Jan. 4, 1944. W. D. WILKINS 2,338,273

SPRAY NOZZLE

Filed June 10, 1942

Fig. 1.

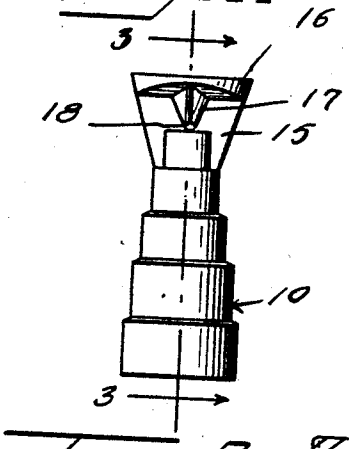


Fig. 2.

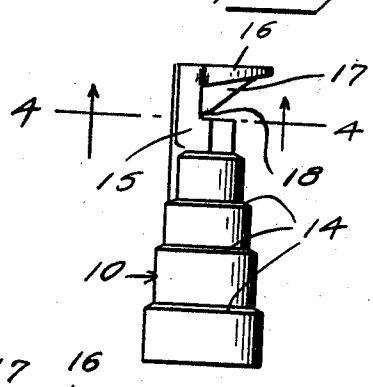


Fig. 3.

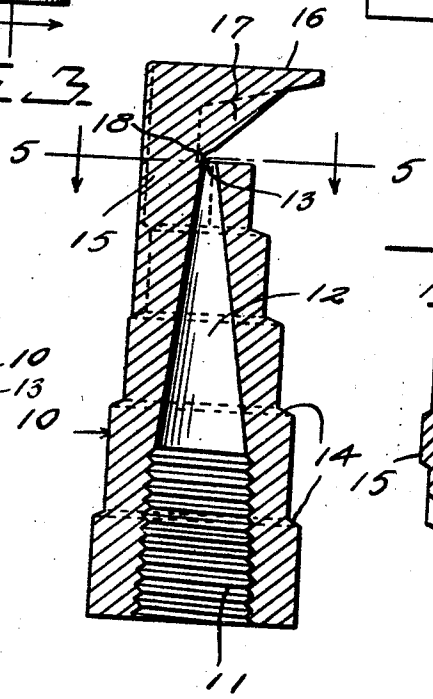


Fig. 5.

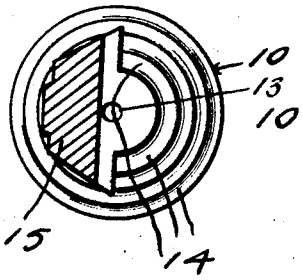
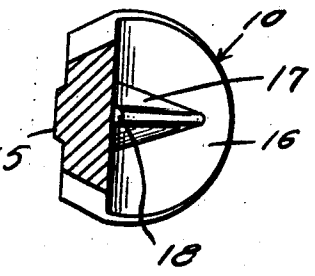


Fig. 4.



Inventor

W. D. Wilkins

By K. F. Randolph

Attorney

Patented Jan. 4, 1944

2,338,273

UNITED STATES PATENT OFFICE

2,338,273

SPRAY NOZZLE

Walter D. Wilkins, Lubbock, Tex.

Application June 10, 1942, Serial No. 446,501

3 Claims. (Cl. 299—122)

This invention relates to a spray nozzle especially but not necessarily adapted for use for spraying cotton plants in the eradication of worms or insects.

A particular object is to provide a construction which may be manufactured inexpensively and in a single piece and is well adapted for manufacture from scrap aluminum as well as any other scrap metal.

An important object is to provide a nozzle having an overhanging deflector with a rib functioning dually to reinforce the same and the provision of a depression or wall to spread or diffuse the spray.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawing illustrating an operative embodiment.

In said drawing:

Figure 1 is a view in front elevation of the improved nozzle;

Figure 2 is a view thereof in side elevation;

Figure 3 is a central vertical section taken on the plane of line 3—3 of Figure 1;

Figure 4 is a horizontal section taken on the plane of line 4—4 of Figure 2, and

Figure 5 is a horizontal section taken on the plane of line 5—5 of Figure 3.

Referring specifically to the drawing wherein like reference characters designate like or similar parts, the nozzle as a whole is designated 10 and is capable as shown of being manufactured in a single piece as by casting it from scrap aluminum or other metals. The nozzle is hollow and its bore has screw threads at 11 whereby it may be attached to the outlet pipe of a sprayer and, for instance, a quarter inch outlet pipe as used on sprayers for material to kill worms on growing cotton plants or for other uses. The bore from the screw threads 11, as at 12, tapers to a small outlet or discharge opening at 13. It will be noted that the nozzle is exteriorly stepped as at 14, progressively, to use minimum metal and, in general, conformative to the reduction in diameter of the bore.

Integral with the nozzle or body 10 at the outlet and, is a fan shaped wall 15 and extending laterally therefrom in spaced relation to the outlet opening 13 is a spreader wall 16.

The surface of wall 16 presented toward the nozzle opening 13 is inclined outwardly and away from wall 15 to direct liquid from the nozzle upwardly and outwardly therefrom.

The walls 15 and 16 are reinforced by a rib 17 integral therewith and extending from approximately the opening 13 and centrally with respect to the bore of the nozzle. This rib 17 has its bases at the walls 16 and 17 reduced relatively to said walls and its sides inclined towards each other to a dividing edge that is inclined upwardly and away from opening 13 also serves to spread the liquid or material discharged through the opening 13 and, in addition thereto, it will be noted that the rib along its dividing edge and leading directly from the opening 13 and overhanging the same is a flattened and preferably curved surface or depression 18 which the discharged liquid strikes and is more effectively sprayed as a result.

Various changes may be resorted to provided they fall within the spirit and scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A spray nozzle having an outlet opening, a wall spaced from and overhanging said opening, and a relatively narrow spreader rib on the nozzle extending from adjacent said opening to the wall and disposed in the line of discharge through the opening, said rib having a depressed portion relatively close to and overhanging the opening, said depressed portion having a concave surface to facilitate spraying.

2. A nozzle of the class described having a bore therethrough terminating in a relatively small discharge opening, a wall integral with the nozzle, a spreader wall integral with said first wall and extending laterally therefrom in overhanging and spaced relation to the opening, a rib integral with said walls centered with respect to the opening and extending on a diagonal line from the same to the spreader wall, and said rib directly over the opening having a concave portion to facilitate spraying.

3. A nozzle of the class described having a bore therethrough terminating in a relatively small discharge opening, a wall on the nozzle, a spreader wall extending laterally from said first wall in overhanging and spaced relation to the discharge opening, a rib on said walls centered with respect to the opening and extending on a diagonal line from the same to the spreader wall, and said rib directly over the opening having a concave portion to facilitate spraying.

WALTER D. WILKINS.