

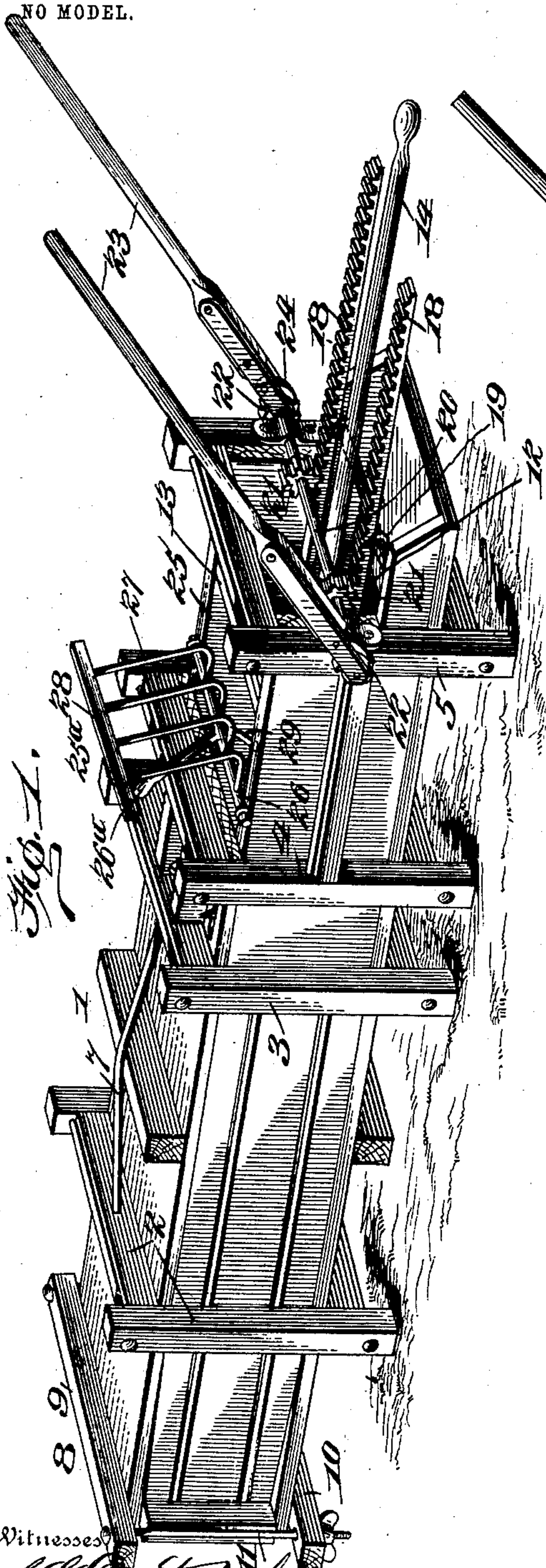
No. 737,729.

PATENTED SEPT. 1, 1903.

J. E. FRANCE.
HAND POWER HAY PRESS.
APPLICATION FILED AUG. 6, 1902.

NO MODEL.

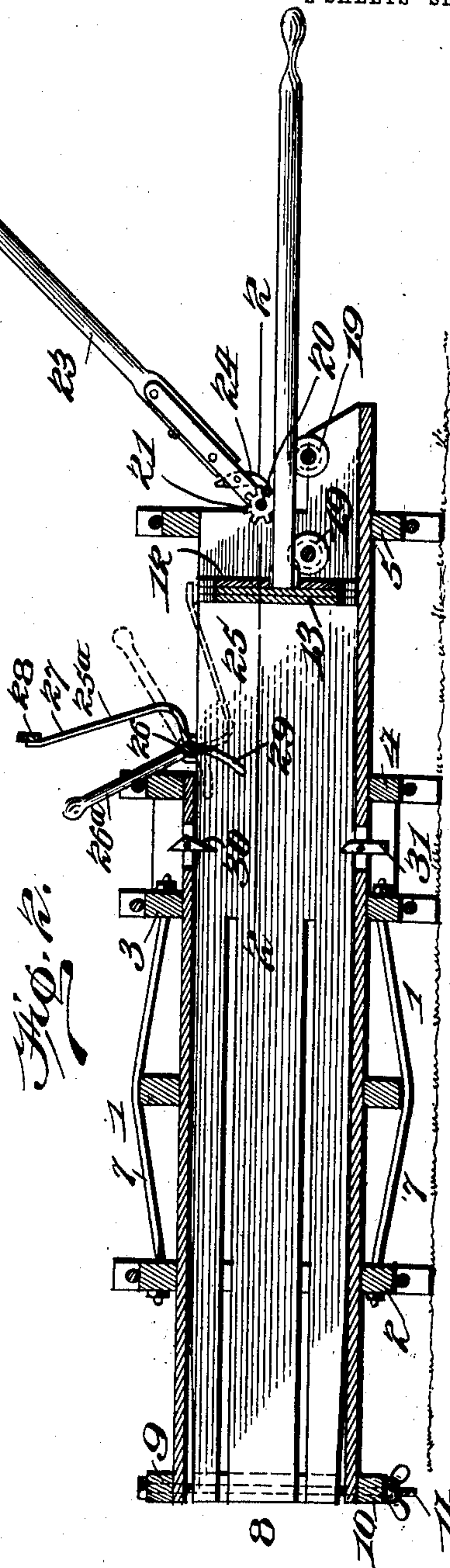
2 SHEETS—SHEET 1.



Witnesses

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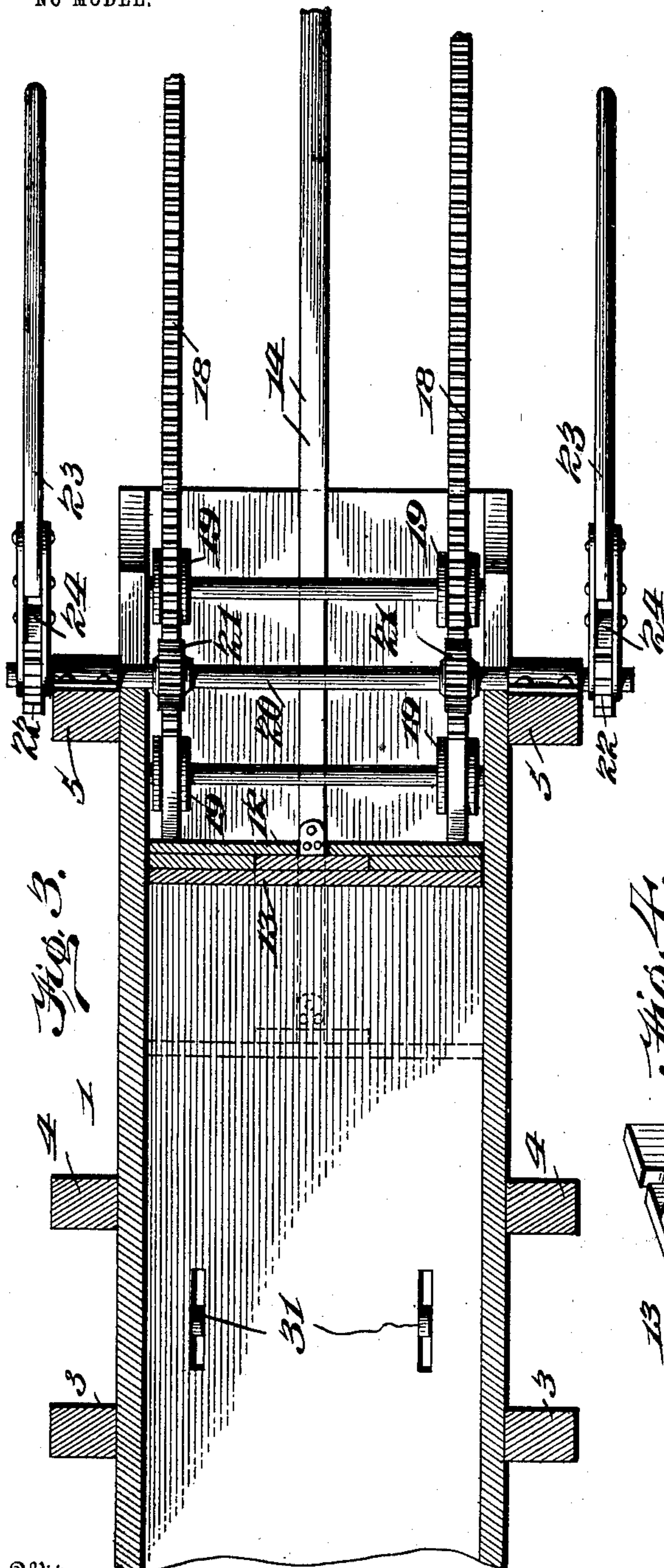
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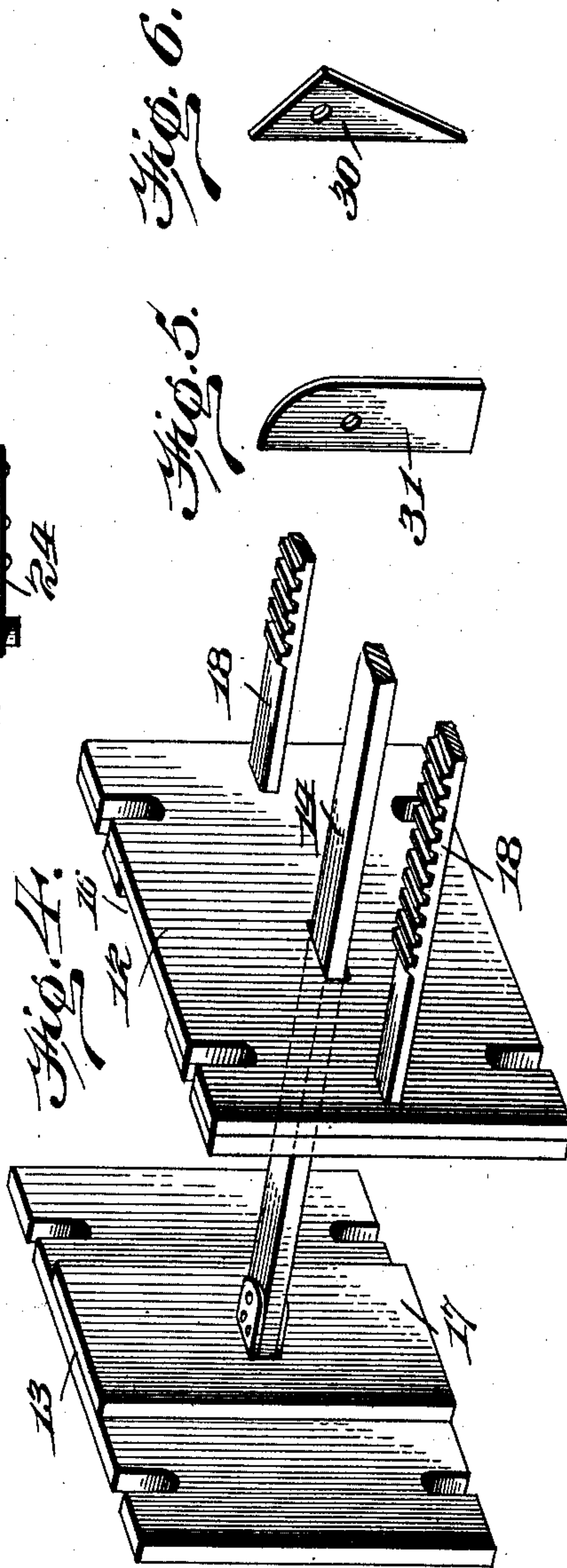
NO MODEL.

2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES E. FRANCE, OF WATERVALLEY, MISSISSIPPI.

HAND-POWER HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 737,729, dated September 1, 1903.

Application filed August 6, 1902. Serial No. 118,646. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. FRANCE, a citizen of the United States, and a resident of Watervalley, in the county of Yalobusha, State of Mississippi, have invented certain new and useful Improvements in Hand-Power Hay-Presses, of which the following is a specification.

Heretofore a hand-press has never been provided which is continuous in its operation, it being necessary to stop the machine while the bale is being wired and to operate numerous doors and other devices.

The object of my invention is to provide a press of this kind which will be simple and durable in construction and which will firmly and quickly compress the material fed therein.

A further object is to provide means for tramping the material to be finally compressed within the box before the plunger is used, so that the operator's hand will not be caught by said plunger.

Further objects and advantages will appear in the following description and will be pointed out in the appended claims.

In the drawings forming part of this specification, Figure 1 is a perspective view of my improved press. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a horizontal longitudinal section of the plunger and its operating mechanism. Fig. 4 is a perspective view of the plunger with its two members separated; and Figs. 5 and 6 are perspective views, respectively, of the lower and upper retaining-dogs.

The press-box 1 is braced by a plurality of rectangular frames 2, 3, 4, and 5, and trussed rods 7 are secured at their ends to two of said frames (2 and 3) and extend directly over the compressing-chamber to strengthen the box at this point. One end of the press-box is reduced, as at 8, so as to form an opening of less diameter than the body of the box, so that the bale will be compressed when ejected from it and be retarded somewhat to form an abutment for the hay being compressed. The sides are reduced in width at the compression end, and the strips 8^a of which the sides are composed are held to-

gether at their ends by short cleats 8^b, of a length equal to the width of the sides at this point.

The means for adjusting the size of the opening at the end of the bale-box consists of two cleats 9 and 10, one upon the top and one upon the bottom of the press-box, and these cleats are connected together by adjustable rods 11, which rest against the side cleats 8^b and which when adjusted bring the top and bottom together or permit them to expand.

The plunger for compressing the material comprises an auxiliary plunger 13 to give preliminary compress and which is adapted to be moved by a rod or pole 14 to give the material a preliminary compression and to separate the hay into packages or feeds and a backing-plunger 12, to which the final-compressing mechanism is connected. The plunger is provided with a space 16 for the reception of a cleat 17 on the auxiliary plunger and with an opening through which the pole 14 on the auxiliary plunger works.

Attached to the outer face of the main or backing plunger 12 are two racks 18, which are supported upon two grooved rollers 19, journaled in the sides of the press-box. Located above the rack-bars 18 and between the rollers 19 is a shaft 20, journaled on the sides of the press-box and carrying two pinions 21, which mesh with the rack-bars 18. Each end of the shaft 20 carries a ratchet 22, which is straddled by the bifurcated end of a lever 23, also journaled upon the shaft 20. Each lever 23 carries a dog 24, which engages with the adjacent ratchet 22.

The material is fed into the compression-chamber through the opening 25 in the press-box, and to tramp the material to a position to receive the compression of the plunger a device 25^a, journaled upon the top of the press-box, is provided. This device consists of a rocking bar 26, having secured thereto a weighted arm 26^a and L-shaped fingers 27, connected at their ends by a bar 28, which projects at each end from the fingers, said projecting ends being adapted to rest upon the sides of the press-box. Also secured to the rocking bar is an arm 29.

Mounted in the top and bottom of the press-box are weighted retaining-dogs 30 and 31, respectively.

The operation of the invention is as follows:

5 Material to be compressed is fed into the opening 25 and engages with the arm 29, which rocks the bar 26 and moves the fingers 27 to a position to tramp the material. The operator then grasps the weighted arm 26^a and presses the material within the compression-chamber. The operator then takes hold of the pole 14 and moves the auxiliary plunger 13 and gives the material a preliminary compression and to separate the hay into 15 packages or feeds. Then the levers 23 are grasped and the main or backing plunger is moved through the medium of the dog 24, ratchet 22, shaft 20, pinion 21, and rack-bars 18 to give a second and a greater compression. When the auxiliary plunger 13 is 20 moved forward, it engages with one portion of the L-shaped fingers and lifts the pressing device out of its path, and after the material is compressed the back follower engages with 25 the other portion and again lifts said device out of its path. The bale is ejected from the contracted end of the press when the baling-chamber is full and is bound in the usual manner.

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

1. In a hay-press having a feed-opening, tramping means operating in the said opening, and a plunger adapted to move the tramping means out of its path by contact with said means. 35

2. The combination with a press-box, and a plunger, of means for tramping the material within the press-box before the plunger 40

compresses it, and means within the path of the material moved by the material to position the tramping means to a position for tramping the material.

3. In a press, means for tramping the material within the press-box, comprising a rock-shaft, L-shaped fingers, and means moved by the material to be compressed to move the fingers to a position for tramping the material. 45

4. Means for pressing material within the press-box, comprising a rock-shaft, and L-shaped fingers, and a cross-bar connecting the fingers and projecting from the sides thereof. 50

5. Means for pressing material within the press-box, comprising a rock-shaft, and L-shaped fingers, and a weighted arm secured to the rock-shaft. 55

6. Means for pressing material within the press-box, comprising a rock-shaft, and L-shaped fingers, and an arm adapted to be engaged by the material to be compressed to move the fingers to a position for pressing said material. 60

7. Means for pressing material within the press-box, comprising a rock-shaft, and L-shaped fingers, and a cross-bar connecting the fingers and projecting from the sides thereof, a weighted arm connected to the rock-shaft, and another arm adapted to be engaged by the material to be compressed to move the fingers to a position for pressing said material. 65 70

The foregoing specification signed this 2d day of August, 1902.

JAMES E. FRANCE.

In presence of—

BASS FEDNER,
S. LUCAS FOWLER.