(No Model.)

2 Sheets—Sheet 1.

H. C. PERHAM.

TRUNK FOR COTTON OPENERS.

No. 365,484. Patented June 28, 1887.

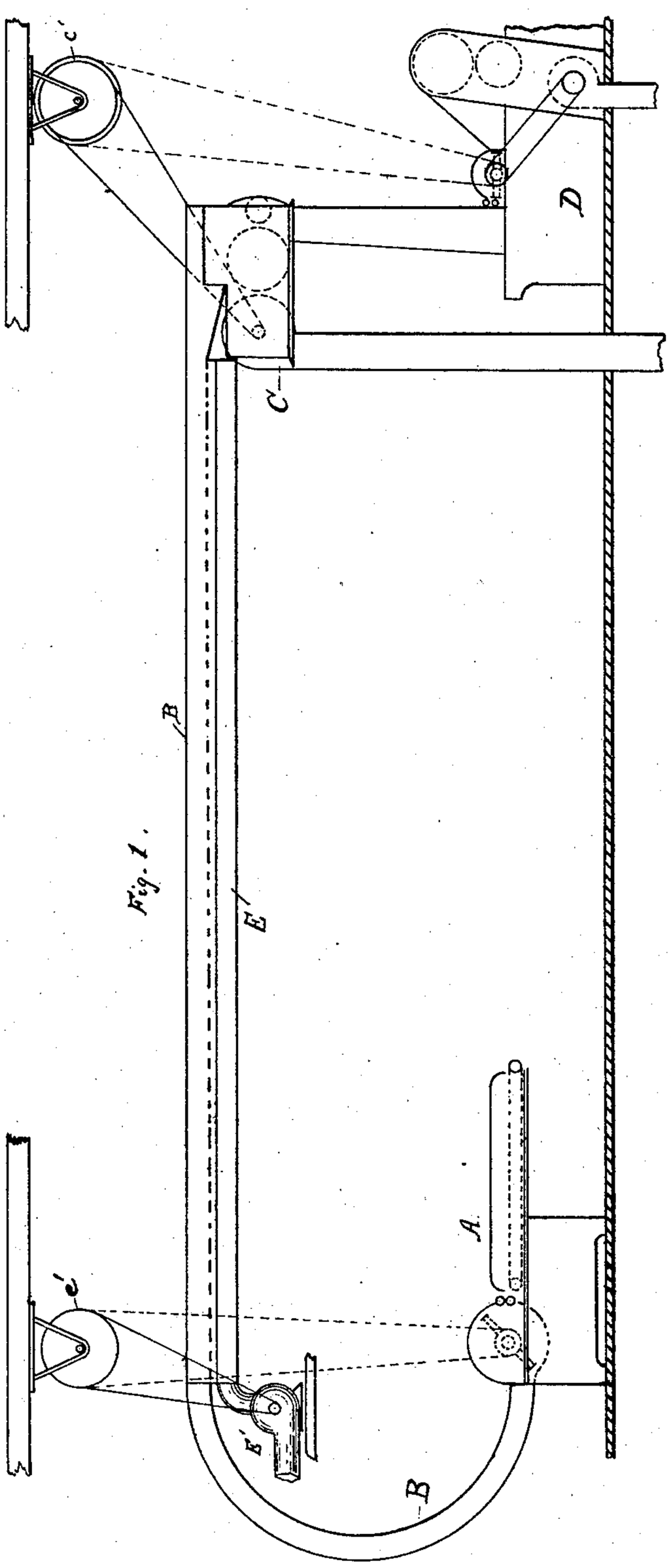

Fig. 1.

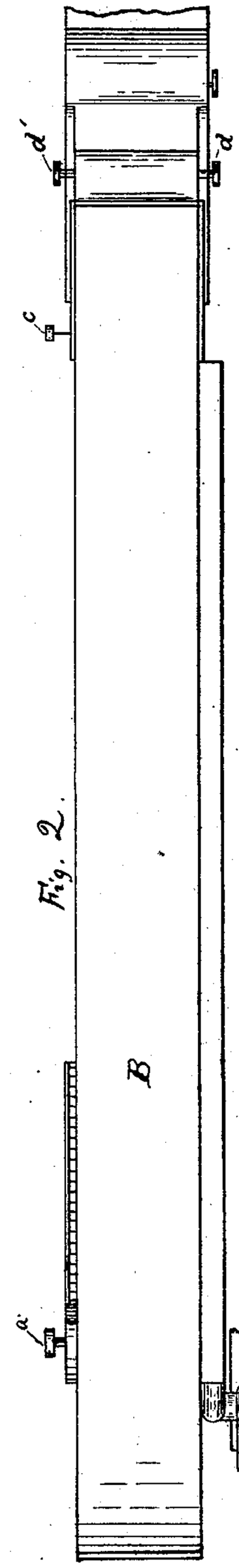

Fig. 2.

Witnesses:
Leonard H. Davis.
Millard F. Davis.

Inventor:
Harris C. Perham

(No Model.)

2 Sheets—Sheet 2.

H. C. PERHAM.

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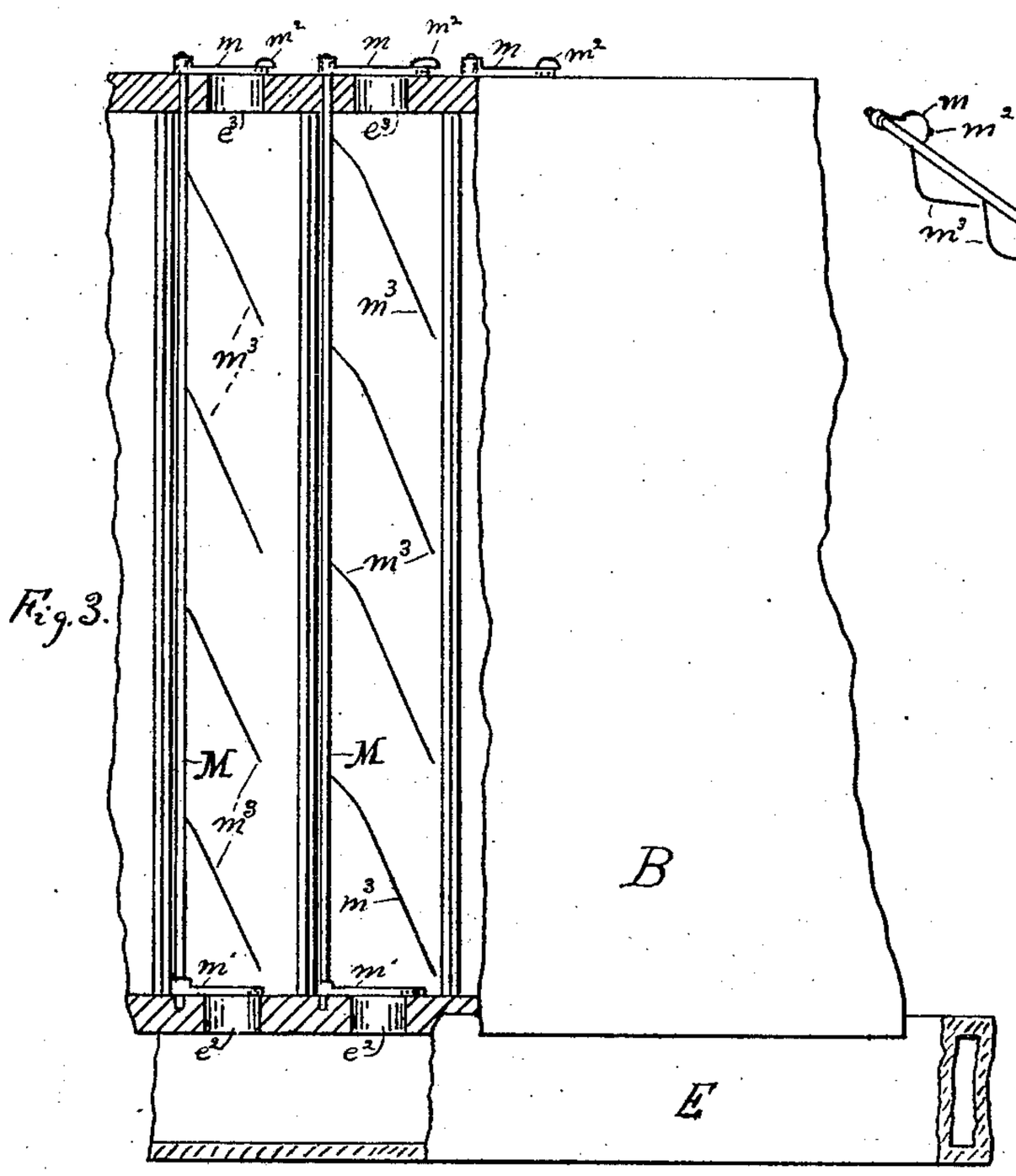


Fig. 3.

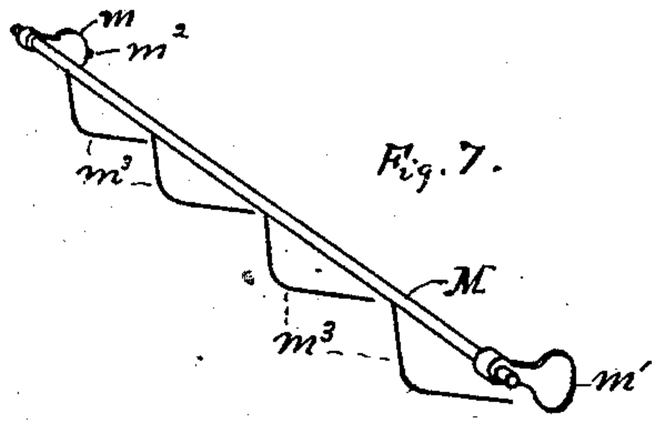


Fig. 7.

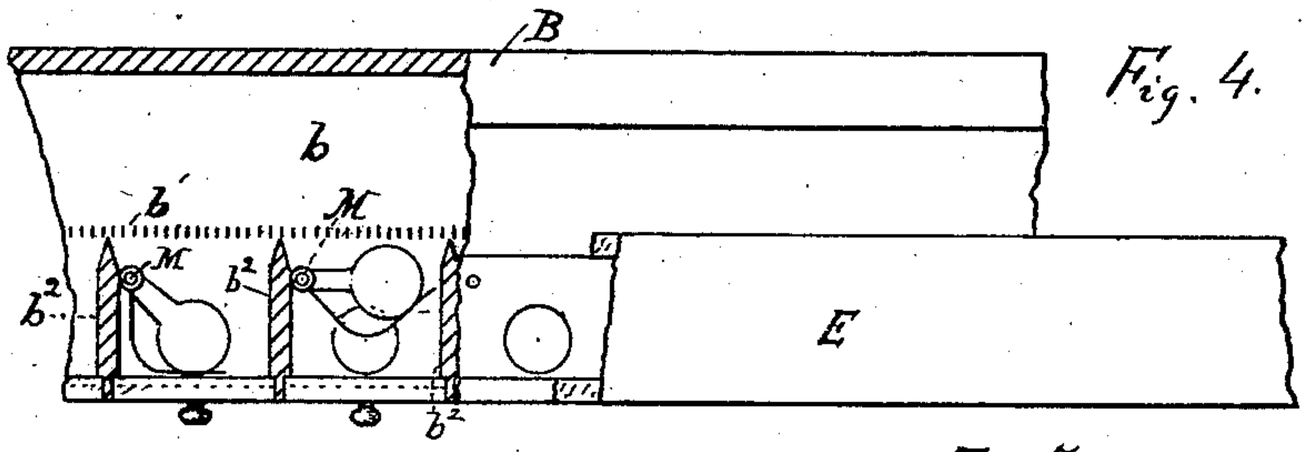


Fig. 4.

Fig. 5.

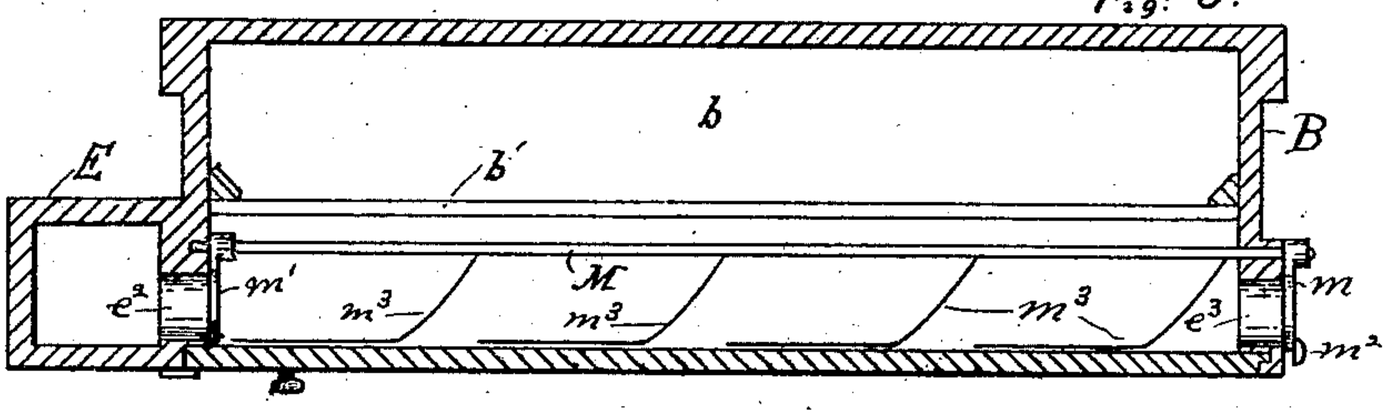
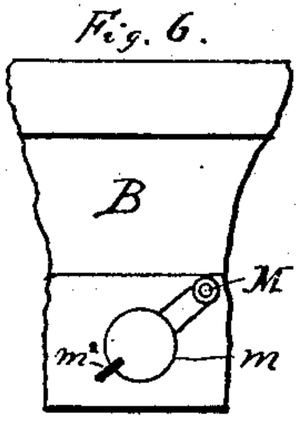


Fig. 6.



Witnesses:
Lenard H. Davis.
Millard F. Davis.

Inventor.
Harvey C. Perham

UNITED STATES PATENT OFFICE.

HAVEN C. PERHAM, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO THE KITSON MACHINE COMPANY.

TRUNK FOR COTTON-OPENERS.

SPECIFICATION forming part of Letters Patent No. 365,484, dated June 28, 1887.

Application filed August 14, 1886. Serial No. 210,950. (No model.)

To all whom it may concern:

Be it known that I, HAVEN C. PERHAM, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Trunks for Cotton-Openers, of which the following is a specification.

My invention relates to machines for opening and cleaning cotton; and it consists in certain new and useful constructions and combinations of the several parts thereof, substantially as hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of a cotton-opener and cotton-trunk with the lapper connected to the delivery end thereof. Fig. 2 is a top plan view of the same. Fig. 3 is a top plan view of a portion of the cotton-trunk, having a part of the cover thereof broken away, and provided with my improvements connected therewith. Fig. 4 is a side elevation of the same, partly in section, to show the working parts. Fig. 5 is a transverse vertical section of the same. Fig. 6 is a side elevation of a portion of the trunk, and my improvement on the opposite side from that shown in Fig. 4. Fig. 7 is a view of the stirring-rod and its attached valves removed from the trunk.

My improvement relates more particularly to that part of cotton-openers commonly known as a "cotton-trunk;" and it consists of certain attachments connected therewith for facilitating the cleaning out of the same when the dust or dirt has been deposited therein from the cotton or other fiber passing through it.

A is the breaker-opener, containing a feed-apron, feed-rolls, and a cotton-beater, operating in the usual manner. The beater is driven by pulley *a*, Fig. 2.

B is the cotton-trunk, into which the opener A delivers the cotton and through which it is drawn or driven by the current of air generated by the beater of the machine A, and drawn by the fan C, connected with the trunk near its opposite end. The fan C is driven by a belt from the pulley *c'*, running upon its pulley *c*.

D is the lapper, which receives the cotton from the trunk B and forms it into a lap in the usual manner. The beater of the lapper is driven by the pulley *d*, and drives the pulley *c'* from its attached pulley *d'*. The lap is formed on cages in the lapper D in the usual manner; but these mechanisms being such as are ordinarily used with the cotton-trunk, to which my improvement alone relates, others operating with the trunk in a similar manner may be employed instead thereof. The cotton-trunk B is formed in the usual manner, having a passage-way, *b*, Figs. 3, 4, 5, through the upper part thereof, and a screen, *b'*, separating the passage-way from a series of compartments beneath the latter, separated from each other transversely of the trunk by partitions b^2. The cotton blown through the passage *b* in the trunk in a comminuted state permits the dirt and heavier impurities to drop downward and pass through the screen *b'* into the compartment between the partitions b^2. It has been customary heretofore to construct these compartments with hinged or swinging bottoms, which could be removed, so as to allow the dirt and impurities to drop out of the compartment when they became sufficiently filled to require cleaning; but this has been found to be a somewhat tedious process.

Alongside of the cotton-trunk, and opposite to the dust-compartments just described, I attach a long tube, E, and to one end of this I connect a suction fan or blower of ordinary construction, E', Figs. 1 and 2. The blower is driven by a belt upon its pulley *e* from the pulley *e'*, which is driven from any suitable pulley or counter-shaft by suitable belting. Each one of the compartments in the cotton-trunk below the screen *b'* and between the partitions b^2 b^2 is connected at one end by a passage-way, e^2, with the tube E, and at the opposite end has a passage-way, e^3, opening into the room through the side of the trunk. Through each of these passage-ways, transversely of the trunk, I mount the shaft M in bearings in the sides of the trunk, as shown in Figs. 3, 4, 5, 6, and 7, one end of the shaft projecting outside of the trunk and carrying a damper, *m*, in suitable position to swing over the passage e^3, and the other end of the shaft M carrying a damper, *m'*, in position to cover the passage e^2, these dampers being so arranged that they close and open the passage-ways e^2 e^3 simultaneously.

Upon each of the dampers *m* outside of the trunk I attach a knob or button, m^2, which is used for turning the damper over or away from the passage e^3 by the operator, which also turns the shaft M and the damper *m'* at the opposite end of the compartment, thereby opening a passage from the room through e^3 and the compartment and passage e^2 and tube E to the suction fan or blower E'.

To the shaft M, I attach fingers m^3, preferably made of wire, in such a position that they lie upon the bottom of the compartment when the dampers are closed, thus allowing the dirt falling through the screen *b'* to rest upon them; but when the dampers are opened by means of the knob m^2 turning the shaft M, the fingers m^3 are moved through the dirt, stirring and breaking it up. Upon the dampers *m m'* being opened, as described, the current of air drawn through the compartment below the screen *b'* sucks the dirt out of it through the passage e^2 into the tube E, and thence through the suction fan E', whence it is delivered into any suitable room or receptacle.

This apparatus for cleaning the compartments of the cotton-trunk is intended to operate while the trunk is out of use and no fiber is passing through its conduit *b*, and by opening the dampers in one or more of the compartments at once a sufficiently strong draft can be concentrated through the compartments to carry out the dirt contained in them and clean them effectually.

Instead of having both dampers *m m'* attached rigidly to shaft M, the damper *m'* may be attached rigidly thereto and the damper *m* revolved loosely thereon, so as to allow the dampers to be opened and closed independently of each other, if desired.

What I claim as new and of my invention is—

1. A cotton-trunk having the passage-way *b* and screen *b'*, one or more compartments beneath the latter and between the partitions b^2 b^2, the latter and the opposite passage-ways, e^2 e^3, leading into each compartment at the opposite ends thereof, and dampers *m m'*, in combination with the tube E and suction-fan E', substantially as described.

2. A cotton-trunk having the passage-way *b* and screen *b'*, one or more compartments beneath the latter and between the partitions b^2 b^2, the latter and the opposite passage-ways, e^2 e^3, leading into each compartment at the opposite ends thereof, the rod M, and dampers *m m'*, attached rigidly to the rod M, and adapted to open and close simultaneously, in combination with the tube E and suction-fan E', substantially as described.

3. A cotton-trunk having the passage-way *b* and screen *b'*, one or more compartments beneath the latter and between the partitions b^2 b^2, the latter and the opposite passage-ways, e^2 e^3, leading into each compartment at the opposite ends thereof, the shaft M, and dampers *m m'*, and the fingers m^3, attached to shaft M, in combination with the tube E and suction-fan E', substantially as described.

HAVEN C. PERHAM.

Witnesses:
DAVID HALL RICE,
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