March 10, 1936. C. L. BAKER 2,033,672

DUST MOP CLEANER

Filed May 14, 1935

Fig. 1.

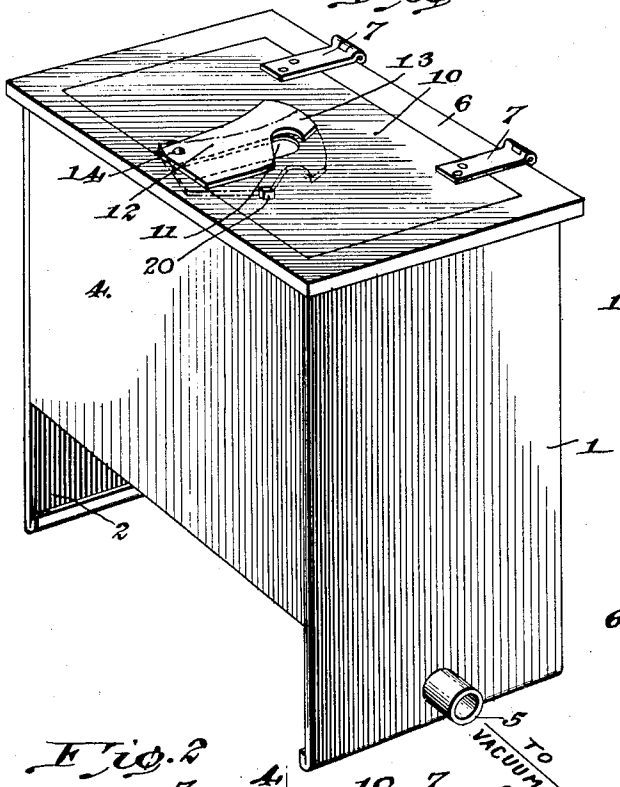


Fig. 3.

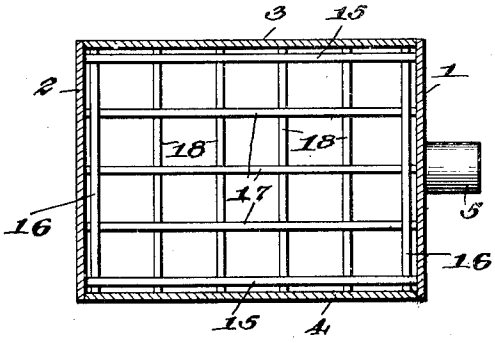


Fig. 5.

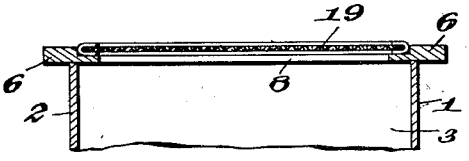


Fig. 2

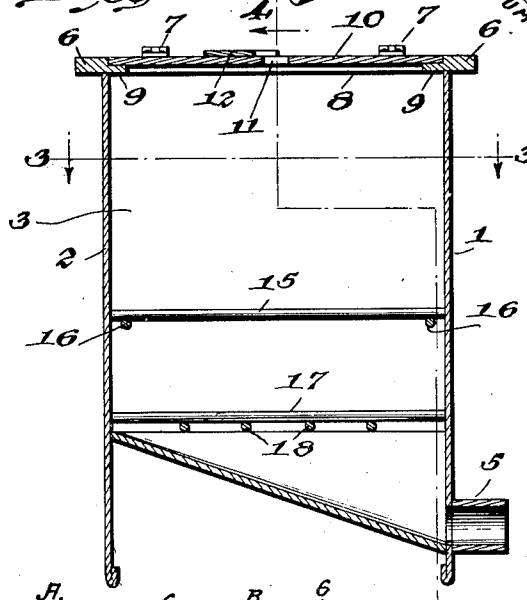


Fig. 4.

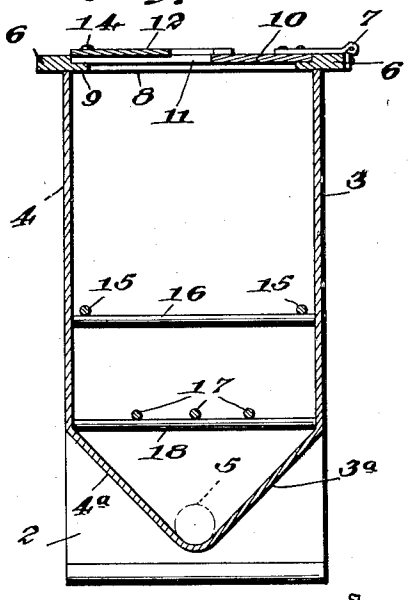
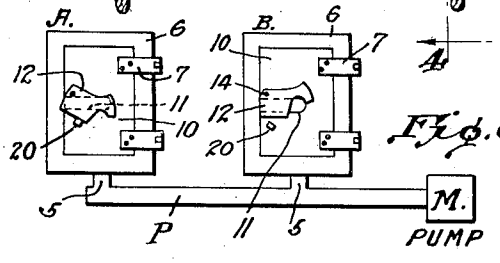


Fig. 6.



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DUST MOP CLEANER

Charles L. Baker, Grosse Pointe, Mich.

Application May 14, 1935, Serial No. 21,449

3 Claims. (Cl. 15—15)

My invention relates to improvements in cleaners for dust mops, and more particularly of the vacuum type, and it consists in the combinations, constructions and arrangements herein described and claimed.

Dust mop cleaners of this type have heretofore been made in which hinged covers have been provided which may be moved apart to permit the mop to be inserted in a cleaning box. The disadvantage of such a construction is that space must be left for the mop handle and this space extends for the full length of the cover and permits air to be drawn in at some distance from the mop proper, thus lowering the efficiency of the device.

Other mop cleaners have been proposed in which it is necessary to break the vacuum or to shut off the current of the motor before the cover can be raised, as in placing the mop in position or in removing it.

An object of my invention is to provide a mop cleaning device which may be used in connection with a suction creating means of any suitable type in which the stream of air entering the cleaner is concentrated around the handle of the mop and is directed toward the mop body as distinguished from those in which the air is drawn in at varying distances from the mop body.

A further object is to provide a device which forms a closure for preventing the drawing in of the air at a distance from the body of the mop and also a means by which a quantity of air admitted can be regulated.

A further object of the invention is to provide a device of the type described in which this closure member also serves as a means of admitting air when desired so that the cover to which it is attached may be readily raised and is not held down by the suction.

Other objects and advantages will appear in the following specification and the novel features of the invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawing forming part of this application, in which:—

Figure 1 is a perspective view of the device.

Figure 2 is a longitudinal central section of the device.

Figure 3 is a section along the line 3—3 of Fig. 2.

Figure 4 is a section along the line 4—4 of Fig. 2.

Figure 5 is a sectional view of a modified form of the device, and

Figure 6 is a view showing a plurality of cleaning units arranged in parallel.

In carrying out my invention I provide a box or casing having end members 1 and 2, respectively, and side members 3 and 4. The members 1 and 2 are prolonged as shown in the drawing and form supports. The side members are preferably joined by an integral bottom having sloping sides 3a and 4a respectively, as shown in Fig. 4. The bottom also slopes from the side 2—see Fig. 2—toward the side 1, and a tube or pipe 5 is provided for attachment to a flexible connection from a vacuum cleaner of any suitable type, not shown.

A lid 10 is hinged preferably by strap hinges 7 to a top 6. The top is provided with a rectangular opening 8 and the edges of the top adjacent to the opening are flanged to provide shelf portions 9. The lid or closure member 10 fits snugly in the opening 8 and rests on the shelf members 9 so that the upper surface of the lid is flush with that of the top 6.

The lid 10 is provided with a slot 11 that extends inwardly from one edge of the lid. This is to receive the handle of the mop. A hinged shutter member 12 is provided having a curved recess 13 arranged to conform with the curvature of the end of the slot 11. This shutter member is pivoted at 14, as shown in the drawing.

On the interior of the casing or box I provide rods 15 which run longitudinally of the device and rods 16 which run transversely, these rods being located near the sides to form means whereby the strands of the mop may be separated as it is turned. A grid is formed below the upper rods by means of longitudinal bars 17 and transverse bars 18.

From the foregoing description of the various parts of the device the operation thereof may be readily understood. Assuming that a suitable connection has been made to the pipe 5, the lid 10 may be raised and the mop placed therein in vertical position. The handle may be passed through the slot 11 to the end thereof and the lid 10 may be closed.

The shutter 12 is now brought up into substantial engagement with the handle which is received in the recess 13, the major portion of the slot 11 being covered by the shutter and when the motor of the suction pump is started the mop can be twisted or raised or lowered and the upper rods may be used to separate the

strands by thrusting the mop against them and the grid may be used in order to knock the dirt off from the strands thus separated, the dirt falling down to the bottom and being drawn out of the pipe 5 by the vacuum. It will be noted that the shape of the recess in the shutter 12 is such as to let the necessary stream of air in to carry off the dust, but that this stream is concentrated along the handle directly upon the body of the mop. The extent of the opening about the handle can be regulated by moving the shutter 12.

When the cleaning is finished the shutter 12 may be moved away from the slot 11 and this breaks the vacuum so that the lid 10 can be easily lifted and the mop can be taken out without cutting off the current to the vacuum pump. Where a number of mops have to be cleaned this cuts down the time in the cleaning operation.

It will be noted that the strap hinges are elongated so that the lid 10 may be raised and lowered over the side 4. When this is done a screen 19 may be placed in the opening 8 and a pillow may be placed on the top of the screen, the vacuum pump will be started and the pillow may be agitated so that the dust may be sucked down into the box and thence into the vacuum cleaner.

When it is desired to cut off the entrance of air through the slot 11 the shutter 12 may be moved from the full line position shown in Figure 1 to the dotted line position against a stop 20, thus closing the slot completely. If another unit should be used in parallel, the full power of the vacuum will be exerted on the other unit which would not occur if the slot were left open when the device is not in use, but while still connected with the vacuum pump.

In Figure 6 I have shown a pair of casings in parallel indicated at A and B, the outlet pipes 5 being connected to a pipe P leading to a vacuum pump M. In the event that the unit A for instance is not in use, the shutter 12 may be moved to completely cover the slot 11 so that even while the vacuum pump is connected with the casing and is in operation, no air will be drawn into the casing A, but all the power of the motor driven pump will be exerted on the casing B.

I claim:—

1. A dust mop cleaning device comprising a casing, an outlet pipe communicating with the casing near the bottom for attachment to a vacuum cleaner, a hinged lid for said casing provided with a stop and having a slot extending inwardly from one edge, and adapted to receive a mop handle, a pivoted shutter comprising a flat plate having a recess arranged to receive the handle, when the handle is at the inner end of the slot, said shutter being adapted to cover the major part of the slot during the normal cleaning operation, and movable to engage the stop and to entirely close the slot.

2. A cleaner for dust mops comprising a casing having a top provided with an opening, a lid arranged to fit within the opening and being hinged to the top, said lid being provided with a slot extending inwardly from one edge thereof toward the center of the lid, the inner end of the slot being rounded, a shutter member comprising a flat plate pivoted on one side of said slot and having a recess arranged to receive a mop handle, a portion of said recess conforming to the curvature of the rounded inner end of the slot and to the curved walls of the handle and adapted to register with the rounded end of the slot, said shutter being arranged to cover the major part of the slot and being movable away from the slot.

3. An arrangement for cleaning dust mops comprising a plurality of casings, each casing having an outlet pipe, a vacuum pump, means for connecting the outlets with the vacum pump, each of said casings having a hinged cover, said cover having a slot extending from the side opposite the hinges toward the center for receiving a mop handle, and a pivoted shutter carried by the cover and arranged to close the major portion of the slot during the normal cleaning operation and to entirely close the slot when the mop handle is removed, whereby full power of the vacuum will be exerted on the other casing.

CHARLES L. BAKER.