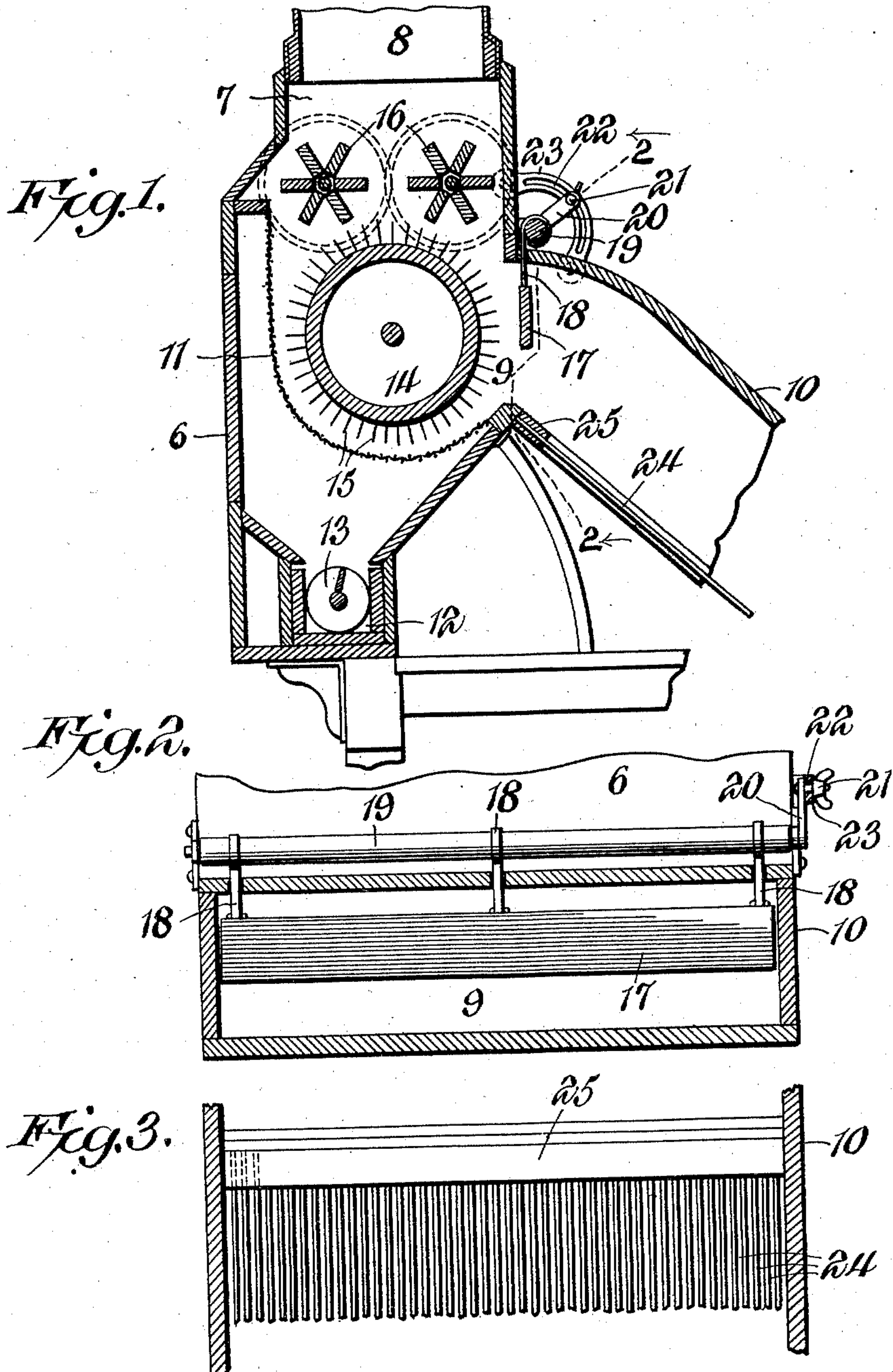


G. L. SCHMIDT.
COTTON CLEANING MECHANISM.
APPLICATION FILED MAY 26, 1908.

Patented Aug. 16, 1910.

967,446.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE L. SCHMIDT, OF LINCOLN, ALABAMA.

COTTON-CLEANING MECHANISM.

967,446.

Specification of Letters Patent.

Patented Aug. 16, 1910.

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To all whom it may concern:

Be it known that I, GEORGE L. SCHMIDT, a citizen of the United States, residing at Lincoln, in the county of Talladega and State of Alabama, have invented certain new and useful Improvements in Cotton-Cleaning Mechanism, of which the following is a specification.

This invention relates to improvements in means for cleaning seed cotton prior to its entry into the gins or for other purposes of an analogous nature, and the primary object is to provide novel, simple and effective means whereby the cotton can be maintained in coaction with the cleaning means for different lengths of time in order that cotton containing different proportions of dirt may be properly treated.

A further object is to provide a structure in which supplemental cleaning means is employed for more thoroughly effecting the separation of the dirt from the cotton.

One embodiment of the invention is disclosed in the accompanying drawings, wherein:—

Figure 1 is a vertical sectional view through a combined cleaner and feeder. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is a plan view of the screen employed in the discharge spout.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, a casing 6 is employed having an inlet 7 on its top to which a feed spout or other feeding means 8 is connected and having a discharge 9 in one side, from which leads a downwardly inclined discharge spout 10 that communicates with a gin or other structure. A screen 11 is arranged within the casing, and has a lower curved portion arranged below the discharge 9. Beneath this screen is located a trough 12 in which operates a conveyor screw 13 that removes the dirt and trash separated from the cotton. A rotary picker drum 14 is located in the casing, and is provided with a series of radially disposed picker teeth or fingers 15 that co-operate with the screen 11. Feed rolls 16 are located above the picker drum in the inlet of the casing. Adjustably mounted in said casing is a gate 17 that has a vertical path of movement across the discharge, being suspended by straps 18 or other suitable devices that are wrapped about a drum 19

journalled on the exterior of the casing. As the straps 18 are flexible, the gate can swing or yield laterally from the drum chamber into the spout so that the gate will be self-adjusting to allow the cotton to pass from the drum to the spout. The gate is in the form of a plate of a length slightly less than the width of the spout so as to freely swing laterally. This drum is provided at one end with a crank arm 20, and carried by said crank arm, is a clamping nut 21 operating in the curved slot 22 of a bracket 23 fastened to the side of the casing.

The bottom of the discharge spout 10 is provided with a screen formed of spaced comparatively stiff wires 24 arranged in parallel relation and disposed longitudinally of the spout, these wires being fastened at their upper ends by being inserted in a transverse board or plate 25.

It will be understood that in this mechanism, the cotton fed through the conduit 8 will be delivered to the picker drum by the feed roll 16, and will be passed by said drum over the screen 11, where the dirt will be separated from it, said dirt dropping into the trough 12, while the cotton is delivered through the lower portion of the discharge 9. Inasmuch, however, as some cotton contains much more foreign matter than others, it is advisable to pass it over the screen more than once and therefore the gate 17 is provided. When cotton containing a large proportion of dirt is passed through the machine, the gate 17 is lowered, and consequently this cotton must pass one or more times around the drum before it will escape. After leaving said drum, the cotton passes over the screen 24, where additional foreign matter will drop from it.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction, may be restored to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. The combination of a cotton gin feeder comprising a casing, a rotary picker drum mounted therein, means for feeding fiber to

the drum, a screen arranged under the drum, and a discharge spout connected with the side of the casing at a point laterally from the drum and extending outwardly 5 from the casing, with means for controlling the discharge of fiber from the drum to the spout, said means consisting of a plate-like gate or valve arranged in the receiving end of the spout and of such length 10 as to move vertically and laterally between the side walls of the latter, flexible elements supporting the entire weight of the valve and serving to permit the latter to be pushed laterally by the fiber passing into 15 the spout, and a means to which the flexible elements are connected to raise or lower the valve.

2. The combination of a cotton gin feeder comprising a casing, a rotary picker drum 20 mounted therein, means for feeding fiber to the drum, a screen arranged under the drum, and a discharge spout connected with the side of the casing at a point laterally from the drum and extending outwardly 25 from the casing, with means for controlling the discharge of fiber from the drum to the

spout, said means consisting of a valve of less length than the width of the spout and having its ends disposed in proximity to the side walls of the latter, suspending devices 30 for the valve consisting of flexible elements disposed above the valve with their lower ends connected with the top of the valve, the top of the spout having openings through which the elements project, a wind- 35 ing device mounted on the spout and to which the elements are secured to wind and unwind thereon, the portions of the elements within the spout being flexible to permit the valve to be moved laterally from the 40 drum into the spout by the fiber passing from the drum to the spout, and means connected with the winding device for holding the valve in different positions of vertical adjustment while permitting free lat- 45 eral movement of the valve.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE L. SCHMIDT.

Witnesses:

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