

(No Model.)

2 Sheets—Sheet 1.

J. E. VAN DYKE & H. STOBAUGH.
COTTON PRESS.

No. 488,641.

Patented Dec. 27, 1892.

FIG. 1.

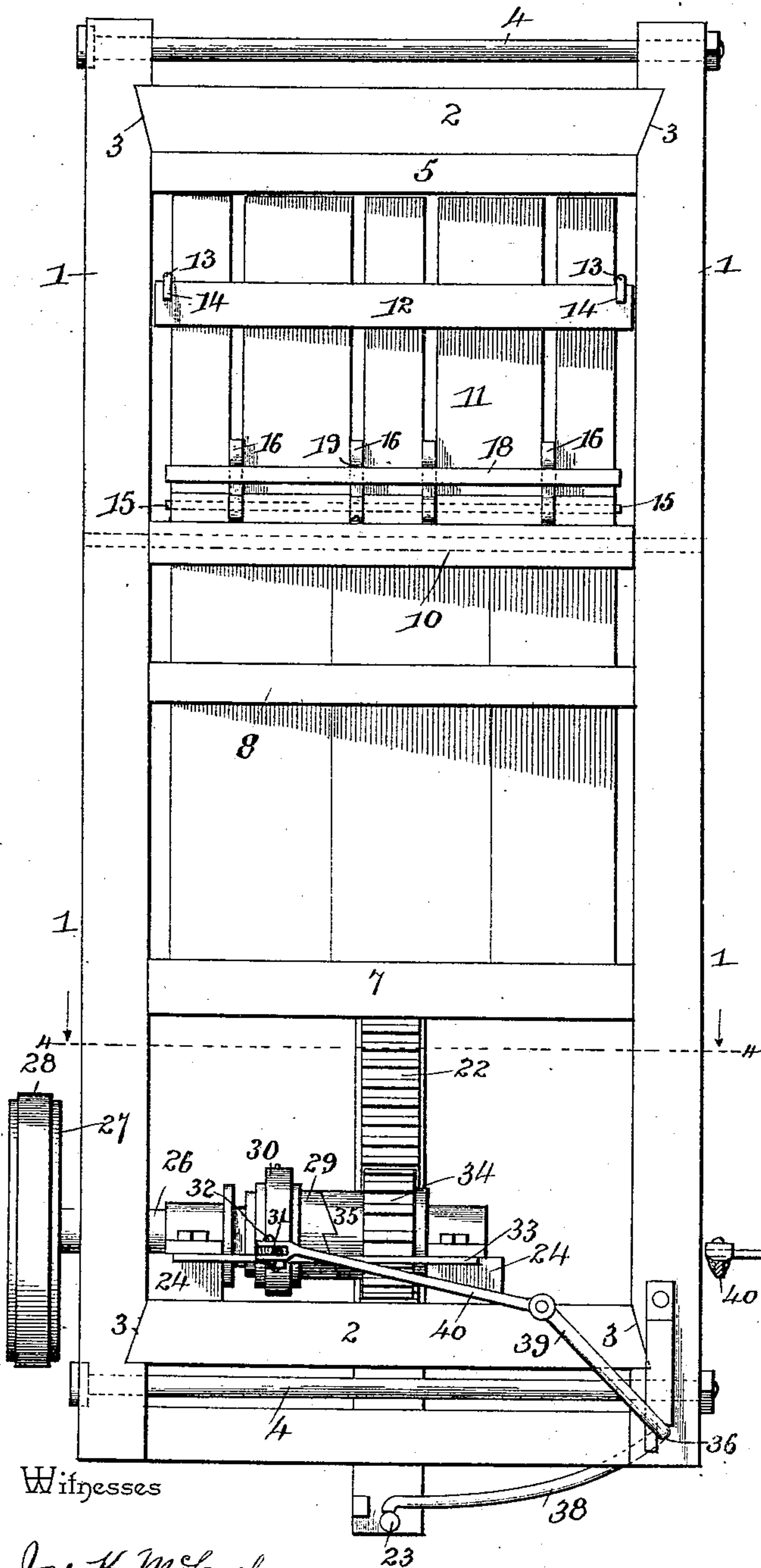
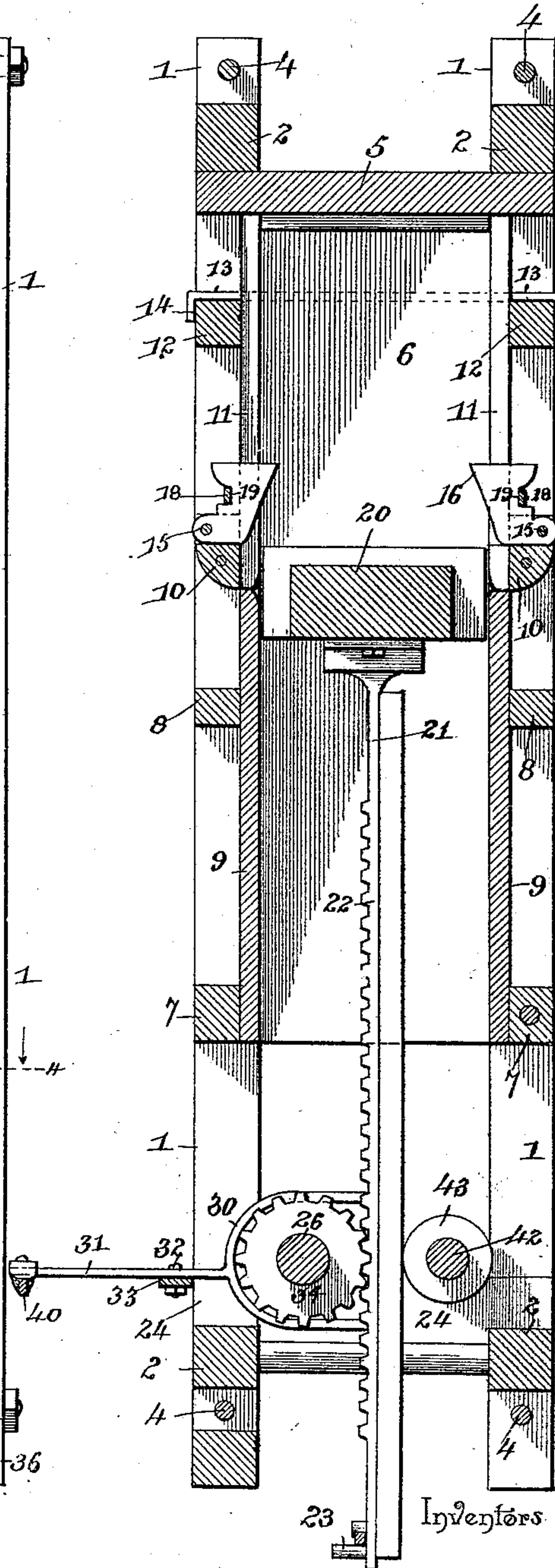


FIG. 2.



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FIG. 3.

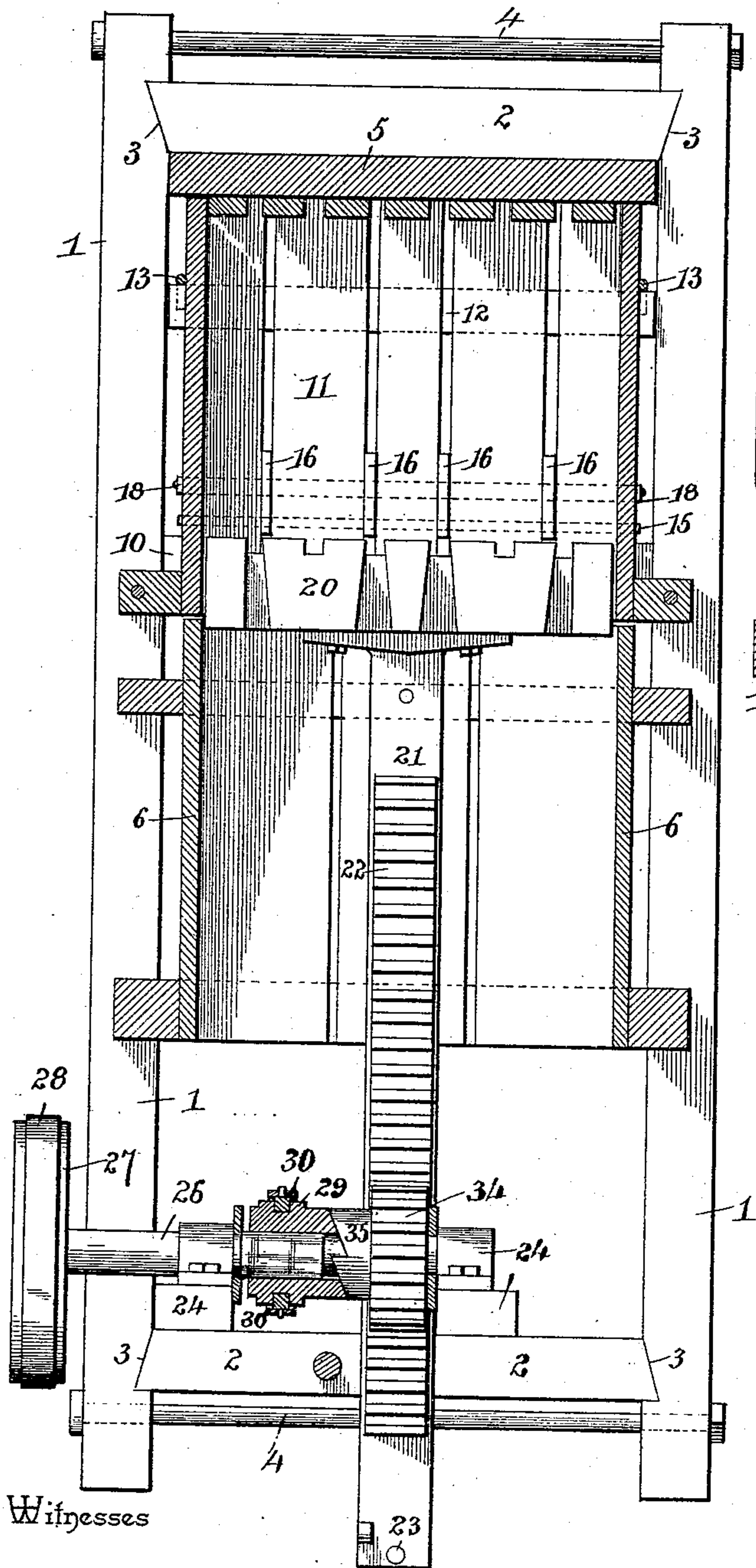
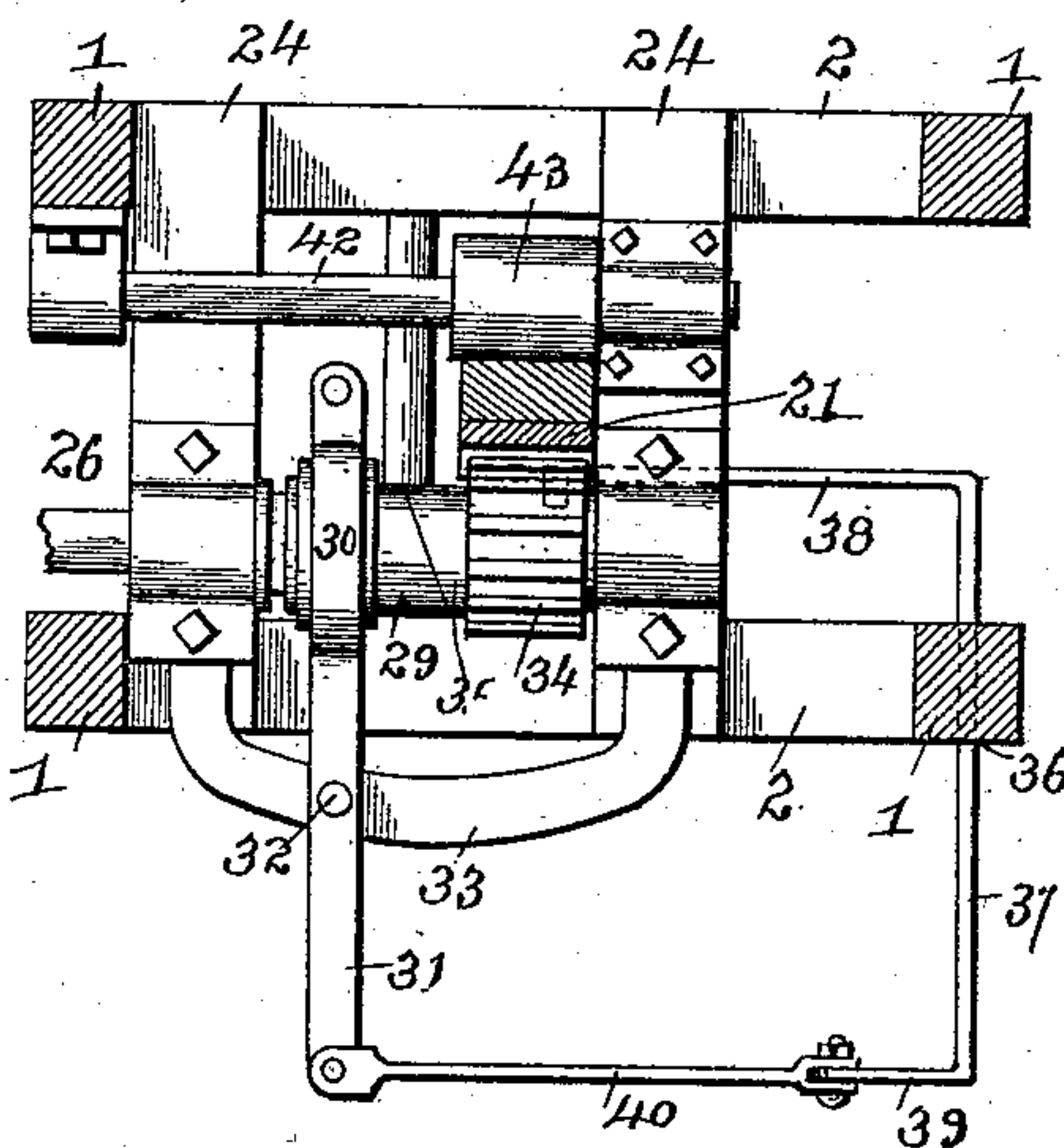


FIG. 4.



Witnesses

Inventors

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UNITED STATES PATENT OFFICE.

JAMES E. VAN DYKE AND HARRY STOBAUGH, OF CLARKSVILLE, TEXAS,
ASSIGNORS OF ONE-THIRD TO EUGENE M. BOWERS, OF SAME PLACE.

COTTON-PRESS.

SPECIFICATION forming part of Letters Patent No. 488,641, dated December 27, 1892.

Application filed April 5, 1892. Serial No. 427,884. (No model.)

To all whom it may concern:

Be it known that we, JAMES E. VAN DYKE and HARRY STOBAUGH, citizens of the United States, residing at Clarksville, in the county of Red River and State of Texas, have invented a new and useful Cotton - Press, of which the following is a specification.

Our invention relates to baling-presses for baling cotton and transforming the same from its loose state into what is commonly known as the plantation bale.

The objects of our invention are to produce a press of simple construction, adapted to be operated by the same power that operates the gin, and to so construct the plunger mechanism as to operate automatically.

With these objects in view the invention consists of certain features of construction hereinafter specified and particularly pointed out in the claim.

Referring to the drawings:—Figure 1 is a front elevation of a cotton-press constructed in accordance with our invention. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is a vertical transverse sectional view. Fig. 4 is a horizontal transverse sectional view, the plunger operating mechanism being shown in plan.

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

In practicing our invention, we prefer to build the press in a well, formed in a gin-house, locating the feed-chamber on one floor and the baling chamber upon the floor above, or rather on a level therewith. However this may be, if desired the press may be operated by any other mechanism than that herein mentioned, namely the gin mechanism, and need not be built in a well formed in the gin-house floor.

In the present instance, 1 designates the standards or posts, which are located one at each of the four corners of the rectangular well or opening formed in the gin-house floor. The posts are connected at their upper and at their lower ends by cross beams 2, the ends of which are preferably beveled as shown, and let into angular notches 3 with which the posts or standards 1 are provided. Tie-bolts 4 serve to bind the posts together. The head

5 of the press is of the usual construction, and located under the upper cross-beams 2. The opposite end-walls 6 of the press extend from the upper cross-beams 2, or rather the head 5, down to a point near the bottom of the framework, at which transverse connecting-bars 7 are located. Above the bars 7 transverse bars 8, connect the posts, and to these the opposite side-walls 9 are secured, combining with the walls 6 to form the feed-chamber. One of the transverse bars is pivoted and thus the wall 9 may be swung outwardly, and in fact, constitutes a door for giving access to the aforesaid feed-chamber. Above the walls 9, cross-bars 10, are located, and the same are pivoted in position and are provided with a slatted door 11, connected by cross-cleats 12, the ends of which extend beyond the series of slats. The doors 11 combine with the opposite side-walls 6 to form the baling-chamber of the machine, and they may be locked securely together against separation by a pair of transverse rods 13, the ends of which are bent laterally, as at 14, to take over the aforesaid cleats.

The bars 10 have passed therethrough a pintle-rod 15, and pivoted on said rod opposite each of the spaces formed between the slats, is a detent 16, which extends inwardly through the doors into the baling chamber. These detents may be swung outwardly, but are normally held pressed inwardly, through the medium of a spring-rod 18, which is seated in the series of notches 19, with which the rear edges of each series of detents are provided. The under sides of the detents are inclined, so that they permit of the upward passage of the cotton, readily yielding to the same against the action of their springs, and prevent a withdrawal of the cotton when the follower leaves the deposit.

20 designates the follower or plunger-head, and the same is provided with and operated by the bar 21. This bar is provided at one side with a series of teeth, 22, transversely-disposed and at its lower end with a trip-pin 23, laterally extending.

A pair of transverse sills 24 connect the lower cross-beams 2, and bearings 25 are mounted upon the same. In these bearings

a shaft 26 is journaled for rotation, said shaft being provided with a pulley 27, over which passes a belt 28, leading from the gin-mechanism, or any other suitable motor. Splined upon the shaft is a clutch-sleeve 29, a yoke 30, encircling the same and terminating at one end in a lever 31, which is fulcrumed as at 32 on a rest 33. Loosely mounted at the side of the clutch-sleeve upon the aforesaid shaft is a gear 34, the teeth of which are designed to engage with the transverse rack-teeth of the bar 21. This gear is provided at one side with a toothed-hub 35, with which the toothed-sleeve is designed to engage, when thrown into operation through the medium of the lever of the yoke that engages the sleeve.

In a bearing 36, located in the lower end of one of the posts or standards, is a transverse rock-shaft 37, having a rear horizontally-disposed and curved rock-arm 38 and a front upwardly-disposed rock arm 39, the latter being loosely connected with the outer end of the clutch-lever through the medium of a connecting-rod 40.

In bearings 41, located upon the rear standards 1, immediately above the sills 24, a transverse shaft 42 is journaled, the same being an idle shaft and provided at a point opposite the plunger-bar with a pulley 43, adapted to maintain said bar in engagement with the teeth of the cog-wheel for operating the bar.

This completes the construction of the press, and the operation thereof is as follows: The baling-chamber doors are secured in the manner before mentioned, and the cotton introduced at the floor below through the door 9, which is swung open for the purpose. It will be understood that the pulley and power-shaft are revolving. The outer rock-arm of the rock-shaft being connected with the clutch-lever, it will be seen that as the power-shaft revolves, the sleeve moving with it will clutch and rotate the gear-wheel, and thus elevate the plunger, the cotton being carried by the plunger up into the baling chamber, beyond the spring-pressed detents, by which it is prevented from falling back into the feed-chamber. After the plunger-bar has moved upwardly its pin operating against the inner rock-arm of the rock-shaft oscillates the said rock-shaft, and through the medium of the connecting-rod gradually draws upon the outer end of the

shifting lever until the latter disengages the splined clutch-sleeve with the toothed-hub of the gear. The gear thus being released, retrogrades and the plunger and its bar fall by gravity to the first position, when the rock-arms falling by gravity returns the lower rock-arm to the path of the plunger for re-engagement and also shifts the clutch-lever so as to throw the clutch-sleeve into engagement with the hub of the gear. By a series of deposits and reciprocations, the bale is finally completed, and a rod or other device may be inserted under the follower to prevent it from descending during the tying of the bale. After the bale has been tied, the plunger is permitted to fall or return to its normal position and the operation is repeated.

From the foregoing description, in connection with the accompanying drawings, it will be seen that we have provided a press of very simple construction and mechanism for automatically operating the same, said mechanism receiving its power preferably from the same motor that drives the gin.

Having described our invention, what we claim is:—

The combination with the framework having the baling-chamber, the plunger-head and plunger mounted for reciprocation therein, the latter being provided at one side with a rack and below the same with a trip-pin, a power-shaft journaled in the framework at one side of the plunger-bar, a gear loosely mounted on the shaft having a toothed hub, a clutch-sleeve splined upon the shaft, a clutch-lever having its yoke connected with the clutch-sleeve and fulcrumed at one side of the same to the framework, a transversely disposed rocking-shaft, rock-arms extending to one side of and from the shaft, one of which is arranged in the path of the trip-pin, and the connecting-rod between the remaining rock-arm and the free end of the clutch-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.

JAMES E. VAN DYKE.
HARRY STOBAUGH.

Witnesses:

J. J. TAYLOR,
S. B. STANLEY.