

J. Gilmore Cotton Cleaning Mach.

N^o 28,361.

Patented May 22, 1860.

Fig. 1.

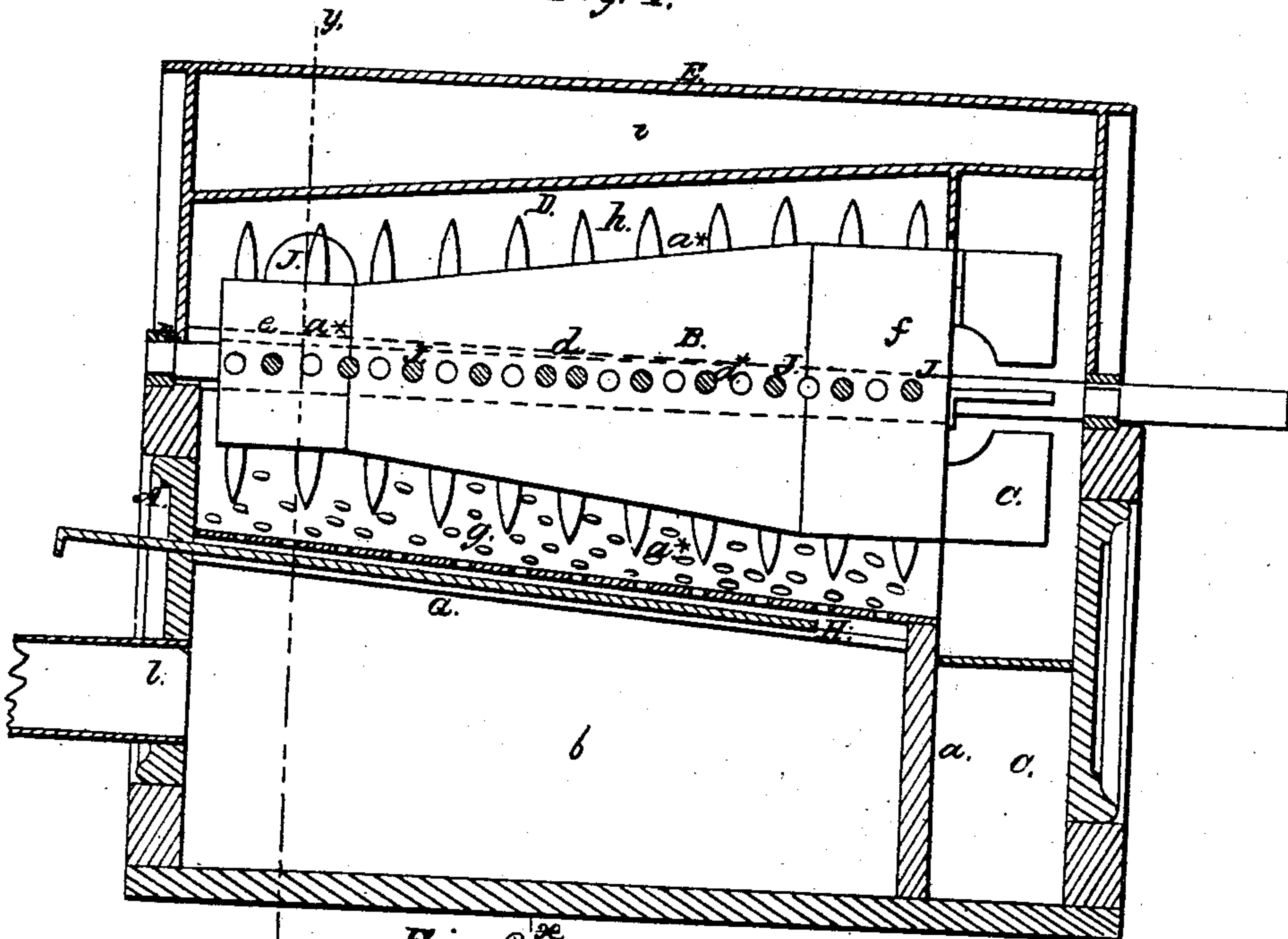
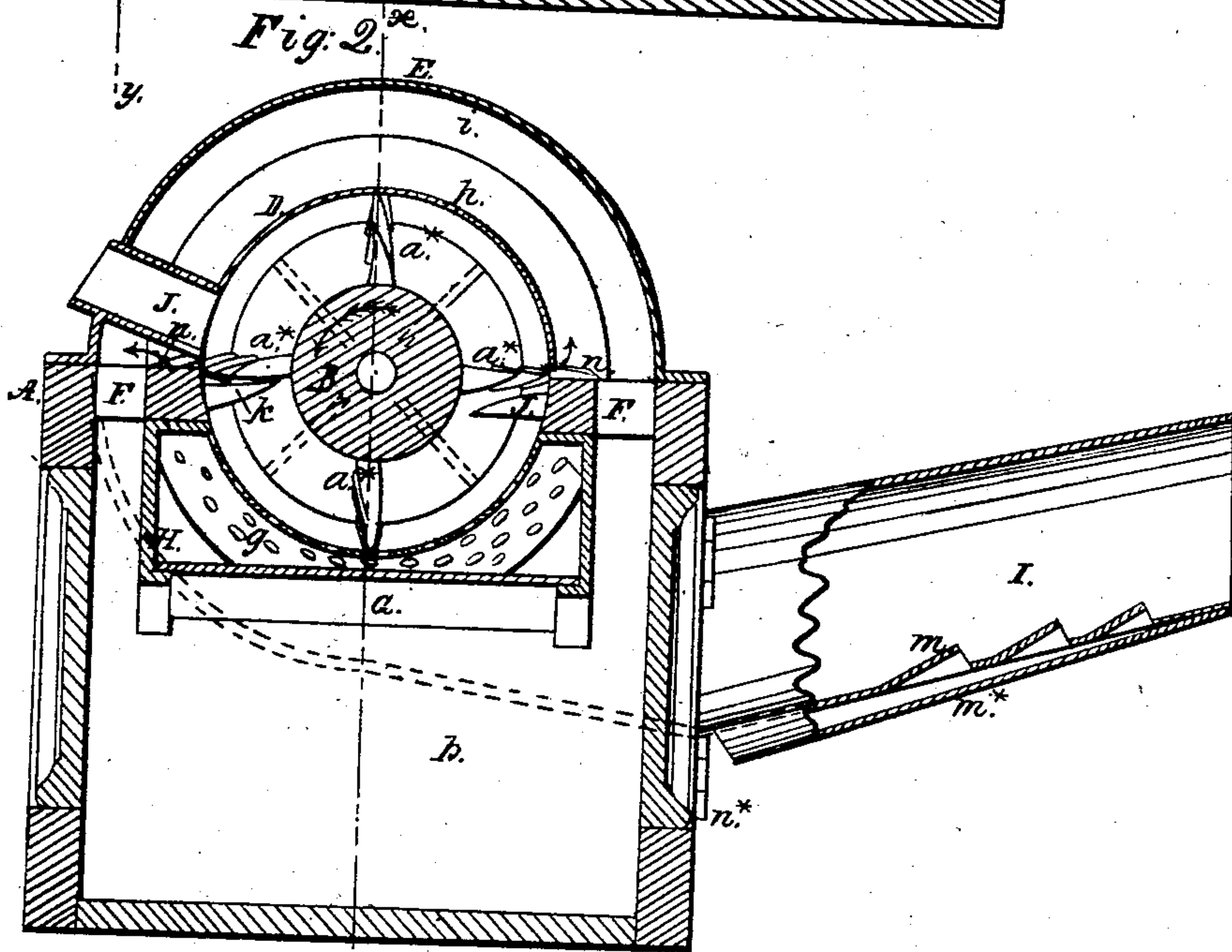


Fig. 2nd.



Witnesses.

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JOHN GILMORE, OF NEW ORLEANS, LOUISIANA.

MACHINE FOR CLEANING COTTON.

Specification of Letters Patent No. 28,361, dated May 22, 1860.

To all whom it may concern:

Be it known that I, JOHN GILMORE, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and
5 Improved Machine for Opening and Cleaning Cotton, Wool, and other Fibrous Substances; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the
10 annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal vertical section of my invention taken in the line x, x , Fig. 2. Fig. 2, is a transverse vertical section of the same, taken in the line y, y ,
15 Fig. 1.

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

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

A, represents a rectangular frame which is inclosed, and divided by a partition a , into two compartments b, c , as shown clearly
25 in Fig. 1. On the upper part of the frame A, a picker B, is placed. This picker is formed of a conical portion d , and two cylindrical portions e, f , the latter being at the ends of the picker and the former at the
30 center, as shown plainly in Fig. 1. The cylindrical portions e, f , of the picker vary in diameter corresponding to the difference between the diameter of the larger and smaller end of the cone as shown clearly in Fig. 1.
35 At the larger end of the picker B, a fan C, is placed. The picker is provided with four longitudinal rows of teeth a^x , which gradually decrease in length from the smaller to the larger end of the picker, as shown clearly
40 in Fig. 1.

The picker is placed within a shell D, which is formed of two longitudinal parts g, h . The shell D, is of conical form corresponding to the form of the picker and the
45 lower part g , is perforated and is fitted within the frame A. The upper part h , of the shell is fitted within a top E, of semi-cylindrical form, a space i , being allowed between the top E, and the part h , of the shell.

At the top of the part g , of the shell D, at each side, there is a bar F, these bars are provided at their inner sides with teeth j, k , the teeth j , of one bar being curved downward and the teeth of the other bar being
50 curved upward as shown in Fig. 2. The teeth j, k , of the bars F, are placed in line

with the centers of the spaces between the teeth a^x , as shown in Fig. 1.

Immediately below the perforated part g , of the shell a slide G, is placed, said slide
60 forming the bottom of a box H. The slide G, is inclined corresponding to the inclination of the lower part g , as shown clearly in Fig. 1. The slide G, is within the compartment b , and this compartment is provided
65 with a door and a spout l .

The compartment c , has an inclined spout I, communicating with it, and the bottom of this spout is slotted as shown at m , and has a slide or chute m^x , below its slotted bot-
70 tom as shown in Fig. 2.

The fan C, is directly over the compartment c , which compartment communicates with the conical shell D, as shown in Fig. 1.

The compartment b , communicates with
75 the space i , between the top E, and the upper part h , of shell D, by means of openings n, n , near the feed end of the shell D.

The operation is as follows: Motion is given the picker B, by any convenient power
80 in the direction indicated by the arrow and the cotton or other material to be opened and cleaned, is fed into the induction pipe J, which is directly opposite the small end of the picker and the longer teeth a^x . The
85 cotton or other substance is opened or loosened up by the action of the long teeth a^x, j, k , and the cotton passes along toward the larger end of the picker, its fiber being drawn apart and the dirt and heavy foreign
90 substances falling on the perforated part g , of the conical shell and passing through said perforations drop on the slide G, which is partially withdrawn and thence into the compartment b . A quantity of the light
95 dirt and dust will pass through the openings n, n , into the space i , and thence settle down into the compartment b , while some will pass along with the cotton, or other sub-
100 stance into the compartment a . When the cotton or other substance reaches the larger end of the picker, it is blown by the fan, up the inclined spout I, and all dust and dirt which might have accompanied the cotton or
105 other substance into the compartment a , will be forced up the spout but a certain distance as it is specifically heavier than the cotton or other substance, and said dust and dirt will pass through the slots or openings
110 m , into the chute m^x , and be discharged at n^x .

The cotton, wool or other substance acted

upon, may be blown by the fan upward through the spout I, a long distance and discharged in a clean loose state. In certain cases where the cotton or other substance to be operated on contains no large impurities, the slide G, may be closed. The impurities and dirt may be taken from compartment b, either through a door, or through the spout l, and the bars F, are fitted loosely on the frame A, so that they may be readily removed at any time. By having the picker B, of cylindrical form at its ends, the cotton or other substance is readily fed into and discharged from the machine, far more so than if it were wholly conical.

If the picker were entirely conical the ingress and egress of the cotton into and from the shell D, would not be so free the cylindrical portions cause an enlarged space at each end of the shell as will be readily seen by referring to Fig. 1. A good or free ingress and egress being given the cotton, the

picker will not be liable to become choked or clogged, and the enlargement at the larger or discharge end of the picker greatly favors a good draft through the shell and also facilitates the passage of the cotton through it.

I am aware that rotary pickers have been constructed and arranged in various ways with fans, and screens, and I do not claim separately either of said parts; but,

I do claim as new and desire to secure by Letters Patent—

1. The arrangement and combination of the box H, and slide G, between the picker B, and the compartment b, as and for the purpose herein shown and described.

2. The combination of the chute m*, with the slotted bottomed spout I, as and for the purpose herein shown and described.

JOHN GILMORE.

Witnesses:

HY. D. MONIER,
JOHN B. JUNEK.