

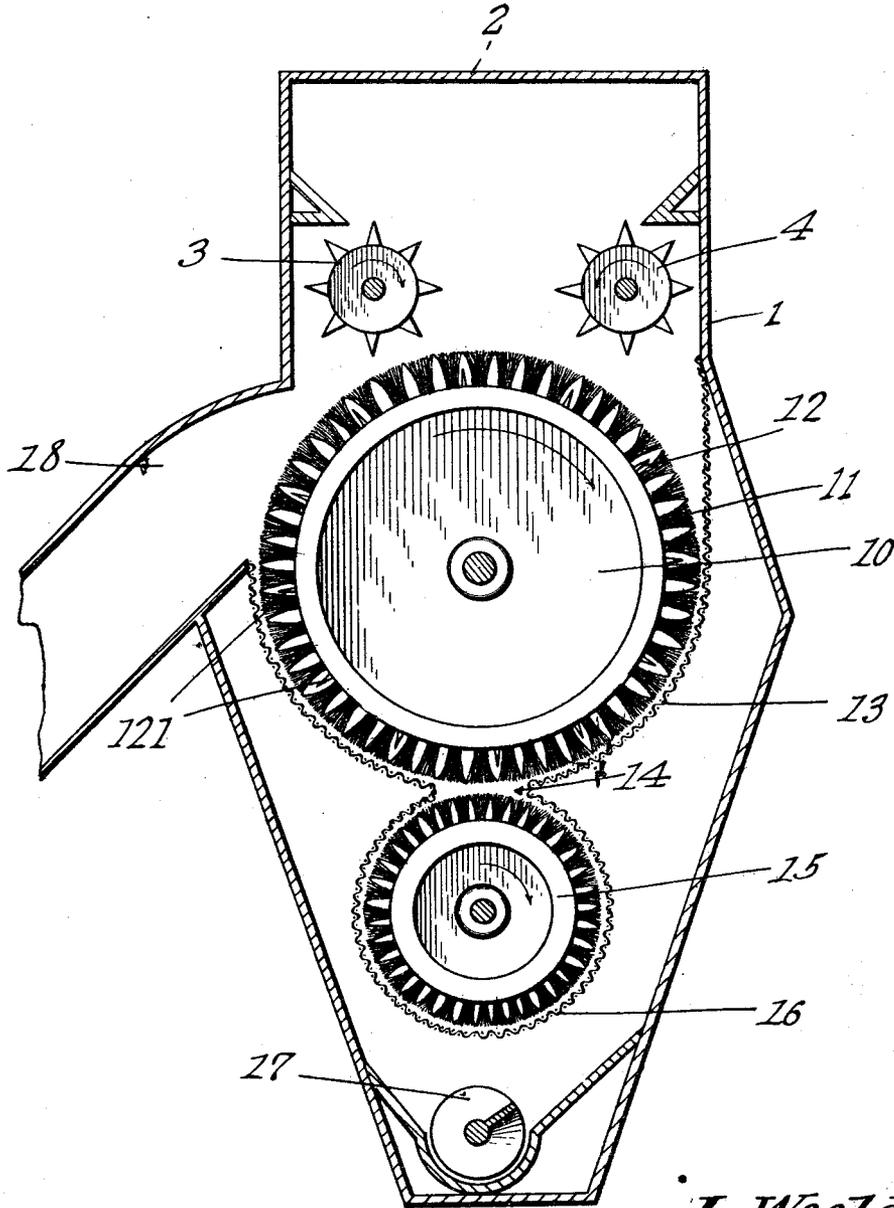
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J. WOOLDRIDGE

COTTON GIN FEEDER AND CLEANER

Filed Feb. 21, 1925



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UNITED STATES PATENT OFFICE.

JOHN WOOLDRIDGE, OF WACO, TEXAS, ASSIGNOR OF NINE-TWENTIETHS TO LUCILLE WOOLDRIDGE FARR, AND ELEVEN-TWENTIETHS TO W. H. McCULLOUGH, BOTH OF WACO, TEXAS.

COTTON-GIN FEEDER AND CLEANER.

Application filed February 21, 1925. Serial No. 10,866.

To all whom it may concern:

Be it known that I, JOHN WOOLDRIDGE, a citizen of the United States, residing at Waco, in the county of McLennan and State of Texas, have invented a new and useful Cotton-Gin Feeder and Cleaner, of which the following is a specification.

This invention relates to cotton gin feeders and the object thereof is to provide a simple and efficient apparatus of this character so constructed that the cotton will be thoroughly brushed and cleaned before being passed on to the gin, without danger of breaking the fibers.

Another object is to so construct an apparatus of this character that the cotton will be forced down through the cleaner and subjected to a scrubbing operation as well as to a brushing operation.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

The accompanying drawing represents a vertical section of a cotton gin feeder and cleaner constructed in accordance with this invention.

In the embodiment illustrated a closed casing or shell 1 is shown in the upper portion of chamber 2 of which are located spiked feed rollers 3 and 4 between which the cotton is fed.

Located in the casing 1 below the feed rollers 3 and 4 is a large rotary brush 10 provided around its periphery with a plurality of bunches of bristles 11 having short spikes 12 arranged at intervals between them, the spikes being approximately one-half the length of the bristles and are designed for a purpose presently to be described. The brush 10 is designed to be rotated by any suitable means not shown and arranged around the lower portion thereof is a wire screen 13 with an opening 14 formed at the bottom to provide communication between the brush 10 and a smaller brush 15 also rotatably mounted below and adjacent the brush 10 and which is designed to receive

the cotton delivered from brush 10. The wire screen 13 extends also around the brush 15 as shown at 16 and between which and the bristles of brush 15 the cotton is designed to pass.

A conveyor 17 is located in the bottom of the casing 1 and is designed to carry away the dirt and trash which are cleaned from the cotton.

The rotary brush 10 rotates at about 400 revolutions per minute and as the cotton is fed down between the rollers 3 and 4 the bristles of brush 10 being longer than the spikes 12 strike the cotton and brush out all the dirt and trash without danger of breaking the fiber. Should the bristles fail to grab the cotton as it is pushed down between the rollers the feeding of the cotton will push the bristles back and the short spikes 12 will catch it as soon as it passes out from under the feed rollers and then the bristles operate as springs to force the cotton off the spikes and hold it up against the wire cloth 13 scrubbing it over the cloth and passing it on to brush 15. This brush 15 carries the cotton around over the wire screen portion 16 and delivers it back to the brush 10 which rotating at the revolutions above specified takes the cotton and delivers it into the discharge spout 18.

The construction of the brush 10 with long bristles and short spikes operates to perfectly clean the cotton without breaking the fiber.

In the construction illustrated a two-brush gin feeder or cleaner is shown but obviously any desired number of brushes may be employed and the brush 10 may be substituted for the spike drums used in the ordinary makes of gin feeders without otherwise changing the structure of the gin feeder. These brushes may also be used in cotton cleaners where spike drums are now used, the spike drums being objectionable for the reason that they break the fiber of the cotton.

I claim:—

1. A cotton cleaning and feeding brush made in the form of a cylinder having arranged around the periphery bristles with spikes arranged at intervals in the bristles and of a length less than that of the bristles.
2. A cotton feeding and cleaning brush having a plurality of bristles arranged thereon with short spikes located in the

bristles and of less length than the bristles.
3. In a combined cotton cleaner and feeder, a casing having a combined cleaning and feeding drum mounted to rotate therein, 5 means for supplying cotton to said drum, said drum being equipped with bristles and spikes with the spikes embedded in the bristles and of less length than the bristles, and wire cloth fabric located adjacent the drum to assist the drum in cleaning and 10 feeding the cotton.

4. In a combined cotton cleaner and feeder, a casing having a drum mounted for rotation therein and equipped with spikes 13 and bristles for brushing and cleaning the cotton supplied thereto, the bristles being longer than the spikes, feeding rolls for sup-

plying cotton to said drum, another drum below said first mentioned drum and having bristles arranged around its periphery, and 20 a screen encompassing both of said drums and spaced from the bristles adapted to cooperate with the bristles for scouring the cotton in its passage through the feeder, said screen having an opening between the two 25 drums to permit cotton to pass from one to the other.

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

JOHN WOOLDRIDGE.

Witnesses:

R. G. FARR,

JOHN B. ATKINSON.