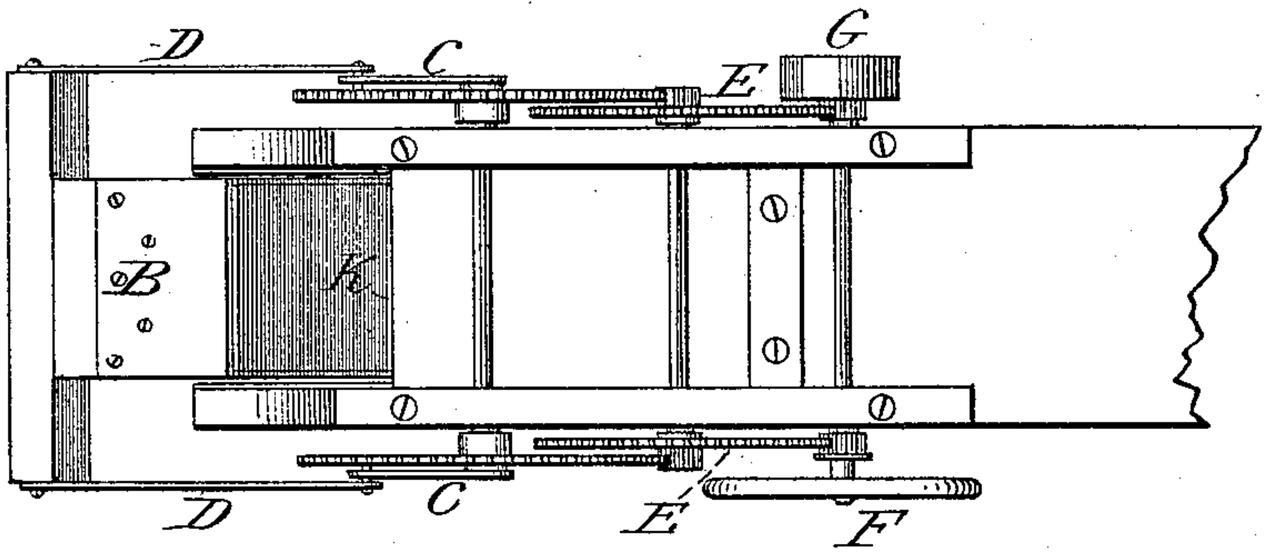
P. K. DEDERICK.

BALING PRESS.

No. 251,101. Patented Dec. 20, 1881.

fig. 1.



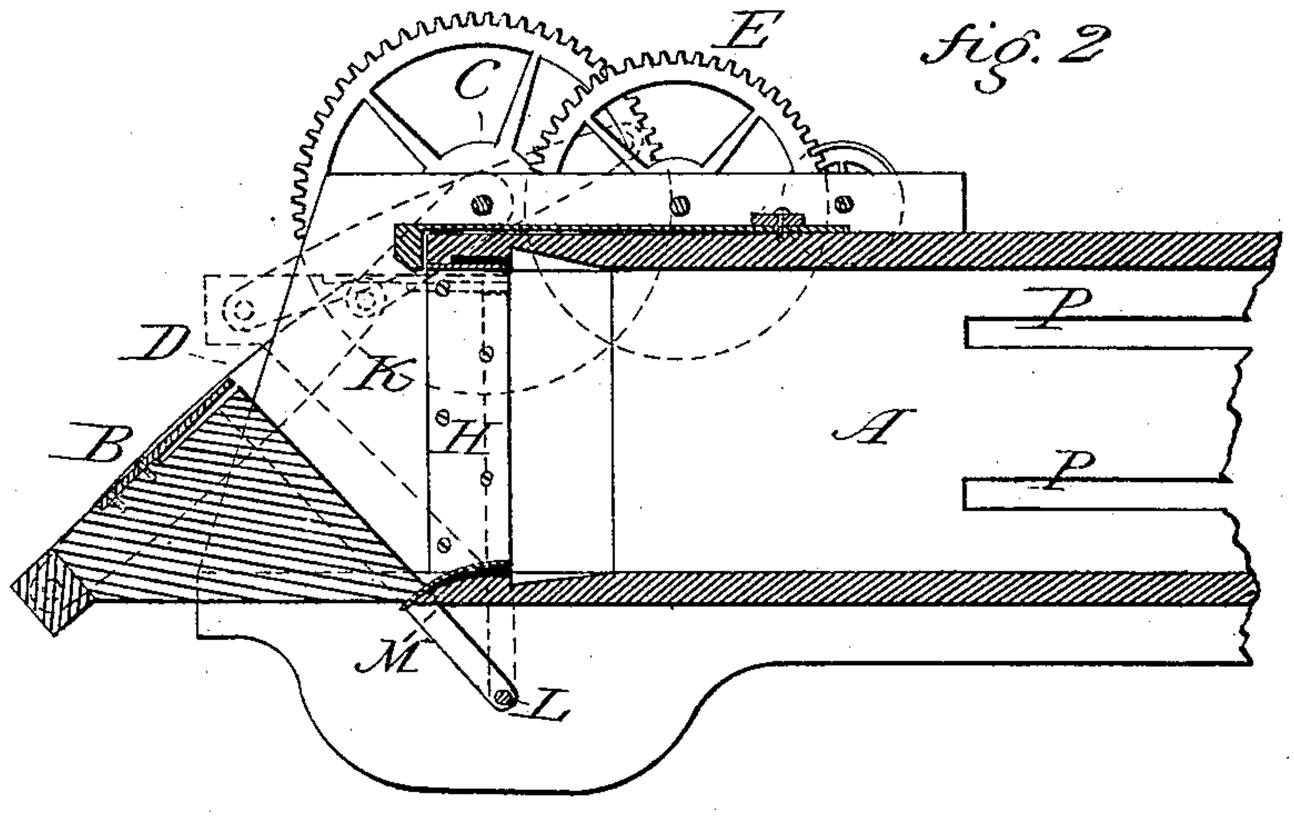


fig. 2

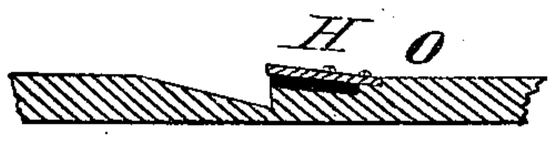


fig. 3

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UNITED STATES PATENT OFFICE.

PETER K. DEDERICK, OF ALBANY, NEW YORK.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 251,101, dated December 20, 1881.

Application filed December 16, 1878.

To all whom it may concern:

Be it known that I, PETER K. DEDERICK, of the city and county of Albany, State of New York, have invented an Improvement in Baling-Presses, of which the following is a specification.

My improvement relates to that class of presses patented to me October 29, 1872, No. 132,566 and No. 132,639, and the various modifications of the same secured to me by patents since that date; and it consists, first, in the combination, with the press-box having the feed-opening at the end, of the traverser hinged or pivoted to the press, so as to have an oscillating motion in and out of the end of the press-box, and having a face area substantially equal to the cross-sectional area of the press-box, so as to fill the latter when forced into it, whereby separate and successive charges of material are adapted to be forced into the press-box and to be distributed over and pressed against each other, so as to form bales that are separable into layers or sections; secondly, in extending the sides of the press-box so as, in connection with the oscillating traverser, to form a hopper into which the charges of loose material are fed.

Figure 1 is a top plan view of my press, with a part of the bale-chamber broken away. Fig. 2 is a longitudinal vertical section of the same; and Fig. 3 is a sectional view, showing one of the retaining-shoulders.

Similar letters represent the same parts.

A is the body of the press, which may be constructed in any suitable manner or as shown.

B is the traverser.

C C are crank-wheels, one at each side of the press.

D D are pitmen connecting the cranks to the traverser.

E E are intermediate gearing located on a shaft which is provided with pinions and geared to the crank-wheels C C. The balance-wheel F and band-wheel G are located on another shaft, with pinions gearing to the wheels E. The press inside is provided with retaining-shoulders, as shown in Figs. 2 and 3, H being a plate of metal.

As shown in the Letters Patent referred to, the discharge ends of these presses are constructed adjustable in order to secure more or less friction, and the bales are separated by movable partition-followers, which are inserted at the feeding end and pass through with the bales.

In all that class of presses heretofore constructed the hay is fed at the top or side, and the traverser has a reciprocating motion, whereas in this case the press is fed at the end, at K, and the man feeding may stand on the ground, and the traverser has an oscillating or vibrating motion, and is hinged at L by strong iron fastenings, or otherwise, so as to secure a circular falling-and-rising motion to the traverser, so that the press may be fed at the end, and also secure the following important advantage: It is well known that in feeding fine material it always falls to the bottom of the press, and the result is the bale is more compact at the bottom than the top, so much so that it is almost impossible to bale fine material unless the receiving box is filled up entire, and then both the power and machine are incapable of doing the work except in very light bales. Now, in this machine the face of the traverser moves up at an angle to the end of the press, said angle decreasing as the traverser progresses, so that the fine material bilges upward, and by the time the hard pressing comes the material is equally distributed over the entire end of the forming bale. When the traverser is swung back the sides of the press-case A and the face of the traverser form a hopper into which the material to be baled can be conveniently pitched prior to being forced into the press past the retaining-shoulders by the forward movement of the traverser.

The traverser may have a spring-top, as shown, and a folder to fold down the material overlapping, the operation of all of which is fully explained in the patents referred to, and it is unnecessary to repeat it herein. The traverser and bottom of the press must conform to each other or be convex and concave in order to retain a joint or close fit during the circular or vibratory movement. In pressing very fine hay or other material the feed end of the press should be elevated a little in order to prevent portions of the pressed material from falling back.

The retainers H consist of metal plates se-

cured to the sides and top and bottom at such point that the face of the traverser will force the material past them. Said plates have one side let into the wood and secured to the press, as at O. The other sides project into the press, with blocking or filling behind them in order to present a beveled or contracting face to the advancing material, which is reduced in size as it is forced by the contracting-plates and expands behind the shoulders after being forced past them. In a working press the plates project inwardly between the point O and their outer sides or shoulders from three-eighths to one-half inch, thus making the press from three-fourths to one inch less in diameter at the outer sides than at the inner sides.

In operation the belt is applied to the pulley G, which communicates a rotating motion to the balance-wheel and the gearing and revolves the crank-wheels and cranks C, thus drawing the follower forward, so that its face is brought at right angles to the press-frame and just past the retainers, and then vibrating back with a falling motion until it is in the position shown in Fig. 2, when the material is fed in until a bale is formed, when a partition-follower may be inserted and the operation continued.

The bales are bound through the tying-slots, as repeatedly described in the patents referred to, on which this is an improvement. The chamber may be only of sufficient length for one bale, and operated as described in Patent No. 132,566, if preferred, and the press may be turned on its side, so that the traverser will vibrate laterally, if desired, or placed on end; but this would not be as effective in distributing and equalizing the charges of material fed into the press.

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

1. The combination, with the press-box having the feed-opening at the end, of the traverser hinged or pivoted to the press, so as to have an oscillating motion in and out of the end of the press-box, and having a face area substantially equal to the cross-sectional area of the press-box, so as to fill the latter when forced into it, whereby separate and successive charges of material are adapted to be forced into the press-box to be distributed over and pressed against each other, so as to form bales that are separable into layers or sections, all substantially as described.

2. The combination, with the press-box having its sides extended beyond its end opening, of the hinged or pivoted traverser having an oscillating or vibrating movement and adapted to work between the side extensions of the press, and to constitute one side of the hopper formed by itself and the said extended sides, substantially as described.

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