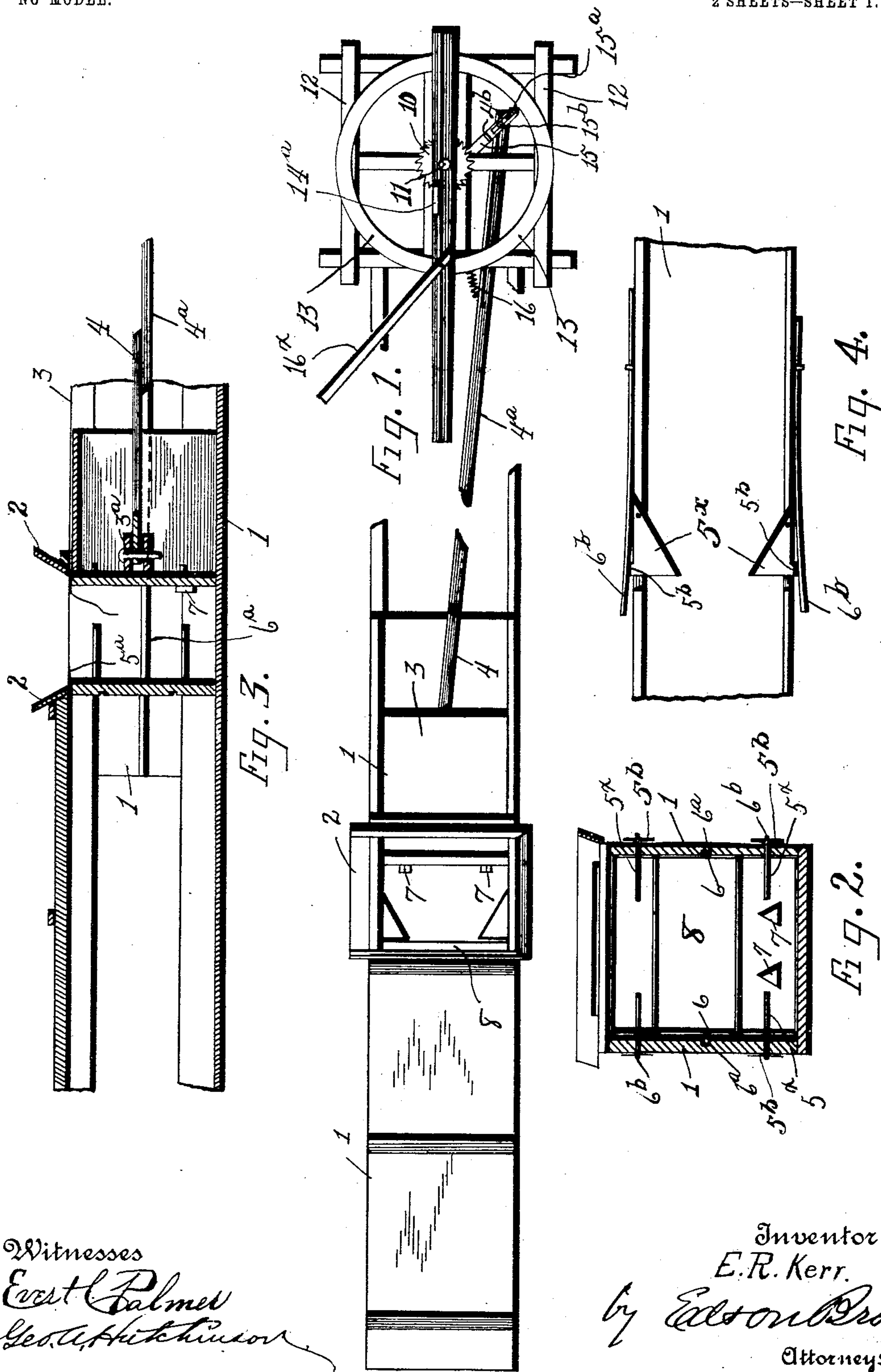


E. R. KERR.
BALING PRESS.

APPLICATION FILED DEC. 16, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
Everett Palmer
Geo. A. Hutchinson

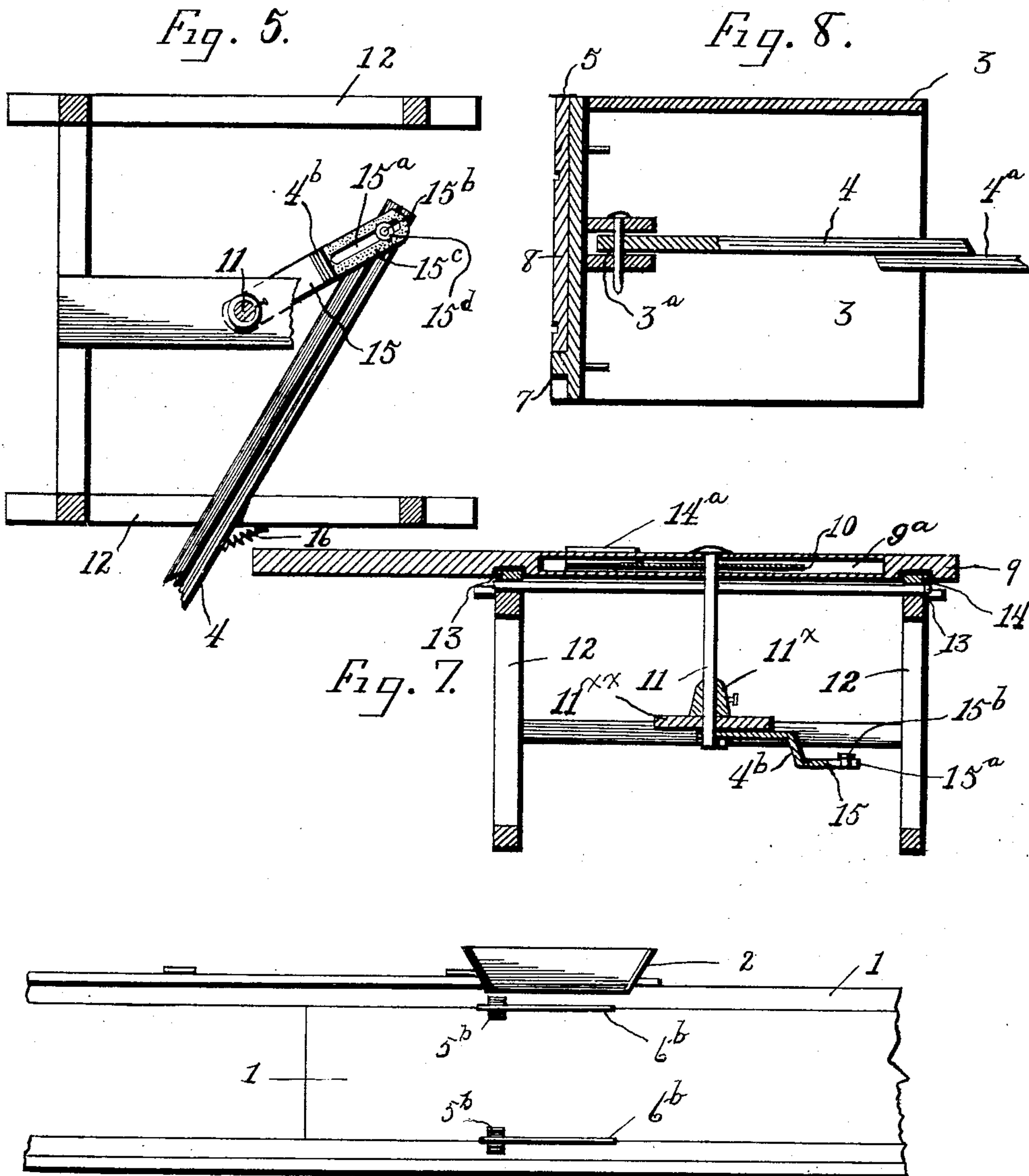
Inventor:
 E. R. Kerr.
 by *Edson Bros.*
 Attorneys.

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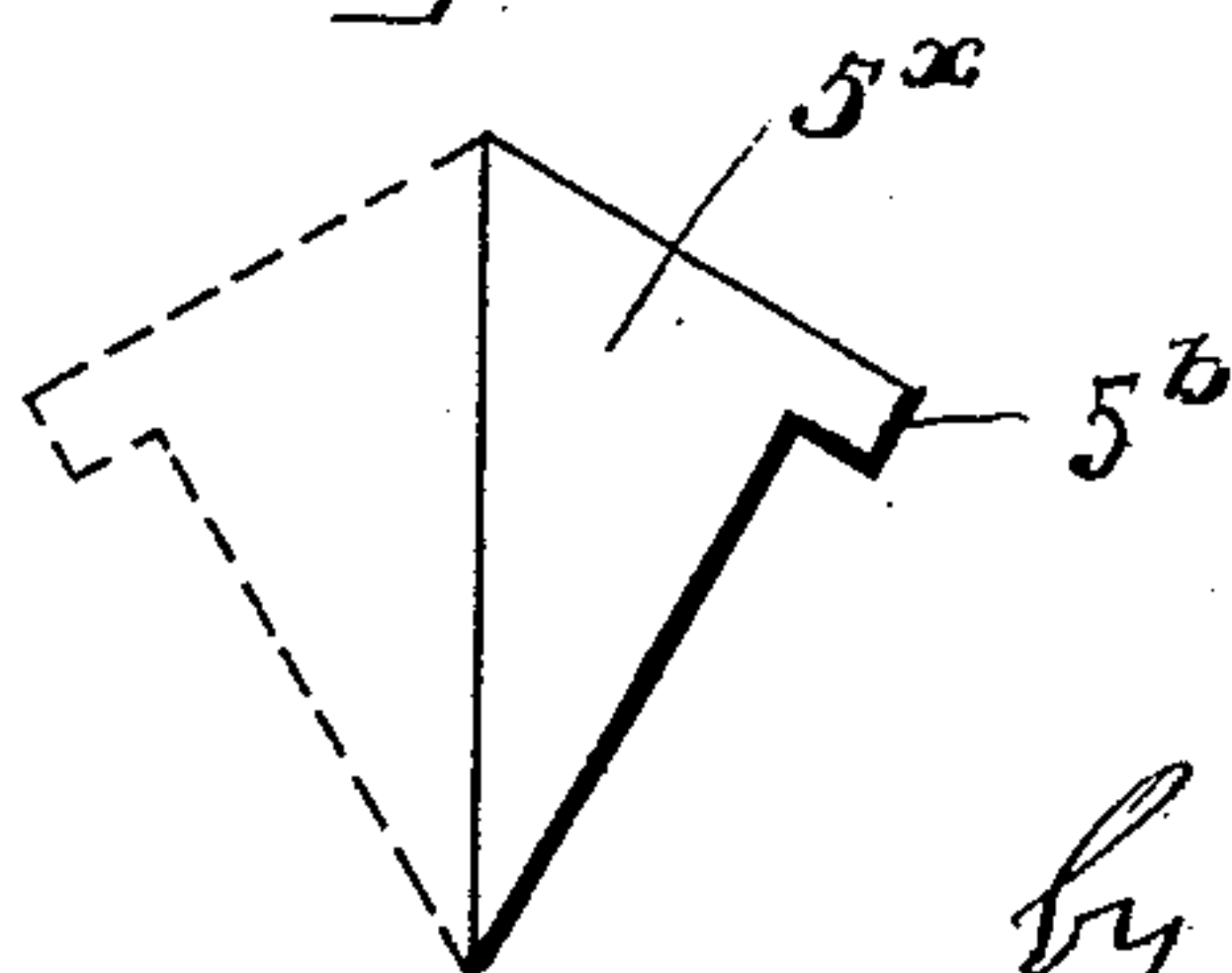
NO MODEL.

2 SHEETS—SHEET 2.



Witnesses
Evert L. Palmer
Geo. A. Hutchinson

Fig. 9.



Inventor:
E. R. Kerr
by Edson Bros.
Attorneys

UNITED STATES PATENT OFFICE.

ELISHA R. KERR, OF ERIN, TENNESSEE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 745,862, dated December 1, 1903.

Application filed December 16, 1902. Serial No. 135,418. (No model.)

To all whom it may concern:

Be it known that I, ELISHA R. KERR, a citizen of the United States, residing at Erin, in the county of Houston and State of Tennessee, have invented certain new and useful Improvements in Baling-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain improvements in baling-presses.

Said invention has for its object to effect the expeditious and compact baling of the material acted upon—as, for instance, hay and the like. It also provides for the ready and effective actuation of the various parts, together with the lessening of the labor and time required in the formation of the bales and their delivery from the press. It is also simple, ready of construction, and can be manufactured at the minimum cost.

Said invention consists of the combination and arrangement of parts, including their construction, substantially as hereinafter more fully disclosed, and specifically pointed out by the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a broken plan view thereof. Fig. 2 is a cross-section taken through the hopper or where the material is introduced into the press. Fig. 3 is a broken longitudinal section taken through the press proper. Fig. 4 is a horizontal sectional view disclosing more particularly the holding-dogs or retainers for the material after the withdrawal of the plunger from said material. Fig. 5 is a detail sectional view showing more fully the crank connection between the sweep-shaft and the plunger-rod or pitman. Fig. 6 is a broken side view of the press proper. Fig. 7 is a sectional view taken through the sweep-carrying shaft, ratchet, and annular track or guide. Fig. 8 is a broken sectional view taken vertically through the plunger. Fig. 9 is a detail view showing the formation of the retaining devices.

Latitude is allowed herein as to details, which may be changed as circumstances may suggest without departing from the spirit of

my invention and said invention remain intact and be protected.

In carrying out my invention I employ a suitable press-box or closure 1, in general construction as usually employed for such purpose, having the usual filling-opening in its top surmounted by a hopper 2, preferably extended laterally beyond one side wall to facilitate the reception of the material or hay filled into said receptacle. Within said receptacle or press-box is arranged a plunger 3, preferably of a box-like construction—that is, with top and lateral portions extending rearward from its head a suitable distance therefrom, said head having attached thereto at its rear side, so as to swing or move laterally, as at 3^a, the pitman or rod 4. Said plunger has secured to its forward edge a transverse bar or plate 5, which as said plunger is moved forward in alinement with and past the filling-opening in said receptacle passes directly under and close to a straight-edged knife 5^a, thus severing any protruding portions of hay or material to prevent the crowding or wedging of the material as it is passed into the press-chamber, said knife being secured to the opposite edge of the press-chamber. Said plunger has lateral cleats or guides 6 engaging corresponding grooves or slots 6^a in the inner surface of the sides of said receptacle. Said plunger also has its head portion provided near its bottom forward edge with preferably tapered or wedge-shaped projections 7, and 8 is a board or partition having undercut corresponding notches in its lower edge adapted to be engaged by or receive said projections, said board or partition being initially inserted in place between the head of the plunger and the material acted upon and forced by said plunger past the retaining devices previously referred to and after having thus been forced past said devices will remain in position between said retaining devices and the hay or material in the baling-chamber of the press. The projections upon the head of the plunger serve to support the division-block when placed so that the notches in its lower edge engage said projections away from the walls and floor of the press-chamber, thus preventing all friction and wear which would other-

wise result. Said board or partition has two or more horizontal grooves or gains in its surfaces next to the hay or material to be baled to receive the binding-wires, suitably
 5 passed thereinto in the manner usually practiced from and through the sides of the press. Retaining devices are preferably formed of triangular plates 5^x, each of which may be stamped up of sheet metal and folded upon
 10 itself, with one of the corner edges of each of the folds thereof extended at right angles to the main portion of the folds, forming stops 5^b, resting laterally against the receptacle of the press. Said plates are arranged in hori-
 15 zontal longitudinal slits produced laterally in the press-box or receptacle and have their inner ends or angles pivoted therein. Springs 6^b, with their rear ends suitably held to the press-box, are adapted to exert inward lateral
 20 pressure upon said plates to cause said plates to stand normally within the plane of the movement of the plunger, said springs having their opposite ends applied to said plates. The plunger-rod or pitman 4 has preferably
 25 one portion 4^a thereof depressed in order to permit the horse employed as the motor-power for actuating the press to readily step over said pitman or rod.

A sweep or hitching-bar 9, loosely fitted
 30 upon a vertical shaft having fixed thereto a ratchet 10 and which shaft 11 suitably journaled in the framing 12, said sweep resting above an annular track-like guideway 13, also secured to said framing. Said sweep has
 35 connected thereto a pendent inturned projection or arm 14, engaging the under side of said guideway to retain said sweep in a horizontal working position, said sweep also having a pendent pawl 14^a engaging said ratchet.
 40 Said sweep has suitably connected thereto, preferably by an eyebolt passing through said sweep and secured thereto by the usual nut, what is termed a "lead-pole" 16^x for the horse hitched to said sweep. In practice the
 45 press and framing of the power mechanism are preferably held the requisite distance apart for obvious reasons by means of rods or bars suitably adapted and secured in position for that purpose. The shaft 11 is con-
 50 nected to a crank-arm 15, having a longitudinal slot 15^a therethrough to receive a bolt 15^b effecting connection with said pitman or connecting-rod. Said crank-arm has a roughened surface 15^c presented upward and having en-
 55 gaging therewith for its effective retention in place a nut 15^d, screwed upon said bolt. The shaft 11 bearing said ratchet is suitably stepped in a collar or shoulder 11^x, resting upon a plate 11^{xx}, suitably secured upon the
 60 framing 12 to retain said ratchet suitably elevated above the lower sides of the slot 9^a in the sweep 9, in which said ratchet moves, to prevent contact therewith. By the above-mentioned arrangement of the connection be-
 65 tween the crank-arm 15 and the pitman 4 it will be observed that by shifting the bolt 15^b after loosening the nut 15^d the stroke of said

rod or pitman may be readily adjusted as circumstances may require. Said plunger-rod or pitman has applied thereto a spring 70 16, suitably connected to the framing supporting the shaft and to said pitman or rod for providing for the automatic return stroke of said pitman, as is common. Said plunger-rod or pitman may be split longitudinally or
 75 formed in longitudinal sections for a portion of its length to provide for readily receiving the means of connection between it and said crank-arm. Said crank-arm is offset, as at 4^b, to enable the projecting bolt end and nut to
 80 readily clear the framing 12 as the pitman or plunger-rod is actuated when the machine or press is in operation.

The sweep 9 is preferably made in two pieces, the division being made longitudinally 85 and vertically to provide for its being readily placed in position around the ratchet 10.

In operation it will be readily seen that upon placing or filling the material or hay into the press-box through the hopper-open- 90 ing and duly actuating the plunger the material will be carried, with the partition or board applied to the head of said plunger, past the retaining devices, and upon the return stroke of said plunger said head or par- 95 tition, with the hay or material, will be retained in the baling-chamber ready for tying and the formation of the same into a bale, said operation being continued during the continued placing of hay or material in the 100 press-chamber and the movement of said plunger.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is— 105

1. In a device of the character described, a plunger having near its forward bottom edge projections or cleats, and a board or partition temporarily carried by said plunger, having notches in its lower edge adapted to 110 receive said projections or cleats.

2. In a device of the character described, a plunger having lateral guide-cleats engaging corresponding grooves or slots in the press-chamber, and having cleats or projec- 115 tions near its bottom forward edge, a temporary board or partition adapted to be engaged by said cleats or projections, means for actuating said plunger, and a press-box having lateral inwardly-projecting retaining devices 120 to engage said board or partition.

3. In a device of the character described, a press-box or receptacle equipped with retaining devices each comprising a triangular plate with lateral projections or stops at one 125 angle thereof, arranged exteriorly of said press-box or receptacle, and springs applied to said retaining devices for holding the same normally in the path of the plunger.

4. In a device of the character described, 130 a chamber or receptacle equipped with retaining devices each comprising a triangular plate formed of folds resting one upon the other, with one of the angles of each fold

adapted to bear laterally against said receptacle or chamber, and springs secured to said chamber and bearing upon said plates.

5 In a device of the character described, an annular guide or track way suitably supported in position, a sweep or hitching-bar having a pendent arm engaging said guide-way, a shaft carrying a ratchet having pawl
10 a crank-arm connected to said shaft, a plun-

ger-rod having adjustable connection with said crank-arm, and a plunger carried by said rod working in a press-chamber.

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

ELISHA R. KERR.

Witnesses:

G. W. KANNORD,

R. P. KIRK.