

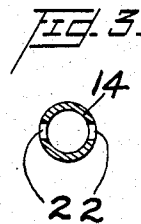
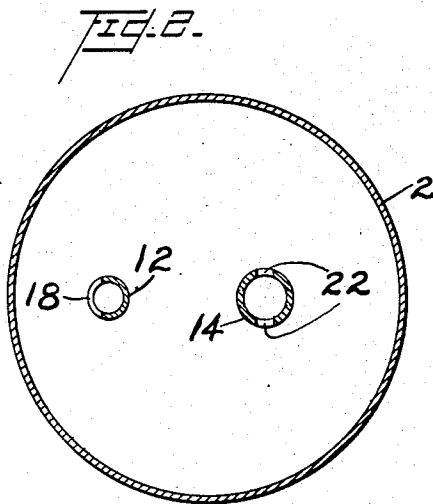
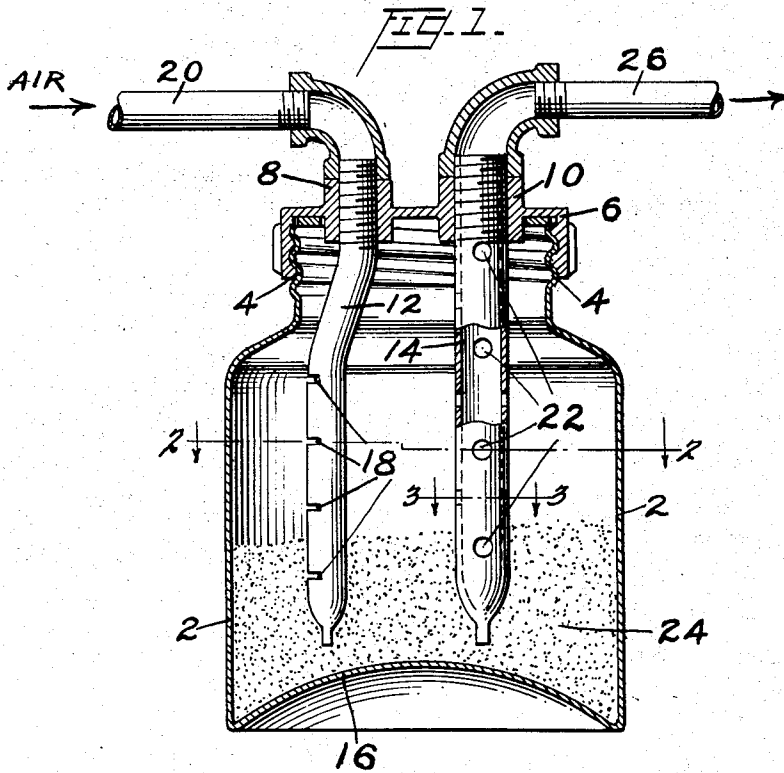
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BLOWER FOR APPLYING COMMINUTED MATERIAL

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BLOWER FOR APPLYING COMMINUTED MATERIAL

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4 Claims. (Cl. 91-45)

This invention relates to blowing devices for applying comminuted material in the form of powder, dust, chips or granules upon surfaces of various kinds and has particular reference to devices for blowing comminuted pigments and other finely divided mineral substances upon plastic materials before these plastic materials have become set.

Among the objects of this invention is to provide a blowing device which will dispense with the use of complicated structures, such as intricate nozzle discharge mechanism, pistons, etc.

A further object of this invention is to provide a blowing mechanism which will deliver in a steady and uniform stream comminuted material in powder form as well as comminuted material of larger size.

A further object of this invention is to provide a device of this character which will function efficiently, irrespective of the quantity of comminuted material in the apparatus.

Other, further, and more specific objects of this invention will become readily apparent to persons skilled in the art from a consideration of the following description when taken in conjunction with the accompanying drawing wherein:

Fig. 1 is a vertical section through the apparatus.

Fig. 2 is a cross-section along line 2-2 of Fig. 1.

Fig. 3 is a section through the discharge nozzle of the device taken along line 3-3 of Fig. 1.

The apparatus comprises the jar or container 2 having the threaded neck 4 to which is secured the internally-threaded cap or cover 6. This cap 6 is provided with the flanged bores 8 and 10, which hold in threaded engagement the tubes or nozzles 12 and 14, respectively. Each of these nozzles 12 and 14 is closed at the inner end. The intake nozzle 12 extends close to the bottom 16 of the jar 2, the bottom 16 being preferably dome-shaped to give strength and rigidity thereto. The nozzle 12 is provided with air holes or perforations 18, preferably on the side remote from nozzle 14 and facing away from nozzle 14 and uniformly spaced, the lower perforation being near the bottom 16 of the jar. The nozzle 12 is connected to an air supply organ (not shown) by means of the pipe 20 fitted with a suitable air gun adapter.

The ejection nozzle 14 is practically coextensive downwardly with nozzle 12 and also reaches close to the bottom 16 of the jar 2. It is provided with the perforations 22 which are greater in

number and of larger size than the perforations 18 in nozzle 12.

In using my device, powdered or granular material 24 is placed in the jar 2, cap 6 supporting the nozzles 12 and 14 is screwed onto the jar, and pipe 20 connected to an air gun. By blowing compressed air through pipe 20, then through nozzle 12 and out through the perforations 18 into jar 2 containing the comminuted material 24, the compressed air will pass from jar 2, through the perforations 22, into the nozzle 14 and then leave through the discharge pipe 26, carrying with it entrained particles of the comminuted material 24.

I have found by extending the incoming nozzle 12 and the outgoing nozzle 14 to practically the same distance from the bottom 16 and distributing the openings in these nozzles as illustrated, that a uniform and steady issue of the comminuted material takes place from the discharge pipe 26. Furthermore, by this arrangement of nozzles and disposition of the perforations, the steady outflow of comminuted material will continue until practically all of the comminuted material has been blown from the jar 2.

The jar 2 may be made of any suitable material that will withstand the action of the material placed therein. I prefer to make the jar 2 and cap 6 of aluminum. The nozzles 12 and 14 may be made of bronze or other suitable metal.

My device is specially adapted for applying or dashing upon mortar cement, while such cement is in the plastic condition, crushed stone or granules, powdered materials, such as mica, pigments, stone and slate, chips of stone, diatomaceous earth, kieselguhr, etc., in the formation of facings of artificial stone or breccia. The device is easy to operate and is free from parts and mechanism that require frequent repair or adjustment.

The present invention is not limited to the specific details set forth in the foregoing examples which should be construed as illustrative and not by way of limitation, and in view of the numerous modifications which may be effected therein without departing from the spirit and scope of this invention, it is desired that only such limitations be imposed as are indicated in the appended claims.

I claim as my invention:

1. In a blower for applying comminuted material, a container, a cover for said container, a tubular intake nozzle extending through and sup-

ported by said cover and projecting into said container close to the bottom thereof, means for connecting said intake nozzle to a supply of compressed air, said intake nozzle being closed at the inner end and having a plurality of perforations in the portion projecting into said container, a tubular ejection nozzle extending through and supported by said cover and projecting into said container close to the bottom thereof, and said ejection nozzle being closed at the inner end and having a plurality of perforations in the portion projecting into said container.

2. In a blower for applying comminuted material, a container, a cover for said container, a tubular intake nozzle extending through and supported by said cover and projecting into said container close to the bottom thereof, means for connecting said intake nozzle to a supply of compressed air, a tubular ejection nozzle extending through and supported by said cover and projecting into said container close to the bottom thereof, said intake nozzle being closed at the inner end and having in the portion projecting into said container and on the side remote from said ejection nozzle a plurality of perforations, and said ejection nozzle being closed at the inner end and having in the portion projecting into said container a plurality of perforations greater in number and size than said perforations in said intake nozzle.

3. In a blower for applying comminuted material, a container, a detachable cover for said container, a tubular intake nozzle extending through and supported by said cover and projecting into said container close to the bottom thereof, means for connecting said intake nozzle to a supply of compressed air, a tubular ejection nozzle extending through and supported by said cover and

projecting into said container close to the bottom thereof, said intake nozzle being closed at the inner end and having in the portion projecting into said container and on the side remote from and facing away from said ejection nozzle a plurality of perforations disposed at different elevations of said container, and said ejection nozzle being closed at the inner end and having in the portion projecting into said container a plurality of perforations greater in number and size than said perforations in said intake nozzle and disposed in spaced relation throughout the length of said projecting portion.

4. In a blower for applying comminuted material, a container having a dome-shaped bottom, a detachable cover for said container, a tubular intake nozzle extending through and supported by said cover and projecting into said container, means for connecting said intake nozzle to a supply of compressed air, a tubular ejection nozzle extending through and supported by said cover and projecting into said container substantially as close to the bottom of said container as the inner end of said intake nozzle is to the bottom of said container, said intake nozzle being closed at the inner end and having in the portion projecting into said container and on the side remote from and facing away from said ejection nozzle a plurality of perforations disposed at different elevations of said container, and said ejection nozzle being closed at the inner end and having in the portion projecting into said container a plurality of perforations greater in number and size than said perforations in said intake nozzle and disposed in spaced relation throughout the length of said projecting portion.

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