No. 666,203. Patented Jan. 15, 1901.

T. J. MAYBERRY.

BALING PRESS.

(Application filed Mar. 15, 1900.)

(No Model.) 2 Sheets—Sheet 1.

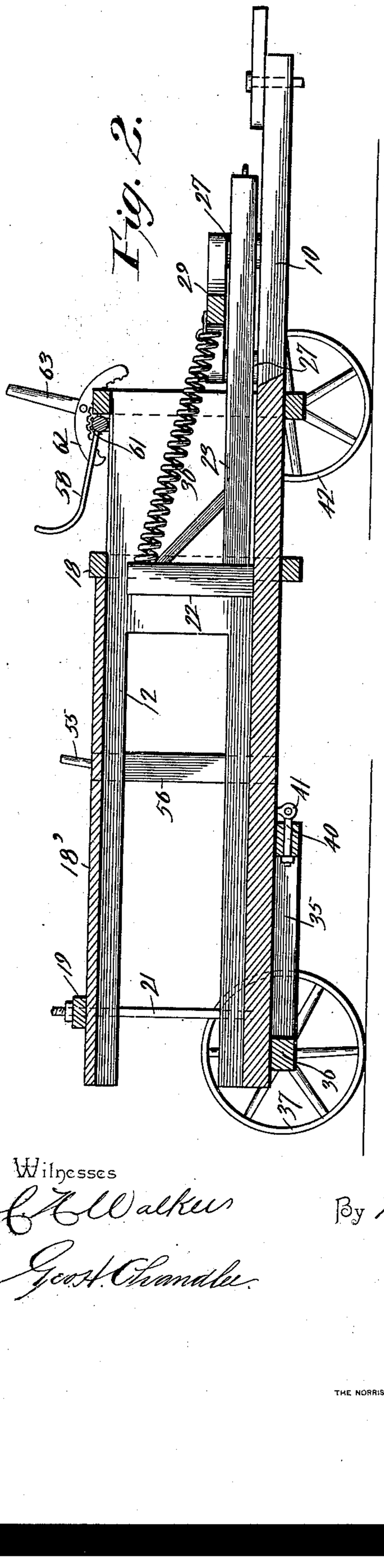

Fig. 2.

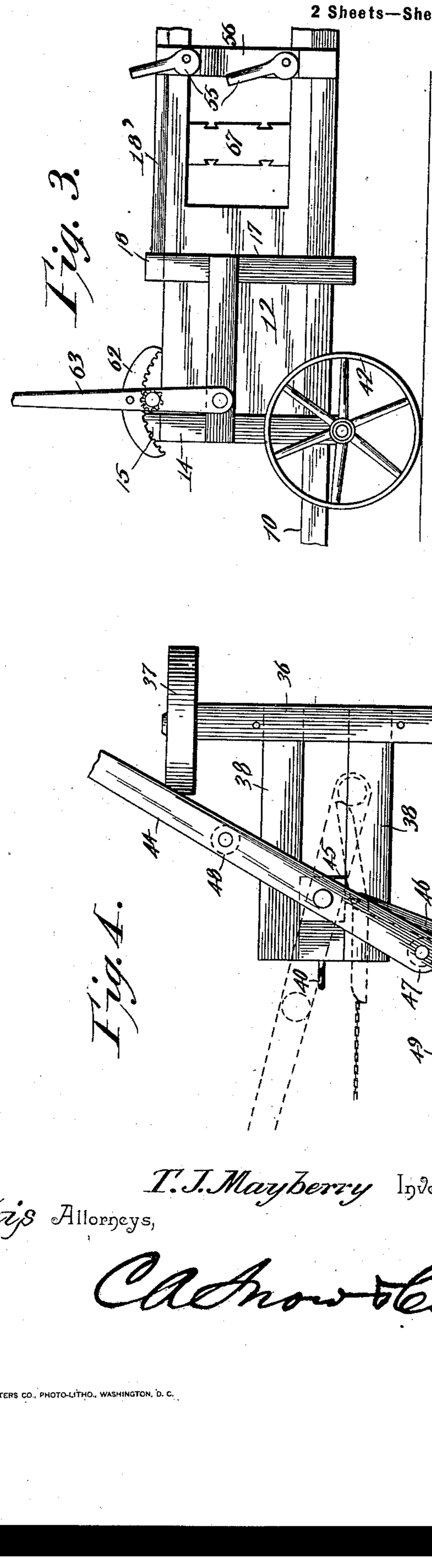

Fig. 3.

Fig. 4.

Witnesses
C. H. Walker
Geo. H. Chandlee

T. J. Mayberry Inventor
By his Attorneys,
C. A. Snow & Co.

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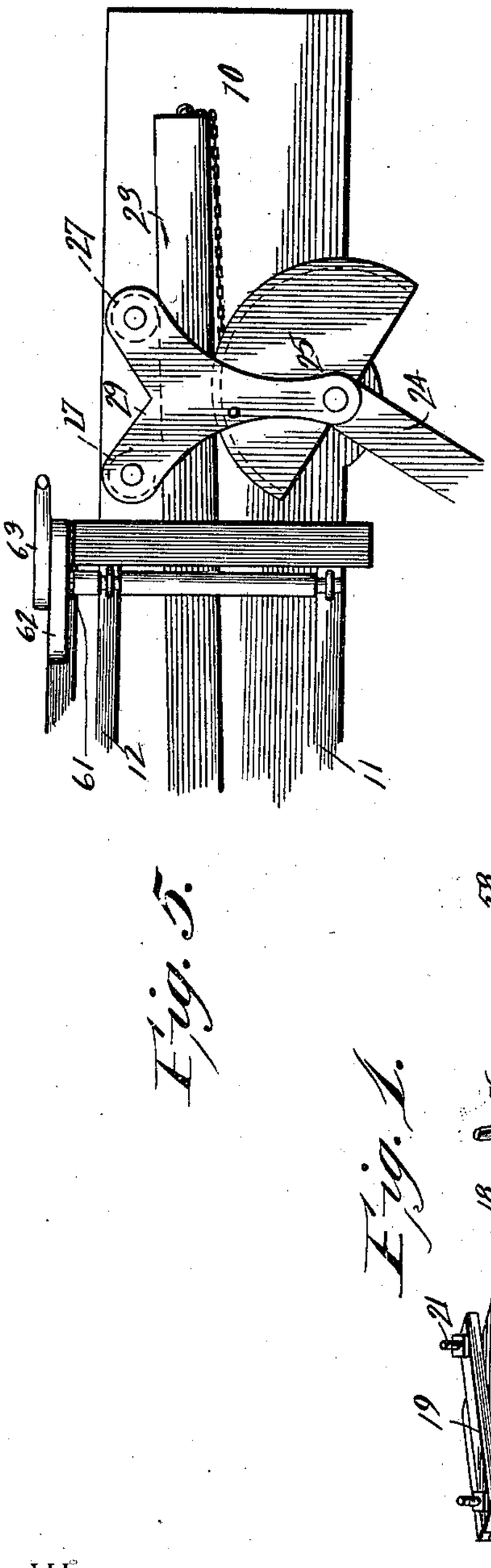

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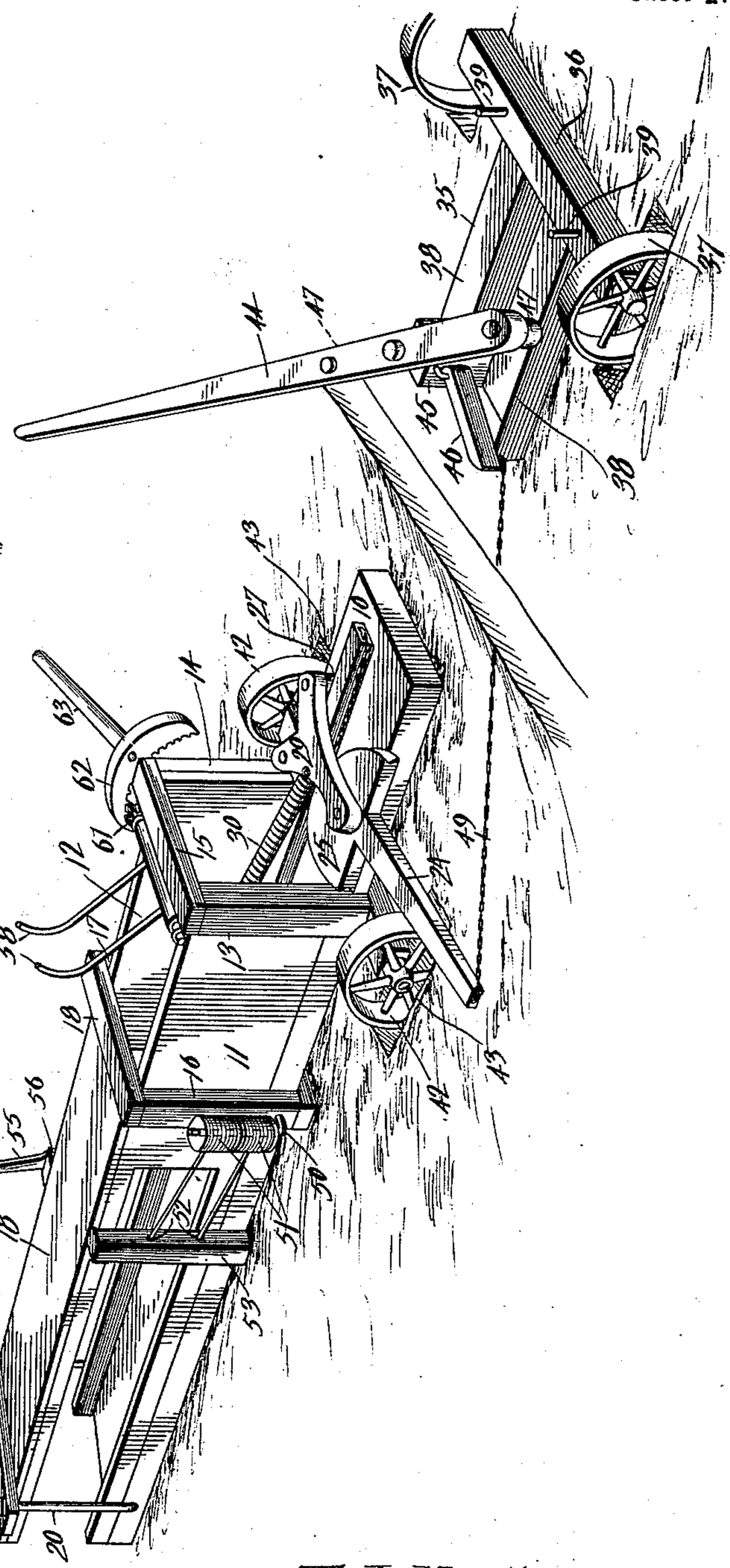

Fig. 1.

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Geo. H. Chandlee.

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UNITED STATES PATENT OFFICE.

THOMAS JORDEN MAYBERRY, OF MOUNTAIN GROVE, MISSOURI.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 666,203, dated January 15, 1901.

Application filed March 15, 1900. Serial No. 8,788. (No model.)

To all whom it may concern:

Be it known that I, THOMAS JORDEN MAYBERRY, a citizen of the United States, residing at Mountain Grove, in the county of Wright and State of Missouri, have invented a new and useful Baling-Press, of which the following is a specification.

This invention relates to baling-presses in general, and more particularly to that class employed for baling hay, straw, &c., one object of the invention being to provide a cheap, simple, and efficient structure for this purpose.

A further object of the invention is to provide means for operating the plunger with a minimum expenditure of energy and to provide for quickly returning the plunger after each stroke, an additional object being to afford means for feeding the materials into the press-box in operative relation to the plunger and also to provide means for feeding the baling-wires to the bales.

The object of the invention is, furthermore, to provide a construction which when assembled for operation may be easily and quickly operated and which after being disassembled from its operative condition may be compactly arranged for transport from place to place.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view showing the complete press ready for the pressing operation. Fig. 2 is a longitudinal central section of the press with the parts arranged for transport and showing the front portion of the apparatus in elevation. Fig. 3 is a side elevation of the front portion of the press-box and showing the opposite side from that shown in Fig. 1. Fig. 4 is a plan view of the rear truck detached and with the operating-lever and connected parts in their operative positions. Fig. 5 is a detail plan view showing the front portion of the press-box and the forwardly-projecting base and illustrating the cam-lever and its connection with the plunger-stem.

Referring now to the drawings, the press of the present invention comprises the usual press-box, including a base 10, to which are secured side pieces 11 and 12, mutually parallel and lying at right angles to the base, the forward ends of the sides terminating short of the base, while the rear ends of the sides are bifurcated, as shown.

At the front end of the box are uprights 13 and 14, rigidly connected with the base and having a connecting cross-piece 15, which lies against the upper edges of the sides. Additional uprights 16 and 17 are disposed in the rear of the first-named uprights and have a connecting cross-piece 18, the top of the box being covered in the rear of the last-named cross-piece, as shown at 18, while the uncovered portion between the cross-pieces forms the hopper for the introduction of the materials to be pressed. A third cross-piece 19 is disposed transversely of the top 18 near its rear end, and through this cross-piece are passed tie-bolts 20 and 21, lying at opposite sides of the box and having their lower ends engaged with the base 10, whereby the top of the box, as also the upper bifurcations of the sides, may be prevented from upward displacement.

In the press-box there is disposed a slidable plunger 22, which fits the box with the usual snugness, and this plunger has a plunger-rod 23 rigidly connected therewith and through the medium of which the plunger is reciprocated in the press-box to perform the pressing operation. To thus operate the plunger-rod, a lever 24 has its semicircular head pivoted to the upper face of the forwardly-projecting portion of the base 10 and in such position that the adjacent face of the plunger-rod will lie substantially tangent thereto. This lever 24 has a peripheral groove in its head 25 to receive a flexible connection in the form of a chain or cable 26, one end of which is connected with the extremity of the plunger-rod, while the other end is connected with the farther end of the arc of the lever-head, so that as said farther end is rocked away from the extremity of the plunger-rod the chain or cable will be wound into the groove of the head 25 and the plunger will be advanced into and rearwardly of the press-box. Movement of the plunger-rod away from the head of the lever is prevented by friction-rolls 27, mounted on the base 10, and at the opposite side of the plunger-rod from the cam-lever, while up-

ward displacement of the rod is prevented by a plate 29, which lies above the rod and in which the spindles of the rolls and the pivot of the cam-lever are mounted. This plate furthermore prevents spreading of the cam-lever and rolls. The plunger is returned after the pressing operation through the medium of a helical spring 30, one end of which is attached to the plate 29, while its opposite end is attached to the outer face of the plunger, as illustrated in Fig. 2 of the drawings.

The mechanism for operating the lever is adapted to be mounted upon the rear supporting-truck 35 of the press-box. This truck comprises an axletree 36, carrying an axle, upon which are mounted supporting-wheels 37, and to the axletree are connected parallel beams 38, mutually connected at their outer ends and separated in the rear of such connection by an interspace, as shown. When the apparatus is ready for transportation, this truck is disposed beneath the rear portion of the press-box to receive the press-box between pins 39 upon the axletree, and to hold the truck in this position a ring 40 is connected with the connecting-piece of the beams and lies between and in alinement with eyes 41 upon the under side of the press-box. A retaining pin or bolt is then passed through the alining ring and eyes. When the apparatus is to be operated for pressing, the truck is removed and the rear end of the press-box rests upon the ground, the forward wheels 42 being disposed in trenches 43 to prevent displacement of the box and to permit it to lie flat upon the ground throughout its length.

The apparatus carried by the truck during the operation of the machine consists of a lever 44, which is pivoted upon a block 45, of such dimensions that it may fit snugly between the beams 38, this block being adapted to project above the beams and having a short lever or finger 46, pivotally mounted upon one face thereof. This finger is pivoted eccentric to the lever 44 and is adapted for movement into and out of the orbit of two rollers 47 and 48, which are mounted upon the under side of lever 44. As the lever 44 is rotated the rollers successively engage the finger and after moving therealong pass off of the free end of the finger. The engagement of the rolls with the finger moves the latter upon its pivot with a swinging motion. The outer end of the finger is connected with the lever 24 through the medium of a cable or chain 49, and as the finger is swung on its pivot the lever 24 is correspondingly moved to wind the connection 26 in the groove of its head and move the plunger inwardly. When a roller passes from the finger, the finger is free to return to its original position and is so returned by the helical spring 30, acting through the cam-lever and the connection of the finger therewith. Thus as the lever 44 is rotated the plunger will be reciprocated.

Upon the upright 16 is fixed a spindle 50 to receive the spools 51, of wire, for binding the bales, the wires from the spools being taken through perforations 52 in an upright 53 on the adjacent side of the press-box and then through the sides of the press-box and are held in clamps 55 upon an upright 56 opposite to the upright 52. The gates 67 are of the usual construction and have parallel horizontal grooves in their front and rear faces for the reception of the binding-wires. After the bale is formed the wires are drawn from the spools and cut and the free ends are passed through grooves in the front gate, and the wires are then fastened by twisting or in any other suitable and well-known manner.

In order to press the material down into the press-box by way of the hopper, a shaft is journaled transversely of the hopper and at the front end thereof, this shaft having radially-extending arms 58, which are adapted to move into the box when the shaft is rocked in one direction and to move therefrom when the shaft is rocked in an opposite direction. The extremities of these arms are curved upwardly, and thus if the plunger be moved inwardly when the arms are in the box the engagement of the plunger or the materials to be pressed with the arms will act to rock them upwardly out of the box to permit the plunger to pass therebeyond. For operation of this rock-shaft a pinion 61 is fixed at one end thereof, and engaged therewith is a segmental gear 62, carried by a lever 63, fulcrumed to the press-box. Thus as the lever 63 is oscillated the gear and pinion will be operated to raise and lower the arms. After the pressing operation the truck is replaced in engagement with the press-box after the lever and connected parts have been removed, and a tongue is connected to the front end of the base of the box for hitching a team. It will thus be seen that with the present construction the pressing operation may be easily and effectively performed and that the parts may be readily adjusted to their operative positions; also, that when the pressing operation is at an end the parts carried by the truck may be loaded upon the box for transportation.

The specific construction and arrangement shown and described may be changed within the scope of the appended claims and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. In a baling-press, the combination with a box and a plunger therein, of a lever operatively connected with the plunger, a supporting-truck removably connected with the box, said truck comprising spaced beams connected at their ends and provided with wheels, and a sweep mechanism adapted for connection with the truck when removed from the box, said mechanism comprising a block adapted to fit between the beams of the truck, a sweep pivoted upon the block and having rollers on its under side, and a finger pivoted to the block eccentric to the sweep and lying

in the path of movement of the rollers to be engaged and released thereby, said finger having operative connection with the lever.

2. A baling-press comprising a box, a hopper leading to the inclosure of the box, a plunger in the box and having operating means, a rock-shaft journaled transversely of the hopper and at the front end thereof, arms carried by the shaft and having their outer ends curved away from the hopper, said arms being adapted for movement into and out of the box, a pinion on the shaft, a lever pivoted on the box, and a mutilated gear carried by the lever and engaging the pinion for operating the rock-shaft.

3. The combination with a press-box having a plunger therein, of a removable supporting-truck comprising spaced beams connected at one end by an axle provided with wheels and connected at their opposite ends by a cross-beam having an eye for engagement by a pin passed through an alining eye upon the box, pins carried by the spaced beams for engagement with the box to hold it from lateral displacement from the truck, said truck being adapted to receive a sweep mechanism when removed from the box.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS JORDEN MAYBERRY.

Witnesses:
O. Q. WELLS,
JOEL F. SHORT.