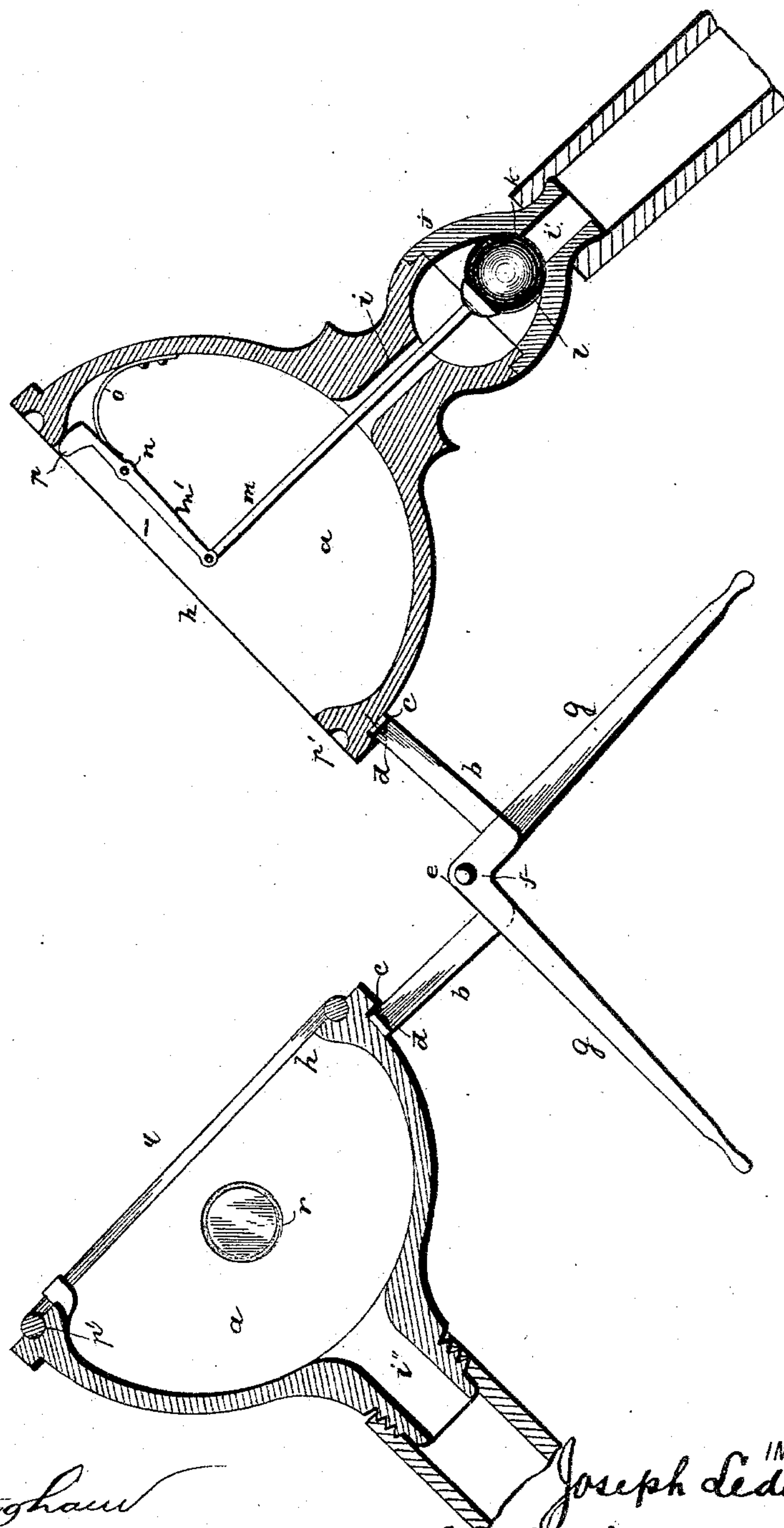


(No Model.)

J. LEDWARD.  
COTTON HARVESTER.

No. 321,440.

Patented July 7, 1885.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOSEPH LEDWARD, OF WESTERLY, RHODE ISLAND.

## COTTON-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 321,440, dated July 7, 1885.

Application filed July 14, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH LEDWARD, of Westerly, in the county of Washington and State of Rhode Island, have invented certain  
5 new and useful Improvements in Cotton-Harvesters; 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  
10 the same.

My invention relates to an improvement in cotton-harvesters, the object of the same being to provide a harvester by means of which the cotton may be effectively and expeditiously  
15 removed from the bolls, and simultaneously therewith means for conveying or directing the cotton into a suitable receptacle conveniently located and adapted to receive them; and with these ends in view my invention  
20 consists in two funnel-shaped cups pivoted together by means of suitable arms; and, further, in providing one of the cups with a tube by means of which steam or air is conveyed therein from a suitable heater, boiler, or compressed-  
25 air engine, and in further providing the last-mentioned cup with a valve connecting with the said tube, and adapted to be actuated by contact with the opposite cup, thereby admitting the steam while in such contact, and shut-  
30 ting off the flow thereof when such contact is removed.

My invention further consists in certain features of construction and combinations of parts, as will be hereinafter fully described,  
35 and pointed out in the claims.

The accompanying drawing is a view in side elevation, partly in section, of my invention.

*a* represents funnel-shaped cups, the interior of which may be octagonal, hexagonal, or circular in cross-section, as desired. The cups  
40 are rigidly secured to the bent arms *b* by means of the ends *c*, which clasp the cups near their mouths and are secured thereto by means of the bolts or rivets *d*. The arms *b* are pivoted together at their elbows *e*, in the manner of shears, by means of the pivot *f*. The free  
45 ends *g* of said arms are provided with suitable handles, by means of which the arms may be operated and the mouths *h* of the cups brought into contact with each other and re-  
50 moved from such contact, as desired.

The bottom of one of the cups is provided

with a suitable opening, *i*, which is provided with a short pipe, *j*, to the outer end of which is suitably connected a flexible tube, one  
55 end of which is attached to a steam-boiler or air-compressing engine of any construction generally used in connection with machines of this character. Said pipe *j* is provided with a valve-seat, *k*, adapted to receive  
60 the ball-valve *l*, which is held to the seat by means of the rod *m* and lever *m'*, which last is pivoted near the mouth of the cup by means of the pivot *n*. A suitable spring, *o*, secured to the cup presses against the inner side of the  
65 outer end of the lever and tends to retain the valve in a closed position.

The lever is further provided with an outwardly-projecting knob, *p*, adapted, when the cups are brought together, to come in contact  
70 with a suitable projection on the opposite cup, thereby forcing the outer end of the lever inward and the inner end outward, thereby permitting the valve to open and admit the steam or air into the cups, by the force of which the  
75 cotton is removed from the bolls.

The other cup is provided at the opening *i'* with a flexible hose or other tube of any desired length, whereby the cotton is conveyed,  
80 when removed from the bolls, by action of the air or steam, into any desired receptacle.

The cups at their outer edges are provided with the semicircular grooves *p'*, one of which is provided with the packing *q*, adapted, when  
85 the cups are closed, to fit the corresponding groove on the other cup. The packing *q* should be made of cloth, rubber, or any other yielding material, so that when the stem of the plant is between the cups an air-tight joint  
90 will be formed between the stem and the packing, thereby effectively preventing the escape of air or steam at this point. The cups through which the escape of the cotton is effected are provided with one or more observation-holes,  
95 *r*, which are supplied with glass, by means of which the amount of cotton in the cups can be readily ascertained.

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

1. A cotton-harvester consisting of two cups adapted to inclose a cotton-boll, and each provided with an aperture, one aperture adapted to the passage of a steam or air blast and the



other to the passage of the air or steam with the cotton, substantially as set forth.

2. In a cotton-harvester, the combination, with two cups adapted to inclose a cotton-boll, each cup having an aperture for the passage of steam or air, of a spring-actuated valve located in one of said cups, and mechanism whereby the valve is operated by the closing of the cups, substantially as set forth.

3. In a cotton-harvester, the combination, with two cups adapted to inclose a cotton-boll, of apertures formed in said cups for the passage of a steam or air blast, and a valve located in one of the cups, and means for operating the same, whereby the steam or air blast will be admitted, substantially as set forth.

4. In a cotton-harvester, the combination, with two cups adapted to inclose a cotton-boll, and each provided with an aperture, of a hose or tubing secured to one of the apertures for the conveyance of steam or air to the cups, substantially as set forth.

5. In a cotton-harvester, the combination, with two cups, each provided with an aperture, of a flexible hose or tubing secured to one of said apertures for the conveyance of a steam or air blast, a valve for cutting off the blast, and mechanism connected with the valve, whereby the contact of the cups opens the valve, substantially as set forth.

6. In a cotton-harvester, the combination, with two funnel-shaped cups, the one adapted

to the passage of an air or steam blast and the other to the passage of the blast and cotton, of operating-handles secured to the edges of the cups and pivoted together like shears, whereby the cups may be opened and closed, and an automatically-operated valve for cutting off the flow of the blast, substantially as set forth.

7. In a cotton-harvester, the combination, with two cups adapted to inclose a cotton-boll, and provided at their inner ends with circular grooves and packing, of a hose or tubing secured to the small end of one of the cups for the admission of a steam or air blast, and a valve for arresting the action of the blast, and mechanism connected with the valve, whereby the contact of the cup opens the valve, substantially as set forth.

8. In a cotton-harvester, the combination, with two funnel-shaped cups adapted to inclose a cotton-boll, the escape-cup being provided with observation-holes, of operating-handles secured to the edges of the cups and pivoted together, whereby the cups are opened and closed, and an automatically-operated valve for arresting the flow of the blast, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

Witnesses: JOSEPH LEDWARD.  
EUGENE B. PENDLETON,  
EVERETT BARNES.