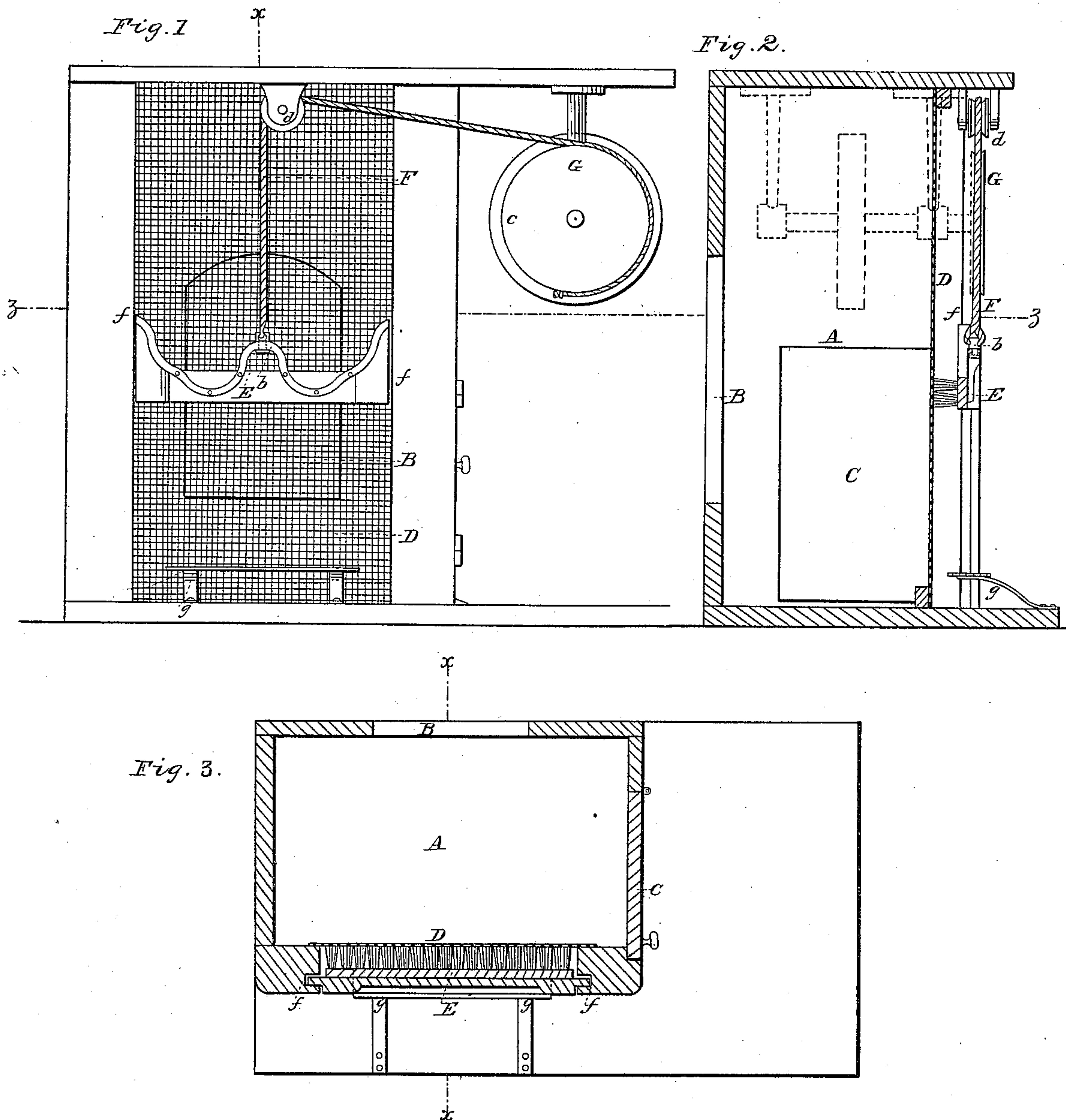


J. Whitehill Cotton Picker

N^o 66,921.

Patented Jul. 16, 1867.



Witnesses.
J. C. Conly
A. Sellers

Inventor.
James Whitehill
Per Brown Conly
Atty

United States Patent Office.

JAMES WHITEHILL, OF NEWBURG, NEW YORK.

Letters Patent No. 66,921, dated July 16, 1867.

IMPROVEMENT IN DUST-ROOM IN CLEANING COTTON.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES WHITEHILL, of Newburg, in the county of Orange, and State of New York, have invented a certain new and useful Improvement on Dust-Room Arrangements for Cotton and Wool-Pickers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a front elevation of my improvement.

Figure 2, a vertical section of the same, at right angles to fig. 1, through the line *x x* in figs. 1 and 3.

Figure 3, a horizontal section thereof through the line *z z* in figs. 1 and 2.

Ordinarily the dust released in picking is carried off by means of a blast or suction through or in the room communicating, say, with a chimney or shaft. Where the current or blast is a strong one—and to secure a perfect action, it is necessary that it should be so—such loose cotton that escapes from the pickers is carried off with the dust, and not unfrequently up the shaft into the outside yard, whereby great loss or waste occurs, or when such escaping cotton is recovered it is so mixed with dust or dirt as to need a special cleaning process to make it available for the purposes of trade. These objections my improvement removes, and the nature of my invention consists, first, in a novel combination of a screen arranged, say, across one end of the dust-room, and reciprocating-brush, having a sudden and rapid clearing stroke, which serves not only to prevent the escape of cotton, but to detach it from the screen and keep the meshes of the latter open for free passage of the dust; and said invention further consists in certain novel means for operating said brush.

Referring to the accompanying drawing, A represents the dust-room, and B an opening or it may be outlet to the shaft for carrying off the dust, while C is a door or opening for removing deposited dust. D is a screen arranged, say, across the one end of the dust-room, or there may be any number of such screens otherwise, and suitably arranged, through which the draught is established in the ordinary or any other proper way to carry off the dust from the picker-room. This screen serves to admit of the passage of dust released by the pickers without allowing of the loose or escaping cotton so passing off, said loose cotton naturally adhering to the surface of the screen. To detach such cotton therefrom and keep the meshes of the screen clear for escape of the dust, I arrange a brush, E, of any suitable form or construction, to slowly move up over the surface of the screen D, and suddenly drop or descend, so as to brush off or remove any cotton or dust sticking to the screen, such abrupt or rapid clearing stroke of the brush being necessary to accomplish the desired effect. The brush E may be thus operated as follows: Attached to the brush or its frame, preferably by means of a swivel, *b*, is a rope or chain, F, the opposite end of which, after being passed over a sheave or roller, *d*, is made fast to a grooved pulley, G, having a tripping formation, *e*, on it, that, as the brush-frame is raised, say at intervals, by the rotation of the pulley G winding the rope F, serves to let fall or slip said rope from off the pulley G, which causes the brush to drop suddenly and rapidly sweep over the face of the screen for the purposes before mentioned, after which, at a proper interval, the pulley G, in continuing its rotation, takes up the rope into its groove and slowly winds up the brush again for a repetition of the dropping and clearing action, the tripping formation *e* being so conducted as to guide the rope into the groove of the winding-pulley when it is required to raise the brush. This action, which may be accomplished by other means than those described, is repeated with any degree of frequency. To prevent the twist of the rope being affected by the tripping and re-engagement of it by the winding-pulley, as described, it is attached to the brush by means of a swivel, *b*, arranged to freely turn therein or on, or the swivel may be otherwise situated to accomplish the same purpose. The brush E may be formed in one or more rows of splints or tufts, one above the other, or it may be of any appropriate form and construction, and be guided in its reciprocating action by its frame working in between uprights *f*. It should be provided at its bottom with a cushion or springs, or at the end of its descent strike a cushion or springs *g*, to break the effect of concussion and form an easy rest for it until again lifted by the winding-pulley.

By this, my improvement, it will be seen that a strong dust-clearing current may be established through the picker room for the more perfect removal of dust, with a free escape for it through the meshes of the screen, kept clear by the brush, and prevention of its settling on the machinery; also that all loose cotton is restrained from flying off with the dust, and, though carried by the current against the screen where it is cleaned by the blast, it is prevented from accumulating there by the action of the brush, and finally deposited or collected, in a cleaned condition, at the base of the screen.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a screen to the dust-room, of a brush operating in its one stroke or action to abruptly and rapidly travel over or sweep the face of said screen, while in its opposite or further action it moves at a slower velocity over the same, substantially as and for the purposes specified.
2. The winding-pulley G with its tripping formation *c*, in combination with the brush, and rope or chain, operating essentially as herein set forth for the purpose specified.
3. In combination with the screen and brush, operating as described, a cushion or springs to arrest the brush in its descent, substantially as specified.
4. The attachment to the rope F, when tripped as described, of a swivel thereto for operation in an intermediate manner between the winding-pulley and brush, essentially as and for the purpose described.

JAMES WHITEHILL.

Witnesses:

EUGENE COSS,

HUGH WHITEHILL.