June 4, 1929. E. C. CAMERON 1,716,112

COTTON FEEDER

Filed Oct. 27, 1925 2 Sheets-Sheet 1

Fig. 1.

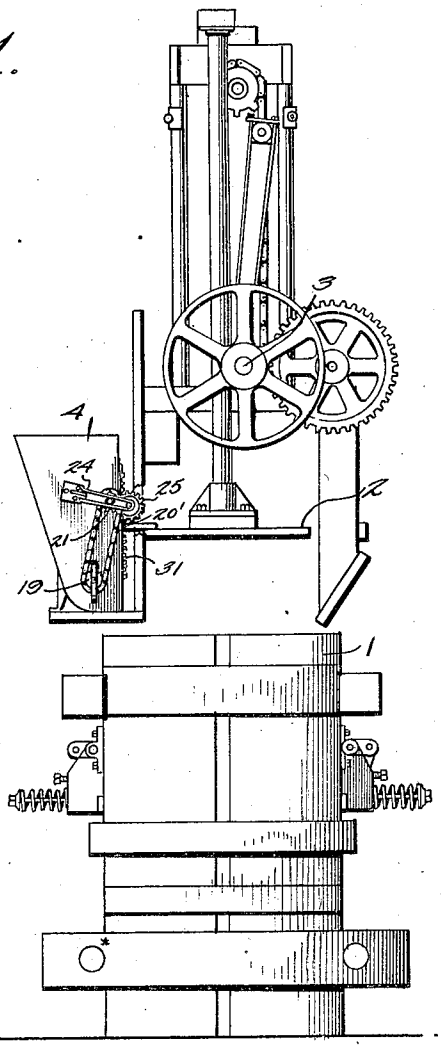


Fig. 3.

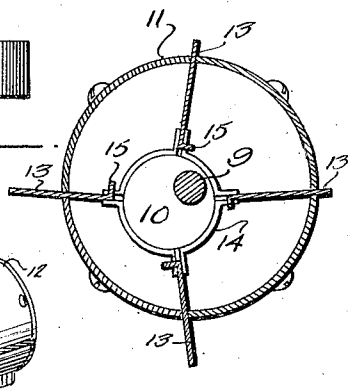
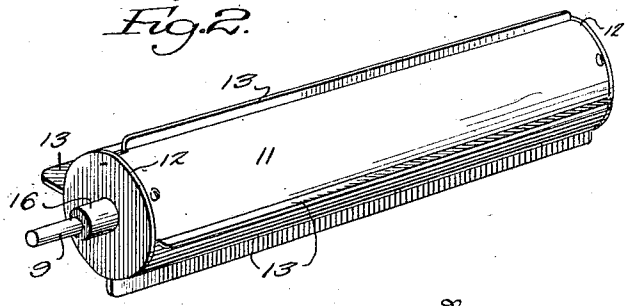


Fig. 2.



Inventor

EDDIE C. CAMERON

By

Attorney

June 4, 1929. E. C. CAMERON 1,716,112

COTTON FEEDER

Filed Oct. 27, 1925 2 Sheets-Sheet 2

Fig.4.

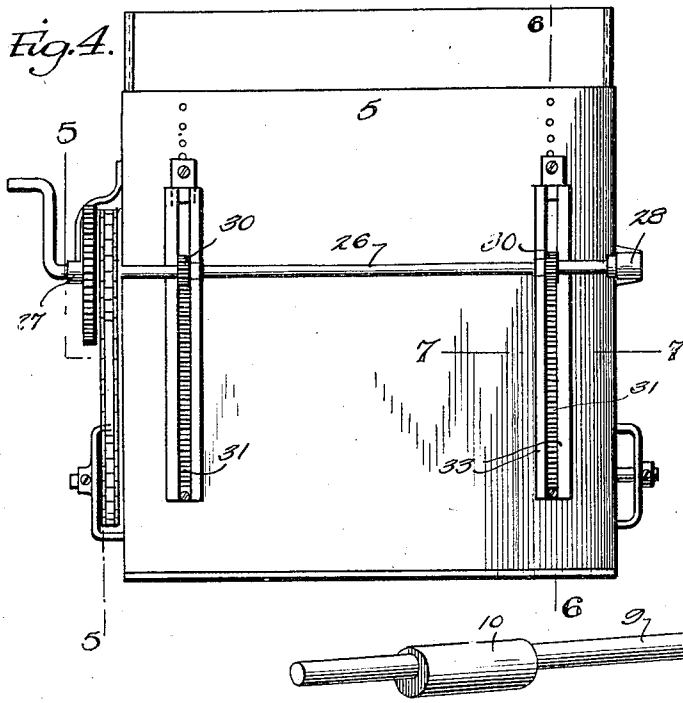


Fig.10.

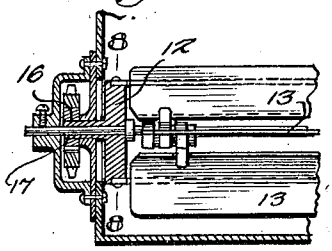


Fig.9.

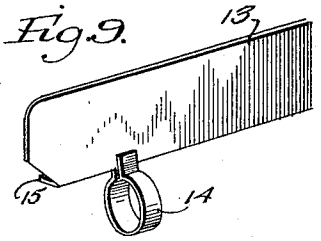


Fig.11.

Fig.5.

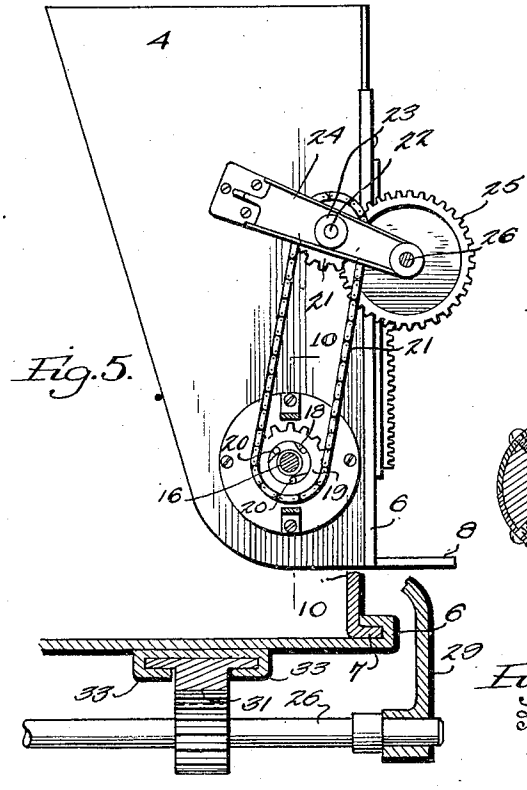


Fig.6.

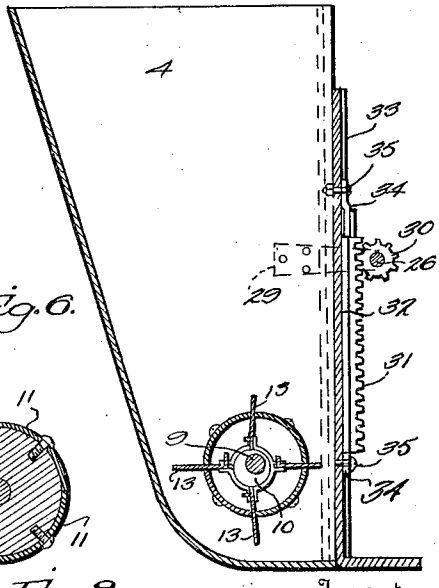


Fig.8.

Fig.7.

Inventor

EDDIE C. CAMERON

By

Attorney

Patented June 4, 1929. 1,716,112

UNITED STATES PATENT OFFICE.

EDDIE C. CAMERON, OF HONDO, TEXAS.

COTTON FEEDER.

Application filed October 27, 1925. Serial No. 65,258.

This invention relates to cotton feeders, and more particularly to feeder drums for cotton packers.

An object of the invention is to provide improved means for raising the lint shield when the follower block of the packer is raised.

A further object of the invention is to provide an improved drum construction having blades or paddles which are projected through the operative portion of a revolution and then withdrawn.

A further object of the invention is to provide means actuated by the upward movement of the lint shield for rotating the drum.

In the accompanying drawings, I have shown one embodiment of the invention. In this showing:

Figure 1 is a front elevation of a cotton packer showing the drum in position,

Figure 2 is a perspective view of the feeding drum,

Figure 3 is a transverse vertical sectional view thereof,

Figure 4 is a rear elevation of the feeder,

Figure 5 is a side elevation,

Figure 6 is a vertical sectional view on line 6—6 of Figure 4,

Figure 7 is a detail horizontal sectional view on line 7—7 of Figure 4,

Figure 8 is a detail sectional view on line 8—8 of Figure 10,

Figure 9 is a perspective view of one of the blades or paddles,

Figure 10 is a detail sectional view on line 10—10 of Figure 5, and,

Figure 11 is a perspective view of the stationary shaft or bearing by means of which the blades are projected.

Referring to the drawings, the reference numeral 1 designates generally a baling press having a follower block 2 which is reciprocated in the usual manner from a main shaft 3 for the purpose of packing cotton in the press for baling.

The feeding mechanism consists of a box or receptacle 4 arranged at one side of the baling press and above it and adapted to deliver the cotton into the press when the follower block is in raised position. As shown, the front and rear walls of the feeder converge toward the bottom to facilitate feeding the cotton from the bottom of the receptacle. The front of the receptacle is provided with a lint shield 5, the ends of which are provided with grooves 6 (see Figure 7) to receive flanges 7 formed on the side walls of the box. In the ordinary construction of cotton feeders, the lint shield is connected to the follower block of the press and is raised and lowered by the follower block. In the present construction, I provide a projection 8 on the bottom of the lint shield which is adapted to be engaged by the follower block as it raises (see Figure 1) to raise the lint shield and thus permit the cotton to be fed into the press. The lint shield is lowered by gravity and is limited in its downward movement by engagement with the bottom of the feeder.

Within the casing, I provide a drum having blades or paddles adapted to deliver the cotton to the press. As shown, I provide a stationary inner shaft or bearing member 9 having cam portions 10 adjacent each end. The drum consists of a shell 11 formed of arcuate sections and secured to disks 12 at each end. These sections are slightly spaced from each other to provide slots for the passage of blades 13. As shown, a ring 14 is secured to the inner end of each band, and these rings surround the stationary cams 10 to project the blades as the drum revolves. The inner end of each blade is also provided with a flange 15. A hollow shaft 16 is secured to each of the disks 12 and these shafts extend through the side walls of the feeder. One of the shafts is provided with a ring or bushing 17 secured thereto to revolve therewith and this bushing is provided with a plurality of slots or recesses 18 in its periphery. A sprocket wheel 19 is arranged over the bushing and pins or rollers 20 are arranged in the slots. The sprocket wheel is adapted to receive a chain 20′ which passes over a second sprocket wheel 21 carried by a shaft 22 mounted on the side of the feeder. The inner end of the shaft is arranged in a suitable bearing in the side wall of the feeder and the outer end is received in a bearing 23, carried by an arm 24 secured to the side wall. This shaft is provided with a pinion meshing with a gear 25 carried by a transverse shaft 26. As shown, the shaft 26 extends across the conveyor, one end being mounted in a bearing 27 carried by the arm 24 and the other end being mounted in a bearing 28 carried by an arm 29 secured to the other side wall of the conveyor. This shaft may be provided with a handle to permit manual operation.

Intermediate its ends, the shaft is provided with pinions 30 meshing with racks 31 on the front of the lint shield. As shown, these racks are formed on plates 32 which are secured to the face of the lint shield by means of guides or flanges 33 formed integral with the lint shield and adapted to receive the base of the rack bars. Above and below the rack bars, suitable retaining members 34 are arranged in the guides and retained in position by means of fastening elements 35.

In operation, the upward movement of the follower block 2 raises the lint shield by engaging the projection 8. This causes the transverse shaft 26 to revolve in a clockwise direction due to the meshing of the pinions 30 and the racks 31. Through the gear 25 and its associated pinion, the shaft 22 is then rotated in a counter clockwise direction and the chain 21 rotates the sprocket 19 in the same direction. The pins or rollers 20 then ride toward the shallower end of the slots 18 coupling the sleeve 16 to the sprocket wheel and causing the drum to revolve. As the drum revolves, the rings 14 revolve on the cam portions 10 of the stationary shaft or bearing 9 and the blades are projected when in the position shown in Figure 6 of the drawings to feed the cotton to the presser. As the blades start their upward movement, they are withdrawn, as shown.

When the follower block moves downwardly, the lint shield is then lowered by gravity until it engages the bottom of the conveyor. During this movement, the sprocket 17 revolves in a clockwise direction, causing the rollers or pins 20 to move to the deeper parts of the recesses 18 and thus disconnect the drum from the drive.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

I claim:

1. In a device of the character described, a casing, a movable lint shield arranged in front of said casing, a drum arranged within said casing, means controlled by the upward movement of said lint shield for revolving said drum, a plurality of paddles carried by said drum, and means for projecting each of said paddles during a portion of each revolution of the drum.

2. In a device of the character described, a casing, a lint shield mounted in front of said casing, a drum mounted in said casing, paddles carried by said drum, a driven member operatively connected to the lint shield, a disk carried by said drum and arranged within said driven member, the periphery of said disk being provided with inclined slots, and pins arranged in said slots and adapted to couple said disk and said drum to said driven member when the driven member rotates in one direction.

3. In a device of the character described, a casing, a movable lint shield mounted in front of said casing, a drum mounted in said casing, paddles carried by said drum, a rack formed on said lint shield, a shaft arranged adjacent said lint shield and adapted to be rotated by the movement of said lint shield, a sprocket wheel operatively connected to said shaft, a disk carried by said drum and arranged within said sprocket wheel, the periphery of said disk being provided with inclined slots, and pins arranged in said slots whereby said drum will be rotated when the sprocket wheel rotates in one direction.

4. In a device of the character described, a casing, a movable lint shield arranged in front of said casing, a drum arranged within said casing, and means controlled by the upward movement of the lint shield for revolving said drum.

5. In a device of the character described, a casing adapted to be arranged adjacent a baling press, a vertically reciprocable lint shield arranged in front of said casing, feed means arranged within said casing and adapted to discharge material therefrom to said press, and transmission means connected between said shield and said feed means and including a clutch adapted to render said feed means operative during upward movement of the shield.

In testimony whereof, I affix my signature.

EDDIE C. CAMERON.