

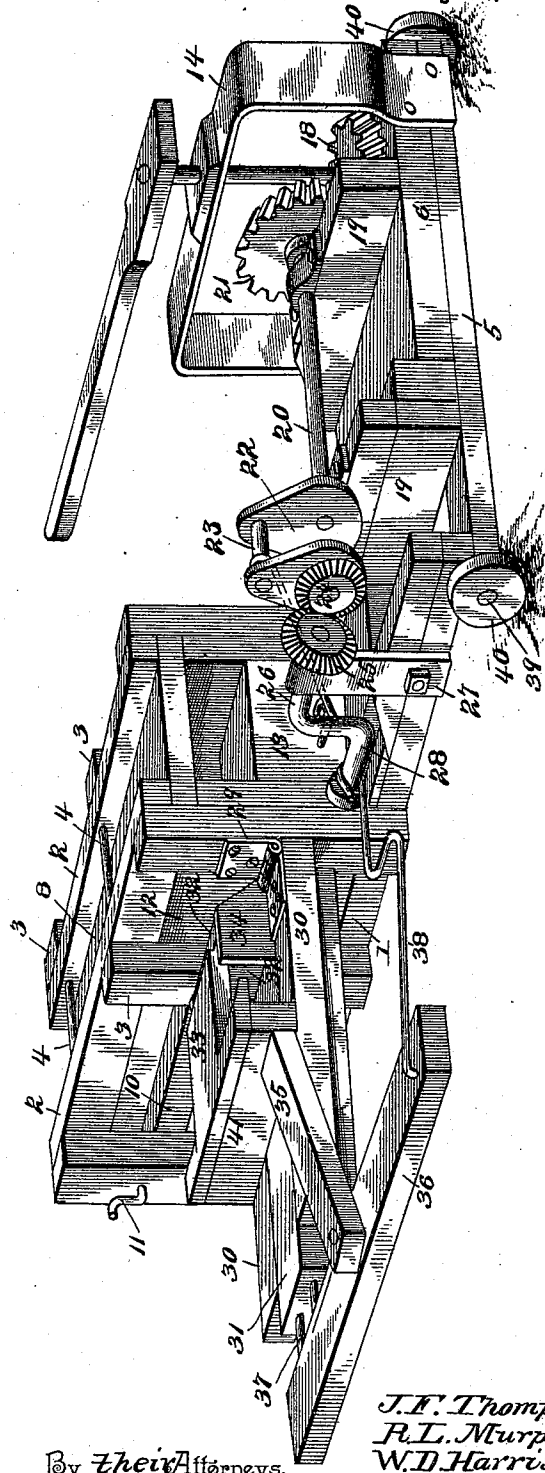
(No Model.)

2 Sheets—Sheet 1.

J. F. THOMPSON, R. L. MURPHREE & W. D. HARRISON.
HAY PRESS.

No. 496,457.

Patented May 2, 1893.



Witnesses

E. H. Stewart,
J. H. Giggers,

By their Attorneys,

Inventors

J. F. Thompson,
R. L. Murphree and
W. D. Harrison

Cashow & Co.

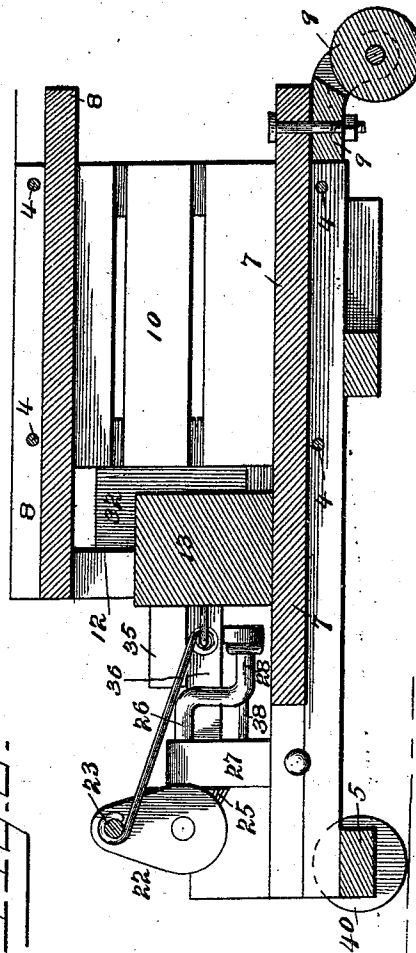
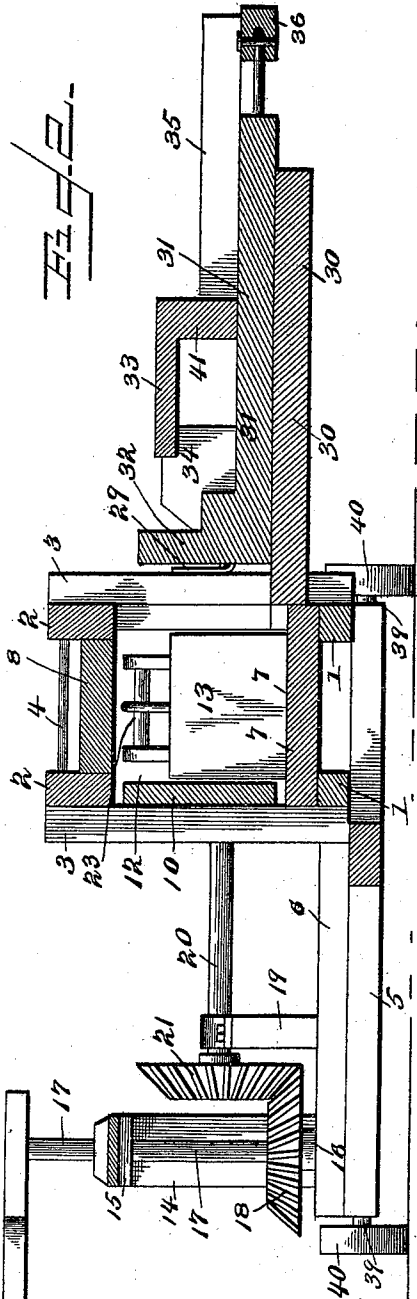
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UNITED STATES PATENT OFFICE.

JOSEPH F. THOMPSON, RICHARD L. MURPHREE, AND WILLIAM D. HARRISON,
OF SALADO, TEXAS.

HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 496,457, dated May 2, 1893.

Application filed November 19, 1892. Serial No. 452,531. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH F. THOMPSON, RICHARD L. MURPHREE, and WILLIAM D. HARRISON, citizens of the United States, residing at Salado, in the county of Bell and State of Texas, have invented a new and useful Hay-Press, of which the following is a specification.

Our invention relates to improvements in hay-presses; the objects in view being to provide a press of cheap and simple construction, and so arranged as to alternately feed the hay into the chamber, and press the same, the two mechanisms being operated from the same source; to provide for increase of power, and for regulating the tension or mouth of the press at the point of exit of the completed bale.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings:—Figure 1 is a perspective view of a press embodying our invention. Fig. 2 is a transverse-section. Fig. 3 is a longitudinal-section.

Like numerals of reference indicate like parts in all the figures of the drawings.

The baling-chamber comprises a pair of ordinary base-sills 1, and a pair of upper top-sills 2, the pairs of sills being connected, as is usual, by the uprights 3, also arranged in pairs, and the whole structure bound securely together by transverse tie-bolts 4. The base-sills 1 extend in front of the press, as shown, and are supported upon transverse sills 5, which at one side of the press support a platform 6. The baling-chamber is further provided with a bottom 7 and with a top 8, said bottom and top having their rear ends extending in rear of the delivery-mouth of the press. A caster 9, may if desired be swiveled to the under side and rear end of the bottom of the press. Between the top and bottom of the press the uprights have secured thereto the side-walls 10, and these side-walls have their rear ends disconnected from the rear uprights and are borne upon by cranked-screws 11, so that they may be squeezed together and thus reduce the width of the mouth

of the press. The side-walls are slotted in the usual manner so as to receive the binding-wires, whereby the bale may be bound previous to its delivery from the press. This completes the construction of the baling-chamber, with the exception of a feed-mouth or opening 12, which is formed in one of the side walls thereof near the front end of the press, and a plunger 13 which is mounted for movement within the chamber and over the bottom thereof, which in addition to being extended in rear of the press also extends in front of the same.

A frame or standard 14 rises from the platform of the press at one side thereof, and is disposed longitudinally with relation to the baling-chamber. This frame has an upper bearing 15, which is in vertical alignment with a similar bearing 16 in the platform, and in these bearings there is journaled a vertical power-shaft 17, to which is connected above the frame 14, a sweep-arm to which the horses for operating the press may be hitched in the usual manner. Within the frame or between the bearings of the vertical shaft there is mounted on the latter a large beveled-gear 18.

In a series of three standards 19, located upon the platform 6, in front of the baling-chamber, and to one side of the frame 14, there is journaled a transverse horizontal power-shaft 20, the outer end of which has secured thereto a large beveled gear 21, which is engaged and driven by the gear 18 of the vertical power-shaft. Between those bearings 19 that occur in front of the baling-chamber, the shaft 20 is provided with a cranked-portion 22, and a link or pitman 23, is loosely connected to said cranked-portion at the opposite end to the plunger 13. To that end of the shaft 10 farthest from the frame 14 the same is provided with a small gear-wheel 24, and the same engages with and drives a corresponding beveled gear-wheel 25, which is located on the front end of a shaft 26, journaled in a vertical standard 27 rising from the outer base-sill 1 and at that side of the baling-chamber provided with the opening. The rear end of this shaft is provided with a crank-arm 28.

By means of hinges 29 secured to the op-

posite sides of the feed-opening in the baling-chamber there is secured a way or platform 30, and in the same there is mounted a reciprocating-plunger 31, having an enlarged head 32, adapted to pass within the feed-opening of the baling-chamber. Flanges 34, rise from the opposite sides of the guide 30, and receive the inner end of a projection 33 that extends inwardly from a standard 41, the latter maintaining the plunger in position within the guides. An arm 35 extends from the guides 30, and a lever 36, is fulcrumed between its ends upon the outer end of the arm. A link 37, loosely connects one end of the lever with the outer end of the reciprocating-plunger, and a connecting-rod 38, connects the opposite end of the lever with the crank-arm 28 of the shaft 26.

If desired, the ends of the front transverse-beam 5 may be reduced to form journals 39, and the same are provided with wheels 40, which in connection with the caster-wheel at the rear end of the baling-chamber will permit of a transportation of the press. In such instance, also, it is preferable to hinge the guide 30 to the sides of the baling-chamber, in that the same may then be swung up and the press be enabled to pass through smaller openings in buildings than would otherwise be the case. If preferred, however, the guide need not be hingedly connected to the side of the baling-chamber, and the wheels and caster may be omitted. This completes the construction of our invention, and the operation of the same is as follows: The horses are started, and through the medium of the sweep motion is imparted to the vertical-shaft, from which motion is imparted to the horizontal power-shaft 20, through the means of the intermediate gears. The shaft 20 by reason of its cranked-portion, through the medium of the pitman-rod, reciprocates the plunger into and out of the baling-chamber in a manner as will be obvious. The rotations of the shaft 20 are imparted to the shaft 26 and its cranked end through the medium of the connecting-rod oscillates the lever 36, thus reciprocating the plunger 31 which is the feed-plunger. Hay is introduced in the front of the feed-plunger between the flanges 34, and as the feed-plunger reciprocates the hay thus deposited is forced into the baling-chamber in advance of

the plunger 13; in other words, the plungers operate alternately, and as the main plunger 13 is withdrawn the supplemental-plunger is advanced and a deposit of hay pushed into the baling-chamber, and being guided by the main plunger is advanced thereby and packed against the preceding bale. By regulating the width of the exit mouth of the baling-chamber it will be obvious that the resistance offered to the advancing bale may be increased or diminished, and in this manner a requisite density may be given to the bale.

From the foregoing description, in connection with the accompanying drawings, it will be seen that we have provided a machine of great simplicity, the same being adapted to rapidly form bales of required density, and have provided a means for automatically feeding the material to be baled into the chamber.

Having described our invention, what we claim is—

In a baling-press, the combination with the baling-chamber having the opening at one side, the platform having ways extending from the opening, the plunger provided with a head mounted for reciprocation in the ways, and a lever fulcrumed and pivotally supported at the rear end of the platform and connected to the plunger, of bearings located in front of the baling-chamber, a crank-shaft journaled in the bearings, a pitman loosely connected to the crank-shaft, a plunger mounted in the baling-chamber and connected to the opposite end of the pitman, an intermediate bearing, an intermediate shaft, gears on the adjacent ends of the crank and intermediate shafts, means for operating the crank-shaft, a crank on the rear end of the intermediate shaft, and a connecting-rod between said crank and the free end of the lever, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOSEPH F. THOMPSON.
RICHARD L. MURPHREE.
WILLIAM D. HARRISON.

Witnesses:

W. B. SMITH,
J. H. CASKEY.