No. 702,201. Patented June 10, 1902.

J. B. GRIFFIN & S. C. ANDERSON.

COMPRESS AND PACKER.

(Application filed Nov. 18, 1901.)

(No Model.) 4 Sheets—Sheet 1.

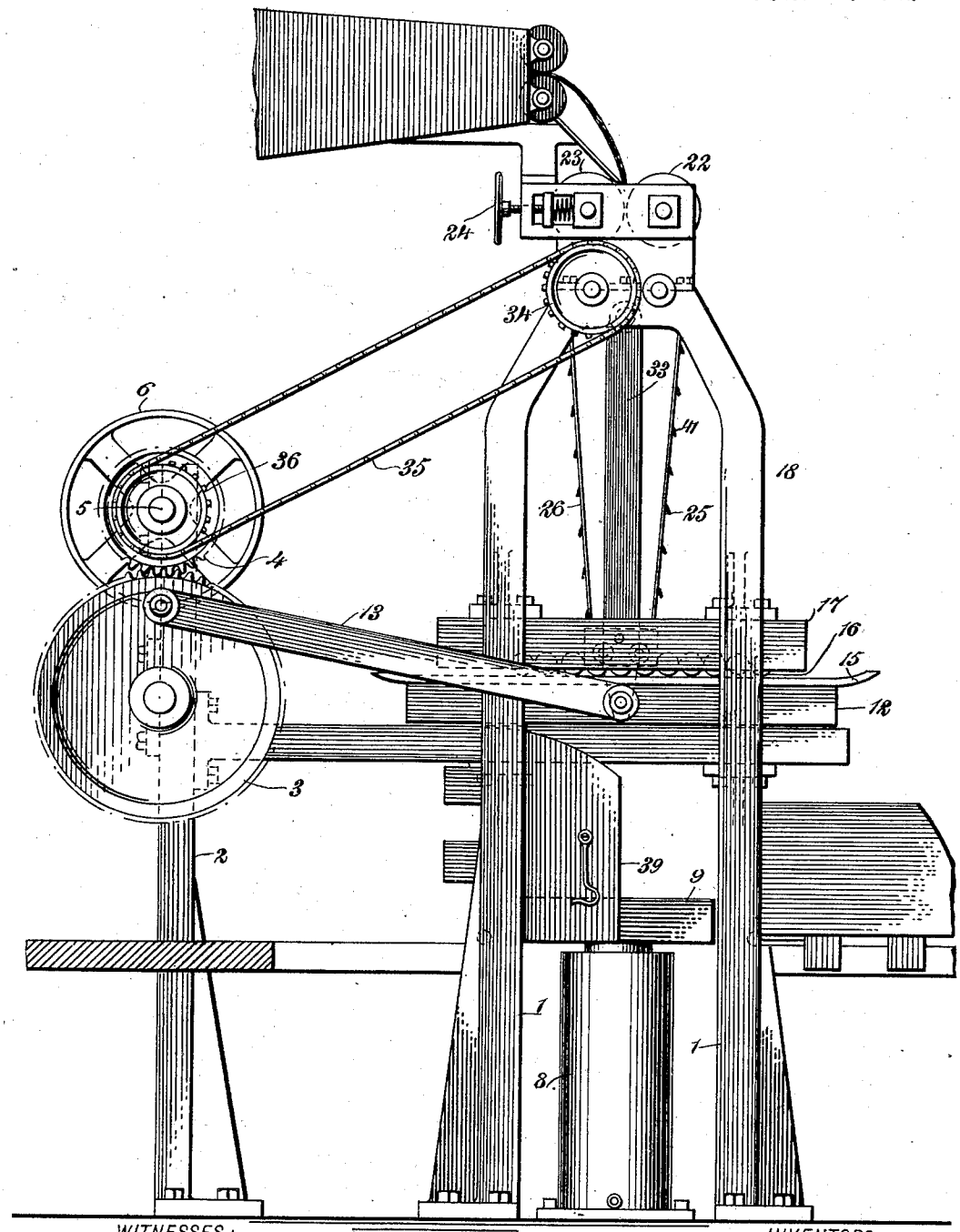

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FIG. 1

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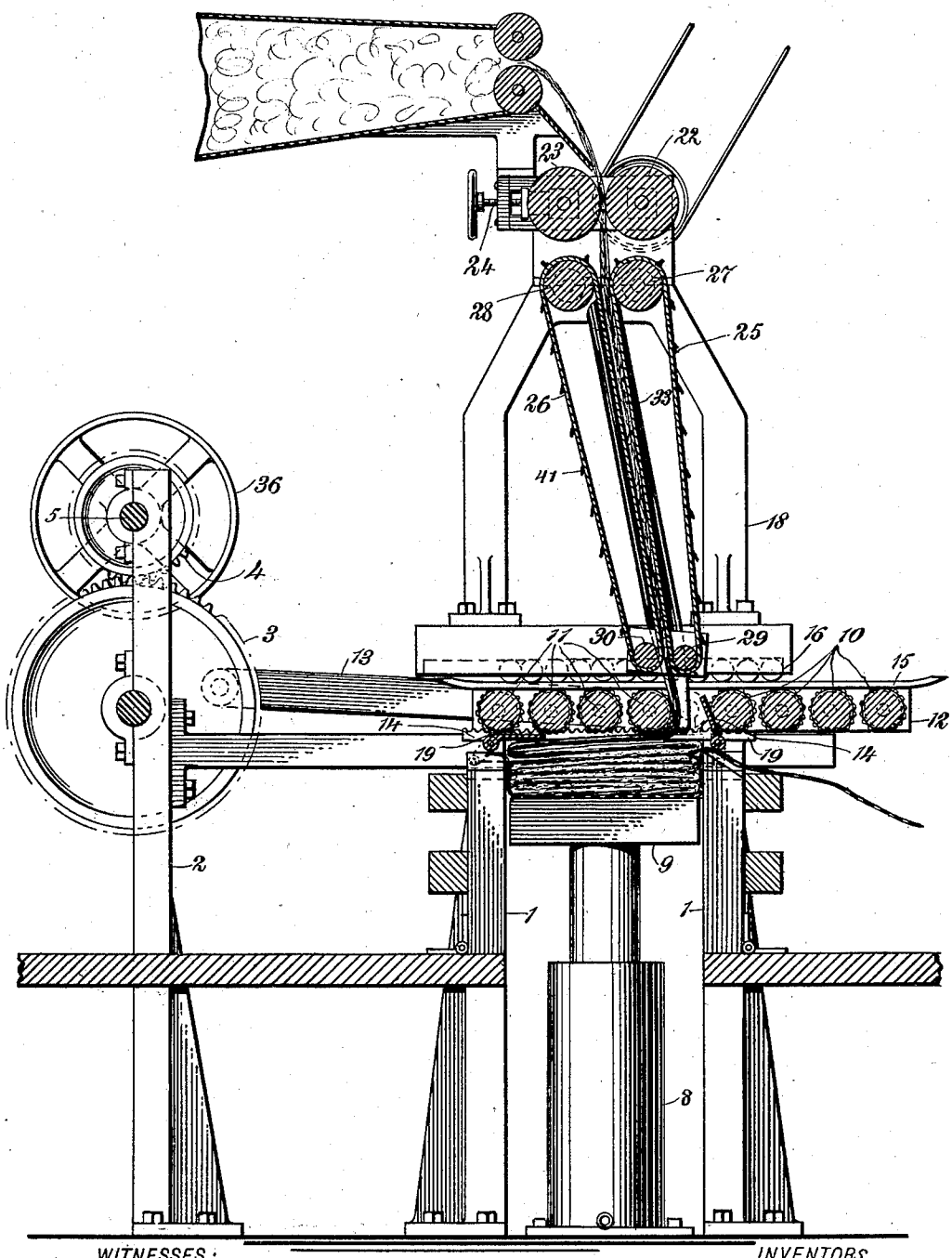

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Fig. 2

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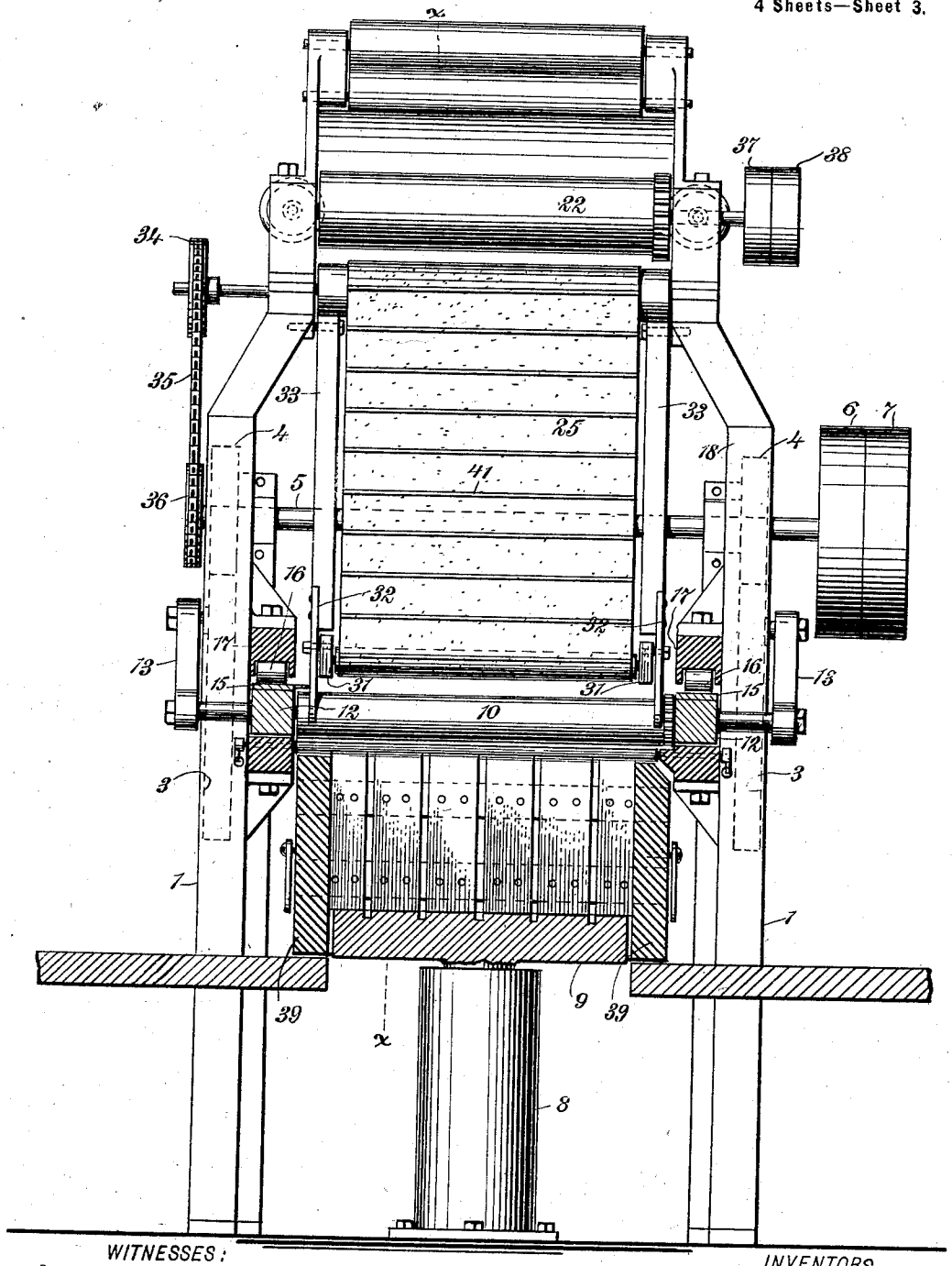

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Fig. 3

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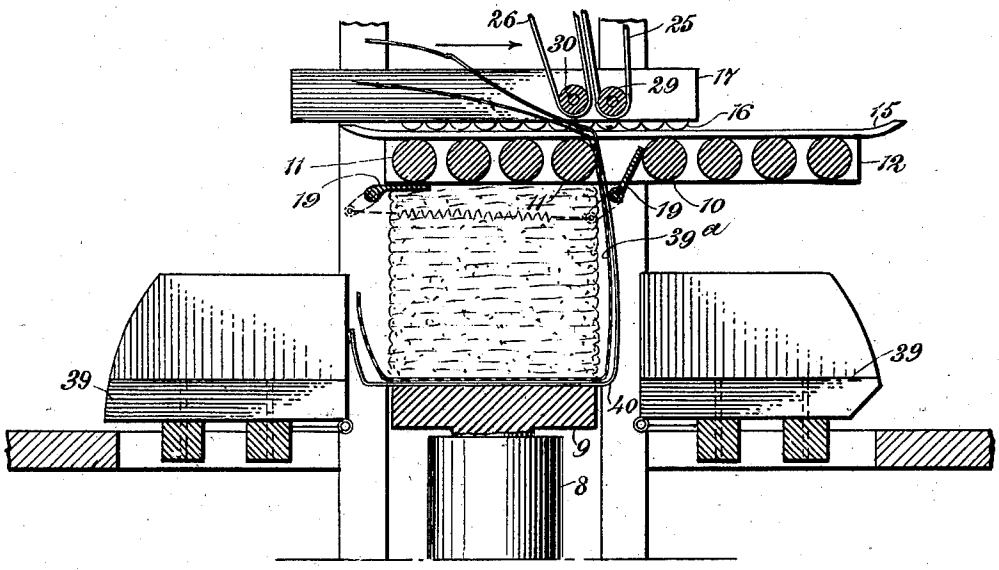

Fig. 4

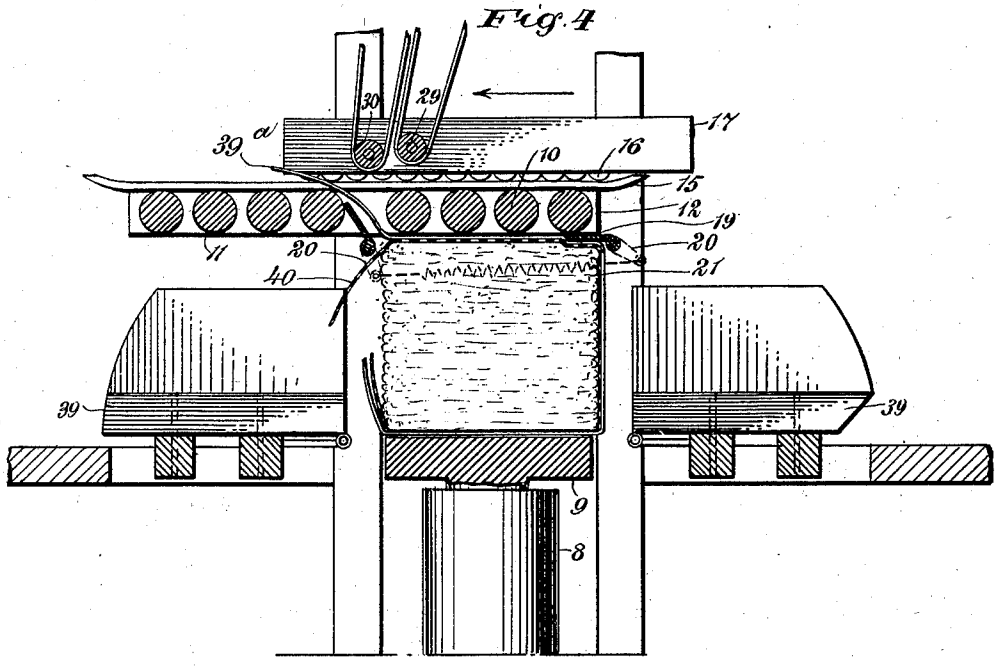

Fig. 5

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UNITED STATES PATENT OFFICE.

JOHN B. GRIFFIN AND SAMUEL CORNELIOUS ANDERSON, OF VAN ALSTYNE, TEXAS.

COMPRESS AND PACKER.

SPECIFICATION forming part of Letters Patent No. 702,201, dated June 10, 1902.

Application filed November 18, 1901. Serial No. 82,658. (No model.)

To all whom it may concern:

Be it known that we, JOHN B. GRIFFIN and SAMUEL CORNELIOUS ANDERSON, citizens of the United States, and residents of Van Alstyne, in the county of Grayson and State of Texas, have invented a new and Improved Compress and Packer, of which the following is a full, clear, and exact description.

This invention relates to improvements in machines for compressing, packing, and baling cotton, hay, straw, and the like; and the object is to provide a machine of this character operating automatically to form the bat as the material is received from the gin or condenser and folding the bat back and forth in even layers in the press, forming a complete and symmetrical bale.

We will describe a compress and packer embodying our invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a compress and packer embodying our invention. Fig. 2 is a section on the line x x of Fig. 3. Fig. 3 is a front elevation, partly in section; and Figs. 4 and 5 are sectional details showing the position of parts while wrapping or tying the bale.

The machine comprises a frame having the uprights 1, at the rear of which are the standards 2, on which bearings are formed for crank-wheels 3, driven by pinions 4, mounted on a shaft 5, on one end of which are fast and loose pulleys 6 7. Arranged within the frame is the hydraulic-press cylinder 8, on the piston-rod of which is a supporting-platform or pressing-head 9.

Movable over the upper portion of the frame 1 are two series of rollers, one series being represented by 10, while the other series is represented by 11. The rollers of the two series at the inner ends are spaced slightly apart to permit the passage of the bat between them, as clearly indicated in the drawings. These rollers have their journal-bearings in a frame 12, which is moved back and forth by the rods 13, connecting said frame with the crank-wheels 3. During the back-and-forth motion of the frame rotary movement is imparted to the rollers by means of a rack 14 on the frame, with which pinions on the ends of the rollers engage. The side rails of the frame at their upper sides are provided with iron rails or tracks 15, upon which ball-bearings 16 engage. These ball-bearings are arranged in raceways in rails 17, attached to upward extensions 18 of the frame.

At the front and rear portions of the frame 1 at the top are swinging holding-plates 19, designed to move downward upon the layers of cotton or other material as the first roller of a series approaches the same on a movement of the frame 12. On the extended shafts of these plates 19 are arms 20, and the opposite arms are connected by means of a spring 21. Therefore as one plate 19 moves downward to engage with the bat the other plate will be moved upward and between the inner rollers of the series, as indicated in Fig. 2, permitting the layer to be extended entirely across the press, and then upon the opposite movement of the rollers said plate will be moved downward, while the other plate is moved upward when the opening or space between the two inner rollers reaches the same.

Arranged in the upper portion of the frame-sections 18 are the batter and feed rollers 22 23, the roller 23 being mounted in adjustable bearing-blocks which are moved by means of screws 24 to cause a more or less pressure of the material between the rollers. Endless feeder aprons or bands 25 26, consisting of canvas or other suitable material, extend around upper rollers 27 28 and also around rollers 29 30, supported in blocks 31, mounted to rock on hangers 32, extended downward from arms 33, having swinging connection at their upper ends with the frame-sections 18, as clearly shown in Fig. 3. These hangers 32 project downward between the inner rollers 10 11, so that during the back-and-forth movements of the frame 12 the frame, comprising the arms 33 and carrying the feeding-aprons, will be moved back and forth while the cotton-bat is feeding. One of the upper rollers (here shown as the roller 27) is provided with a sprocket-wheel 34, from which a chain 35 extends to a sprocket-wheel 36 on the

driving-shaft 5. The roller 22 is driven by any suitable means. We have here shown its shaft as provided with fast and loose pulleys 37 38.

The sides and front of the frame at the point where the material is compressed are provided with swinging doors 39, and these doors, as is also the top of the presser-head 9, are provided with channels or grooves to receive the binding cords or straps.

In using the machine the hydraulic press is first lowered to its lowermost point by permitting the water to escape from the cylinder. While in this position the tie-bands 39ª are placed on the head 9, with their buckles, provided they are supplied with buckles, extending somewhat beyond the edge of said head. Next the bagging 40 is spread over the ties, and the pump is now to be started, raising the pressing-block 9 up firmly against the packer-rollers 10 and 11, after which the swinging doors 39 are to be closed and the machine started. The cotton or other material will be pressed into bats by means of the rollers 22 and 23, and in this condition will pass down between the inner stretches of the aprons 25 and 26, and thence to the press between the inner or adjacent rollers 10 and 11, and this bat will obviously be folded back and forth as the said rollers carried by the frame 12 move back and forth, and the head 9 as the press becomes filled will be forced downward. When the bale is complete, the ties 39ª and the bagging 40 are to be carried up between the adjacent rollers 10 and 11, as indicated in Fig. 4. Then by a movement to the left the series of rollers 10 will be moved over the bale and also over the ties and bagging, bringing the same into the position indicated in Fig. 5, after which the ends of the ties are fastened together and the completed bale removed.

It will be noted that flaps or brushes 41 are placed at intervals along the endless aprons, which operate to remove the cotton or material from the batter-rolls and also to cause the aprons to discharge the material at the proper time and place.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A compress and packer comprising a pressing-head, a reciprocating frame, two series of pressing-rollers carried in said frame, two endless feeding-aprons mounted to swing back and forth, flexible flaps on the aprons, and batter-rollers above said aprons, substantially as specified.

2. A compress and packer, comprising a frame, a hydraulic press arranged in said frame, swinging holding-plates on said frame at the front and rear for engaging with a bat, spring connections between said plates, a reciprocating frame, two series of rollers carried by said frame, the inner adjacent rollers of the two series being considerably spaced apart, bars mounted on the frame and having raceways, bearing-rollers engaging in said raceways and bearing in the upper side of the reciprocating frame, swinging arms extended down between said inner rollers, and endless feeding-aprons carried by the arms, substantially as specified.

3. A cotton compress and packer, comprising a frame, a hydraulic press arranged in said frame, a reciprocating frame, means for causing the back-and-forth movements of the reciprocating frame, two series of pressing-rollers carried by said frame, the inner adjacent rollers of the two series being considerably spaced apart, swinging arms, hangers on said arms extended downward between the said inner adjacent rollers, blocks mounted to swing in the hangers, rollers having bearings in said blocks, rollers in the upper portion of the machine-frame, endless aprons extending around the upper and lower rollers, and batter-rollers arranged above the said aprons, substantially as specified.

4. A cotton compress and packer comprising a frame, a hydraulic press arranged in the frame, a reciprocating frame, two series of pressing-rollers mounted in said reciprocating frame, a fixed rack, gears on the rollers for engaging with said rack, holding-plates mounted to swing, a spring connection between the plates, the two inner rollers of the series being spaced apart to permit the plates to swing upward between them, crank-wheels, and connections between the wrist-pins of said crank-wheels and the reciprocating frame, substantially as specified.

5. A cotton compress and packer comprising a frame, batter and feed rollers at the upper portion of the frame, one of said rollers having its bearings in adjustable boxes, rollers arranged in the frame below the first-named rollers, arms mounted to swing on the frame, blocks mounted to swing on the lower ends of said arms, rollers having bearings in said blocks, endless aprons extended around the said rollers and the rollers above them, a reciprocating frame, two series of presser-rollers arranged in said reciprocating frame, a press arranged on the frame below the pressing-rollers, and means for causing the movements of the reciprocating frame, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN B. GRIFFIN.
SAMUEL CORNELIOUS ANDERSON.

Witnesses:
E. K. RUDOLPH,
S. F. HUNNICUTT.