(No Model.)

2 Sheets—Sheet 1.

D. C. SUMMERS.

DEVICE FOR PACKING COTTON.

No. 332,304. Patented Dec. 15, 1885.

Fig. 1.

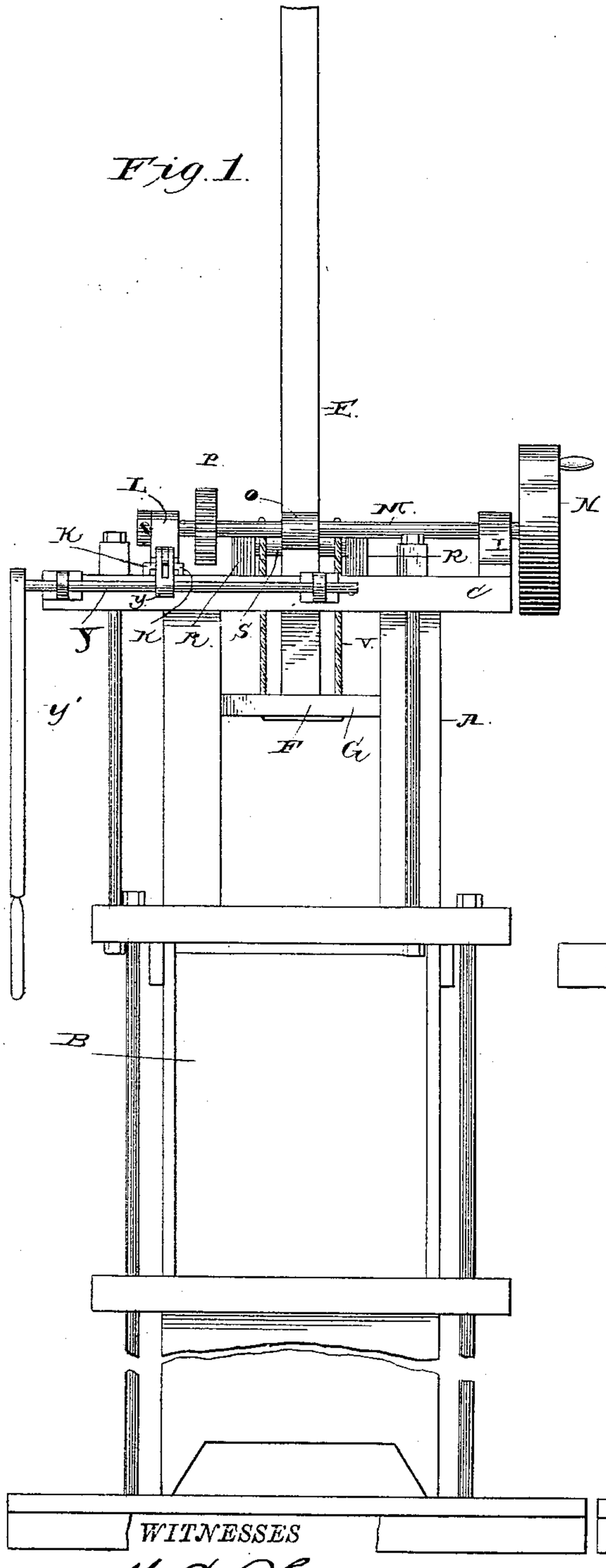
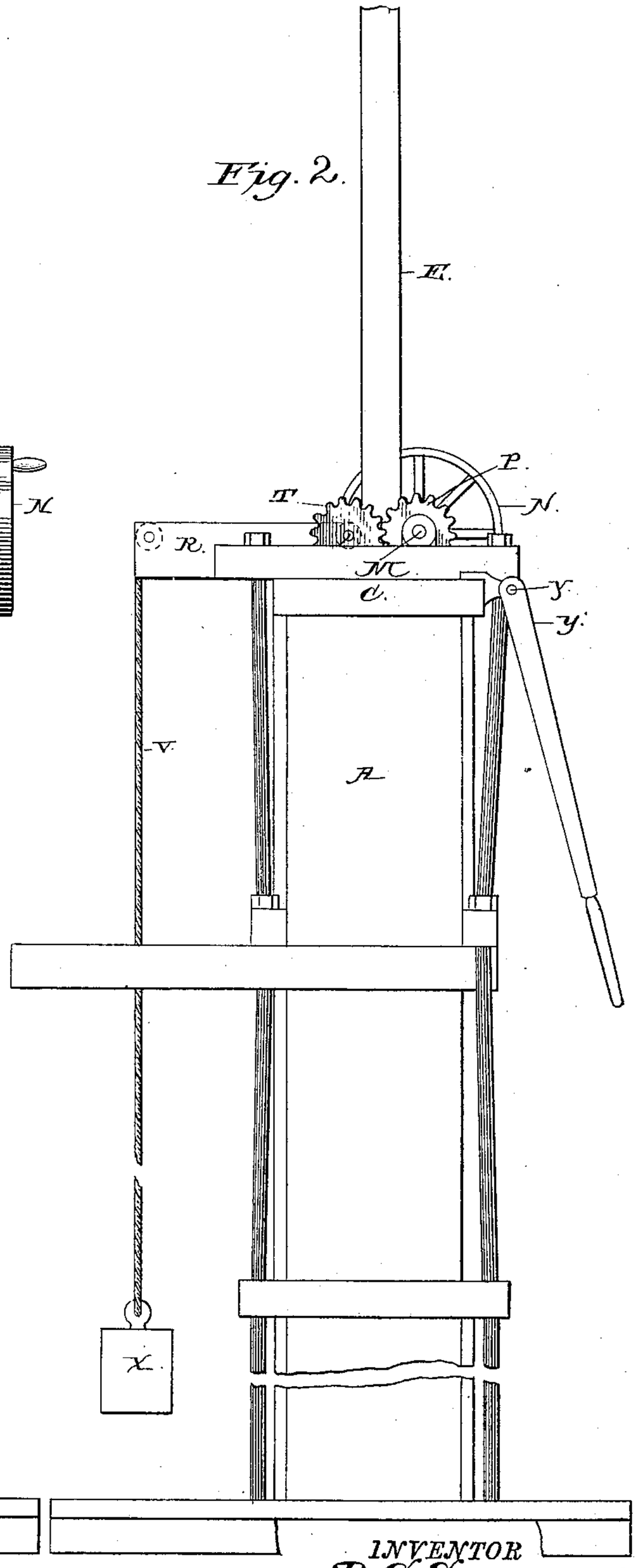


Fig. 2.



WITNESSES

M. E. Fowler

Wm. A. Moore.

INVENTOR

D. C. Summers

By C. A. Snow & Co

His Attorneys

(No Model.)

2 Sheets—Sheet 2.

D. C. SUMMERS.

DEVICE FOR PACKING COTTON.

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Fig. 3.

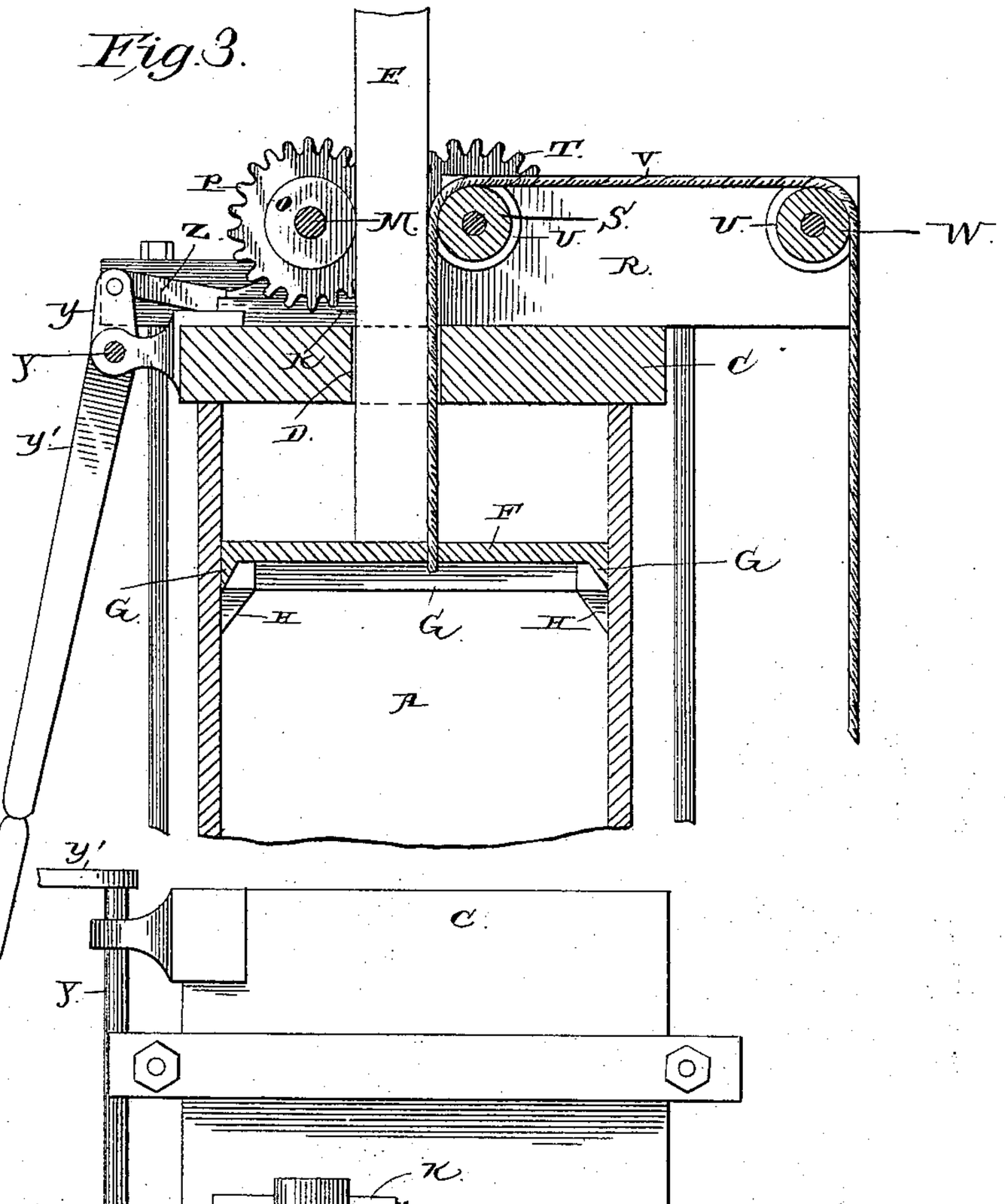

Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

DEWITT C. SUMMERS, OF SUMMER'S MILLS, TEXAS.

DEVICE FOR PACKING COTTON.

SPECIFICATION forming part of Letters Patent No. 332,304, dated December 15, 1885.

Application filed May 21, 1885. Serial No. 166,298. (No model.)

To all whom it may concern:

Be it known that I, DEWITT C. SUMMERS, a citizen of the United States, residing at Summer's Mills, in the county of Bell and State of Texas, have invented a new and useful Improvement in Devices for Packing Cotton, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in devices for packing cotton; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

This invention relates to machines or devices for packing and compressing cotton and other material in press-boxes, and is an improvement upon that for which Letters Patent of the United States were granted to me June 26, 1883, No. 280,333.

In the accompanying drawings, Figure 1 is a front elevation of a press-box having my invention attached thereto in position for operation. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical sectional view, and Fig. 4 is a top plan view.

A designates the press-box, which may be of any suitable construction. The follower of the press proper and the means or power for operating the same are not shown in the drawings hereto annexed, and they form no part of this invention. The press-box is provided with a feeding-opening, B, and a top piece or cap, C. The latter is provided with a central opening, D, through which slides a vertical bar, E, to the lower end of which is secured a follower or packer, F. The sides and ends of the packer or follower are provided with downwardly-extending flanges G, the inner sides of which are inclined outwardly and downwardly at an angle of about forty-five degrees, and are sharpened at their lower ends or edges. The corners of the packer are provided with projecting tampers H, which are pointed at their ends, and adapted to press the corners of the bale that is being formed inwardly toward the center thereof. To the upper side of the cap C, near one end thereof, is secured a bearing-block, I, and in line with said block, near the opposite end of the cap, is secured a guide or way, K, on which slides a block, L. In the blocks I and L is journaled a shaft, M, which has at one end a driving-pulley, N, and also fixed to this shaft is a friction-wheel, O, and a spurred gear-wheel, P. In blocks R, that are secured to the cap C, is journaled a friction-wheel, S, that bears on the rear side of the bar E. One end of the shaft of the friction-wheel S is extended, and to the extended end of this shaft is fixed a gear-wheel, T, similar to the wheel P. Grooves U are made in the ends of the friction-wheel S.

V represents ropes that are secured to the packer, extend over the grooves U of the friction-wheel S, and over sheave W, that are suspended from any convenient point. To the depending ends of the ropes V is attached a weight X, that is sufficiently heavy to raise the packer to the top of the press-box.

Y represents a rock-shaft that is journaled in blocks on the front side of the cap C. An arm, *y*, extends from the upper side of the shaft Y, and is connected to the sliding block L by a connecting-rod, Z. A hand-lever, *y'*, is attached to the outer end of the shaft Y, and depends to within easy reach.

It will be seen that by means of the rock-shaft, the lever *y'*, the arm *y*, and the connecting-rod Z the block L may be moved so as to cause the wheel P to engage with the wheel T, and the friction-wheel O to bear against the front side of the bar E, and to compress said bar between the friction-wheels. Motion is then imparted to the wheel N and the packer is driven forcibly in a downward direction in the press-box. When the lever *y'* is moved so as to throw the gear-wheels out of engagement, the weight will overbalance and lift the packer to the top of the box. When in this position, the packer will be raised sufficiently above the upper edge of the press-box to enable the cotton or other material which is to be pressed to be conveniently thrown into the box. The packer may then be lowered one or more times, so as to pack or stamp the material thrown in. The operation may then be repeated as often as necessary until the press contains a sufficient quantity of material to form a bale, which may then be compressed in the usual manner.

The improvement claimed for the continuous flange G over the blades shown in my

aforesaid patent is that the flange will pack the cotton more evenly, and also cover the entire side edges of the bale. The spaces left between the blades in my former patent cause the same to lose their efficiency; but this is entirely overcome by forming a continuous flange on the under side of the follower, causing the cotton to be pressed inward toward the center entirely around its several side edges, and not leave spaces unpressed. Furthermore, the flange G can be made with less trouble and expenditure of time. Besides, the flange will stand more wear and cannot become broken, as would be the case with the blades hereinbefore referred to. By having tampers H projecting below the line of the flange G the former are caused to form the corners and press the cotton over to a greater degree than the sides of the cotton-bale, this action being deemed necessary to provide a perfect bale.

Practicable test in operating machines built under my former patent has demonstrated the need of certain improvements. These are presented in the present application. By dispensing with the rack-and-pinion connection and substituting friction devices the operation of the press is made easier and with less wear on the parts. Besides, the cost is lessened and the machine is made lighter, it requiring less weight to return the plunger.

By this device, which is simple, inexpensive and easily operated, the labor of one or two men may be dispensed with, and the labor of packing be performed in less time and in a more satisfactory manner.

Having thus described my invention, I claim—

1. The press-box, in combination with the packer or follower, provided on its under side with a continuous depending flange, beveled on its inner side and sharpened at the lower edges, and tampers provided at the corners of the packer or follower, said tampers being pointed at their ends and extending below the horizontal line of the flange, as and for the purpose set forth.

2. The press-box, in combination with the packer or follower, having depending flanges on its under side around the sides and ends, and tampers depending from the corners of the follower and extending below the horizontal line of the flanges, as and for the purpose set forth.

3. The press-box, in combination with the packer or follower, having the vertical plain bar E, a friction-wheel, S, bearing against the rear side of the bar, a friction-wheel, O, adapted to bear against the front side of said bar, and the shaft M, on which said wheel O is mounted, the rotation of said shaft effecting the vertical movement of bar E, as set forth.

4. The press-box, in combination with the packer or follower, having the bar E, and means, substantially as described, for operating the same, the friction-wheel S, working against one of the faces of bar E, a pulley, W, and cords V, connected to the follower, extending up through the press-box, passing over the wheel S and pulley W, and provided with a weight, for the purpose set forth.

5. The press-box, in combination with the packer or follower, having the plain vertical bar E, the friction-wheel S, working against one of the sides or faces of the bar, the friction-wheel O, operating against the opposite side or face, the shafts on which said wheels are mounted, and a gear-wheel, T, mounted on the shaft M of wheel O, whereby the said friction-wheels are caused to work together at the same rate of speed, and thus feed the bar E downward without undue pressure or strain on either side of said bar, as set forth.

6. The press-box, in combination with the packer or follower, having the vertical plain bar E, the friction-wheel S, gear T, shaft M, friction-wheel O, gear P, and mechanism for working the shaft M laterally to throw the wheel O out of contact with the bar E, the pulley W, and the cords V, attached to the packer or follower, extending up through the press-box, passing over the wheel S and pulley W, and provided with a weight, as and for the purpose set forth.

7. The press-box, in combination with the packer or follower, having the vertical plain bar E, the friction-wheel S, gear T, the shaft M, sliding block L, gear P, friction-wheel O, rock-shaft Y, connecting-rod Z, and operating-lever *y'*, as set forth.

8. The press-box, in combination with the packer or follower, having the vertical plain bar E, the friction-wheel S, pulley W, cords V, connected to the packer or follower, passing over the wheel S and pulley W, and provided with a weight, gear T, laterally-moving shaft M, friction-wheel O, gear P, connecting-rod Z, rock-shaft Y, and handle or lever *y'*, as set forth.

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

DEWITT C. SUMMERS.

Witnesses:

R. L. GULLY,

ED. T. RUCKER.