

May 15, 1945.

C. G. SOHMER

2,376,018

DISPENSER

Filed Oct. 19, 1943

2 Sheets-Sheet 1

Fig. 1.

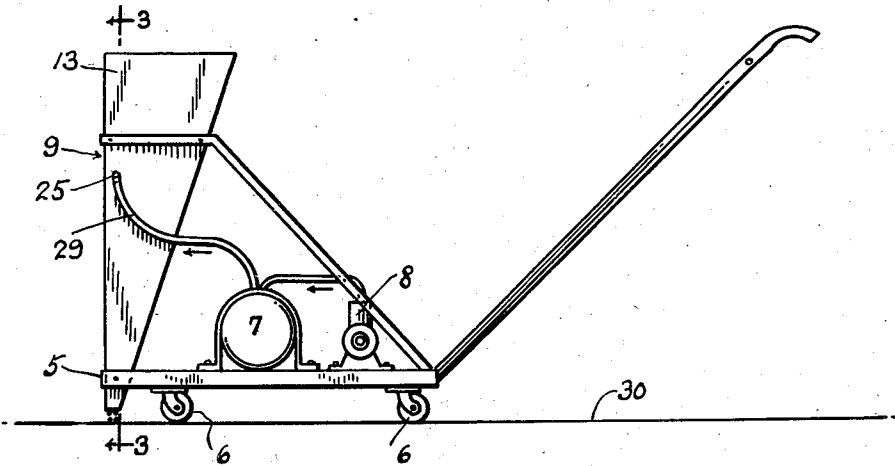


Fig. 2.

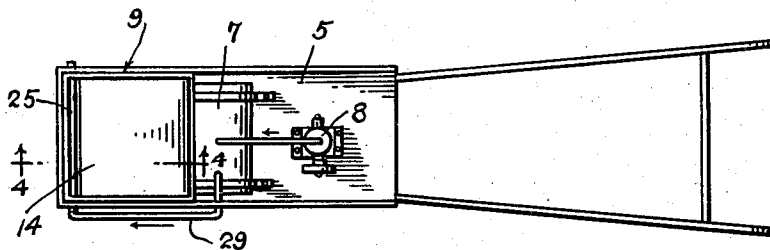
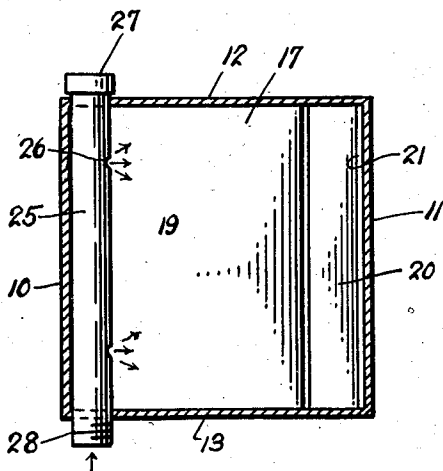


Fig. 5.



Inventor

CARL G. SOHMER

By

Clarence A. O'Brien
and Harvey B. Jacobson
Attorneys

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Fig. 3.

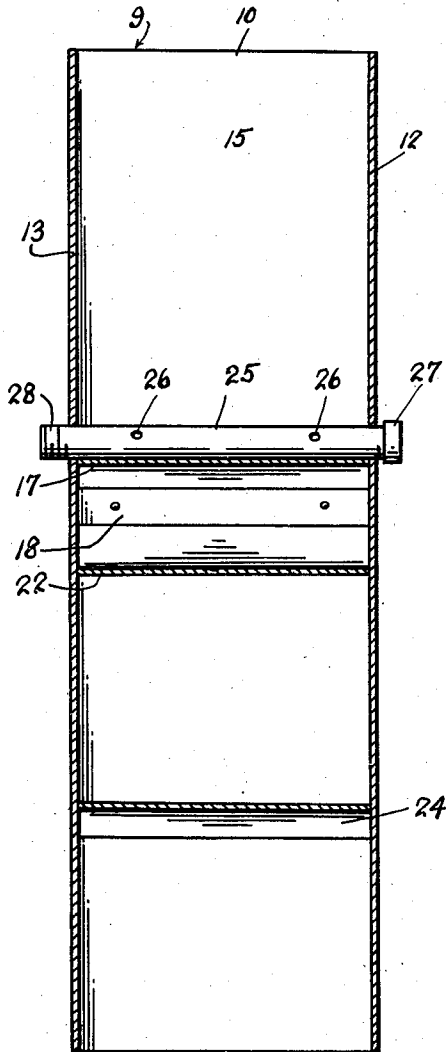
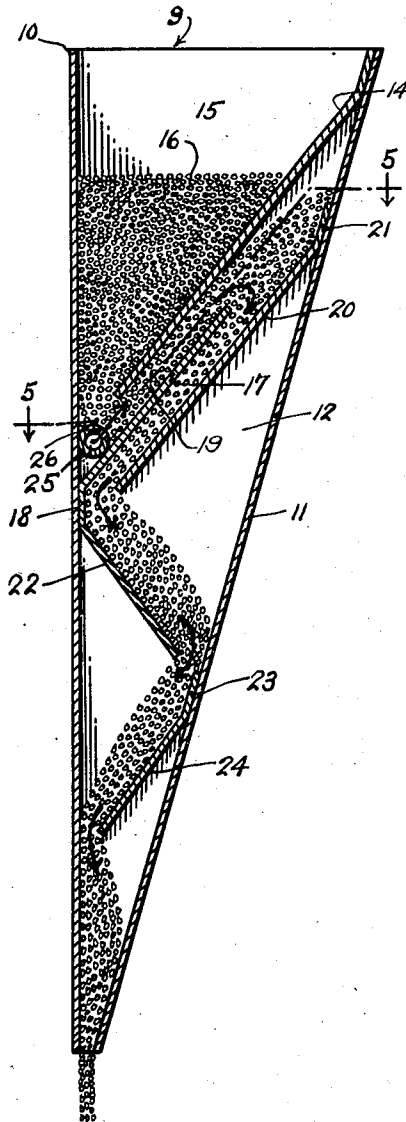


Fig. 4.



Inventor

CARL G. SOMMER

By

Clarence A. O'Brien
and Harvey B. Jacobson
Attorneys

UNITED STATES PATENT OFFICE

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DISPENSER

Carl G. Sohmer, Tacoma, Wash.

Application October 19, 1943, Serial No. 506,887

1 Claim. (Cl. 222-193)

This invention relates to new and useful improvements in dispensers and more particularly to a dispenser for dispensing minute articles.

The principal object of the present invention is to provide a dispenser for dispensing beads and like minute articles through the aid of air pressure rather than the use of complicated gearing or other moving parts.

Another important object of the invention is to provide a dispenser of the character stated which will dispense small articles in a certain predetermined manner such as in the form of a thin discharging curtain.

Other objects and advantages of the invention will become apparent to the reader of the following description.

In the drawings:

Figure 1 represents a side elevational view of the complete machine.

Figure 2 is a top plan view.

Figure 3 is a vertical sectional view through the dispenser proper.

Figure 4 is a section on the line 4-4 of Figure 2.

Figure 5 is a section on the line 5-5 of Figure 4.

Referring to the drawings wherein like numerals designate like parts, it can be seen that the machine may include a platform 5 supported by rollers 6 and having a compressed air tank 7 mounted thereon and charged by a motor driven pump 8. Numeral 9 generally refers to the improved dispenser which consists of a vertical front wall 10 and an inclined rear wall 11, the rear wall 11 terminating in close proximity to the lower end of the front wall 10. The front and rear walls 10, 11 are connected by side walls 12, 13.

An inclined plate 14 is provided within the upper portion of the dispenser, the same extending downwardly from the upper portion of the rear wall 11 and terminating in close proximity to the front wall 10, thus providing a hopper 15 for containing a multiplicity of small elements such as beads 16.

A plate 17 is suitably secured by a flange 18 to the back side of the front wall 10 and this extends upwardly in spaced parallel relation to the lower portion of the plate 14 to define a trap 19. This trap plate 17 terminates about half way up the plate 14 and underlying the top plate 17 in spaced parallel relation thereto is a deflector plate 20, the upper end of which is flanged as at 21 and secured to the back wall 11.

The flange 18 of the trap plate 17 has a diverged plate 22 which extends inclinedly toward the rear wall 11, terminating in spaced relation thereto just over the rear wall secured flange

23 of a deflector plate 24 which extends downwardly and terminates in close proximity to the rear side of the front wall 10.

Projecting into the space below where the lower end of the plate 14 opposes the front wall 10 is an air pipe 25 having perforations 26 therein. This pipe extends through the dispenser and is closed at one end as at 27 while the other end is threaded as at 28 to connect to a hose or other conduit 29 leading from the compressed air tank 7. It is preferable that this conduit 29 have a valve therein, so that when it is desired to start dispensing the beads or other element 16, turning on of the air will cause an air discharge in the trap 19, pushing the beads upwardly and over the upper edge of the plate 17 so that they gravitate down the plates 20, 22 and 24 to pass out of the lower end of the dispenser in the form of a ribbon or curtain as illustrated in Figure 4 and on to a surface 30 to form a traffic guide strip on a pavement or street.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

30 A dispenser comprising a hopper-like structure including a pair of opposed walls, one being inclined to the vertical, an inclined plate depending from said inclined wall in the upper portion of the structure with a lower edge spaced from the other wall to form a gravity feed upper hopper in said structure having a restricted outlet and for feeding minute articles therefrom, a trap plate inclining upwardly from said other wall below said outlet and inclined plate and parallel with the latter and forming with said inclined plate a trap upwardly inclined from said outlet and having an upper discharge end, an inclined deflector plate depending from said inclined wall below the trap plate and parallel therewith and forming with the trap plate a deflecting passageway having a lower discharge end, a pair of deflector plates below said lower discharge end depending respectively from the walls of said structure, one inclining downwardly from said inclined wall, and the other inclining downwardly from said other wall, said pair of deflector plates providing for the passage of the articles therebetween to the bottom of the structure, and an air supply tube in said trap for forcing the articles upwardly and out of said trap to cause the same to cascade over the deflector plates.

CARL G. SOHMER.