

(No Model.)

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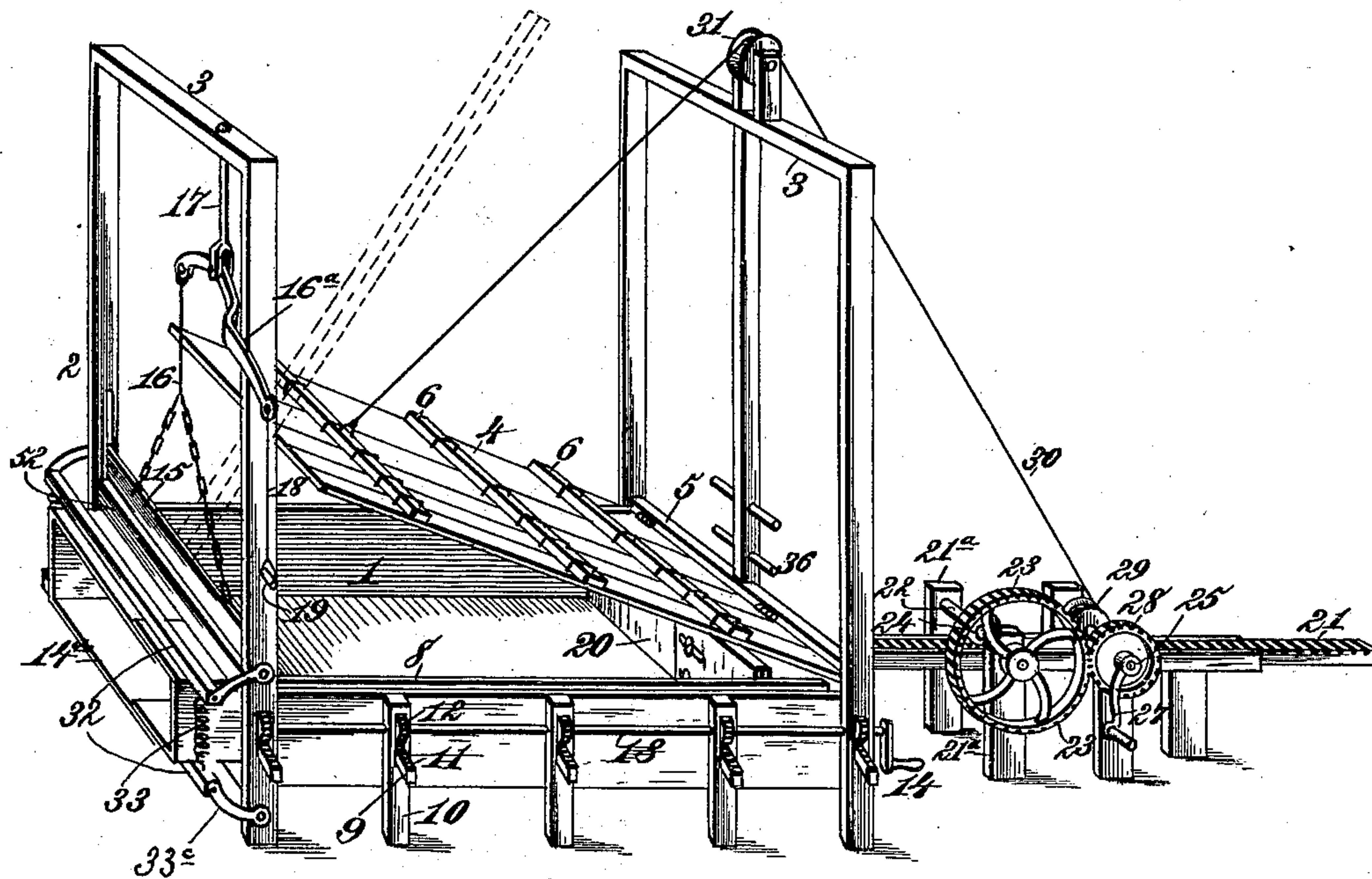
E. N. STEPHENSON.

MATTRESS STUFFING MACHINE.

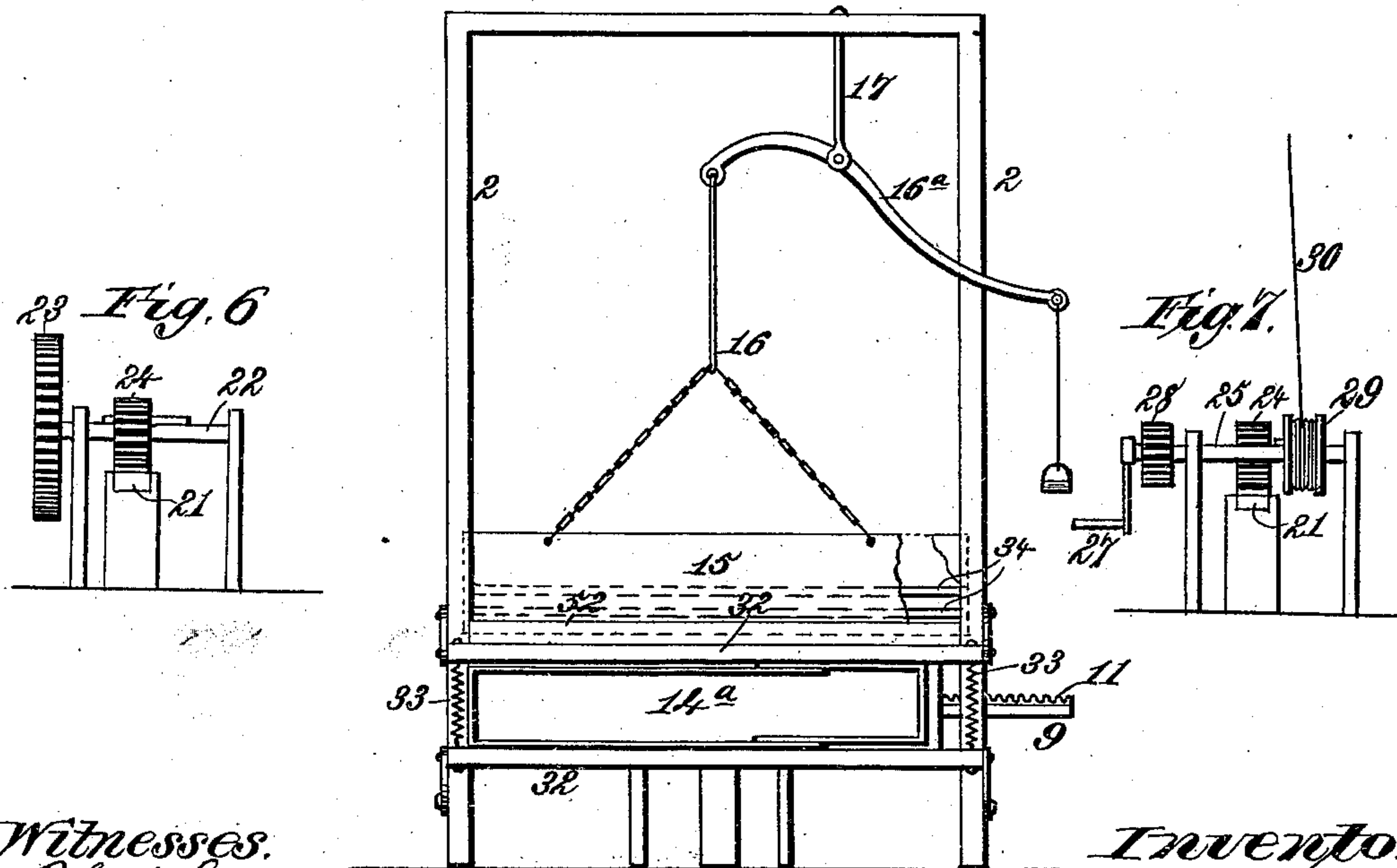
No. 376,399.

Patented Jan. 10, 1888.

*Fig. 1.*



*Fig. 3.*



Witnesses.

*Robert Everett.*

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Inventor.

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*By James L. Norrie.*

*Atty.*

(No Model.)

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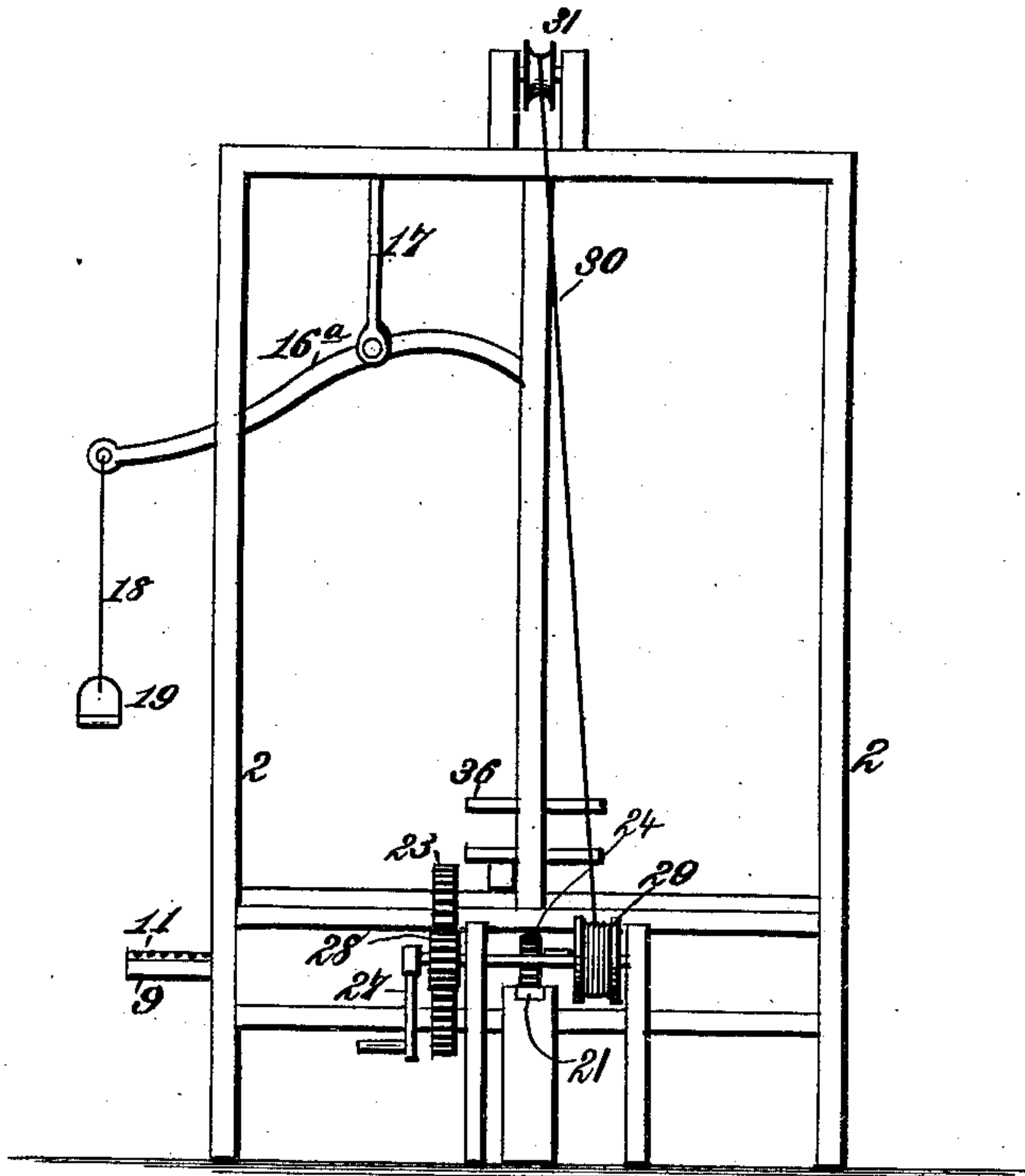
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MATTRESS STUFFING MACHINE.

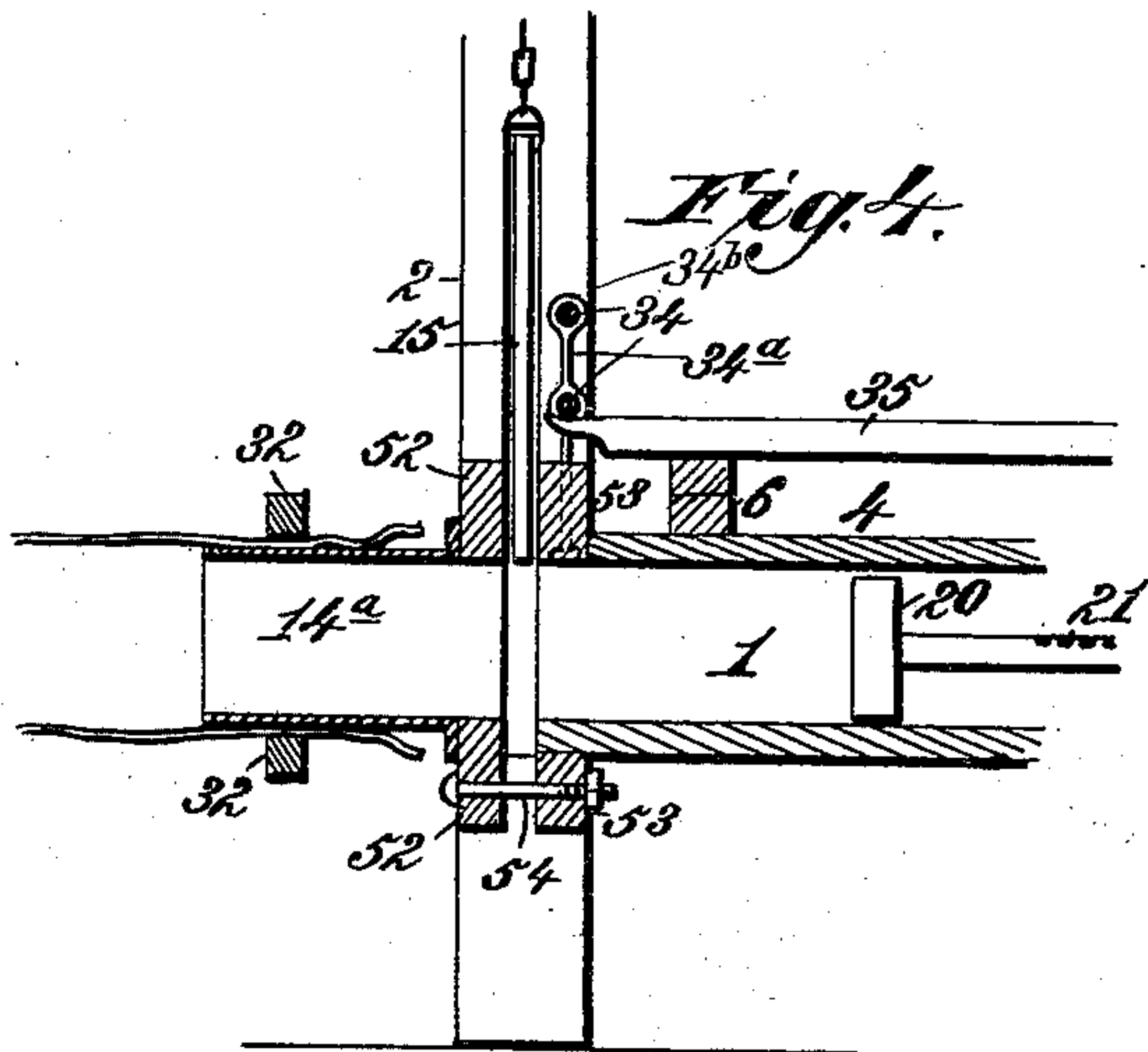
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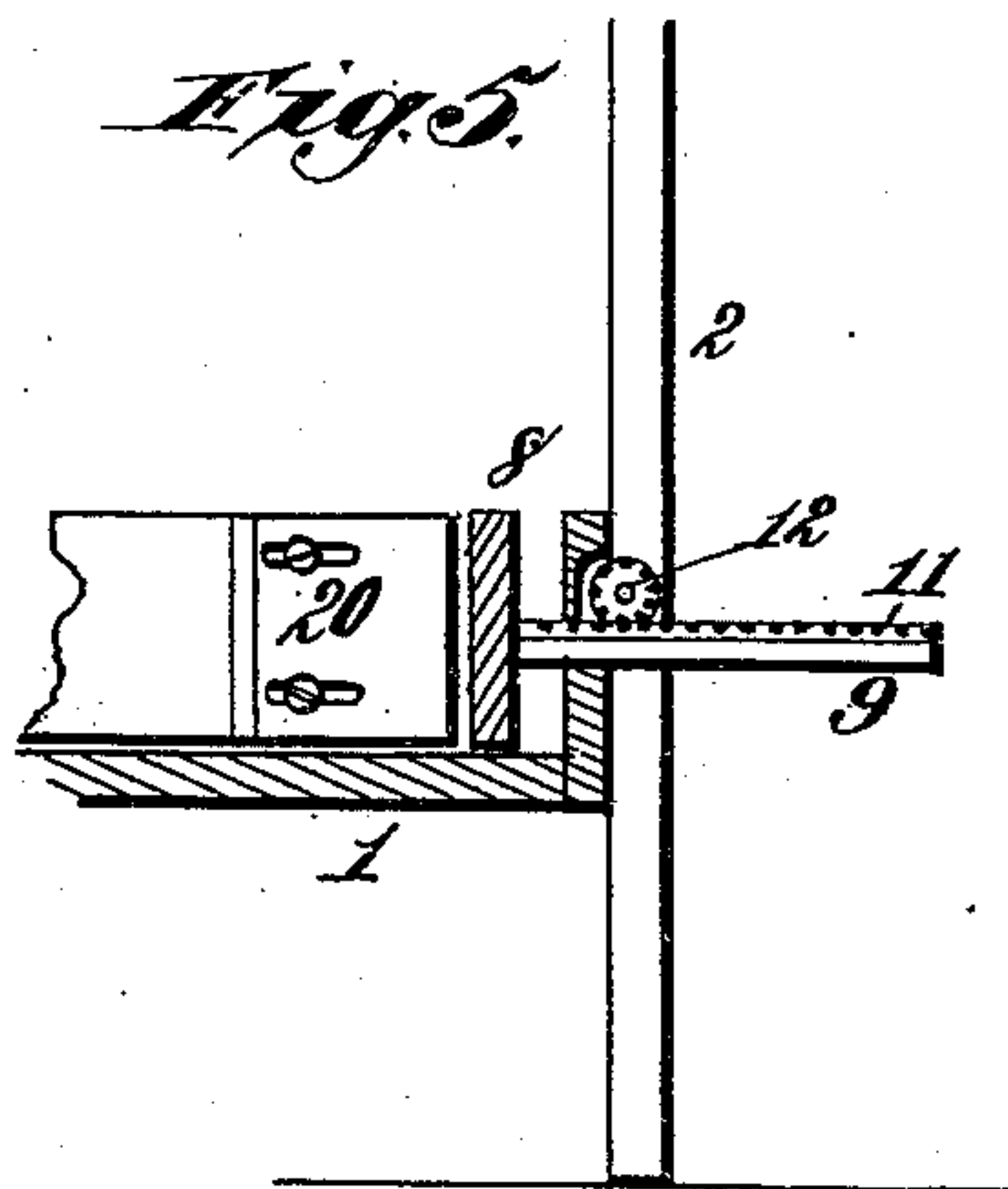
*Fig. 2.*



*Fig. 4.*



*Fig. 5.*



Witnesses,

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By

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# UNITED STATES PATENT OFFICE.

EDWIN N. STEPHENSON, OF WACO, TEXAS.

## MATTRESS-STUFFING MACHINE.

SPECIFICATION forming part of Letters Patent No. 376,399, dated January 10, 1888.

Application filed June 13, 1887. Serial No. 241,188. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN N. STEPHENSON, a citizen of the United States, residing at Waco, in the county of McLennan and State of Texas, have invented new and useful Improvements in Mattress-Stuffing Machines, of which the following is a specification.

The present invention relates to a machine for stuffing mattresses which is simple in construction, efficient in use, and can be adjusted to adapt it for molding or making mattresses of different sizes.

The invention consists in the construction and combination of parts, hereinafter fully described, and then set forth in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a machine constructed according to my invention. Fig. 2 is a rear view of the same. Fig. 3 is a front view of the machine. Fig. 4 is a vertical section through the spout, box, and sliding gate. Fig. 5 is a detail view of the plunger and rack-bar. Figs. 6 and 7 are detail views showing, respectively, the pinion and the spool keyed to their shafts.

The reference-numeral 1 designates a rectangular box of any desired length and width, which is built upon a frame-work of vertical posts, 2, and cross-bars 3. A top, 4, is fitted to this box 1, and it is hinged on a transverse iron bar, 5, running between two of the upright posts of the frame-work. This top 4 is made of longitudinal slats held together by cross-slats 6, which go through suitable eyes or keepers on said longitudinal slats. By pulling out these cross-slats one or more of the longitudinal slats can be removed, so as to give a lesser width to the cover, and then the parts are again secured by substituting shorter cross-slats. One of the sides of the box 1 is stationary and the other one (marked 8) is movable, so as to permit the width of the box to be varied.

From the movable side wall, 8, project horizontal pieces or arms 9, which are securely fastened to the side wall and pass through mortises in short posts 10 of the frame-work. Rack bars or plates 11 are bolted to the arms 9, and into these racks mesh pinions 12, which are secured on a longitudinal shaft, 13, journaled in the posts of the frame-work. The shaft 13 has a crank, 14, for turning it so as to move the side wall, 8, inward or outward, to diminish or increase the width of the box. A

spout, 14<sup>a</sup>, arranged at the front of the machine, is made of two shell-shaped sections, which are fitted one within the other, so that by moving these sections together more or less the width of the spout can be varied. One of the sections of the spout is secured at top and bottom to the front of transverse pieces of wood, 52, running horizontally between the posts 2 and gained into the same. In rear of these pieces of wood, 52, other pieces, 53, are secured and the front and rear pieces are connected by bolts 54. The box 1 is supported by the rear pieces, 53, and a guideway is formed between the different pieces for receiving a gate, 15. The latter is in the form of a steel slab, which moves vertically in guide-grooves of the front posts of the frame-work and passes down into the space between the pieces 52 and 53. These front pieces prevent the steel slab from being pushed out into the spout when a mattress is being pushed up to the proper shape. Iron rods 34, arranged one above the other, extend between the posts 2 and are fastened to the same. These rods are fastened at short intervals to the upper piece of wood, 53, by means of upright iron bolts 34<sup>a</sup>. These bolts have two rings or eyes, 34<sup>b</sup>, one a few inches above the other, through which the long rods 34 pass.

The vertically-sliding gate is connected, by means of suspension-rods and chains 16, with a hand-lever, 16<sup>a</sup>, which is pivoted on a hanger, 17, on the front cross-bar of the frame-work. A chain or rope, 18, with a handle, 19, is connected with the lever, and serves to operate the same.

Within the box 1 is arranged a transverse plunger or head, 20, which is adjustable in width so as to fit the size of the box. This adjustment may be effected by making the plunger in two parts, one of which has slots connected with the other part by screws, as indicated in Figs. 1 and 5. The plunger is carried by a longitudinal rack-bar, 21, which passes in a rearward direction from the machine, and serves for moving the plunger forward and backward. In posts 21<sup>a</sup> is journaled a transverse shaft, 22, which carries a large spur-wheel, 23, and a pinion, 24. The latter gears into the rack-bar, and is held on the shaft 22 by a key and groove in such a way that it can be shifted to disengage it from the rack-bar. (See Fig. 6.) A second shaft, 25,



journalled in other posts, 26, has a crank-handle, 27, and carries a spur-wheel, 28, which engages with the spur-wheel 23. On the shaft 25 is also fitted a wooden spool or sheave, 29, which is secured to the shaft by a key and groove, Fig. 7, in such a way that it can be loosened to allow the shaft 25 to revolve without such spool. A rope, 30, connected with the latter, passes over a guide-pulley, 31, on the top of the frame-work, and runs downward to the sectional cover, where it is secured.

To the spout at the front of the machine I fit top and bottom cross-bars, 32, which are held together by spiral springs 33, arranged at the ends of the spout, said bars being pivotally connected at their ends to the machine-frame by arms 33<sup>a</sup>. The transverse metal rods 34, spanning the space between the front standards of the frame-work, serve as the fulcrum-point of a lever, 35, that extends in a rearward direction, and when depressed is slipped between or under cross-pins 36 on a vertical standard of the frame-work. The object of the two rods 34 is to hold the point of the lever 35 when the top of the box is being forced down into position. Two rods are used, in order to vary the thickness of the mattress.

The operation of the machine is as follows:  
 30 The box and cover being adjusted to suit the size of mattress cover or ticking to be stuffed and the cover being raised to a perpendicular position the machine is ready for work. The gate is then lowered, and then there is placed  
 35 in the box of the machine whatever material the mattress is to be made of. The top or cover is then lowered by releasing the spool from the shaft, and this will obviously unwind the cord to allow the top or cover to descend.  
 40 The end of the lever 35 is then placed under the cross-bar 34, and by depressing it the top is forced down, so as to bring it on a level with the top of the spout at the front of the machine. Then, by turning the shaft  
 45 22 the pinion 24 will serve to move the rack-bar so as to move the driving-block or follower up to whatever length of mattress is required. The spiral springs 33 at each end of the spout are then unhooked from the bars  
 50 32, and the tick or mattress cover is forced over the spout, whereupon the springs are again fastened, so that the two cross-bars held together by said springs will hold the tick in position while the mattress is being run out.  
 55 The tick having been fastened in position, the gate in the spout is raised so as to uncover the passage to the interior of the box. Then, by moving the follower by the rack-bar, the mattress will be forced out through the spout into  
 60 the tick in proper shape. After the filling has been forced into the tick, the spool is moved on its shaft to engage the key, the rack-bar is drawn back, and the cover is again raised to allow the box to be filled with material.

65 Having thus described my invention, what I claim is—

1. In a mattress stuffing machine, the com-

bination, with the box, the movable cover, the plunger, and the discharge-spout, of vertical guides, a vertically-sliding gate guided by the latter intermediate the box and spout, and between which and the follower the stuffing material is compressed, and means for moving the follower and holding the mattress-tick on the spout, substantially as described. 7c 75

2. In a mattress-stuffing machine, the combination, with the box, the hinged swinging cover, the plunger, and the discharge-spout, of vertical guides, a vertically-sliding gate guided by the latter intermediate the spout and box, and between which and the plunger the stuffing material is first compressed, and a lever connected with the gate for elevating it, substantially as described. 80

3. In a mattress-stuffing machine, the combination of the box, the spout, the hinged swinging cover, the plunger, the rack connected with the plunger, the shaft carrying a pinion and a spur-wheel, the shaft carrying the spool and spur-wheel, a cord or chain connecting the spool with the cover, the vertically-sliding gate moving intermediate the box and spout, and between which and the plunger the stuffing material is compressed, and means for holding the mattress-tick on the spout, substantially as described. 85 90 95

4. In a mattress-stuffing machine, the combination, with the box, the plunger, and the spout, of the two cross-bars arranged, respectively, above and below the spout and springs connecting the said bars and drawing toward each other to clamp the tick on the spout, substantially as described. 100

5. In a mattress stuffing machine, the combination, with the box, the plunger, and the spout, of two swinging cross-bars arranged, respectively, above and below the spout and pivotally connected with the machine-frame and springs connecting the said bars and drawing them toward each other for clamping the tick on the spout, substantially as described. 105 110

6. In a mattress stuffing machine, the combination of the box, the presser-head, the rack-bar, the spur-wheel, and pinion-shaft, the driving-shaft, spool, rope, and movable cover, substantially as described. 115

7. In a mattress-stuffing machine, the combination of the box having the movable side provided with rack-bars, and the shaft with pinions gearing into said racks, with the follower or presser-head and the spout and the cover, substantially as described. 120

8. In a mattress-stuffing machine, the combination of the transverse rods and eyebolts with the box, the presser-head, the movable cover, and the lever capable of having its point made to engage with either of the transverse rods, substantially as described. 125

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

E. N. STEPHENSON.

Witnesses:

C. C. BARRETT,  
H. P. KUMPE.