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POWDER DISPENSER FOR PRINTED WEBS

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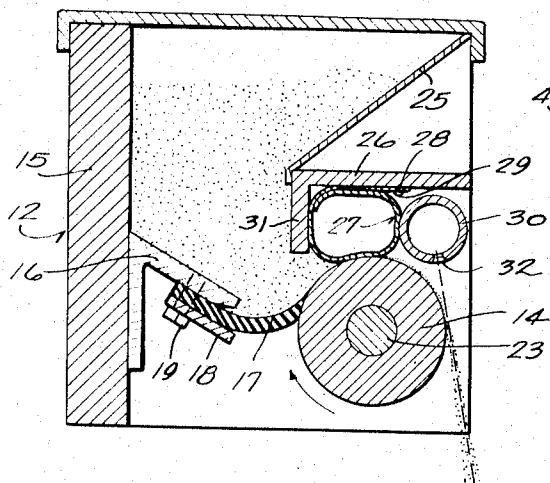
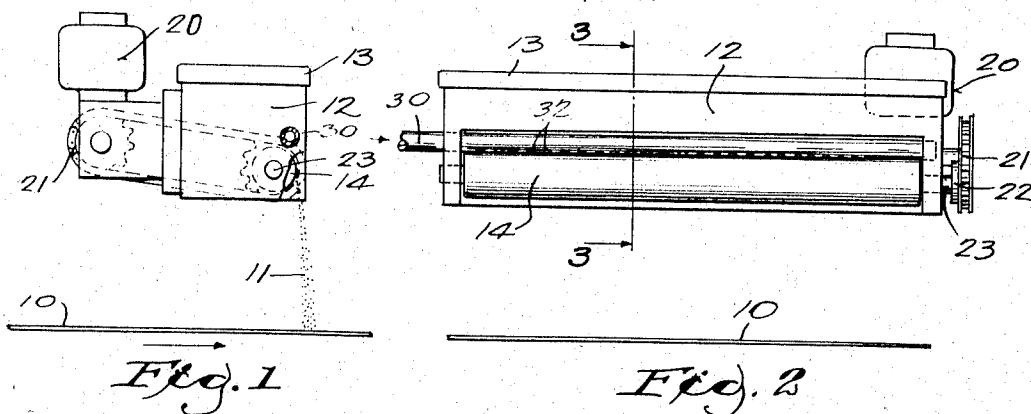


Fig. 3

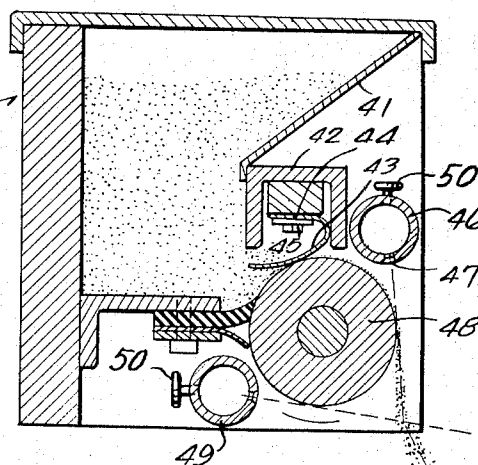


Fig. 4

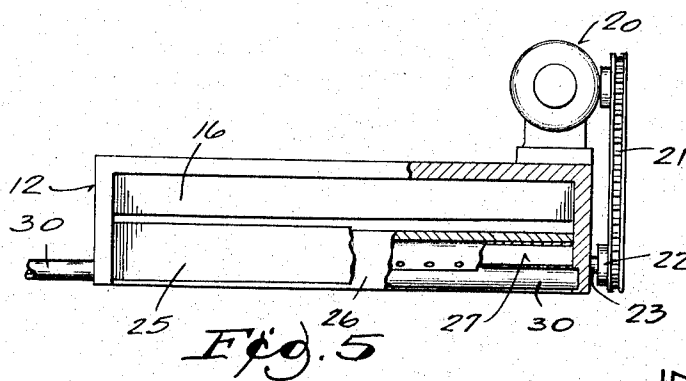


Fig. 5

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POWDER DISPENSER FOR PRINTED WEBS

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ABSTRACT OF THE DISCLOSURE

A powder dispenser for printed webs comprising a container with a roller therein in contact with the powder, a sheet of material fastened by one edge and contacting the roller in coil form to equalize distribution of the powder thereon, and two apertured tubes for releasing compressed air from two different angles to control falling movement of the powder toward a printed web.

This invention relates to improvements in powder dispensers for printed webs, and is an improvement over my prior applications bearing the Ser. No. 453,427, filed May 5, 1965, now Patent No. 3,305,141, issued Feb. 21, 1967, and Ser. No. 543,936, filed Apr. 20, 1966.

An object of the invention is to provide means for more even distribution of powder on a roller before a current of air under pressure blows it onto a web.

Another object of the invention is to subject the powder to cross currents of air under pressure.

Other and further objects of the invention will appear as the description proceeds, reference being had to the accompanying drawing, in which:

FIG. 1 is an end view partially broken away of a powder dispenser embodying the invention.

FIG. 2 is a frontal view in elevation of the same.

FIG. 3 is a cross-sectional view taken on line 3-3 of FIG. 2.

FIG. 4 is a similar view of a modified form of the invention.

FIG. 5 is a plan view partly in elevation and partly in section.

Referring more particularly to the drawing, the numeral 10 refers to a freshly printed web on which the powder 11 is being dispensed. A container 12 having the cover 13 journals a roller 14. The rear wall 15 of the container has affixed thereto the angle element 16 to which is attached the flexible element 17 retained thereunder by bar 18 and the bolt means 19. Element 17 is in flexible contact with the roller 14 and helps to contain the powder 11. The roller 14 is turned by the power unit 20 and chain 21 engaged with the sprocket 22 on shaft 23 connected to said roller.

A hopper wall 25 surmounts an angle element 26 frontally disposed in said container 12. As shown in FIG. 3, a sheet element 27 in coil form of film, resin, metal or other flexible material is fastened by one edge 28 by

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means 29 to the underside of element 26. The element 27 is freely contained between the air tube 30 and the depending portion 31 on the element 26 to rest lightly on the top of the roller 14 to equalize distribution of the powder 11 thereon during the rotative movement of said roller.

The air tube 30 is plurally apertured as at 32 within the container 12.

In FIG. 4 a modified form of the invention is shown, in which a container 40 has a hopper wall 41 supported by the table element 42. A pillow element of sheet material 43 has its opposite edges 44 and 45 secured against the under side of table element 42 by means of the retainer and the threaded means 44.

An air tube 46 with apertures as at 47 directed generally downwardly is disposed tangentially to the roller 48, and a second air tube similarly apertured is provided at 49 with the apertures directing the air current laterally, and valve control means 50 are provided for individual regulation of the two different air current pressures. The regulation of cross currents will necessarily affect the distribution of powder on the web.

It will be understood that the device is capable of many modifications in structure and design, without departing from the spirit of the invention, within the scope of the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent of the United States, is:

1. A dispenser for powder applicable to freshly printed webs comprising a container for the powder, a roller therein in contact with the latter, a sheet of material fastened by one edge and in coil form engaging the rotating roller to conform to the roller surface and equalize the distribution of powder thereon, an apertured tube for receiving compressed air disposed parallel to said roller for vertically downwardly blowing said powder from said powder from the rotating surface of said roller onto said web, a second apertured tube for receiving compressed air disposed to blow a cross current of air against the current issuing past said roller and from said first mentioned tube, and valve control means for separately regulating the pressure of each air current to govern powder application to the web.

2. A device as in claim 1, and a sheet of flexible material having longitudinal edges fastened by one of said longitudinal edges with the intermediate portion thereof disposed against the powder coated rotating roller.

References Cited

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