Jan. 19, 1937. W. V. PAINE 2,068,349

DUSTING TOOL

Filed May 20, 1935

Fig. 1.

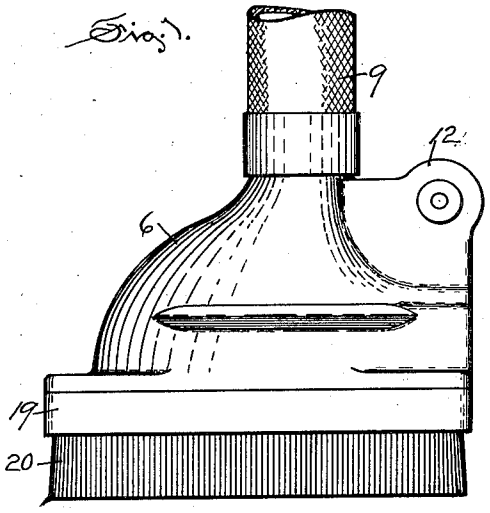


Fig. 2.

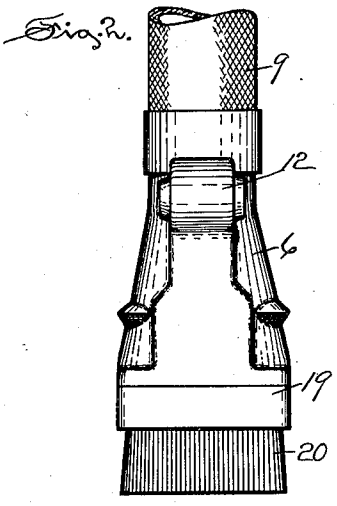


Fig. 3.

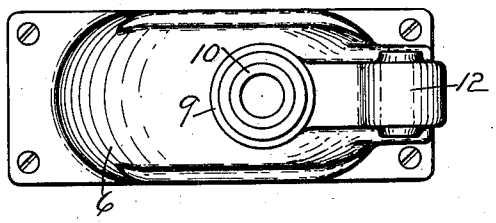


Fig. 4.

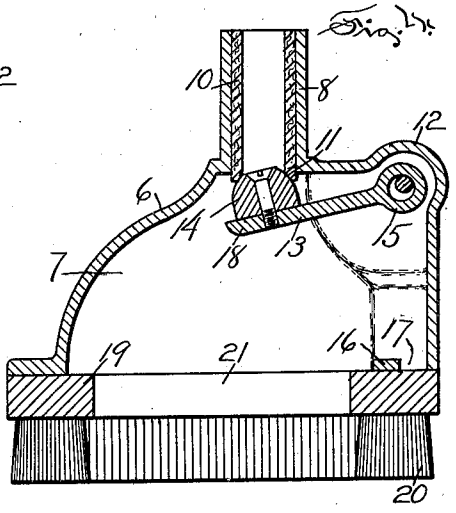
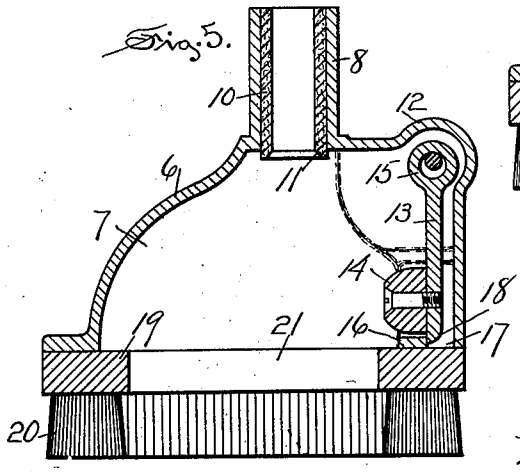


Fig. 5.



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DUSTING TOOL

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Application May 20, 1935, Serial No. 22,351

9 Claims. (Cl. 15—155)

My invention relates to the class of tools which are employed more especially for removing surplus material and dust from surfaces which have been treated with such in enameling, japanning and similar operations, and an object of my invention, among others, is to provide a tool of this type that shall be particularly convenient to use, that shall be simple in construction, and that shall be particularly efficient in the results obtained by its use.

One form of a tool embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained is illustrated in the accompanying drawing in which—

Figure 1 is a side view of my improved dusting tool.

Figure 2 is an edge view of the same.

Figure 3 is a top view.

Figure 4 is a view in central vertical section showing the valve closed.

Figure 5 is a similar view showing the valve open.

While my invention illustrated and described herein is not limited to use in connection with any particular operations, yet, as it is particularly applicable for use in removing surplus dust and material which is applied to surfaces being enameled or japaned I have illustrated the invention in connection with such a tool, in the accompanying drawing the numeral 6 denoting the body of the tool which is preferably formed of some light metal and which may be of any suitable shape, said body containing a chamber 7 into which air and the dust or surplus material are drawn as by suction through a neck 8 projecting from the top of the tool, a hose 9 being attached to the neck and connected with any suitable apparatus for producing a partial vacuum. The neck 8 has preferably a lining 10 as of hardwood or other suitable material, this lining projecting into the chamber 7 and having its opening into said chamber shaped to provide a valve seat 11.

An extension 12 from the chamber 7 is formed at one edge of the tool and a clapper 13 is pivotally mounted in this extension, said clapper having a valve 14 secured at or near its end in position to be seated against the valve seat 11. The clapper is preferably loosely supported upon its pivot, as herein shown the opening through the eye 15 of the clapper being larger than the pivot for a purpose to be shortly described.

A bar 16 extends across the chamber 7 at the bottom thereof, this bar being spaced from the wall of the chamber 7 creating a slot 17. The outer edge of the clapper 13 comprises a lip 18 which fits within the slot 17 to hold the clapper in its lowered position as shown in Fig. 5 of the drawing.

A brush back 19 having bristles 20 is secured to the bottom of the tool body to close the chamber 7 therein, said brush and back having a slot as 21 for the entrance of dust and air from the surface being cleaned.

In the operation of the tool, the valve being in the closed position shown in Fig. 4 may be dislodged by striking the bottom of the tool as against a somewhat solid surface. This will jar the valve from its closed position and as it falls the lip 18 will catch into the slot 17 and hold the valve open while the dusting operation is being performed. When the dusting operation is completed a quick upward movement of the tool and a sudden stop will cause the lip 18 to be disengaged from the slot 17 and the clapper will be moved upward to seat the valve in the opening in the neck 8, and the suction of the apparatus will hold the valve in this position until it is again dislodged as hereinbefore described.

I claim:

1. A dusting tool including a body with a chamber therein having a mouth leading into said chamber and an outlet therefrom, a valve member pivotally mounted within said chamber and a holding member to retain said valve in an open position against suction within the chamber, said members being relatively movable to release said valve from said holding member.

2. A dusting tool including a body with a chamber therein having a mouth leading into said chamber and an outlet therefrom, a clapper member pivotally mounted in said chamber, a valve secured to said clapper to close the outlet from said chamber, and a holding member to positively retain said clapper in an open position, said members being relatively movable to release said clapper from said holding member.

3. A dusting tool including a body with a chamber therein having a mouth leading into said chamber and an outlet therefrom, a valve member pivotally mounted in said chamber and adapted to be held in a closed position by said suction through said outlet, and a holding member to positively retain said valve in open position, said members being relatively movable to release said valve from said holding member.

4. A dusting tool including a body with a chamber therein having a mouth leading into said chamber and an outlet therefrom, a valve member pivotally mounted within said chamber and

adapted to be held in closed position by suction through said outlet, a catch member within said chamber to retain said valve in an open position, and means upon said valve to engage said catch to prevent the valve from closing movement, said members being relatively movable to release said valve from said catch.

5. A dusting tool including a body with a chamber therein and having a mouth leading into said chamber and an outlet therefrom, a valve member pivotally mounted within said chamber and adapted to be held in closed position by suction through said outlet, a bar across one side of the chamber creating a slot, and a lip upon said valve adapted to engage said bar to prevent the valve from closing movement, said members being relatively movable to release the valve member from said bar.

6. A dusting tool including a body with a chamber therein having a mouth leading into said chamber, a neck containing an outlet from said chamber, a sleeve located within said neck, a clapper member pivotally mounted within said chamber, a holding member for retaining said valve in its lowered position, and a valve secured to said clapper to fit a seat at the end of said sleeve to close said outlet, said members being relatively movable to release one from the other.

7. A dusting tool including a body with a chamber therein having a mouth leading into said chamber and an outlet therefrom, a valve pivotally mounted within said chamber and adapted to be self-retained in an open position against suction within the chamber, a bar across one side of the chamber creating a slot, and a lip upon said valve to extend into said slot to engage said bar to prevent the valve from closing movement, said pivot and valve being arranged for movement of the valve in a direction laterally of the pivotal axis for release of said lip from said bar.

8. A dusting tool including a body with a chamber therein having a mouth leading into said chamber and an outlet therefrom, a valve mounted within said chamber and having an eye for a pivot, said valve being adapted to be self-retained in its open position but to be held in a closed position by suction through said outlet, a pivot projecting through said eye, a catch at one side of said chamber, and a lip upon said valve adapted to engage said catch to prevent the valve from closing movement, said pivot being smaller in size than said eye for release of said valve from said catch.

9. A dusting tool including a body with a chamber therein having a mouth leading into said chamber and an outlet therefrom, a valve member pivotally mounted within said chamber and adapted to be self-retained by gravitational force in an open position out of the zone of sucking action to close it but to be held in a closed position by said sucking action, and a holding member for retaining said valve out of said zone of suction, said members being relatively movable to release one from the other.

WILBUR V. PAINE.