

(No Model.)

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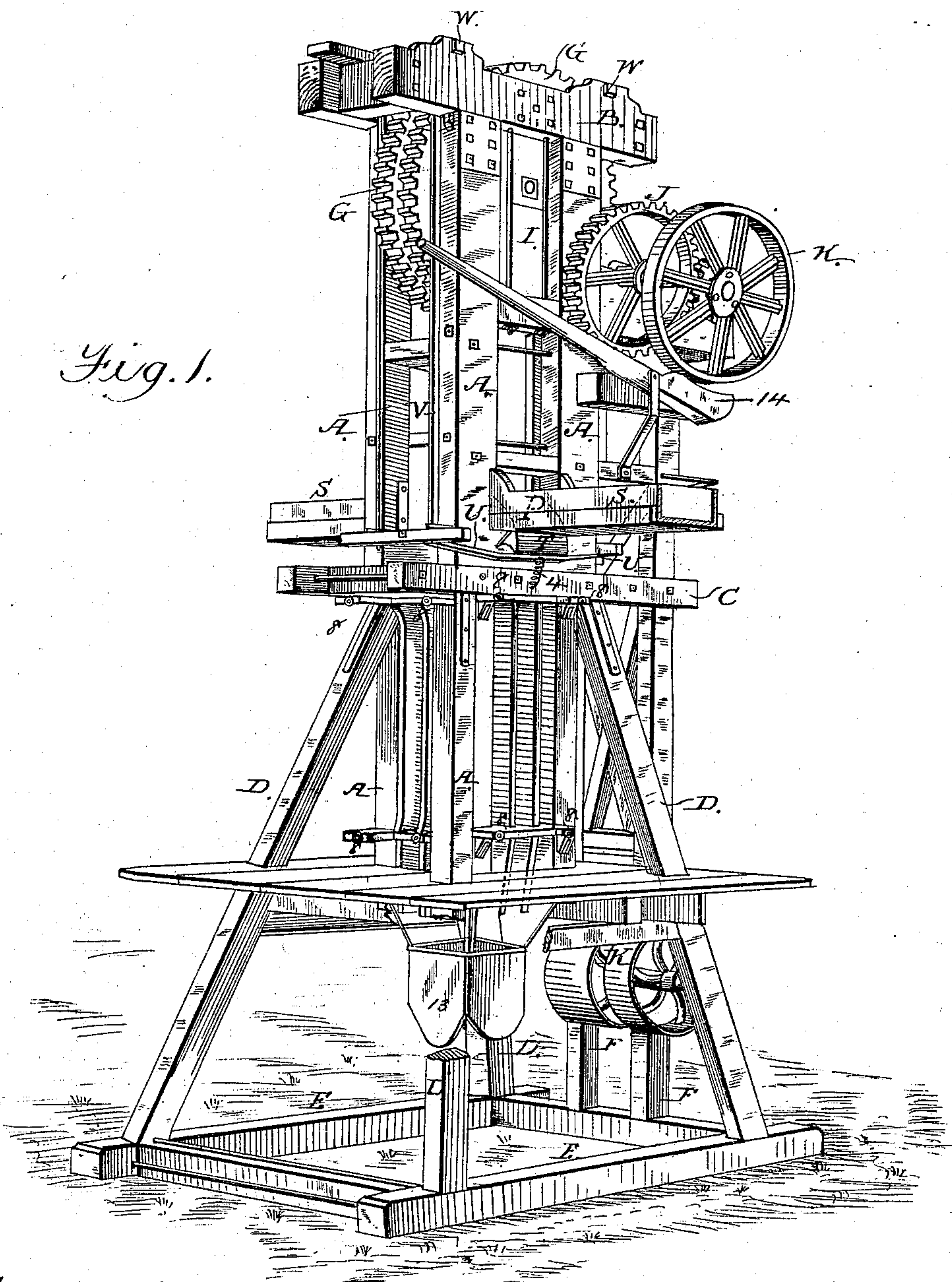
P. K. DEDERICK.

BALING PRESS.

No. 271,812.

Patented Feb. 6, 1883.

*Fig. 1.*



Witnesses;

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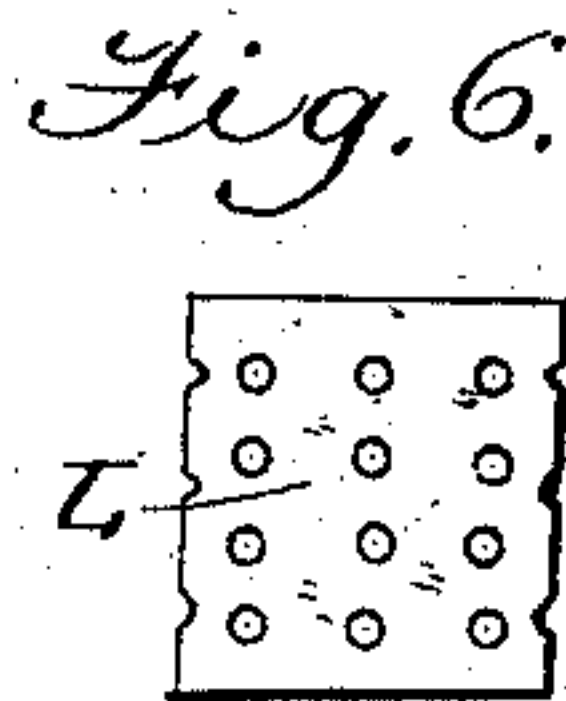
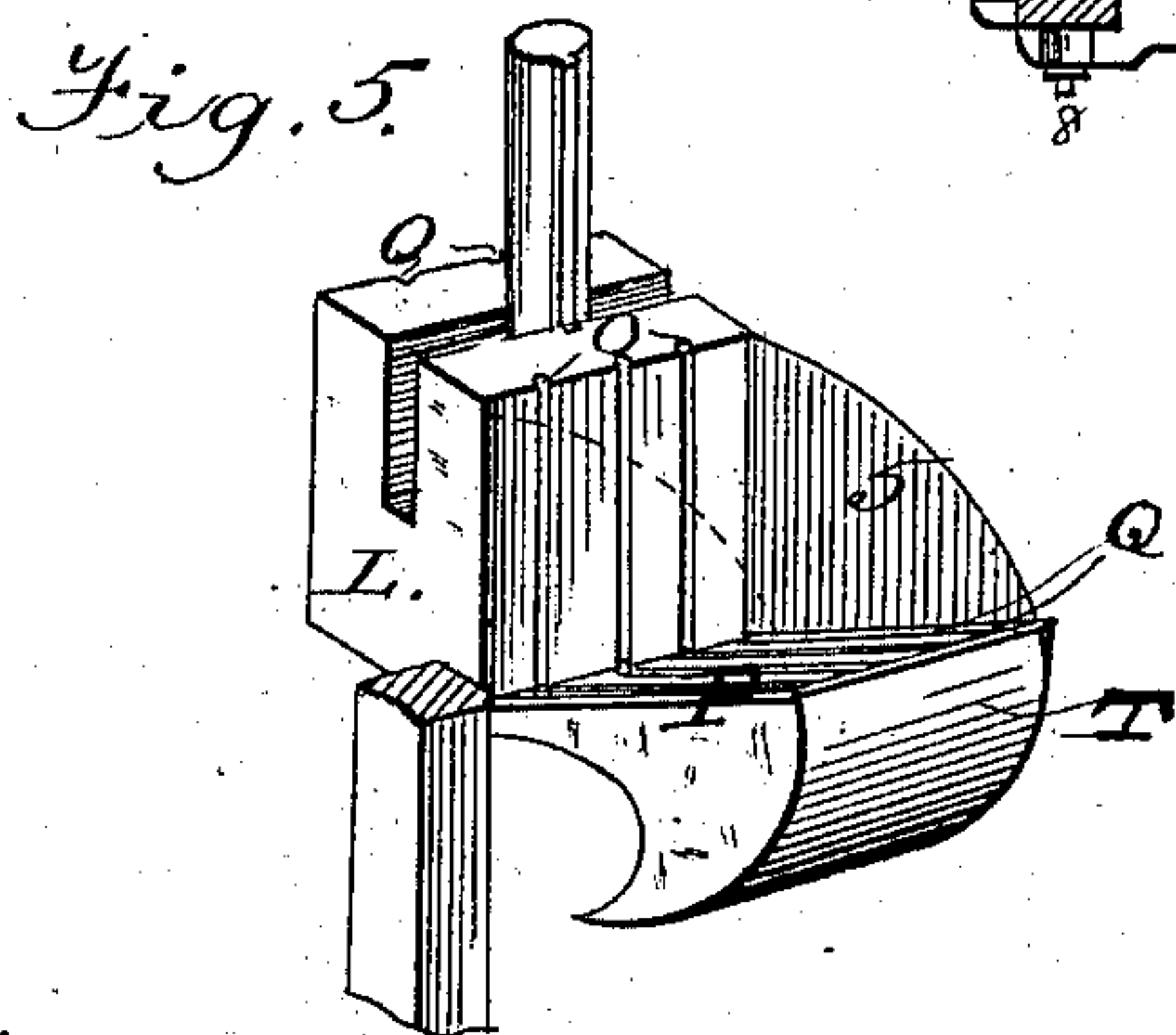
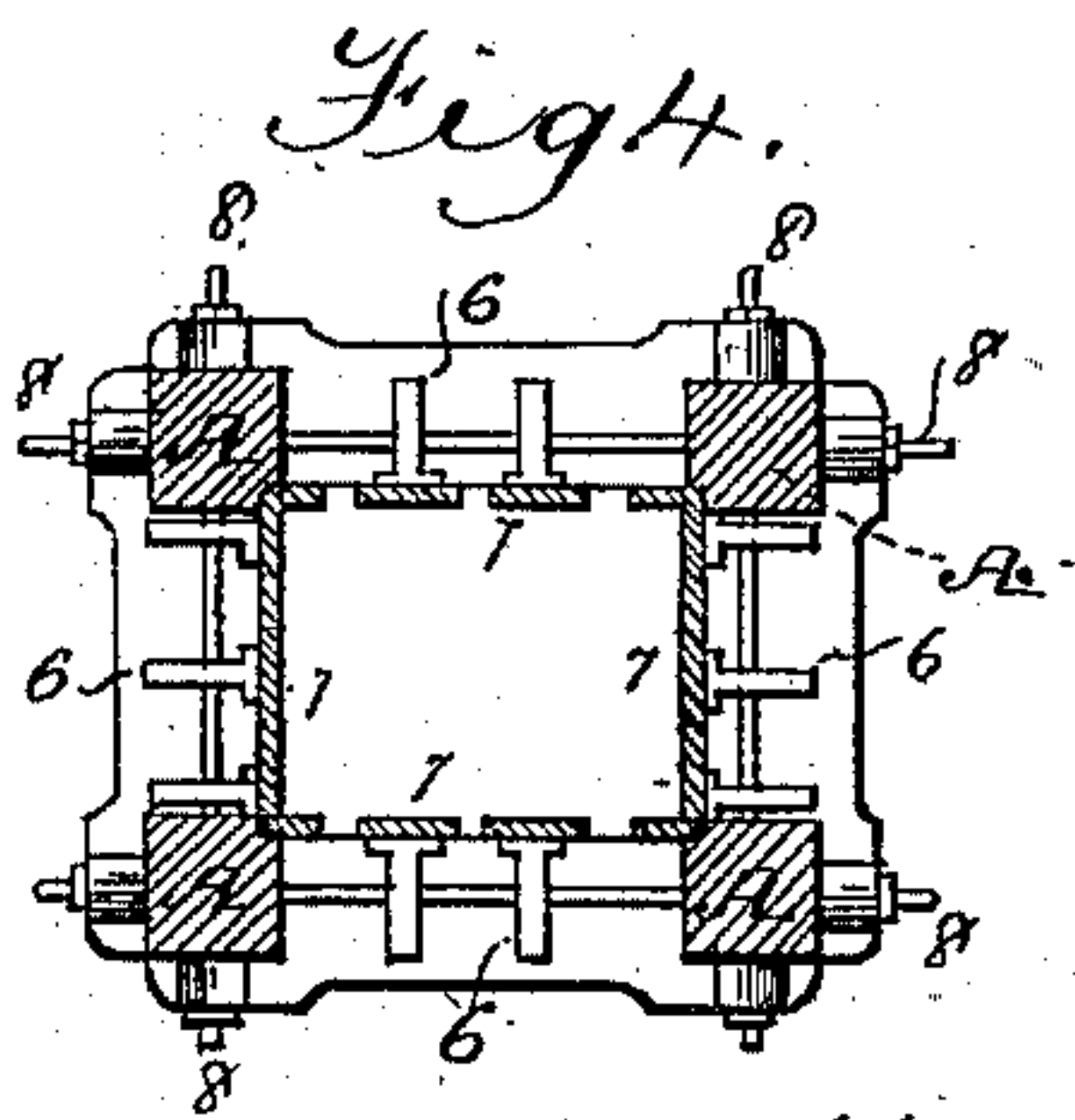
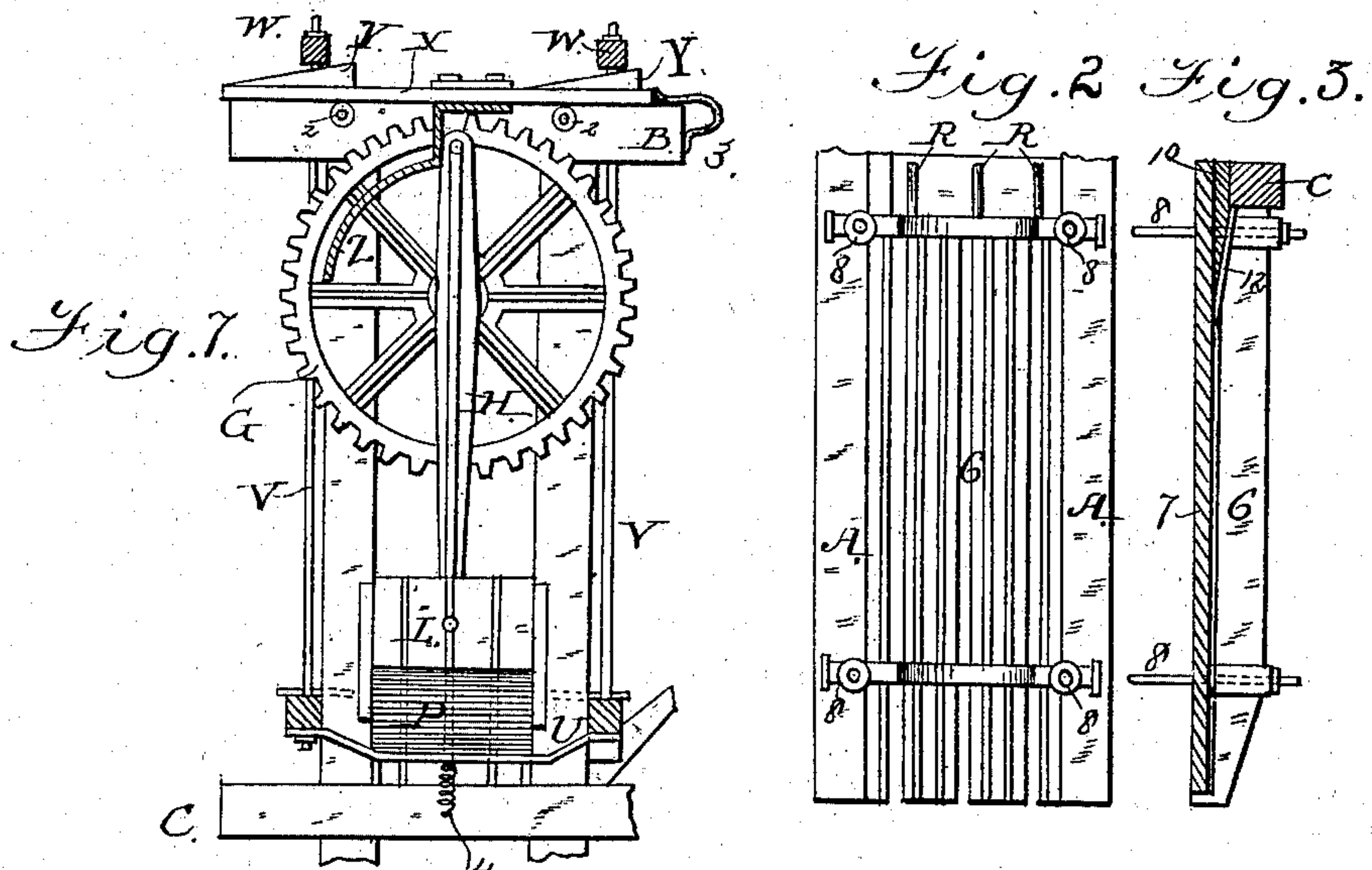
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# UNITED STATES PATENT OFFICE.

PETER K. DEDERICK, OF ALBANY, NEW YORK.

## BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 271,812, dated February 6, 1883.

Application filed September 15, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, P. K. DEDERICK, of Albany, in the county of Albany, State of New York, have invented certain Improvements in Baling-Presses, of which the following is a specification.

My invention relates to that class of presses for which Letters Patent were granted me October 29, 1872, No. 132,566 and No. 132,639, and the various modifications of the same for which Letters Patent have since been granted me; and it consists chiefly in appliances and devices to adapt these machines to the baling of cotton.

In the accompanying drawings, Figure 1 is a perspective view of my improved machine. Figs. 2, 3, and 4 are sectional views of the bale-chamber. Figs. 5 and 6 are sectional views illustrating the traverser and feed-door. Fig. 7 is a sectional view illustrating the devices for operating the feed-doors. Fig. 8 illustrates the movable partitions.

Similar letters represent similar parts.

A represents the main posts or timbers of the frame.

B C are heavy timber clamp or supporting frames, and the entire frame is otherwise strongly trussed and rodded.

D represents the standards of a foundation-frame, which has a base-frame, E, and the upper ends of timbers D rest under the frame C, which is firmly secured to the posts A. The receiving and press box is above the frame C, and the bale-chamber below the frame C. I also erect upright standards F to assist in supporting the machinery and frame of the press.

The two crank-wheels G revolve on fixed journals, either fitted and secured into boxes through the cast plate I or on studs cast on the plate, and the plate is firmly secured to the timbers A and B. A crank-pin connects the two crank-wheels at a distance from the center, as shown in Fig. 7, so as to form a crank and the pivot for the pitman H, the other end of the pitman H being pivoted to the traverser, as shown.

J represents a spur-wheel located on a shaft which has a solid double pinion, (not shown,) that engages with both crank-wheels G, and another wheel similar to wheel J is located

at the other end of the shaft. (Not shown.) Balance-wheel K is located on another shaft, and there should also be another at the other end of the shaft. Said shaft is also provided with pinions to engage with wheels J, and the wheels K are secured by a suitable friction-clutch, all as heretofore secured to me by Letters Patent on this class of presses, and for the purpose of getting up a strong and steady motion. At the center of the shaft on which balance-wheels K are located I place a fixed belt-pulley, and place the counter-shaft and pulleys K near the lower end of the posts F.

The traverser L, I construct with holes through its face, as shown in Fig. 6, in order to allow the air to pass up through the traverser. The traverser is also provided with grooves on both sides, as shown at O, Fig. 5, and the feed-door P is provided with ribs or beads Q, which correspond with the grooves in the traverser, so that when the feed-door is closed the traverser may freely play up and down, the ribs or beads on the door entering its grooves. The partition-followers are provided with notches in their edges, as shown in Fig. 8, so as to permit them to pass ribs or beads R on the sides of the press-box similar to the ribs or beads on the door P, and forming a continuation thereof.

The feed-doors P are located one at each side of the press, and hinged at their lower ends above the frame C, so as to bring them flush with the inside of the lining of the press.

A hopper, S, is shown at each side of the press, although this may be dispensed with, if desired.

A curved projection, T, is formed upon or attached to the feed-door P, and is adapted to fit close to the edge of the end of the bottom of hopper S. When the fixed door is lowered the projection T moves down and uncovers the end of the hopper, thus permitting the cotton to be pushed from the hopper into the feed-opening of the press; but when the feed-door is swung up to close it its projection T rises and closes the end of the hopper and enables the cotton to be filled into the latter without liability of escape. These hinged doors P are opened and closed by means of a loose frame, U, extending around the press, which frame may be of either wood or iron, and that part



passing along the doors P at each side passes close enough to them so that when the frame U is raised it will wedge or crowd the doors into a perpendicular or flush with the inside of the chamber, and when the frame U is lowered the door P will again fall back, as shown in Fig. 5. Rollers may be attached to the frame U, so as to bear the doors P in, if desired, and thus dispense with the friction of a slide. This frame U is raised and lowered by means of rods V V, which connect the frame U to the cross-piece B, (Figs. 1 and 7,) and by means of which the entire frame is wedged up by cams or incline slides, as shown in Fig. 7, X being the slider-bar, Y Y being two incline slides firmly secured to it, so that when moved to the left it will wedge up the entire device, U, V, and W, and thus wedge the doors P into a perpendicular, and when the slide is again moved to the right the entire device will fall of its own gravity.

When the entire device is raised and doors held closed, it is desirable to hold it shut until the face of the traverser I shall pass the lower end of the door P, and I accomplish this by a detent of the form of a segment of the circle described by the crank-pin, as shown by Z, Fig. 7. This detent is secured firmly to the slide-bar X, and when the crank or pitman end moves it so far to the left that it passes the shoulder shown and closes the doors P the crank-pin or end of pitman H continues to bear against the circular end of Z, and thus holds the doors P shut until the crank passes the lower end of Z, at which time the traverser I has passed the lower end of the feed-door P. The slide-bar X may have a weight attached to it by a line to draw it back by passing the line over a pulley to the right; but I have found that it will move back to the right by the weight of the frame U and rods V and timber W resting on the inclines Y, and to facilitate it friction-wheels 2 might be used for the slide X to rest on, and friction-wheels might also be used under the cross-pieces W. To prevent the slide X from going back too far, I attach a strap, 3, to one end of the slide, and attach the other end to the timbers of the top of the frame, as shown. Any stop would answer; but I prefer a strap, as it is noiseless.

A spring, 4, might be attached, so as to connect the door P to the timber C, and thus aid in drawing the door back; but this is unnecessary, except when new and tight in its joints. At the sides of the doors P, I provide wings 5 on each side of each door. These wings are of circular form to conform with the arc of a circle described by the top of the door P. (See Fig. 5.) These are to prevent the cotton from being crowded outside of the line of the movement of the door P. It will thus be seen that the feed-doors are held closed while the traverser passes them, and opened again for a new charge at each turn of the crank, and the ribs or beads on the feed-doors and in the chamber below them form grooves in each sec-

tion, and hence in the bale, so that the bands or wires may lie below the surface of the bale.

The four sides 6 of the bale-chamber, between the posts A below the frame C, I construct of iron, and line the iron with wood to secure a better effect on the cotton, as shown in Fig. 3, 6 being an iron frame, and 7 a wood lining. At the lower end of the iron frame 6, I provide a flange, against which the wood lining bears, as shown, so that it requires but little fastening otherwise. Two of the four sides 6 are slotted, as shown in Figs. 2 and 4, so as to admit of passing the ties to bind the bales. The two sides the short way of the chamber, as shown in Fig. 4, have no slots, and are cast in one piece around the corners to the slots on the sides. I construct this bale-chamber so as to be adjusted on all sides, and both top and bottom may be adjusted so as to keep the sides as near parallel as required. The sides 6 are independent of the posts A in their movements, and the posts remain stationary as the sides 6 are moved in and out, both top and bottom, to secure greater friction on the bale. The sides are adjusted in and out by the rods and nuts 8, as shown in Fig. 1 and in section Fig. 4, and the holes where the rods pass through the posts and sides are oblong, or so that the sides can be moved in and out without binding on the rods, as would be the case if the rods filled the holes. In adjusting all sides of the machine and both top and bottom but little movement is required, but that little will force the bale-chamber inside of the line of the press-box, and there must be a beveled edge or junction end of the movable part of the bale-chamber with the stationary part of the bale-chamber or press-box; or, in lieu of this, I allow the lining to pass the junction without being cut, which latter construction I prefer, as it will spring sufficiently, and thus avoid both the shoulder and bevel end, as shown in Fig. 3, 6 being the movable part, and C being the stationary part. The lining 7 passes over both, and springs to conform to the movement of the movable side 6. It should also be observed that in moving the sides 6 inward it is necessary to leave a clearance at their upper end of about half an inch for a foot below the timber C, as shown at 12, Fig. 3, and I also support the planking 7 where this clearance exists by a backing or beveled planking, 10, as shown. It will thus be seen that no joints are exposed at the inside of the chamber, as the top ends of the sides are moved in and out, as the planking 7 covers the joints and springs to conform to the movement of the sides, and thus adjusts the four sides and secures the friction on all sides of the chamber, and the entire length of the adjustable chamber secures the necessary amount of resistance with the least possible chafing on their surfaces, thereby securing more perfect bales.

The lower clamps, rods, and nuts, 8, might be used singly, and the friction may be applied equally over the surface by cutting off the



sides 6 about midway of the bale-chamber, and having the stationary upper end of the bale-chamber longer; or the lower clamps, rods, and nuts might be moved up to about the center, and thus adjust them with one set of rods, instead of a top and bottom set. This might be done with greater uniformity; but the parts would require to be much stronger to prevent springing, and I prefer the double set, as shown.

At the lower end of the bale chamber I suspend a sacking device, 13, which may be in parts, so as to expand, or may be a rigid band with open corners at the lower end and beveled or rounded sides and a little larger than the bale-chamber. These beveled or rounded ends aid materially in putting the sack on. The sack is slipped over the device 13, and as the bale is ejected from the chamber it passes through the device and carries the sack with it, thus passing directly into the sack. 14, Fig. 1, is friction-brake and lever, in order to more readily stop the movement of the balance wheels.

The operation of this press is identical with that of this class of presses referred to, and unnecessary to repeat here.

Having thus fully described my invention, I claim and desire to secure by Letters Patent—

1. The combination, with the press-box, of the hinged feed-door P, provided with the beads or ribs, and the reciprocating traverser, provided with grooves in its sides corresponding to the ribs on the door, substantially as described.

2. The combination, with the press-box and the hopper, of the hinged feed-door having the circular projection which operates to close the end of the hopper when the feed-door is closed, substantially as described.

3. The combination, with the hinged door, of the frame U, rods V, bars W, the laterally-sliding bar having the inclines Y, the segmental detent Z, and crank-pin, substantially as described.

4. In a continuously-operating baling-press, a bale-chamber having two or more of its opposite sides adjustable, in combination with independent means, substantially as described, for adjusting said sides at each of their ends, so as to preserve the parallelism of the sides throughout their entire extent, thereby producing uniform friction on the bale throughout its entire length, substantially as described.

5. The bale-chamber consisting of the adjustable metal side pieces, 6, the wooden lining 7 extending above the upper ends of the metal pieces 6, in combination with the corner-beams A and the adjusting bolts and nuts 8, substantially as described.

6. The sacking device 13, having its sides rounded at the bottom, so as to form open corners, substantially as described.

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Witnesses:

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