G. W. & J. H. JACKSON.

COTTON PICKER.

APPLICATION FILED MAR. 17, 1908.

901,619. Patented Oct. 20, 1908.

2 SHEETS—SHEET 1.

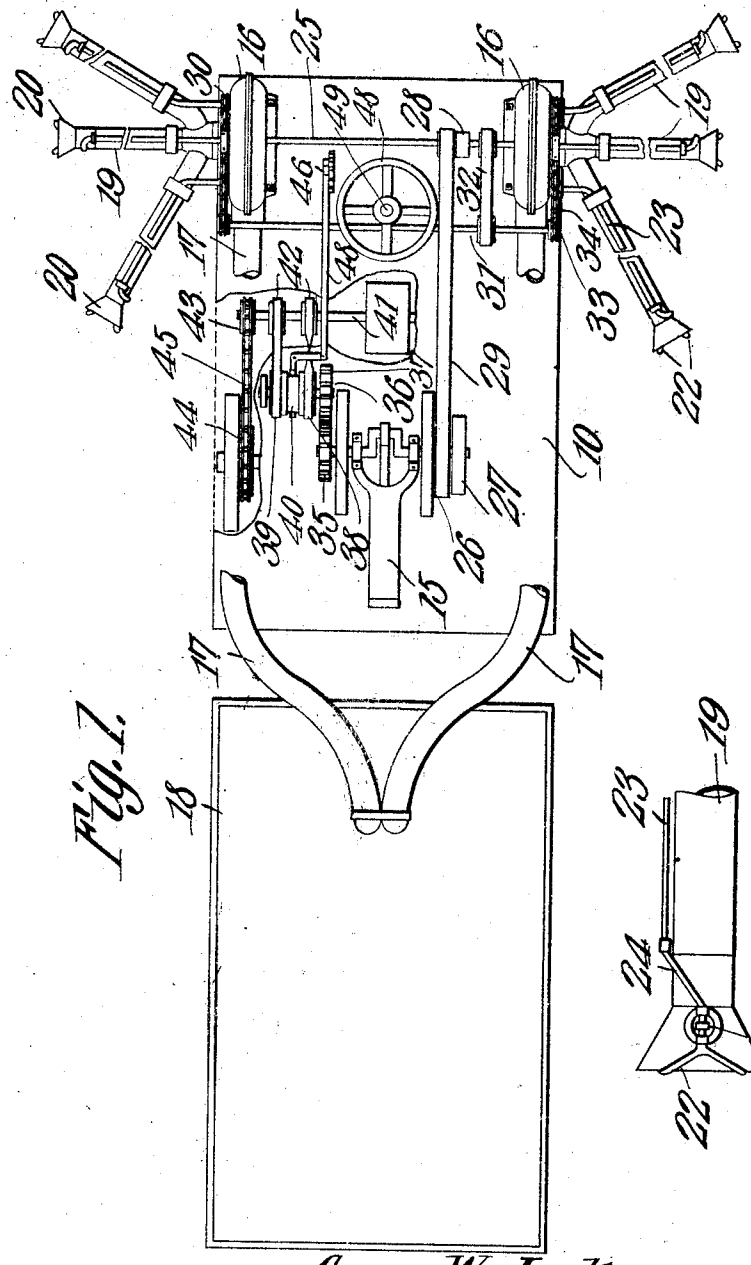


Fig. 1.

Fig. 5.

Witnesses

E. F. Clement

F. Wilkins

George W. Jackson and John H. Jackson Inventors

By C. A. Snow & Co

Attorneys

G. W. & J. H. JACKSON.

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2 SHEETS—SHEET 2.

Fig. 4.

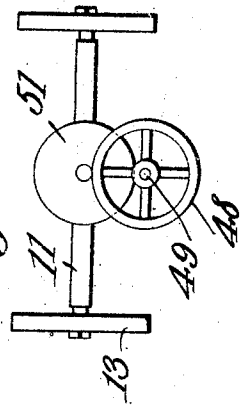


Fig. 2.

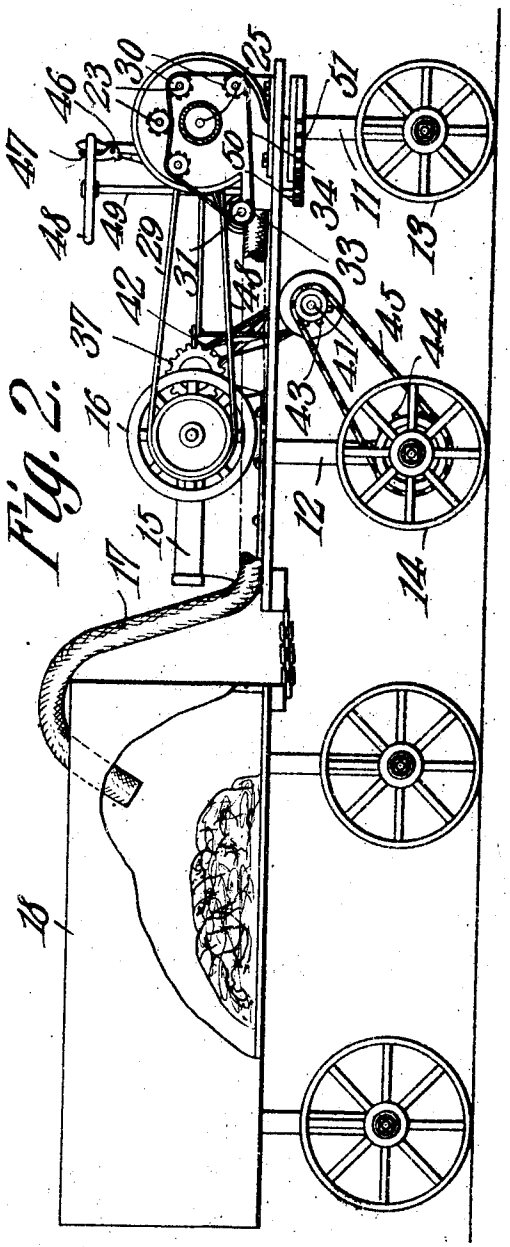
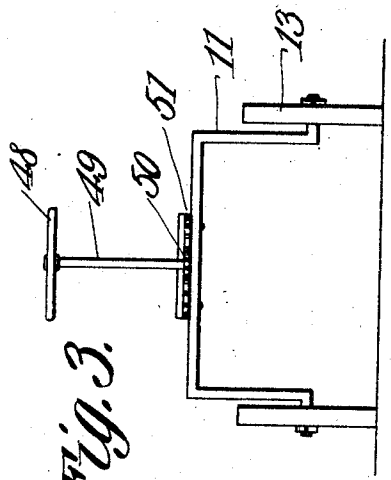


Fig. 3.



Witnesses

E. F. Clement

F. Whiting

Inventors

George W. Jackson AND John H. Jackson

By Cachow & Co

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE W. JACKSON AND JOHN H. JACKSON, OF CAIRO, ILLINOIS.

COTTON-PICKER.

No. 901,619. Specification of Letters Patent. Patented Oct. 20, 1908.

Application filed March 17, 1908. Serial No. 421,726.

To all whom it may concern:

Be it known that we, GEORGE W. JACKSON and JOHN H. JACKSON, citizens of the United States, residing at Cairo, in the county of Alexander, State of Illinois, have invented a new and useful Cotton-Picker, of which the following is a specification.

This invention relates to cotton pickers, and more especially to that class of cotton pickers in which the cotton is removed from the boll and deposited in a suitable receptacle by pneumatic means.

The object of the invention is to provide an improved form of such picker in which the suction will be by direct draft.

A further object of the invention is to provide an unobstructed suction tube so that the cotton may pass readily therethrough.

Another object of the invention is to provide this tube with an improved device to break open the cotton bolls and permit the cotton to be readily drawn therefrom, such improved device being driven by means exterior of the suction tube.

A still further object of the invention is to provide means by which the engine used to produce the necessary suction may be used, also, for the purpose of driving the traction wheels on which the invention is mounted.

The invention consists in certain novel features of construction and combination of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying drawings:—Figure 1 is a plan view of the device showing a receiving cart at the rear thereof. Fig. 2 is a side elevation thereof with the suction device removed. Fig. 3 is a partial front elevation showing the starting gear. Fig. 4 is a plan view of the same. Fig. 5 is a detail of the boll breaker.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The invention embodies a platform 10 which is mounted on upwardly bent U shaped axles 11 and 12, the axle 11 being arranged to carry steering wheels 13 and the axle 12 being arranged to support traction wheels 14. These axles are bent in this particular shape in order to enable the device to pass over a row of cotton without injuring the plants.

Mounted on the platform 10 is an engine 15 preferably an internal combustion engine, although it is obvious that there may be used a steam engine by providing suitable steam generating means.

The fans 16, preferably two in number, are mounted at the front and are also held upon the platform 10. The fan here shown is of the type having a central intake or suction, and a peripheral delivery, as indicated at 17. The delivery pipe 17 is preferably made of some flexible material and extends backward to the rear end of the device, so that the end of said pipe may be placed in any suitable cart, as indicated at 18. Connected to intake of the fan are provided suction tubes 19 having flared mouth portions, as indicated at 20, the body of the tube being unobstructed throughout its entire length.

Mounted within the mouth portion of the tube is a boll breaker 21 provided with fingers 22 and flexible shafts 23 are held on said suction tubes, being connected with the boll breaker by universal joints, as indicated at 24. The fans 16 are preferably arranged to run from the same shaft, this shaft being indicated by the numeral 25. The engine 15 is provided with a fast pulley 26 and a loose pulley 27.

Upon the shaft 25 is mounted a pulley 28 and a belt 29 so arranged to be held on either the pulley 26 or 27 and the pulley 28 to actuate said shaft. Preferably mounted on the fan casing are sprocket wheels 30 connected to the shafts 23. A shaft 31 is arranged on the body to be driven by a belt 32 and is provided with sprockets 33. A chain 34 passing around the sprockets 33 and 30 serves to actuate the flexible shafts 23.

Upon the crank shaft of the engine is mounted a gear 35, and a clutch shaft 36 provided with a gear 37 arranged to mesh with the gear 35 is mounted on the body of the device, and on this clutch shaft are pulleys 38 and 39, loosely carried thereon and arranged to be actuated by the clutch 40 which may be of any desired form. A shaft 41 is preferably mounted under the body and is connected to the shaft 36 by straight and cross belts, as indicated at 42. The sprocket 43 is mounted on the shaft 41 and a sprocket 44 on the wheel 14, a chain 45 serving to connect the said sprockets and to actuate the traction wheels.

In order to operate the clutch, there is provided a latch lever 46 mounted to coact

with a quadrant 47 and suitable rods and levers 48 connecting the same to the clutch.

The device is steered by means shown in Figs. 3 and 4, the same comprising a steering wheel 48 on a shaft 49, on the lower end of which is mounted a pinion 50 meshing with a gear 51 mounted on the axle 11. This is the preferred form of my steering gear, but it is obvious that any other form may be used that may be desired.

The operation of the machine is as follows:—The machine being alongside or between rows of cotton is driven forward by the gearing and sprockets connecting the traction wheels to the engine. At the same time the fans 16 are operated and the boll breakers 21 set into motion through the belt 29 and their connections. An attendant takes one of the suction tubes in his hand as the machine moves along, and places the mouth near or over the cotton boll. Suction by the fan causes the ripe cotton to be drawn into the suction nozzle and through the suction pipe to the fan. Thence it is discharged through the discharge pipe into a trail wagon or other receptacle which may be provided. In case the boll does not open readily, the nozzle is held quite close and the boll breaker members press the boll. The boll breaker is arranged to have very rapid rotary motion, and thus strike a sharp blow on the boll. There is herein shown and described boll breakers operated by flexible shafting, but it is obvious that it would be possible to operate the same through rigid shafting provided with universal joints, or such other means as might be desired. Further there are shown three suction tubes attached to each fan, but there may be used more or less than this number, as is seen fit.

What is claimed is:—

1. In a cotton picker, a suction tube, a boll breaker carried at the end thereof, and means to actuate said boll breaker.

2. In a cotton picker, a suction tube comprising an unobstructed body portion, a boll breaker carried by the end thereof, and means exterior of said tube to actuate said boll breaker.

3. In a cotton picker, a suction tube, a flared mouth formed thereon, a boll breaker held in said mouth, and means exterior of said tube to actuate said boll breaker.

4. In a cotton picker, a suction tube, a boll breaker carried at the end thereof, a flexible shaft carried exterior of said tube, means to actuate said shaft, and means connected to said shaft and to the boll breaker.

5. In a cotton picker, a suction tube, a flared mouth formed thereon, a boll breaker held in said mouth, a flexible shaft carried exterior of said tube, and mounted thereon, means to actuate said shaft, and means to connect said shaft to the boll breaker.

6. In a cotton picker, a suction fan, a suction tube connected directly therewith, a boll breaker carried by the end thereof, and means exterior of said tube to actuate said boll breaker.

7. In a cotton picker, a suction fan, a suction tube connected directly therewith provided with a flared mouth, a boll breaker held in said mouth, and means exterior of said tube to actuate said boll breaker.

8. In a cotton picker, a suction fan, a suction tube directly connected therewith, a flared mouth formed on said suction tube, a boll breaker carried therein, a flexible shaft carried exterior of said tube and mounted thereon, means to actuate said shaft, and means to connect said shaft to the boll breaker.

9. In a cotton picker, a body, traction wheels supporting said body, a suction fan mounted on the body, a suction tube connected therewith, a boll breaker carried at the end of said tube, means connected to said engine to drive said fan and boll breaker, and means connected to the engine to actuate said traction wheels.

10. In a cotton picker, a body, traction wheels supporting one end of said body, steering wheels supporting the opposite end thereof, means to vary the angular relation of said steering wheels and traction wheels, a suction fan mounted on the body, a suction tube directly connected therewith, a boll breaker carried at the end of said tube, means connected to said engine to drive said fan and boll breaker, and means connected to the engine to actuate the traction means.

11. In a cotton picker, a suction tube, a boll breaker, mounted axially thereof, comprising a plurality of fingers disposed at an angle to the axis of said tube.

12. In a cotton picker, a suction tube provided with a flared mouth, bearings formed therein, a boll breaker comprising a shaft arranged to rotate in said bearings, and a plurality of angled fingers extending from said shaft.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

GEORGE W. JACKSON.
JOHN H. JACKSON.

Witnesses:
H. H. HANCOCK,
GUY BAIN.