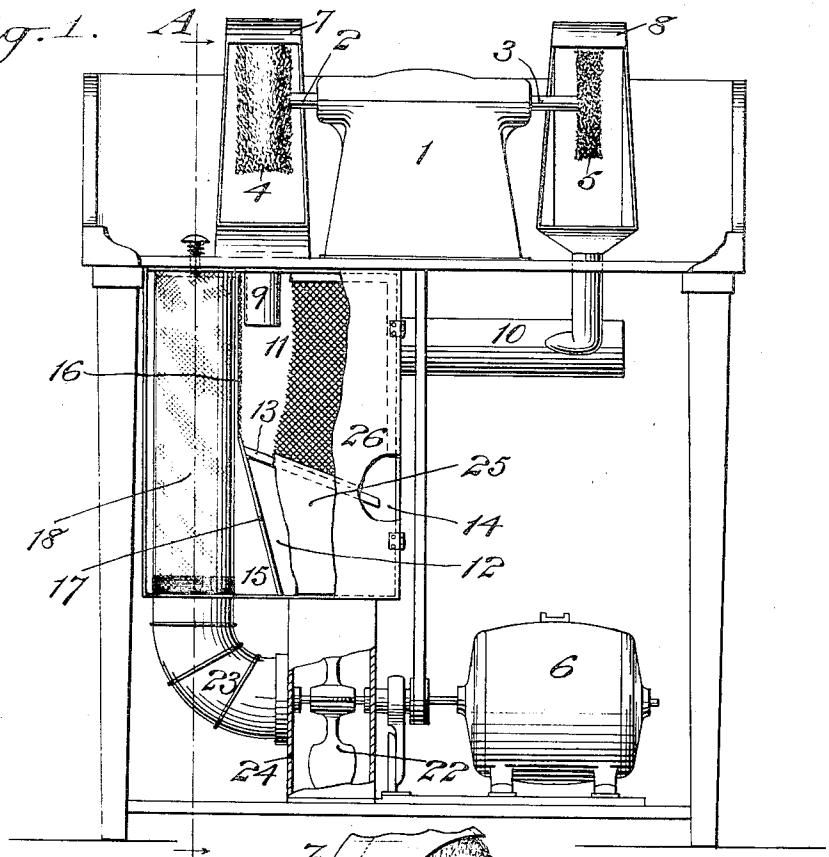
G. W. & W. H. LEIMAN.

DUST COLLECTOR FOR POLISHING MACHINES.

APPLICATION FILED JAN. 14, 1913.

1,177,342. Patented Mar. 28, 1916.

Fig. 1.



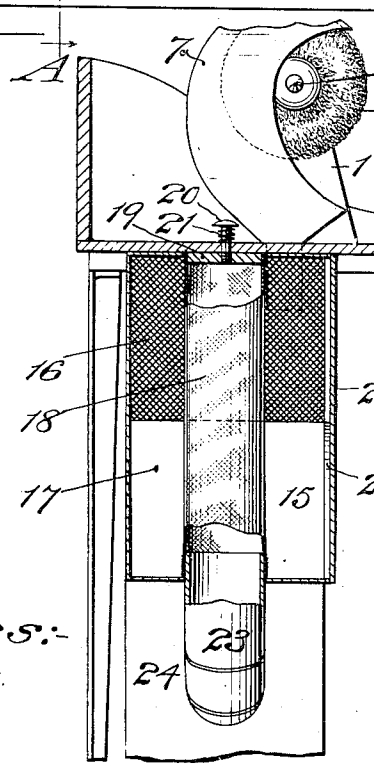
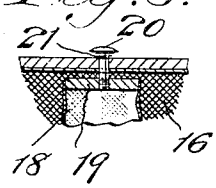


Fig. 2.

Fig. 3.



Witnesses:-

Alperon Barry.

J. George Barry

Inventors:-

George W. Leiman

William H. Leiman

by their attorneys

Brown & Seward

UNITED STATES PATENT OFFICE.

GEORGE W. LEIMAN AND WILLIAM H. LEIMAN, OF NEWARK, NEW JERSEY.

DUST-COLLECTOR FOR POLISHING-MACHINES.

1,177,342. Specification of Letters Patent. Patented Mar. 28, 1916.

Application filed January 14, 1913. Serial No. 741,949.

To all whom it may concern:

Be it known that we, GEORGE W. LEIMAN and WILLIAM H. LEIMAN, citizens of the United States, and residents of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Dust-Collectors for Polishing-Machines, of which the following is a specification.

Our invention consists in a polishing machine having novel means for collecting the dust rising from the operation of the machine, said means including a hood inclosing the polishing or buffing wheel on the head spindle, an exhaust fan connected to the hood and a dust collecting box interposed between the hood and fan.

In the accompanying drawings, Figure 1 represents the machine in front elevation, parts of the dust collecting box being broken away to more clearly illustrate the interior construction of said box. Fig. 2 is a partial vertical transverse section taken in the plane of the line A—A of Fig. 1, and Fig. 3 is a detail section showing the manner of agitating the finer dust screen for freeing it from dust to permit the ready passage of air through said finer screen.

The polishing head 1 is here shown as provided with two oppositely arranged spindles 2, 3, and their brushes 4, 5. These spindles are rotated in the usual manner from any desired means, such, for instance, as an electric motor 6.

Hoods 7 and 8 inclose the brushes 4, 5, on the spindles 2 and 3, which hoods have passages formed by pipes 9 and 10, which lead into an entrance chamber 11 in the dust collecting box. This chamber 11 is partly separated from the dust settling chamber 12 by a partition 13, an opening 14 serving to open communication from the chamber 11 to the chamber 12. The fine dust chamber 15 is separated from the chamber 11 by a coarse screen 16, and from the vacuum chamber 12 by a partition 17. In the fine dust chamber 15, we locate a tubular screen 18 of finer mesh than the screen 16, the upper end of which tubular screen is closed by a head 19, from which head a push button 20 extends upwardly through the top of the box into ready position for manual operation. A coil spring 21 serves to hold the push button 20 raised and thereby the tubular screen 18 extended.

A suction fan 22, driven in the present instance, from the electric motor 6, is in open communication with the interior of the fine screen 18, through a passage formed by a pipe 23 leading from the bottom end of said screen to the interior of the fan casing 24.

A door 25 for the dust collecting box is provided with an imperforate portion closing the side of the dust settling chamber 12, and a perforated portion along the side of the entrance chamber 11. The outer door 26 serves to close the side of the fine dust chamber 15, and also incloses the inner door.

In operation, as the dust is drawn down from the hoods 7 and 8, through the passages 9 and 10, into the entrance chamber 11, by the operation of the fan 22, the screen 16 will prevent the passage of the coarser particles of dust into the chamber 15. The suction of the air will cause a partial vacuum to be maintained in the chamber 12. This will cause the coarser particles of dust to pass from the chamber 11, down into the dust settling chamber 12. The finer particles of dust will be prevented from passing into the tubular screen. These finer particles of dust will drop down into the bottom of the chamber 15. From time to time, to prevent the screen 18 from clogging, the said screen may be agitated by manipulation of the push button 20, for freeing the screen from dust and thus permit the ready passage of the air therethrough. The dust may be removed from time to time from the chamber 15, by opening the outside door 26 and from the chamber 12, by opening the outside door 26 and the inside door 25.

What we claim is:

The combination of a dust collecting box having separated entrance, dust settling and fine dust chambers, said entrance and settling chambers being divided by a partition, said entrance and fine dust chambers being divided by a coarse mesh screen, said parti-

tion extending from the base of said screen and having an opening therethrough at a point removed from the said screen, and an exhaust fan in communication with the fine dust chamber.

In testimony, that we claim the foregoing as our invention, we have signed our names in presence of two witnesses, this third day of January, 1913.

GEORGE W. LEIMAN.
WILLIAM H. LEIMAN.

Witnesses:
F. GEORGE BARRY,
HENRY C. THIEME.