Oct. 25, 1932. F. E. NOISWORTHY 1,884,815

COTTON CLEANING MACHINE

Filed Dec. 15, 1930

Fig. 1.

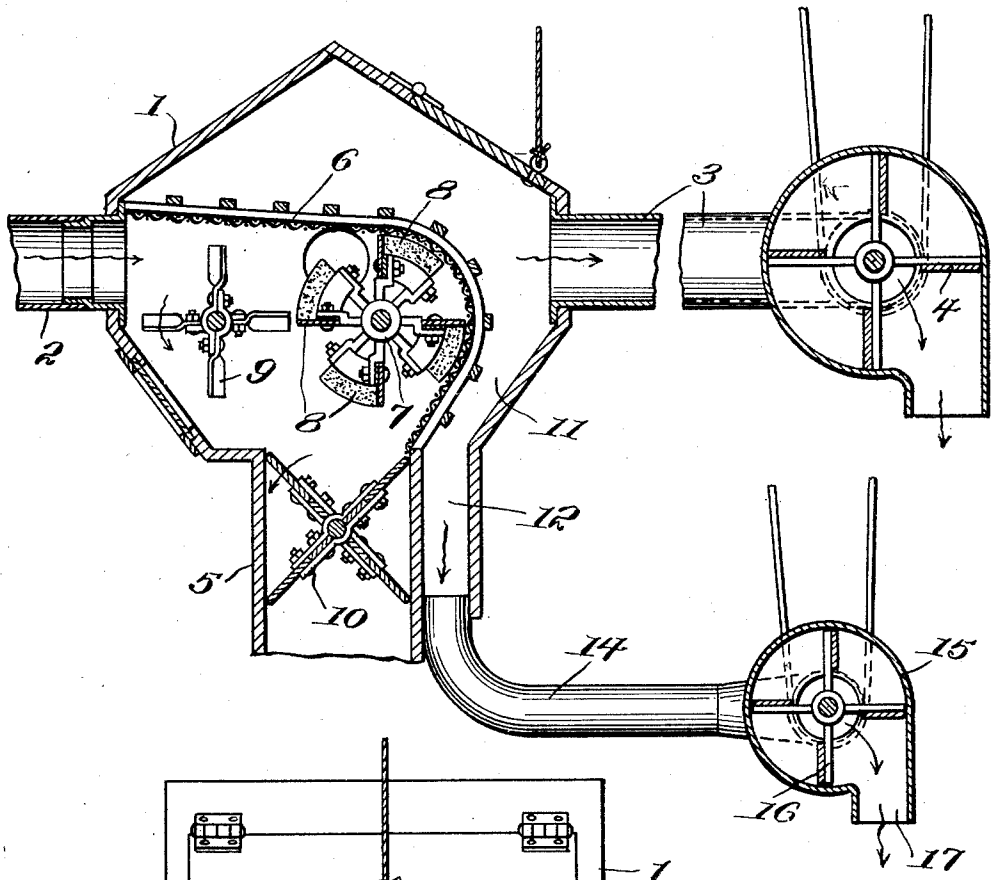
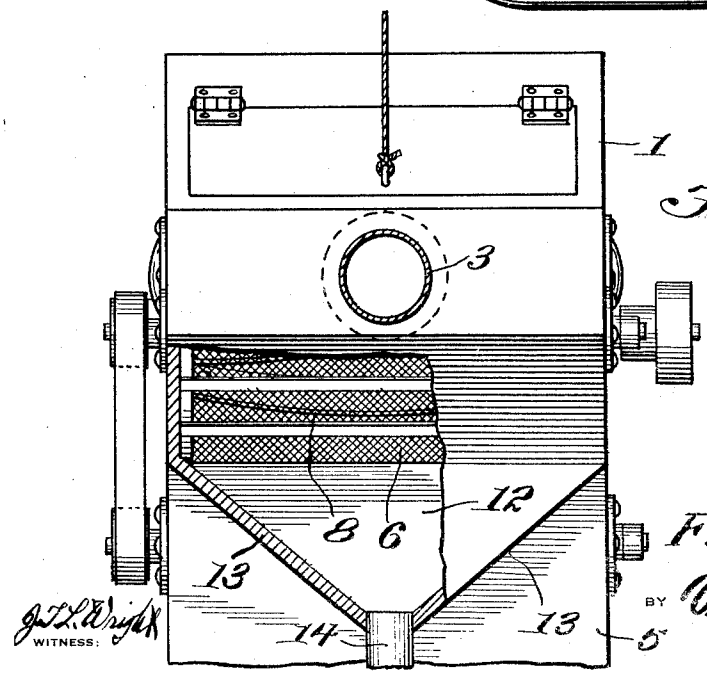


Fig. 2.



WITNESS:

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UNITED STATES PATENT OFFICE

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COTTON CLEANING MACHINE

Application filed December 15, 1930. Serial No. 502,557.

This invention relates to cotton cleaners, and is an improvement on the structure disclosed by my Patent No. 1,775,599.

The general object of the present invention is to provide a machine that not only beats and breaks up cotton and effectively removes dirt and foreign matter therefrom prior to it being passed to a gin, but the dirt and foreign matter is quickly removed from the machine so as to prevent the same from interfering with the efficient operation of the machine, and the dirt and foreign matter removing means cooperates with the cleaning means of the machine, to an extent of rendering the cotton free from all foreign matter, which materially increases the output of the gin and the value of the cotton.

Another object of the invention is to provide an improved cleaning machine that is simple in construction, inexpensive to manufacture and operate, and extremely efficient in operation and service.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a transverse sectional view taken through a machine constructed in accordance with my present invention.

Figure 2 is a side elevation with parts broken away and in section.

Referring to the drawing in detail, the reference numeral 1 indicates a casing which may be of any desired shape, and has arranged in its side walls openings disposed in alignment with each other as clearly shown in Figure 1. Arranged in one of the openings and extending outwardly therefrom is a collar which receives an inlet pipe 2, while arranged within the other opening and extending therefrom is a suction pipe 3 disposed in communication with a chamber that houses a suction fan 4.

Formed with and depending from the bottom of the casing is an outlet portion 5, and extending from above the inlet pipe opening is a screen 6 which terminates with the upper end of the outlet portion as shown in Figure 1. The screen includes a curved portion so as to be directed toward the outlet portion and within this curved portion is disposed a rotary brushing means 7 which includes spirally arranged resilient plates 8 arranged to wipe the curved portion of the screen for removing particles of cotton therefrom as will be apparent. Disposed in advance of the rotary brushing means is a rotary beater 9, therefore it will be apparent that the fan 4 will suck the cotton into the casing and within the confines of the screen 6, the cotton is then broken up by the beater and caused to be arranged against the screen, the fan will then draw the dirt and foreign matter from the cotton and through the screen while the clean cotton will drop upon a valve member 10 arranged within the outlet portion which is arranged in communication with a gin so that the cotton can be passed to the gin and be worked upon thereby.

The foregoing elements are included in my prior Patent No. 1,775,599 which also discloses a passageway 11 for the dirt and foreign matter. This passageway includes an inclined wall which acts in the capacity as a deflecting means for the dirt and foreign matter that gravitates into a trough 12 which is separated from the outlet portion 5 through the medium of the inner wall thereof as best shown in Figure 2, and this trough includes an outer wall arranged parallel with the inner wall, and converging walls 13 that have arranged at the bottom thereof one end of a conduit 14, while the opposite end of said conduit is disposed in communication with a chamber 15 having a suction fan 16 arranged therein. The chamber is provided with an outlet 17 for directing the dirt and foreign matter within a container or the like.

From the above description and disclosure of the drawing, it will be obvious that my improved machine for cleaning cotton is ex-

tremely efficient, as the dirt and foreign matter is removed from the machine in an expeditious manner, therefore fear of the machine becoming clogged or the dirt and foreign matter accumulating therein is eliminated.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:

In a cleaning device, a casing, an inlet pipe in communication therewith, a suction pipe aligned with the inlet pipe, suction means associated with the suction pipe for drawing material through the inlet pipe into said casing to be cleaned, beating and screening means arranged in said casing, a passageway disposed in said casing for receiving dirt and foreign matter from the screening means, and a trough disposed below the passageway and including converging walls, a suction means, a conduit having one end curved and arranged in fitting engagement with the trough at the adjacent ends of the converging walls and the opposite end of said conduit being disposed in communication with the last mentioned suction means and the latter including a fan with its blades disposed for movement at right angles with respect to the longitudinal center of the conduit.

In testimony whereof I affix my signature.

FREDERICK E. NOISWORTHY.