

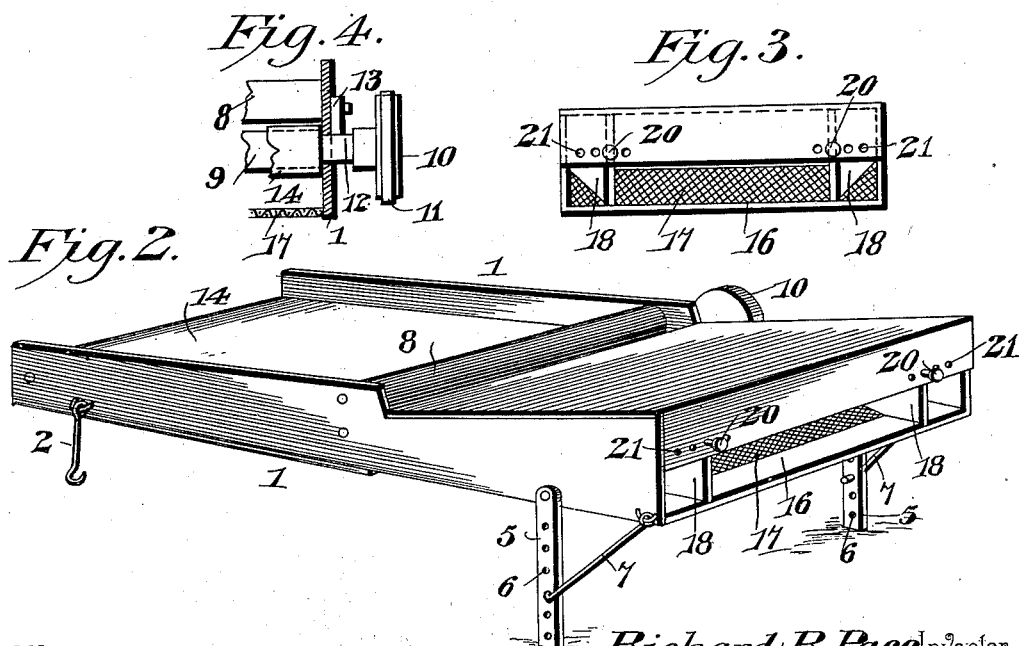
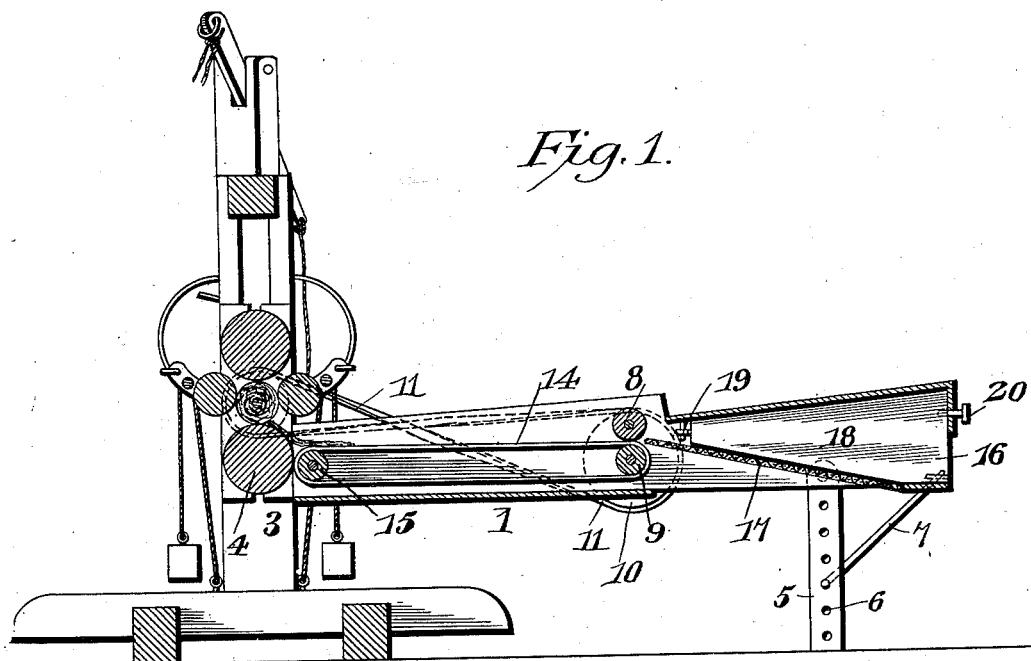
No. 647,516.

Patented Apr. 17, 1900.

R. R. PACE.
COTTON CONDENSER AND FEEDER.

(Application filed Aug. 11, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

RICHARD R. PACE, OF LISBON, LOUISIANA.

COTTON CONDENSER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 647,516, dated April 17, 1900.

Application filed August 11, 1899. Serial No. 726,895. (No model.)

To all whom it may concern:

Be it known that I, RICHARD R. PACE, a citizen of the United States, residing at Lisbon, in the parish of Claiborne and State of Louisiana, have invented a new and useful Cotton Condenser and Feeder, of which the following is a specification.

This invention relates to condenser and feeder attachments adapted for use with cotton-compresses for making cylindrical or round bales of cotton, and has for its object to provide an attachment of this character capable of use in connection with any size of gin and having means for condensing and forming the cotton into a bat of the proper width and feeding the latter continuously to the pressing mechanism during the operation of forming the bale.

With this and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

The fundamental features of the invention are susceptible to a wide range of modifications; but the preferred embodiment of the improvement is shown in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal sectional view of the improved condenser and feeder shown applied to a cotton-compress. Fig. 2 is a perspective view of the improved condenser and feeder. Fig. 3 is an end elevation of the improved condenser and feeder, showing the adjustment of the walls within the flue-box. Fig. 4 is a detail sectional view showing the fastening for the lower condensing-roll.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The improved combined condenser and feeder is so arranged that it will take the lint-cotton directly from the gin, form it into a bat of proper width, and then feed the said bat to a core-rod or directly between the compression-rolls of the cotton-compress. The attachment essentially consists of a rectangular frame 1, having a detachable hook-and-eye connection 2 at one end with the front

side of a press-frame 3, contiguous, preferably, to a lower fixed compression-roll 4. The construction of the cotton-compress is not in any way modified to accommodate the application of the improved condenser and feeder, and it is intended that the latter be employed to perform its function in connection with any form of compress. At the extremity of the rectangular frame opposite that having the hook-and-eye connection with the press-frame folding legs 5 are applied and have aligned openings 6 therein for adjustable connection therewith of brace-hooks 7, loosely connected to the sides of the frame 1 and providing means for holding the said frame in proper position for receiving the full output of lint-cotton from the mouth of the gin.

At a point intermediate its ends the frame 1 has mounted therein a pair of superposed condensing-rolls 8 and 9, the lower roll 9 having on one of its shaft extremities a pulley 10, over which passes a driving-belt or other analogous device 11, which receives motion from the compress. The lower condensing-roll 9 is also preferably provided in one of its shaft extremities with an annular groove 12, as clearly shown by Fig. 4, adapted to receive therein one end of a pivotal locking arm or dog 13 to provide for removably fastening the said roll in place. Around the roll 9 a feed belt or apron 14 travels and also passes over a roller 15 at the opposite end of the frame 1, or the end adjacent the compress, the said belt or apron 14 being provided to deliver the bat of cotton to the compression-rolls.

The outer end portion of the condenser and feeder frame 1, beyond the condensing-rolls 8 and 9, is provided with an inwardly-tapering receiving-flue 16 for the lint cotton. This flue 16 has a screen bottom 17, which acts in the capacity of a cleaning-surface for the lint-cotton to permit the latter to free itself from sand, dirt, and other motes before it passes between the condensing-rolls 8 and 9 and is formed into the bat. The flared end of the receiving-flue 16 is adapted to fit directly over the discharge mouth or flue of a cotton-gin, and to adapt the said receiving-flue to any sized gin a pair of adjustable walls 18 are disposed therein. The adjustable walls 18 are arranged longitudinally inside of the re-

ceiving-flue, at opposite sides thereof, and conform in shape to the interior of the flue, the inner ends of the said walls being pivoted or hinged, as at 19. The outer ends of the walls
 5 are free to be adjusted toward or away from each other to vary the inlet-opening of the flue to suit the size of the discharge mouth or flue of the cotton-gin. The said walls are held in their adjusted position by means of
 10 fastening-pins 20, inserted in any one of a series of openings 21, formed in the outer end of the flue and adapted to enter the outer ends of the said walls.

By having the receiving-flue 16 tapered inwardly or reduced at its inner extremity and the bottom thereof inclined upwardly the lint-cotton as it comes from the gin is forced to be fed between the rolls 8 and 9, and, furthermore, by having the inner extremity of
 20 the said bottom in line with a point between the rolls a proper feed of the cotton is insured and a practical result is attained in the formation of the bat without incurring the disadvantage arising from choking or clogging
 25 or overrun of the lint cotton. The reduction of the inner extremity of the flue also serves to condense the lint-cotton, and thereby provides for the formation of a bat of a more uniform thickness, and in addition to the advantages set forth the walls 18 can be quickly adjusted to accommodate differentiation in the
 30 size of gin-mouths without in the least affecting the width of the bat formed, as the inner pivoted extremities of the said walls are always held at the same distance apart and allow
 35 the rolls 8 and 9 to have a constant exposure in accordance with their primary arrangement.

In operation the cotton from the gin enters
 40 the flue 16 and after reaching the condensing-rolls 8 and 9 is formed into a bat of the proper width and in this condition fed by the belt or apron 14 between the rolls of the compress. Great convenience will arise by the
 45 use of this combined condenser and feeder, and one principal advantage is that it provides means for uniformly packing and compressing the cotton in one operation and reduces the danger of fire to a minimum by
 50 taking the cotton directly from the gin and baling it at a great density. A further advantage that is derived by the use of the improved condenser and feeder attachment is that it is unnecessary to employ the attendant
 55 known as the "feeder" or "packer." Other advantages will appear to those familiar with the art, and in some applications it may be necessary to slightly modify the arrangement of parts, and therefore changes in
 60 the form, proportions, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what
 65 is claimed as new is—

1. In a feeder and condenser for cotton-compresses, a frame or casing provided at one end with an inlet-mouth, a horizontal condensing-flue having a foraminous bottom converging toward the flue-top and arranged at
 70 an upward incline from the inlet-mouth to form a horizontally-tapered mouth or chamber which is reduced in depth from the inlet-mouth regularly toward the outlet-opening, adjustable side plates within the walls of the
 75 said chamber and diverging from the inlet-mouth to the outlet-opening, coacting condensing-rolls mounted in the frame close to the contracted outlet-opening of the said flue and having their meeting faces arranged substantially in the plane of the adjacent end
 80 edge of the bottom of the flue, and a conveyer mechanism disposed in a plane to receive the bat from the condensing-rolls and discharge the latter to the bale-forming mechanism.
 85

2. The combination with pressing mechanism, of a condenser and feeder comprising a frame arranged at one side of said mechanism having a receiving-flue at its outer end
 90 portion provided with inner adjustable walls in addition to the outer fixed walls of the flue, a pair of superposed condensing-rolls mounted within the frame at an intermediate point, and a feed belt or apron extending from the
 95 condensing-rolls to a point contiguous to the condensing mechanism, the inner extremities of the said walls always having the same spaced relation and invariably exposing the full lengths of the rolls to avoid a differentiation in the predetermined width of the bat to
 100 to be formed.

3. A condenser and feeder for the purpose set forth, comprising a frame having an outer inwardly-tapering receiving-flue, adjustable
 105 side walls within the said flue independent of the fixed side walls of the latter and having their inner extremities always held at the same distance apart, and bat-forming mechanism located adjacent the inner extremity of
 110 the said flue.

4. In a feeder and condenser for cotton-compresses, a frame or casing provided at one end with an inlet-mouth, a horizontal condensing-flue having a foraminous bottom converging toward the flue-top and forming a
 115 horizontally-tapered cotton space or chamber which is reduced in depth from the inlet-mouth toward an outlet-opening, the adjustable side plates within the walls of the space or chamber and diverging from the inlet-mouth to the outlet-opening, coacting condensing-rolls mounted in the frame adjacent to the outlet of
 120 the flue, and a carrier mechanism supported by the frame, substantially as described.
 125

5. In a condenser and feeder for cotton-compresses, a frame or casing having the condensing-flue formed by converging side plates and a foraminous bottom to produce a
 130 cotton-space which is tapered progressively

from one end of the flue to the other, said
side plates being laterally adjustable over the
foraminous bottom to assume diverging po-
sitions within, and toward the outlet end of
5 said flue, bat-condensing devices contiguous
to the outlet of the flue, and a carrier mechan-
ism on the frame, substantially as described.

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

RICHARD R. PACE.

Witnesses:

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O. P. BAILEY.