



# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN HAY-PRESSES.

Specification forming part of Letters Patent No. **214,828**, dated April 29, 1879; application filed January 9, 1879.

*To all whom it may concern:*

Be it known that I, THOMAS E. MARABLE, of Petersburg, in the county of Dinwiddie and State of Virginia, have invented a certain new and Improved Hay-Press; 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, forming part of this specification, in which—

Figure 1 is a perspective view of the complete press, and Fig. 2 a detail view of one of the operating-levers.

The object of this invention is to provide, for the pressing of hay and other materials to which it is applicable, a simple, convenient, effective, and inexpensive press, which can be readily constructed in any small country town where a carpenter's shop and a blacksmith's shop are accessible.

The invention consists in the combination, with the press-box and its platen, of graduated ratchet-plates arranged on opposite sides of the vertical slots in the press-box, hinged stirrups depending from the platen-arms and forming fulcrums for adjustable operating-levers, and retaining-pawls pivoted to the top of said platen-arms, and adapted to engage with said racks, substantially as I will now proceed to describe.

In the drawings, A is the press-box, into which the hay is fed at the open top, and from which the bale is delivered at the doors D in the usual manner. S S are vertical slots in the sides of the box, in which the arms *p* of the platen work up and down. Pivoted on the upper side of each arm at *e* is a depending stirrup, E, which acts as a movable hanging fulcrum for the levers L, by which the platen is operated. Pivoted also on the top of each arm at *m* is a pawl, M, which inclines upward and inward, so as to engage by its own gravity with a ratchet-plate or ratchet-plates, W, attached to the box at the lateral edges of the slots S.

Inasmuch as greater speed and less power are required when the platen is at the top of

the box and the hay is loose than when the platen is near the limit of its downward movement and the hay compacted, I graduate the notches or teeth *w* of the ratchet-plates, diminishing their size or distance apart gradually from the upper part to the lower part of said plates, as shown. I also arrange a series of transverse grooves, *l*, across the under side of the levers, as shown in Fig. 2.

The levers can be fulcrumed in the different grooves or notches *l*, to increase or diminish their power at will, the hanging stirrups readily accommodating themselves to such changes. The graduated teeth *w* are adapted to the gradual shortening of the inner arm of the lever, and consequently shorten the stroke thereof. The press can thus be operated quickly when the hay is first put in, and as it becomes compressed the levers can be given a shorter stroke and the hay compressed with great power.

The construction of the press is very simple, and it is exceedingly durable, and is convenient of operation.

The stirrups, fastenings, pawl, and ratchet-plates can be made in any small blacksmith-shop or foundry, and the rest can be made and the whole put together by any person having an ordinary degree of skill in handling tools.

Having thus described my invention, I claim as new—

The combination, with the press-box and its platen, of the ratchet-plates W, arranged on opposite sides of the vertical slots in the press-box, the hinged stirrups E, depending from the platen-arms and forming fulcrums for the adjustable operating-levers L, and the retaining-pawls M, pivoted to the tops of the platen-arms, and adapted to engage with the racks, substantially as described, for the purpose specified.

THOMAS E. MARABLE.

Witnesses:

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