

F. L. LEE.
FEEDING MECHANISM FOR TAMPER COTTON PRESSES.
APPLICATION FILED JUNE 24, 1911.

1,004,045.

Patented Sept. 26, 1911.
2 SHEETS—SHEET 1.

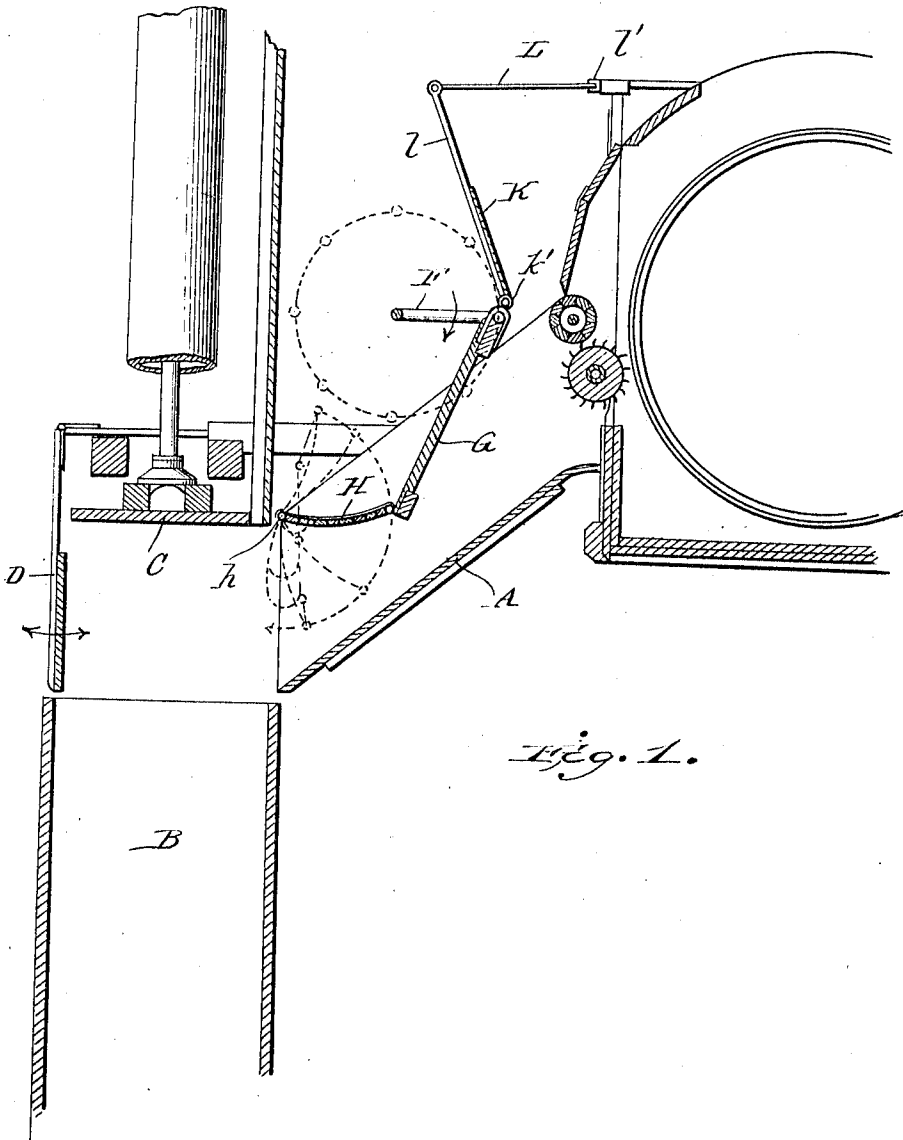


Fig. 1.

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2 SHEETS-SHEET 2.

Fig. 2.

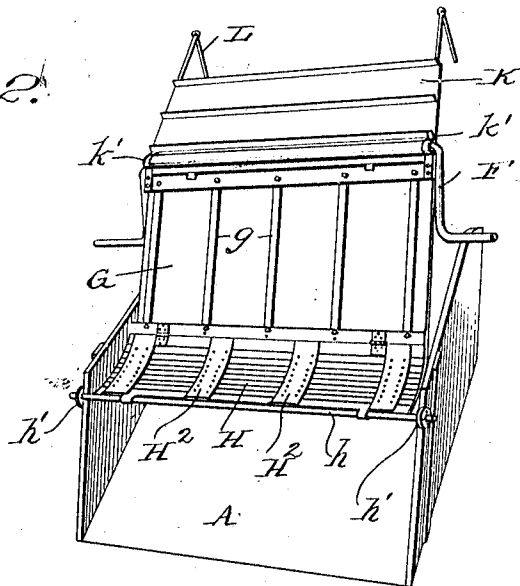
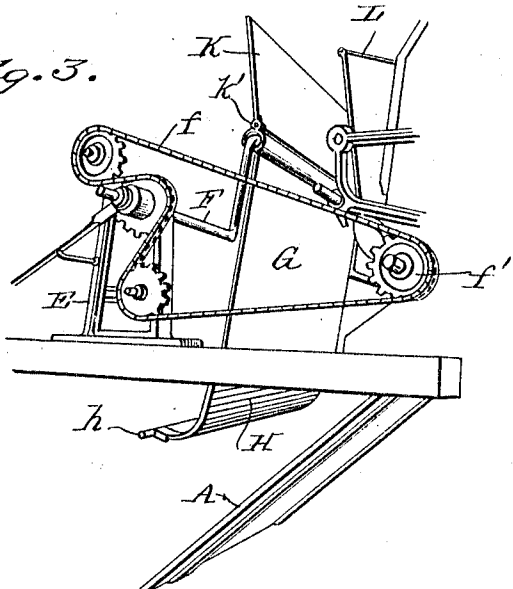


Fig. 3.



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UNITED STATES PATENT OFFICE.

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FEEDING MECHANISM FOR TAMPER COTTON-PRESSES.

1,004,045.

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To all whom it may concern:

Be it known that I, FELIX L. LEE, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Feeding Mechanism for Trampler Cotton-Presses; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

The present invention relates to a cotton feeding mechanism which is primarily adapted for use in connection with that type of presses popularly known as "trampler" presses. In presses of said type the cotton is fed into the upper end of a press or baling chamber and is pressed down into said chamber by a tramping mechanism. In order that the parts may be automatic in their action provision is made in such presses whereby the cotton fed into the press box will upon a sufficient accumulation, automatically operate mechanism for causing the trampler to descend. The part which is directly acted upon by the accumulated cotton is usually in the form of a pivoted or movable apron, or gate, which has been designated, in some instances, a trip apron, there being suitable connections operated by the movement of the apron under the influence of the accumulated cotton, to open the valves or actuate mechanical appliances for releasing or causing the trampler to descend, and the present invention has in contemplation the use of a pivoted or movable apron or gate against which the accumulated cotton may act for the purpose herein above stated, although the invention of the present application has to do more particularly with the means whereby the cotton is pushed into and across the upper end of the press box in order to secure a uniform and positive action.

The invention consists primarily in a feeding mechanism for the cotton, embodying a flexible or sectional cotton engaging apron or pusher, which will periodically extend itself over a portion of the cotton to be fed to the press, and passing down behind or pressing into the same, will, by proper manipulation, force the cotton in

front of it forwardly into and across the top of the press box when the latter is substantially full, this action being successively repeated during the operation of the feeding mechanism.

The invention consists further in certain novel details of construction and combinations and arrangements of parts all as will be hereinafter described and pointed out particularly in the appended claims.

Referring to the accompanying drawings,—Figure 1 is a sectional elevation, looking at one side of a feeding mechanism embodying the present improvements, the representation of certain of the coöperating mechanisms being more or less diagrammatical, or in outline; Fig. 2 is a perspective view looking at the front of the operative or moving parts of the feed mechanism; and Fig. 3 is a perspective view looking at the opposite side of the parts shown in Fig. 2, the frame and inclosing walls being in the main omitted in both Figs. 2 and 3.

Like letters of reference in the several figures indicate the same parts.

In said drawings, the letter A indicates a chute or slide, to which the cotton is delivered from a condenser or other supply not illustrated herein, and down which the cotton is caused to travel into the open upper end of a press box indicated by the letter B. Above the press box there is a power actuated trampler C, the construction of which is unimportant in so far as the present invention is concerned, save that it should be of such character and provided with means whereby it may be caused to operate by the pressure of cotton accumulated above the press box or at the mouth of the press box, after the press box is substantially filled with loose cotton.

The means whereby the pressure of the accumulated cotton may be made effective is a movable part of some character which will be substantially unaffected so long as the cotton is free to drop down into the press box itself. As indicated in the accompanying drawings, a swinging gate or apron D is provided, located immediately above the side of the press box opposite the chute A, and in such position that it will be swung outwardly by the cotton accumulated above and being pushed across or transversely of the mouth of the box. When so

swung, the gate or apron through mechanism not illustrated herein and of well understood character, causes the tramper to operate so as to push the accumulated cotton down into the box. This action or operation may be repeated as often as desired, that is to say, a series of tramping operations may be necessary in the formation of a single bale, but in some instances but a single operation of the tramper may be all that is necessary.

Mounted in suitable bearings in standards E above the chute A is a transversely extending cranked shaft F, said shaft being adapted to be rotated in the direction indicated by the arrow, by any suitable form of gearing, preferably, however, by a sprocket chain *f* receiving its motion from a sprocket wheel *f'* which may conveniently be mounted on one of the shafts of the condenser or mechanism for supplying cotton to the chute. The cranked or off-set portion of the shaft F has hung or journaled upon it a depending feeder board G, and to the lower edge of this feeder board G there is jointed a feeder apron H, the opposite edge of said feeder apron H being jointed to a support *h* which may conveniently take the form of a transverse shaft or bar suitably supported at its ends, preferably in bearings *h'*, Fig. 2, carried by the sides of the chute or press frame.

The jointed connections at opposite ends of the apron H, and the joint between the feeder board G and crank shaft will permit of a rotation of the shaft and a movement of the jointed parts which will cause the lower edge of the feeder board and upper edge of the apron to pass down behind any cotton in or on the lower portion of the chute and to force the said cotton downwardly and then forwardly over the open end of the press box. If the box be full, said cotton will be pushed straight across and will actuate the gate or apron D as heretofore described.

In the preferred construction the feeder apron H is a flexible or jointed sectional structure conveniently formed by slats connected together by joints at their edges or by flexible strips H², Fig. 2, such a construction being desirable, inasmuch as it will wrap around or bow itself over the cotton on the lower portion of the chute, and as the feeder board G reaches the lower portion of its movement, said apron will be straightened out more or less, thereby imparting to the cotton in advance of the same an increased forward impulse, without the apron itself or the lower portion of the feeder board projecting into the line of the tramper. Obviously, in this position, the apron H will in effect form one side of the passage through which the tramper may descend, and thus constitute an upward ex-

tension of the side wall of the press box, thereby preventing any squeezing back of the cotton fed over the press box.

The feeder board G is preferably substantially rigid and may be of iron, wood, fiber, or other suitable material, preferably substantially plain and smooth on the side next the chute, but on the rear side it may be provided with ribs *g*, whereby it is strengthened and whereby sliding bearings will be afforded for properly directing its upward movement, as, for instance, by contact with the transverse bar *h* or the slatted apron connected thereto.

An upwardly projecting feeder board extension K is provided at the upper edge of the feeder board G above the cranked shaft F, such extension being in the preferred arrangement jointed to the upper edge of the feeder board or cranked shaft as by clips *k'* and said extension is held in proper relation to the cranked shaft and given a movement forward and backwardly during the rotation of the cranked shaft by link connections L jointed to an upwardly extending arm *l* on the extension K and to a fixed portion of the condenser or presser frame as at *l'*. The extension K will prevent the escape of any cotton over the top of the feeder board G, even when the latter is at the lowest portion of its orbit, and will in effect at such time form a deflector for directing the entering cotton downwardly onto the chute, behind the feeder board and apron.

The mechanism is such that it will not only handle and feed a large quantity of cotton in a given time, but it has a large capacity for receiving and storing cotton during the tramping operation, which cotton will in no wise interfere with or prevent the correct operation of the feeder when it is again desired to feed cotton to the press box.

What I claim as new and desire to secure by Letters Patent of the United States, is:

1. In a press feeder of the character specified, the combination with a crank shaft, a feeder board depending therefrom, a feeder apron jointed to the lower end of said feeder board, a support for the opposite end of said feeder apron, and a chute for supporting the cotton below said feeder board and apron.

2. In a feeder for presses, such as described, the combination with a supply chute, and a crank shaft, of a feeder embodying members jointed together and pivotally supported by the crank shaft at one end, and a fixed support for the opposite end of said jointed members.

3. In a feeder for presses such as described, the combination with a cotton supply chute, of feeder members jointed together at their meeting edges, a support for

the lower edge of the bottom feeder member, and a rotary crank shaft from which said feeder members are suspended, and to which the upper member is pivotally connected at the top.

4. In a feeder for presses such as described, the combination with the supply chute and rotary crank shaft, of a feeder board pivotally supported on and depending from the crank shaft, a flexible feeder apron connected at one edge to the bottom of the feeder board, and a support for the opposite edge of said apron.

5. In a feeder for presses such as described, the combination with a supply chute and a crank shaft located above said chute, of a feeder board depending from said crank shaft, a slatted flexible feeder apron connected at one edge with the bottom of said feeder board, and a support for the opposite edge of said sliding apron.

6. In a feeder for presses such as described, the combination with a supply chute and a rotary crank shaft located above said chute, of a feeder board carried by and depending from said crank shaft, a feeder apron jointed to the lower edge of the feeder board, a support for the opposite edge of the apron, and a feeder board extension projecting above the crank shaft.

7. In a feeder for presses such as described, the combination with a supply chute, and a crank shaft mounted above said chute, of a feeder board depending

from said crank shaft, a feeder apron jointed to the lower edge of the feeder board, a support for the opposite edge of the apron, a feeder board extension pivotally supported above the crank shaft, and link connections for guiding said feeder board extension.

8. In a feeder for presses such as described, the combination with a supply chute, and a crank shaft mounted above said chute, of a feeder board depending from said crank shaft, a feeder apron jointed to the lower edge of the feeder board, a support for the opposite edge of the apron, a feeder board extension pivotally supported above the crank shaft, and supporting guides for the feeder board extension.

9. In a feeder for presses such as described, the combination with the supply chute and crank shaft, of a substantially rigid feeder board depending from said crank shaft, a substantially rigid, pivotally supported feeder board extension projecting above the crank shaft, a flexible feeder apron connected to and depending from the feeder board, a support for the opposite edge of the apron, and link connections for guiding the feeder board extension.

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