W. F. COOPER.

COTTON PICKER.

APPLICATION FILED APR. 11, 1919.

1,351,373.

Patented Aug. 31, 1920.

2 SHEETS—SHEET 1.

FIG. 1.

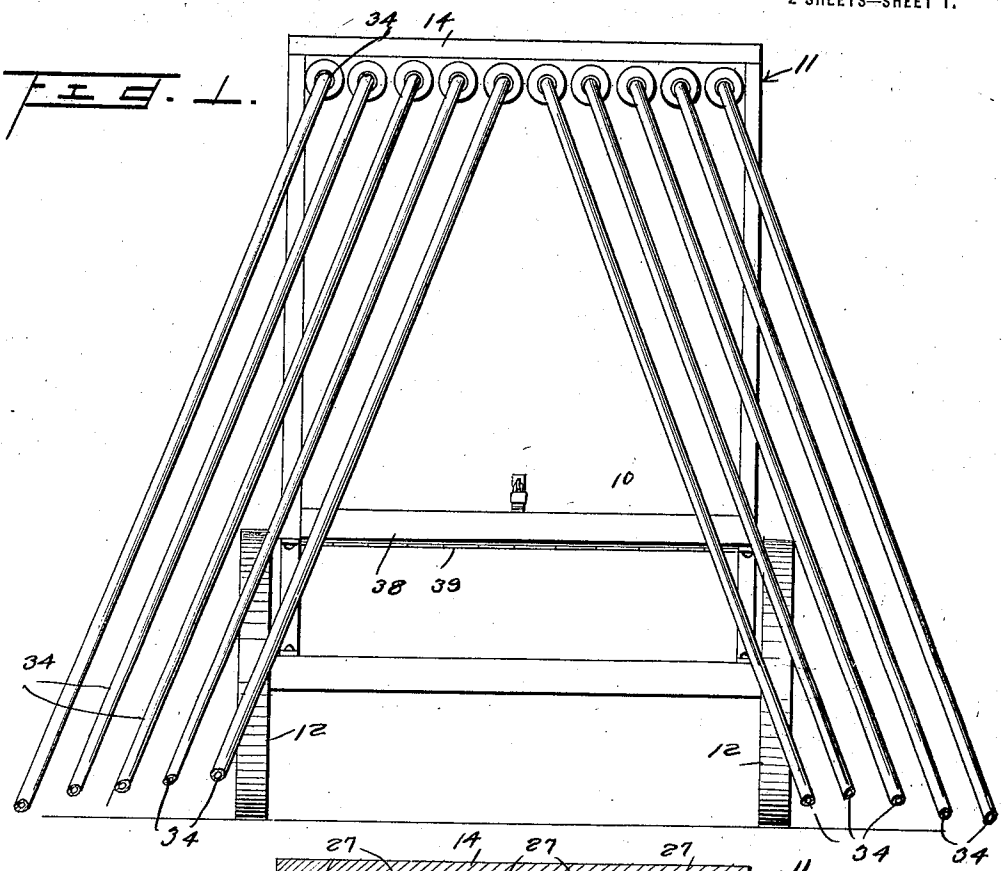
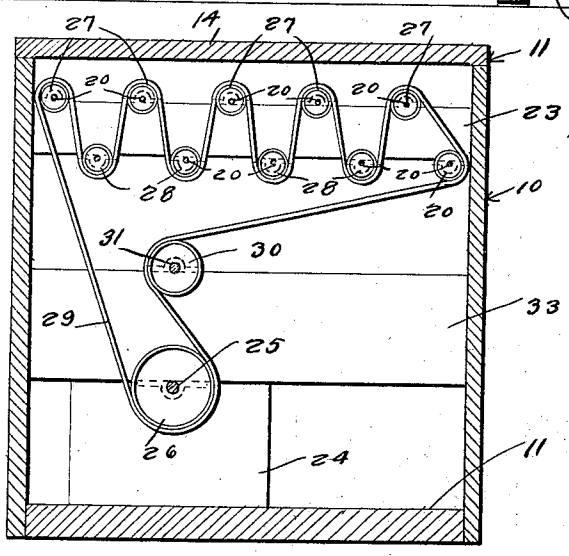


FIG. 4.



Inventor

W. F. Cooper.

By A. Randolph Jr., Attorney.

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2 SHEETS—SHEET 2.

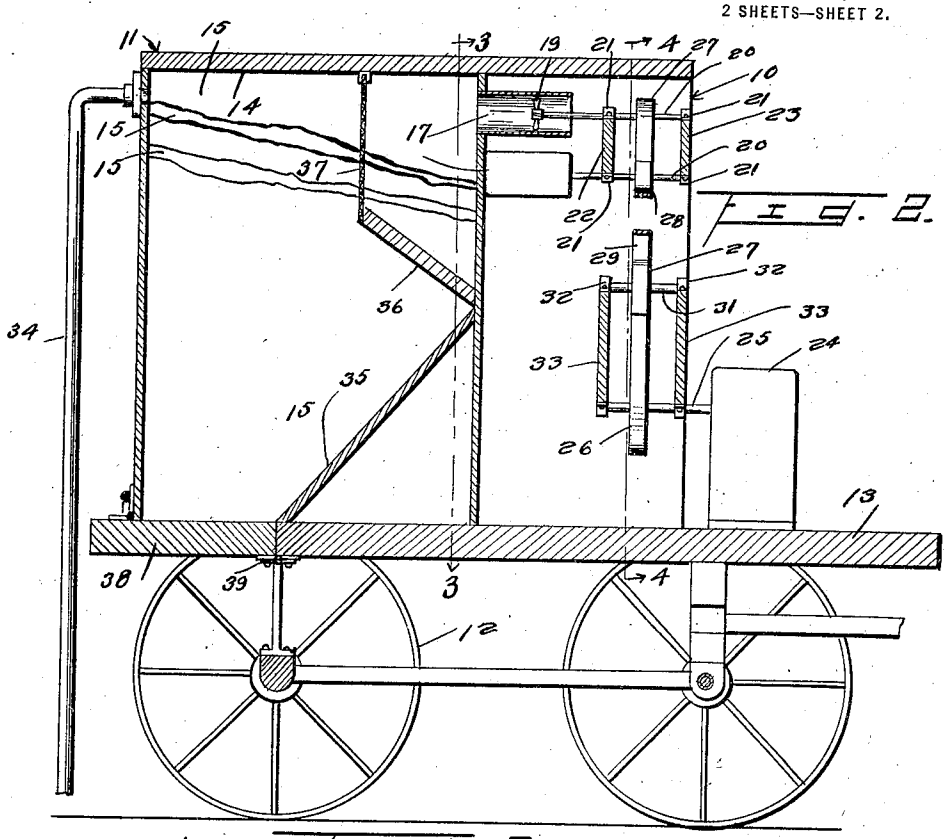


FIG. 2.

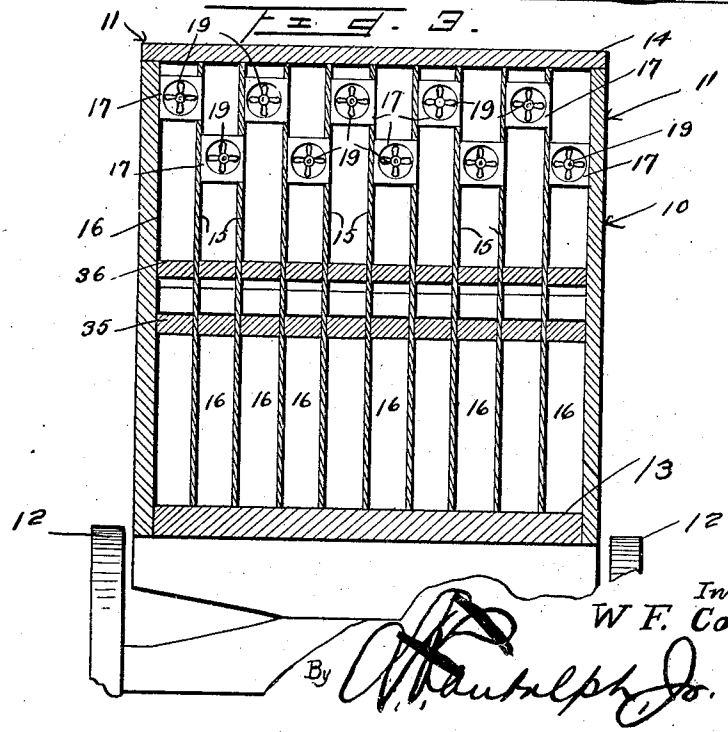


FIG. 3.

Inventor.
W. F. Cooper.
By Randolph & Co. Attorney

UNITED STATES PATENT OFFICE.

WILLIAM F. COOPER, OF NEW ORLEANS, LOUISIANA.

COTTON-PICKER.

1,351,373. Specification of Letters Patent. Patented Aug. 31, 1920.

Application filed April 11, 1919. Serial No. 289,309.

To all whom it may concern:

Be it known that I, WILLIAM F. COOPER, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Cotton-Pickers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in cotton pickers and more particularly to cotton pickers of the vacuum type.

An important object of this invention is to provide a cotton picker of the class described having a plurality of independent vacuum hose connected with an equal number of separate vacuum compartments thereby permitting of the use of any desired number of the hose.

A further object of this invention is to provide a cotton picker of the class described having novel cotton receiving means whereby the bolls are effectively spaced from the vacuum producing element.

A further object of this invention is to provide a cotton picker of the class described which may be operated with a minimum of energy and which may be operated over a comparatively large area at one time.

Other objects and advantages of this invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a perspective of a cotton picking machine embodied in my invention,

Fig. 2 is a vertical section through the same,

Fig. 3 is a vertical transverse section taken on line 3—3 of Fig. 2,

Fig. 4 is a vertical transverse section taken on line 4—4 of Fig. 2.

In the drawings wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 10 generally indicates the apparatus. The same includes a casing 11 mounted on a mobile structure 12. The casing 11 includes a bottom 13 and a top 14. Vertical partition walls 15 are disposed within the casing and extend in spaced parallel relation to each other.

As indicated in Figs. 2 and 3, the upper rear portion of each compartment 16 formed by the partitions is in communication with a cylinder 17. Each alternate cylinder 17 is arranged above the plane of the adjacent cylinders. Rotary fans or vacuum creating elements 19 are disposed within the cylinders and are connected to shafts 20. The shafts extend through bearings 21 carried by transverse supports 22 and 23. A source of power 24 is mounted on the base 13 and is provided with a drive shaft 25. The drive shaft 25 carries a pulley 26 in vertical alinement with pulleys 27 and 28 of the shaft 20. A belt 29 is adapted to extend over the pulley wheel 26 and the pulley wheels 27 and 28. A tensioning wheel 30 is adapted for engagement with the belt 29 and is mounted on a shaft 31 carried by bearings 32 of transverse supports 33.

The front upper portion of the several compartments 16 are in communication with vacuum hose 34. The vacuum creating elements 19 are spaced from the entrance openings of the vacuum hose 34 thereby permitting of the cotton on its entrance to the several compartments to fall to the bottom of the same. Each compartment is provided in its bottom portion with a rearwardly inclined imperforate wall 35. The upper end of the wall 35 abuts the lower end of an upwardly inclined wall 36. The upwardly inclined wall 36 is imperforate and extends at approximately right angles to the lower wall 35. The upper end of the wall 36 terminates below the plane of the several cylinders and the entrance opening of the vacuum hose. A screen of wire 37 or other perforate material connects with the upper end of the wall 36 and the top 14, thereby preventing access of the picked cotton to the vacuum creating elements. The walls 35 and 36 in each of the compartments form pockets which effectively retain the picked cotton in the bottom of the several compartments. The cotton may be discharged from each of the compartments through a trap door 38 hingedly connected to the base 13 by a hinge element 39.

In the use of my invention, the center hose may be about fifteen feet long while the outer hose is increased in length for covering greater areas.

While I have shown and described the preferred embodiment of my invention, it is

understood that I may make such minor changes in arrangement and construction of parts as will remain within the spirit of the invention and scope of the appended claims.

Having thus described my invention, what I claim is:—

1. A cotton picker including, a casing, a plurality of spaced parallel partitions disposed within the casing thereby providing a plurality of compartments, vacuum conveying elements in communication with each of the compartments, vacuum creating elements for each of the compartments, and inclined baffle walls disposed within the compartments.

2. A cotton picker including, a casing, a plurality of spaced parallel partition walls disposed within the casing thereby providing a plurality of compartments, vacuum creating elements for each of the compartments, vacuum hose for each of the compartments, an inclined partition wall in the lower rear portion of each of the compartments, a baffle wall extending at right angles to said inclined partition wall, and spacing the cotton receiving portion of the compartment from said vacuum creating element, and a perforated element connected to the upper end of said baffle wall and the top of said casing.

3. A cotton picker including, a casing, a plurality of spaced parallel vertical partitions disposed within the casing thereby providing a plurality of compartments, a plurality of cylinders arranged rearwardly of said compartments and in communication therewith, each alternate cylinder being arranged in superimposed relation, a source of power, vacuum creating elements within said cylinders and means connecting said vacuum creating elements with said source of power.

4. A cotton picker including, a casing, a plurality of spaced vertical parallel partitions disposed within the casing thereby providing a plurality of compartments, a vacuum hose for each of said compartments, a cylinder for each of said compartments, a rotary fan disposed within each of the cylinders, a shaft for said fan, transverse supports for said shafts, a source of power, and means connecting said source of power and said shafts.

5. A cotton picker including, a casing, a plurality of vertical spaced parallel partitions disposed within the casing thereby providing a plurality of compartments, a vacuum hose for each of the compartments, said vacuum hose being connected to the forward upper end of each of the compartments, a cylinder for each of the compartments, each alternate cylinder being arranged above the plane of the adjacent cylinders, a source of power, vacuum fans disposed within the cylinders, shafts connected with the vacuum fans, drive wheels mounted on the shaft, a shaft connected with the source of power, a wheel mounted on said power shaft, and a belt engaging said power wheel and the wheel of said fan shafts.

6. In a cotton picker a casing, a wall extending transversely of the casing, a plurality of partitions disposed within the casing to afford a plurality of chambers, the transversely extending wall closing the rear ends of the chambers, a plurality of open ended tubular members supported on the wall, one for each of the chambers, a rotatable vacuum creating element disposed in each of the tubular members, means for rotating the latter elements to produce a vacuum in the chamber, and a picker tube leading from each of the compartments.

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

WILLIAM F. COOPER.

Witnesses:
W. S. Post,
A. Newman.