

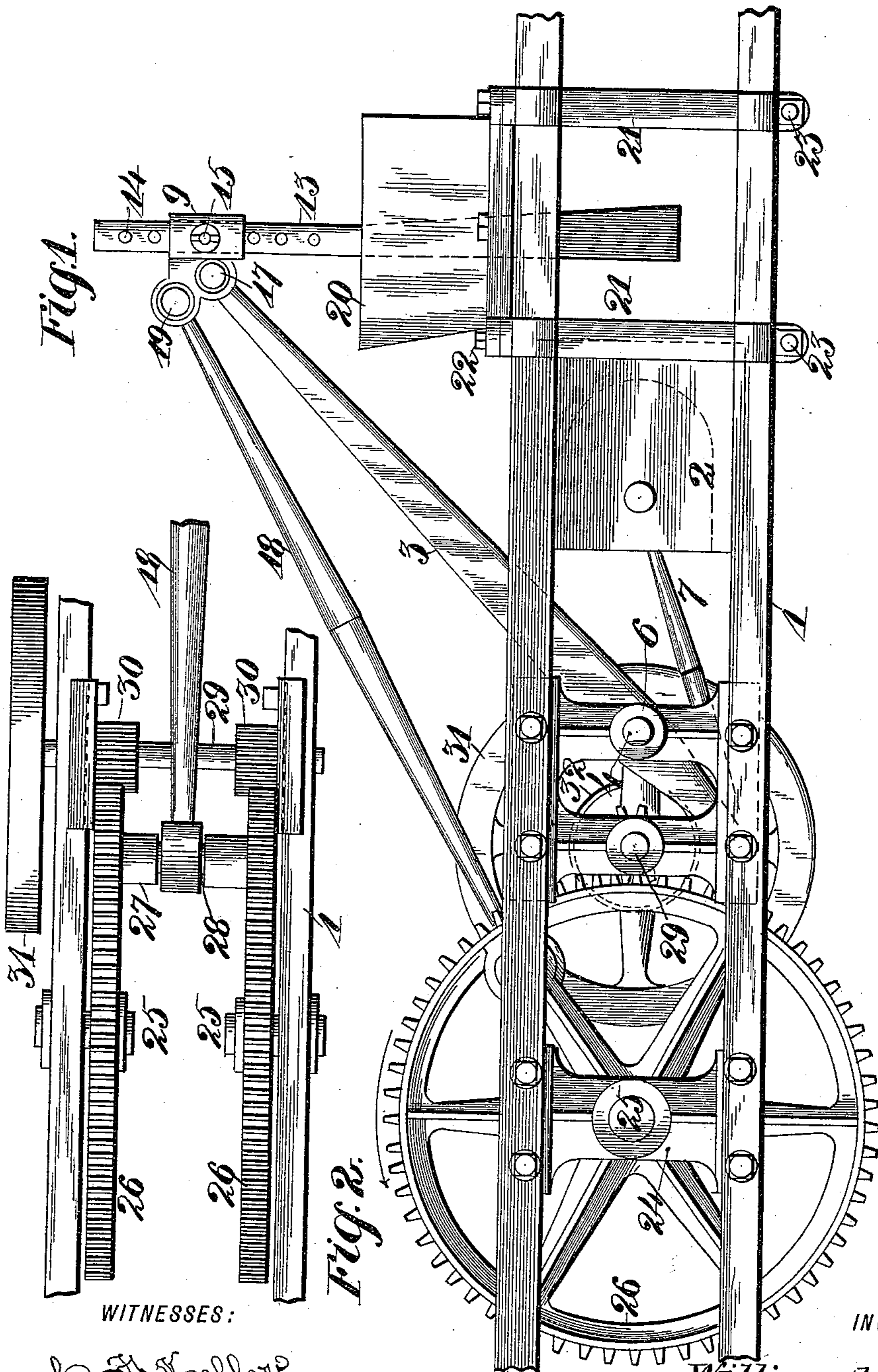
(No Model.)

2 Sheets—Sheet 1.

W. H. HOWARD.
BALING PRESS.

No. 450,585.

Patented Apr. 14, 1891.



WITNESSES:

D. S. Keller.
E. C. Longan.

INVENTOR

William H. Howard.
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ATTORNEYS.

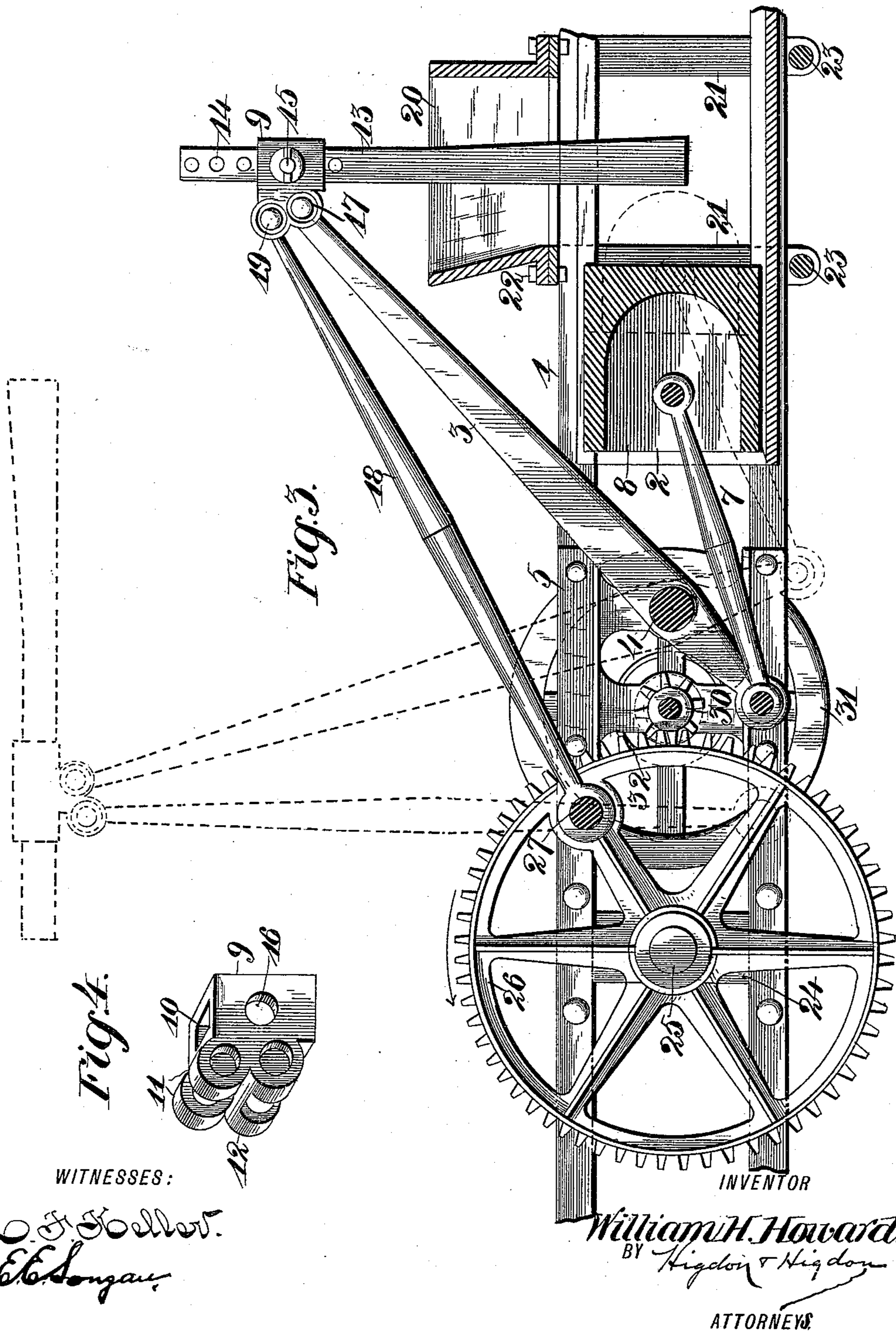
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UNITED STATES PATENT OFFICE.

WILLIAM H. HOWARD, OF PANA, ILLINOIS, ASSIGNOR OF ONE-HALF TO
EDWIN S. DAVIS, OF SAME PLACE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 450,585, dated April 14, 1891.

Application filed November 14, 1890. Serial No. 371,456. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HOWARD, of Pana, in the county of Christian, State of Illinois, have invented certain new and useful
5 Improvements in Baling-Presses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in
10 baling-presses; and it consists in the novel combination and arrangement of parts, as will be hereinafter fully described, and designated in the claims.

In the drawings, Figure 1 is a side elevation of my complete invention. Fig. 2 is a
15 top plan view of the same, showing the gearing with the remaining parts of the device broken away. Fig. 3 is a vertical longitudinal section of my invention, and Fig. 4 is a
20 perspective view of the casting employed at the upper end of the rammer.

Referring to the drawings by number, 1 represents a baling-chamber, to which the
25 various parts constituting my invention are applied.

2 represents a plunger of ordinary construction and movable horizontally upon the usual guides forming a part of the baling-chamber 1.

30 3 represents a lever intermedially pivoted by means of a shaft 4, which shaft is mounted at its respective ends in suitable castings 5. The castings 5 are bolted vertically to the sides of the baling-chamber 1, and are provided with bearings 6, which receive the shaft
35 4, carried by the lever 3. To the lower end of the lever 3 is pivotally attached a secondary pitman 7, which pitman leads to and is movably connected to the plunger 2 within a recess 7, formed in the same.

9 represents a casting provided with a vertical opening 10, and to one side thereof are ears 11 and 12, formed integral therewith, one set of which is located immediately below the
45 other, to which ears the various operating-bars are attached.

13 represents a rammer or feeder provided with openings 14 at its upper end, which holes are adapted to receive a bolt 15, said bolt also
50 passing through holes 16, formed for its reception in the casting 9, whereby the rammer

13 is vertically adjusted to and from the baling-chamber. The upper end of the lever 3 is attached to the ears 12 of the casting 9 by means of a bolt 17, thereby forming a connection between said lever and rammer. 55

To the upper end of the casting 9 is attached a primary pitman 18 by means of a bolt 19, which bolt passes through the upper end of the same and through the ears 11 of the casting 9, thereby forming a movable joint at that point. 60

At a suitable distance in front of the plunger 2 (when the same is retracted) a hopper 20 is fastened upon the baling-chamber 1 by means of vertical straps 21, to which straps the said hopper is securely fastened by means of bolts 22. The straps 21 are securely clamped to the baling-chamber 1 by means of transverse bolts 23, which bolts pass through the lower end of the same, and are thereby located below the said baling-chamber. 65

I will now proceed to describe the motive power employed to carry out the operation of the device. To the rear end of the baling-chamber 1 are attached oppositely-located castings 24, which castings are vertically secured to the same by means of suitable bolts, said castings being provided with bearings for receiving the studs 25, upon which the power-gears 26 are mounted. The said power-gears 26 are connected together by means of a short shaft 27, which shaft is provided with an annular groove 28 for receiving the lower end of the primary pitman 18, and is movably connected to said shaft within said groove. One of the bearings formed upon the casting 6 is adapted to receive a horizontal shaft 29, upon which shaft is mounted and keyed thereto two pinions 30, which pinions mesh with the power-gears 26 for imparting motion thereto. The shaft 29 projects a sufficient distance beyond the baling-chamber to receive the ordinary fly-wheel 31 and belt-pulley 32, to which pulley power may be applied by any suitable means. 75

Having given a detailed description of the device and the manner in which the several parts are mechanically connected, I will now proceed to describe the operation of the same. When motion is imparted to the shaft 29, the pinions 30 will revolve, causing in their turn to revolve the power-gears 26. The said 80 85 90 95 100

power-gears 26 in their turn operate the primary pitman 18, causing the lever to be operated with a rocking movement, thereby causing the plunger 2 to be moved horizontally within the baling-chamber.

In the operation of the machine the automatic feeder or rammer will be raised, as shown in Fig. 3, allowing the material to be placed in the hopper 20 upon the plunger 2, and when the machine continues its operation the said plunger will be retracted and the feeder will be brought in contact with the said material located within the hopper, forcing the same into the baling-chamber in front of the plunger 2, ready to be acted upon or pressed by the same. When it is desired to vary the pressure of the feeder 13 upon the material, the said feeder may be adjusted vertically within the casting 9 by means of the bolt 15 passing through said casting and holes formed in the upper end of the feeder.

By an inspection of the drawings it will be seen that when the plunger is retracted the lower end of the feeder 13 will be located within the baling-chamber and upon the material located therein, and on further movement of the machine the feeder will take the position as shown in dotted lines in Fig. 3, and the plunger forced forward upon the material that has been previously acted upon by the feeder. Thus it will be seen the press is what may be termed a "perpetual" one, the continuous revolution of the fly-wheel shaft causing the plunger to be reciprocated.

Having fully described my invention, what I claim is—

1. In a baling-press, the combination of the plunger 2, the pivoted lever 3, the secondary pitman 7, connecting said lever with the said plunger, a casting 9, mounted upon the up-

per end of the said lever, a feeder or rammer 13, fastened within the said casting, a primary pitman 18, also connected to the said casting, the opposite end of which is pivotally attached to the operating device of the machine, substantially as described.

2. In a baling-press, the combination of a baling-chamber 1, the plunger 2, located therein, an operating-lever 3, pivotally secured to the said chamber, the secondary pitman 7, connecting the lower end of said lever to the said plunger, the casting 9, fastened to the upper end of the said lever, the feeder 13, provided with holes 14, the bolt 15, passing through the said holes and casting, the primary pitman 18, also connected to the said casting, and means whereby the said pitman is operated, substantially as described.

3. In a baling-press, the combination of a baling-chamber having a hopper 20, the vertical straps 21, fastened to the baling-chamber, and to which the said hopper is attached, the plunger 2, located within the chamber, the intermediately-pivoted lever 3, the secondary pitman 7, connecting the said lever and plunger, the casting 9, fastened to the upper end of the said lever, the feeder 13, secured within the said casting and adjustable therein, the primary pitman 18, also connected to the casting, and the opposite end of said pitman being connected to suitable gearing for operating the same, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. HOWARD.

Witnesses:

W. J. JORDAN,
E. S. DAVIS.