

(No Model.)

J. C. POTTER.

MACHINERY FOR OPENING AND CLEANING COTTON, &c.
No. 345,255.

Patented July 6, 1886.

Fig. 1.

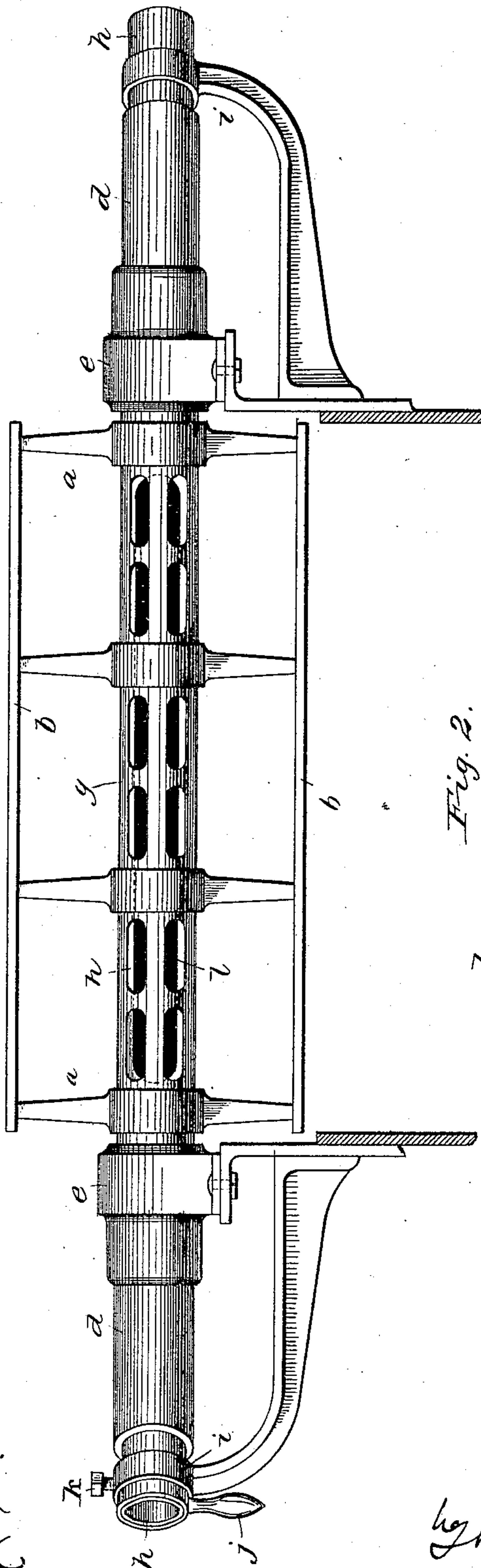
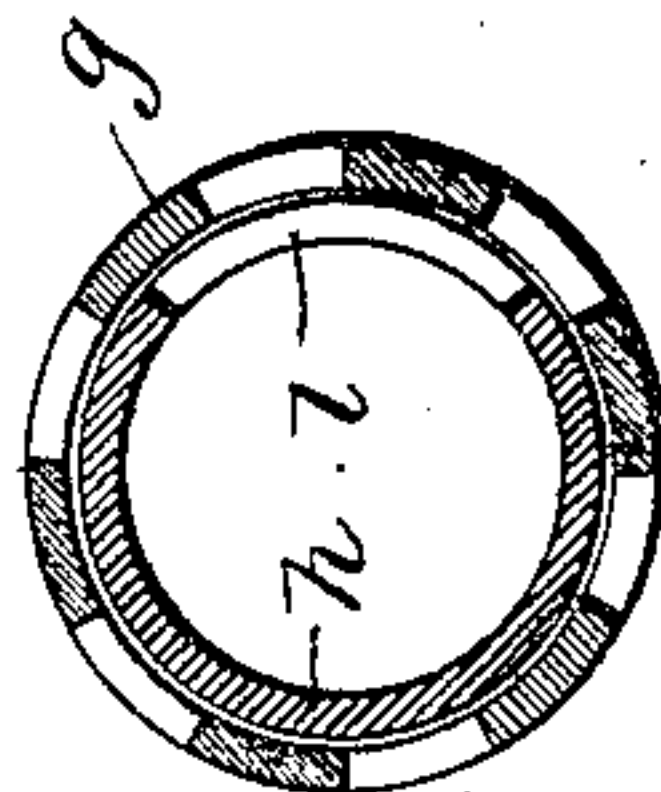


Fig. 2.



Fig. 3.



Witnesses:

H. Low
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UNITED STATES PATENT OFFICE.

JAMES C. POTTER, OF LOWELL, MASSACHUSETTS.

MACHINERY FOR OPENING AND CLEANING COTTON, &c.

SPECIFICATION forming part of Letters Patent No. 345,255, dated July 6, 1886.

Application filed March 16, 1886. Serial No. 195,446. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. POTTER, of Lowell, in the State of Massachusetts, have invented certain new and useful Improve-
5 ments in Machinery for Opening and Cleaning Cotton and other Fibers, of which the following is a specification.

My invention has reference to means for
10 preventing the material operated on by the beater or opening-cylinder from sticking to or gathering upon the same, and for assisting the proper passage of the material through the machine; and it is an improvement upon the mechanism described and claimed in Let-
15 ters Patent No. 321,851, issued to my assignee, Atherton Machine Company, on July 7, 1885. In said patented machine the beater had a hollow perforated central shell and hollow supporting-trunnions, and through the same
20 passed a slotted air-supply pipe supported in end bearings in which it could be rotated or turned, so as to bring its air-discharge slot toward or away from the feed end of the machine more or less, as desired, with a view to
25 modify and control the air supply and discharge. Under my patented arrangement there is a considerable annular space separating the inside air-pipe from the outside per-
30 forated central shell. This arrangement, in practice, has been found open to objection, in that the air-supply is not under absolute control, as it should be in order to produce the best results. The air escaping from the slot-
35 ted pipe is free to fill the annular space between the tube and outer shell, and is liable to be delivered from the latter in any and every direction, thus defeating, in a measure, the object in view, which is to compel the delivery of the air on the same side of the beater-
40 shell as that on which the slot in the pipe is situated. In order to correct this trouble, I so form or proportion the pipe relatively to the shell that it fills the inside of the said shell as nearly as may be without running the risk
45 of frictional contact between the two, and it is in this feature that my improvement consists.

In the drawings accompanying this specification, Figure 1 is an elevation of so much of a cotton-opener as needed for the purpose of
50 illustrating my improvement. Fig. 2 is a like

view of the slotted air-pipe. Fig. 3 is a cross-section of the shell and tube contained therein.

The beater represented in the drawings pertains to a machine of the same general type as that shown and described in Letters Patent
55 No. 321,851, hereinbefore referred to, said beater having heads *a*, between which extend rods *b*, to receive whippers, which, however, are not here illustrated, since they are unnecessary for the purposes of this specification. 60
The hollow hubs or trunnions *d* of the beater are supported in bearings *e* on the frame of the machine, (part of the frame being represented in section.) Between the heads or ends
65 of the beater is the central perforated hollow shell, *g*, which is of the same internal diameter as the hollow trunnions or hubs *d*, there being a continuous opening or passage through the trunnions and the shell—indeed, the trunnions
70 may be cast in one with the shell, if desired; or, in other words, the two may consist of a single tube whose ends are supported in bearings, and whose central portion, or portion
75 inclosed between the heads *a*, is perforated for the delivery of air. The air-supply pipe *h* passes centrally through the trunnions *d* and perforated shell *g*, and is supported at the ends
80 by bracket-bearings *i*. The handle for adjusting the pipe is shown at *j*. *k* is the set-screw for fastening the pipe in its adjusted position. The pipe is of such size as to fill as
85 nearly as may be the interior of the shell *g*, and has a longitudinal slot, *l*, through which passes the air drawn in through the open end or ends of the pipe. Under this arrangement
90 air passing from the pipe through the slot *l* cannot escape into the body of the shell, so as to discharge indiscriminately and simultaneously at various points around the periphery of the latter; but when once the pipe is ad-
95 justed to bring its slot to the point at which it is desired to effect the discharge of air into the beater the air passing out from the slot will discharge through the perforated shell only at that point. In this way the supply of air may
be modified and controlled and its discharge in any particular direction effected with almost absolute certainty.

What I claim as new and of my own invention is—

The described improvement upon the invention set forth in Letters Patent No. 321,851, the same consisting of the combination, with the beater provided with a hollow perforated
5 cylindrical central shell and hollow trunnions, of the slotted adjustable air-supply pipe extending through said shell and trunnions, and of a size to fill practically the interior of the

shell, as and for the purposes shown and specified. 10

In testimony whereof I have hereunto set my hand this 15th day of March, 1886.

JAMES C. POTTER.

Witnesses:

A. T. ATHERTON,

C. T. ATHERTON.