, at different points in the stroke, or as the resistance of the substance being pressed makes necessary or desirable, but the means for operating each end of the follower is independent of the other, so that increased pressure or action may be given to either one side or the other, as not unfrequently is desirable.

What is here claimed, and desired to be secured by Letters Patent, is—

The arrangement of the double or divided ratchet-wheel or wheels F F, the interposed connecting-chain pulley or body G, the lever or levers H, with their pawls I, the pulleys M, sheave or sheaves K, and the chain or chains J, substantially as specified.

P. C. INGERSOLL.

Witnesses:

JOHN D. RUSSET,
HENRY PALMER.