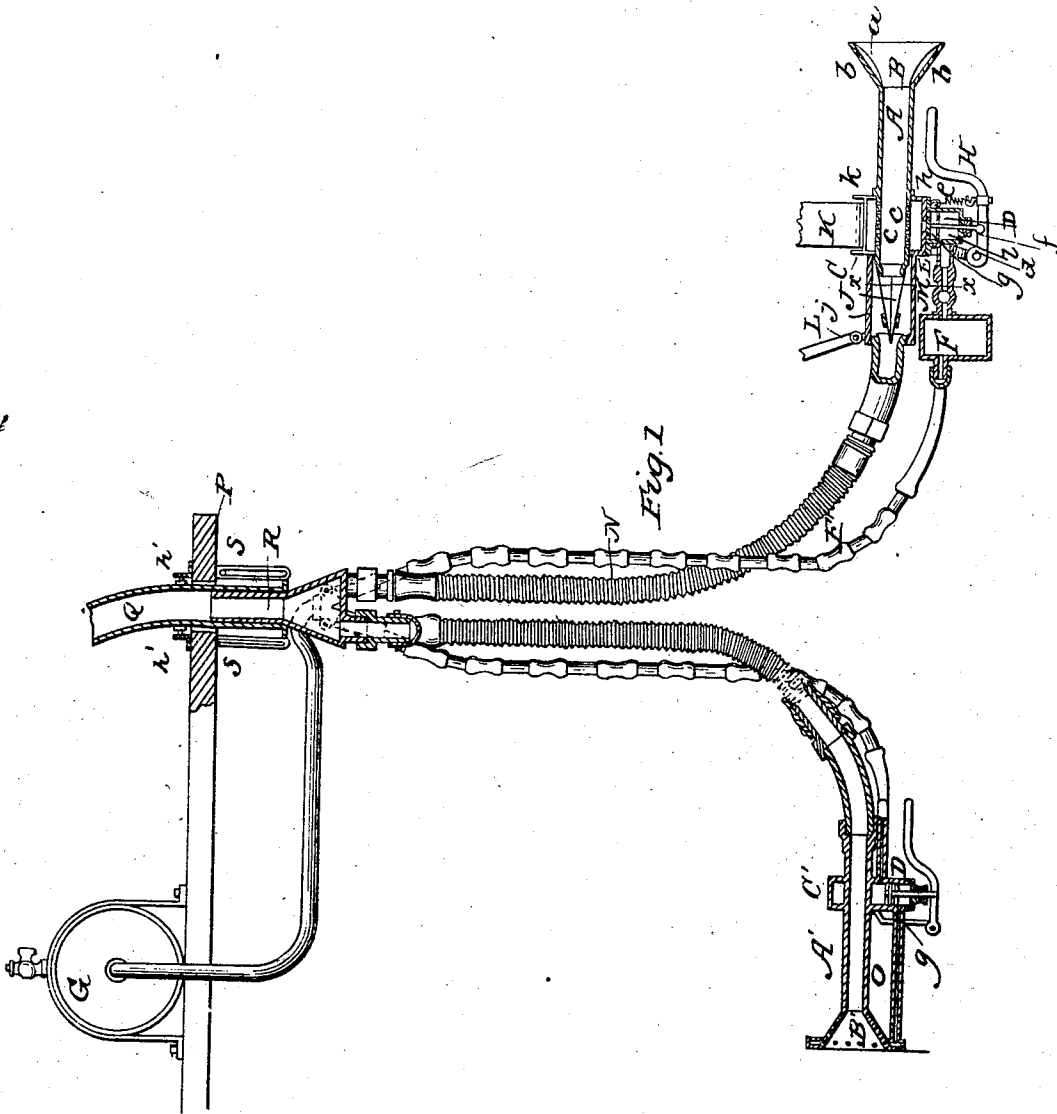
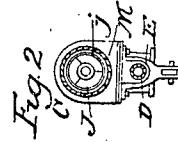


Cotton Picker.

No. 28,980.

Patented July 3, 1860.



WITNESSES

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JOHN GRIFFIN, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN COTTON-PICKERS.

Specification forming part of Letters Patent No. 28,980, dated July 3, 1860.

To all whom it may concern:

Be it known that I, JOHN GRIFFIN, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and Improved Device for Picking or Harvesting Cotton; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a sectional view of my invention; Fig. 2, a section of the same, taken in the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain improvements in a machine for picking or harvesting cotton, for which Letters Patent were granted to me bearing date March 8, 1859, and November 22, 1859.

The object of the within-described invention and improvement is to save or economize in power and render the device generally more practical than either of the devices previously patented.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A is a picking-tube, and B a cup at its end. This cup may be of conical or other suitable form, and provided with a lining of india-rubber or other suitable flexible material, *a*. The cup B is perforated, as shown at *b*, the perforations extending circumferentially around the cup.

C is an air-tight chamber, into which the tube A passes, and the tube A, within the chamber C, is perforated, as shown at *c*.

D is a valve-chest, which is attached to and communicates with the chamber C, and E is a tube which communicates with the valve-chest D and a cylinder, F, the latter communicating by means of an elastic tube, F', with an exhausted receiver, G, which is placed on the carriage of a suitable traction-engine.

H is a lever, which has its fulcrum at *d*, and a spring, *e*, attached to it. This lever H has also attached to it the stem *f* of a valve, *g*, said valve working between its seat *h* and a stop, *i*, in the chest D. The tube E is provided with a stop-cock, I.

At the inner end of the tube A there is fitted a valve, J, which is in the form of a hol-

low cone, and is composed of three longitudinal and equal parts encompassed by an elastic band, *j*, which has a tendency to keep it in a closed state.

The picking-tube A is secured to the wrist or right arm of the operator by an elastic band, K, which passes around a rod, *k*, attached to tube A, as shown clearly in Fig. 1.

L is an eye attached to a tube, M, into which the back part of the tube A passes. This eye has an elastic band attached, which passes over the shoulders of the operator, and may be arranged in any proper way to support the device, said band being attached to an apparatus like the one described, and which is held in the left hand.

The operation is as follows: The air in G is exhausted by any means—such an one, for instance, as is described in my previous Letters Patent. The exhausting of the air from G produces a vacuum in the cylinder F and valve-chest D, and the external air presses the valve *g* downward toward the stop *i*, and while the valve is moving from its seat *h* to *i* the air rushes into the tube A, through the perforations *c*, into the valve-chest D, and thence through tube E into cylinder F, and through the flexible tube F' into G. If, at the commencement of this operation, the cup B had been placed over a cotton-boll, the lining *a* would, under the external pressure of the air, have closed around the cotton, and if the exhaustion in G were sufficient the cotton-boll would have been detached and would have passed directly through tube A and valve J, and into its receptacle through the flexible tube N. While the cup B is being passed to a third boll the lever H is pressed by the finger of the operator, so as to force the valve *g* against its seat *h*, the spring *e* assisting in the operation. By this means all suction in tube A is stopped when not required, the operator opening valve *g* as soon as the cup B has been adjusted over the third boll.

The cylinder F adds greatly to the efficiency of the device. It admits of a strong suction in tube A, and the employment or use of a small tube, F'.

This device would be of great advantage in picking cotton partly shaken out from its bolls, when the cotton cannot fill the cup B sufficiently to form a cut off between the atmos-

phere and the exhaust. The arrangement would also give greater momentum to the cotton when so loose in the bolls as to require less power to dislodge it than would be required to force it into its receptacle; but as this force might be great enough to detach the boll from the stalk, the stop-cock I is employed to regulate the same.

In certain cases, where preferable, the chamber C may be supplied with condensed air and a pipe, O, made to communicate with the valve-chest D and the front part of the cup B. (See the part of Fig. 1 in which the above letters have primes attached.) The picking-tube A' in this arrangement is not perforated, as shown at c in Fig. 1. The operation of the valve g' will be readily seen. By opening the air rushes through pipe O, and into the front part of cup B', driving the cotton through tube A'.

It is important that the tubes N be attached to the carriage properly, and this is effected as follows: P is the rear end of a carriage, and Q is a metallic tube curved slightly at its upper part and hung on trunnions h' h' in the carriage, the tube being allowed to swing freely on the trunnions. Within this tube Q a hollow stem, R, is fitted and allowed to slide freely up and down, and is retained in the tube by india-rubber springs S S, which permit of the movement above mentioned. The lower end of the stem R below the tube Q is of conical form, and to it the tube or tubes N are attached. The tube or tubes F' are of sufficient length to admit of their following the tube or tubes N. The upper part of tube Q communicates with the cotton-receptacle. By

this arrangement a free movement of the tubes N is permitted, and the manipulation of the picker-tubes A greatly facilitated.

The tubes N are constructed of a spiral wire; or they may be constructed in any other way, so long as flexible and open tubes are obtained. In consequence of having the tubes open the dust is allowed to escape from the cotton while the latter is passing into the receiver through the tubes N.

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

1. The arrangement of the cylinder F, chamber C, valve-chest D, and exhaust-receiver G, in connection with the picker-tube A and cup B, substantially as and for the purpose set forth.

2. The arrangement of the picker-tube A' with the condensed-air chamber C', valve-chest D', and pipe O, communicating with the cup B' and valve-chest, as and for the purpose specified.

3. Attaching the cotton-conducting tube or tubes N to the carriage by means of the tube Q, suspended or hung on trunnions h' h', and the hollow stem R, fitted within the tube Q and secured therein by the springs S S, substantially as described.

4. The combination of the flexible and open tubes N, for the purpose specified.

JOHN GRIFFIN.

Witnesses:

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