R. B. LUMPKIN.

BAT FORMER.

APPLICATION FILED MAR. 27 1907.

903,876. Patented Nov. 17, 1908.

3 SHEETS—SHEET 1.

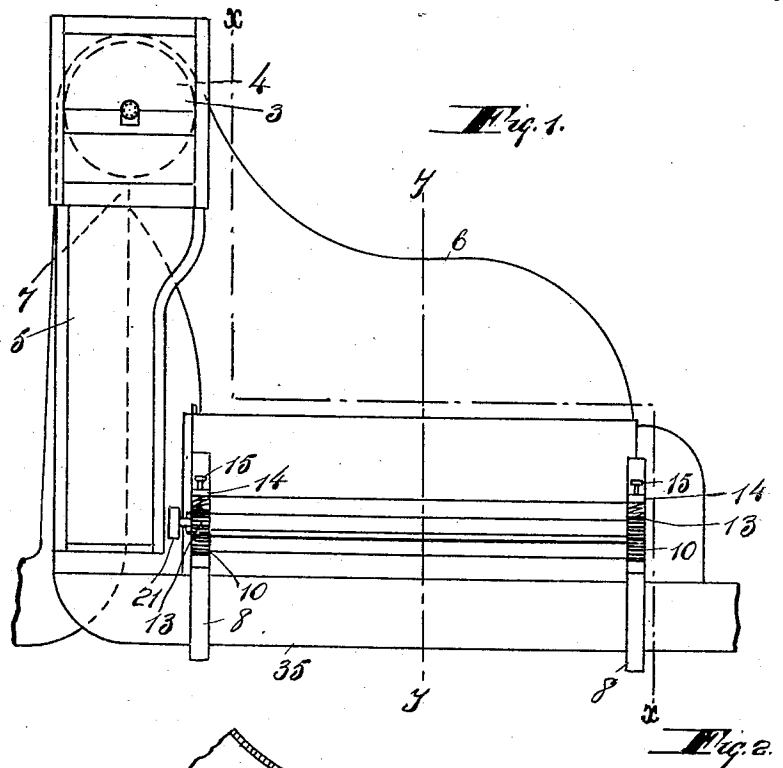
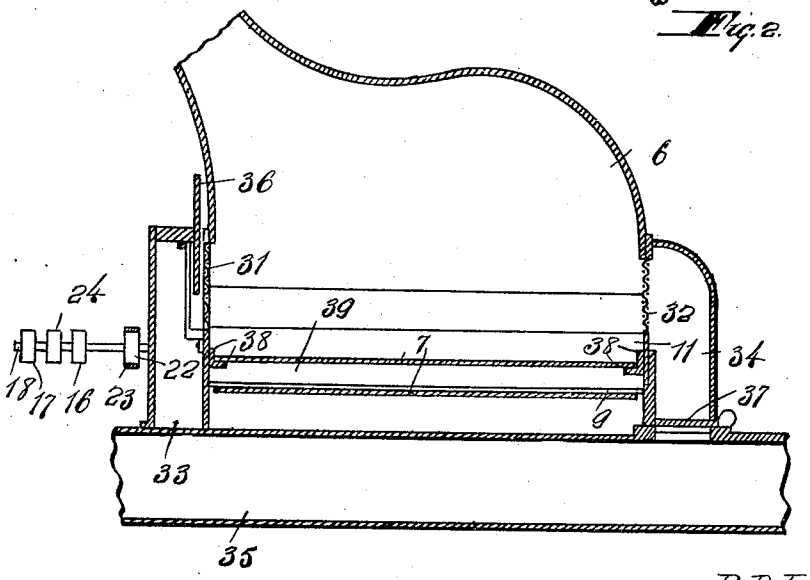


Fig. 1.

Fig. 2.



Inventor

R. B. Lumpkin.

Witnesses

B. J. Sorkowski

R. L. Moseley

By A. L. Jackson

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3 SHEETS—SHEET 2.

Fig. 3

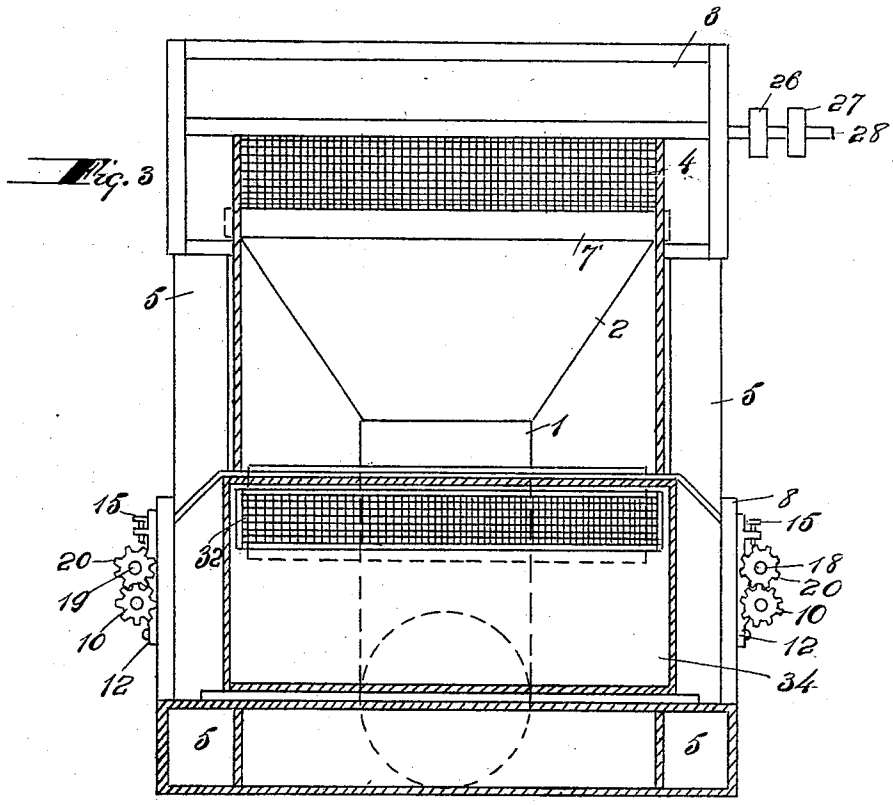
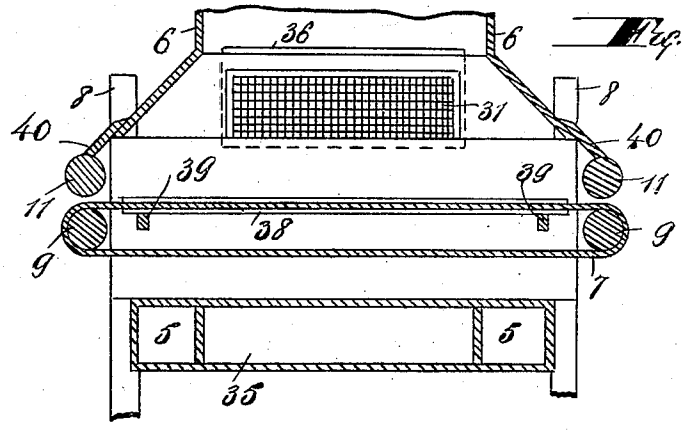


Fig. 4



Witnesses

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3 SHEETS—SHEET 3.

Fig. 5.

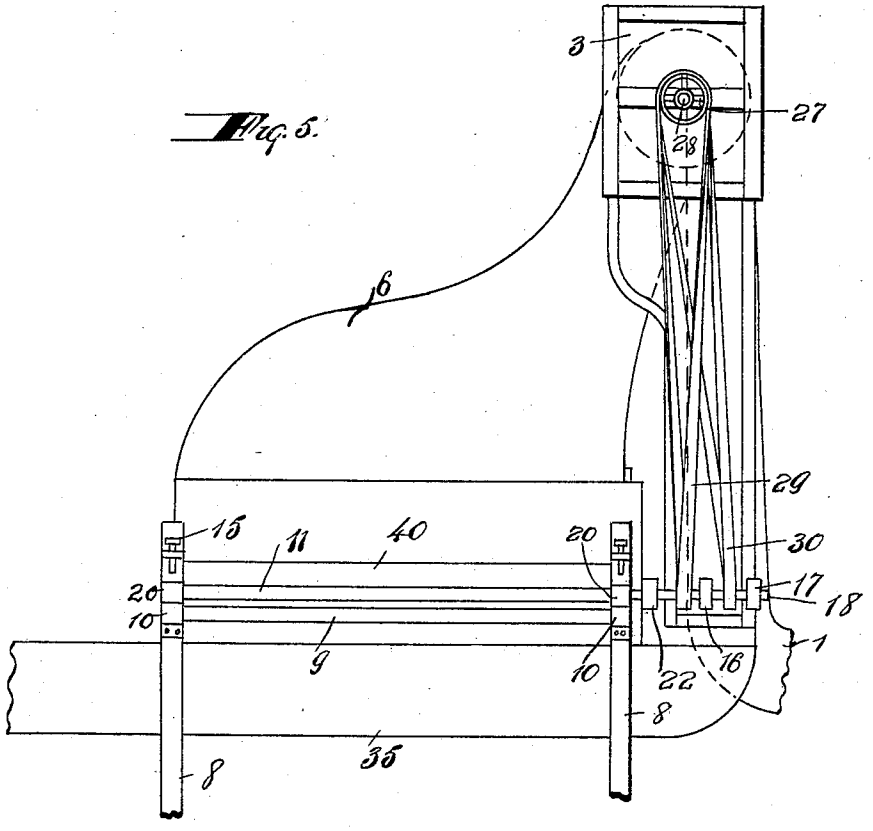


Fig. 6

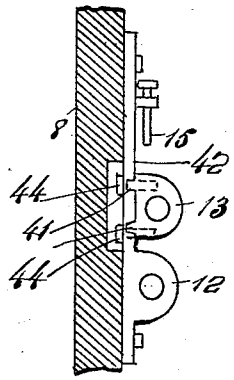
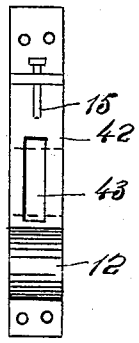


Fig. 7



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT B. LUMPKIN, OF DALLAS, TEXAS, ASSIGNOR TO AIR BLAST GIN COMPANY, OF DALLAS, TEXAS, A CORPORATION OF TEXAS.

BAT-FORMER.

No. 903,876. Specification of Letters Patent. Patented Nov. 17, 1908.

Application filed March 27, 1907. Serial No. 364,786.

To all whom it may concern:

Be it known that I, ROBERT B. LUMPKIN, a citizen of the United States, residing at Dallas, county of Dallas, and State of Texas, have invented certain new and useful Improvements in Bat-Formers, of which the following is a specification.

My invention relates to means for preparing lint cotton for baling presses, and the object is to provide a bat former which will coöperate with a condenser in preparing cotton for baling presses and which has provision for the escape of dust and for evening or distributing the cotton so that a bat of uniform thickness will be discharged to enter a baling press.

Another object is to provide a traveling conveyer which receives the bat and delivers the same and which may be driven in opposite directions so that a baling press may be operated at each end of the bat former so that while a bale of cotton which has been delivered to a baling press by the bat former is being pressed, the bat former may be delivering a bale of cotton to a baling press at the other end of the bat former.

Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application and specification.

Figure 1 is a side elevation of a condenser and an end elevation of the bat former, the bat former being transversely arranged relative to the condenser. Fig. 2 is a transverse section of the bat former. Fig. 3 is a vertical section of certain parts of the casing of the bat former taken along the line *x x* of Fig. 1, illustrating the disposition of the bat former relative to the condenser. Fig. 4 is a longitudinal section of the bat former, taken along the line *y y* of Fig. 1. Fig. 5 is a side elevation of the condenser and an end elevation of the bat former, being the opposite side of the devices as shown in Fig. 1 and illustrating the gearing for driving the conveyer apron. Figs. 6 and 7 are detail views of the bearings for the pressing rollers.

Similar characters of reference are used to indicate the same parts throughout the several views.

The bat former herein described is to be used with a condenser of suitable construction. In the drawings is shown a condenser having an intake flue or pipe 1, having a flared discharge 2 into the condensing chamber 3. The condenser has the usual rotary screen drum 4 and the discharge flues 5 for the air and dust. The rotary screen drum 4 discharges the cotton into the casing 6 of the bat former. A vertically adjustable board 7′ is used to regulate the passage of air about the rotary drum 4.

The bat former has an irregularly shaped receiver 6. The cotton falls from the rotary drum 4 through the receiver 6 and onto the conveyer apron 7. This apron delivers the cotton to either end of the bat former. The bat former is provided with a casing which is supported by the upright posts 8. The conveyer 7 is mounted on drums 9 which are provided with cog wheels 10 rigid therewith. A drum 11 is mounted above each drum 9. The drums 9 are journaled in bearings 12 which are bolted to the posts 8. The drums 11 are mounted in bearings 13 which are mounted on and slidable vertically on the bearings 12. The bearings 13 may be held down by spiral springs 14 which may be retained in place by the bolts 15.

The object of the drum 11 is to press on the cotton as it passes from the conveyer 7. This leaves a compact bat for the baling press. The drum 11 is driven by a pulley 16 or by a pulley 17 which pulleys are fixed on the extended shaft 18 of the drum 11.

Cog wheels 20 are mounted rigidly on the shafts 18 and 19 and serve to drive the drum 9 through the cogs 10. The shaft 19 is driven from the shaft 18 by means of a belt 23 which engages the pulleys 21 and 22 which are fixed respectively on the shafts 19 and 18.

The conveyer 7 is made to run in either direction by gearing in the following manner. A loose pulley 24 is mounted on the shaft 18. Fixed pulleys 26 and 27 are mounted on shaft 28 of the condenser. A belt 29 is mounted on pulley 26 and adapted to engage either pulley 16 or 24. When the belt is mounted on the pulleys 26 and 16 it will drive the conveyer in one direction and when shifted to the loose pulley 24 the conveyer will stop. A belt 30 is mounted on pulley 27 and adapted to engage either pulley 17 or pulley 24. The belt 29 is turned one quarter to engage the shaft 28. The belt 30 will have to be turned one quarter also but in the opposite direction from belt

29 in order to drive the conveyer 7 in the opposite direction from the direction it goes when actuated by the belt 29. If the belt 30 is mounted on pulley 27 and on pulley 17 the conveyer will be driven, but if the belt 30 is shifted to the pulley 24 the conveyer will stop. By means of the gearing thus described the conveyer 7 may be driven in either direction at will. The conveyer can be driven in one direction until a bale is delivered to a baling press and then the gearing shifted to drive the conveyer in the opposite direction to deliver a bale to the press at the other end of the bat former.

The cotton falls on the conveyer as the conveyer is moving. Provision is made for the escape of dust and air. A screen section 31 is formed in the side of the bat former next to the condenser and a screen section 32 is formed in the other side of the bat former. Dust flues 33 and 34 are formed on the sides of the bat former and lead to the main discharge flue 35.

A valve 36 is used to regulate the passage of air through the screen 31 and a valve 37 regulates the passage through the screen 32. The main object of these air escapes is to regulate the cotton which is falling on the conveyer 7. If more cotton should fall on one side of the conveyer than on the other, the valve on that side can be closed or partly closed and the valve on the other side opened more or less until the falling of the cotton is regulated so that the fall will be uniform all over the conveyer. The air is prevented from going below the conveyer 7 by means of angular strips 38 which are attached to the interior of the casing so that the horizontal portions of the strips will be flush with the underside of the upper part of the conveyer. The casing of the conveyer is braced inside by cross bars 39. The casing of the bat former may be open below the conveyer. Flashing strips of some flexible material are attached to each end of the casing and bear against the drums 11 to prevent the escape of air and cotton. These strips 40 serve as packing and must be yielding so that they will not produce friction and so that they will lie close to the drum. The flue 35 may extend outside of the building.

The bearings for the roller 9 are stationary on the posts 8 and the bearings 13 are slidable on the shanks of the bearings 12. The bearings 13 have lugs 41 which project on the sides of the shanks of the bearings 12. The shanks 42 have slots 43 therein and bolts 44 are projected through the slots 43 and screwed into the bearings 13. The heads of the bolts hold the bearings in place. The posts 8 have cut-outs 45 for the movement of the bolt heads 44. The springs 14 hold the bearings 13 down.

I claim:

1. A bat former in combination with a condenser having a casing to receive cotton from the condenser, a traveling endless conveyer horizontally disposed within said casing, a draft flue and a valve therefor in each side of said casing above said conveyer for spreading cotton evenly on said conveyer, and means for driving said conveyer in either direction.

2. A bat former in combination with a condenser having a casing to receive cotton from the condenser, a traveling endless conveyer horizontally disposed within said casing, compressing means forming an exit at each end of said casing, draft controlling means on each side of said conveyer for spreading cotton evenly on said conveyer, and means for causing said conveyer to deliver cotton through either exit at will.

3. A bat former in combination with a condenser having a casing receiving cotton from the condenser, a traveling endless conveyer horizontally disposed within said casing, compressing means forming a delivery from said casing at each end of said casing, means for driving said conveyer in either direction at will, and draft-controlling means for spreading cotton evenly on said conveyer consisting of draft flues in communication with each side of said casing, screens separating the flues from the casing, and valves for regulating the drafts through said flues.

In testimony whereof, I set my hand in the presence of two witnesses, this 13th day of March, 1907.

ROBERT B. LUMPKIN.

Witnesses:

CARLETON GAGE,

A. L. JACKSON.