

No. 693,496.

Patented Feb. 18, 1902.

C. T. CHILDERS.
SPRAYING DEVICE.

(Application filed June 27, 1901.)

(No Model.)

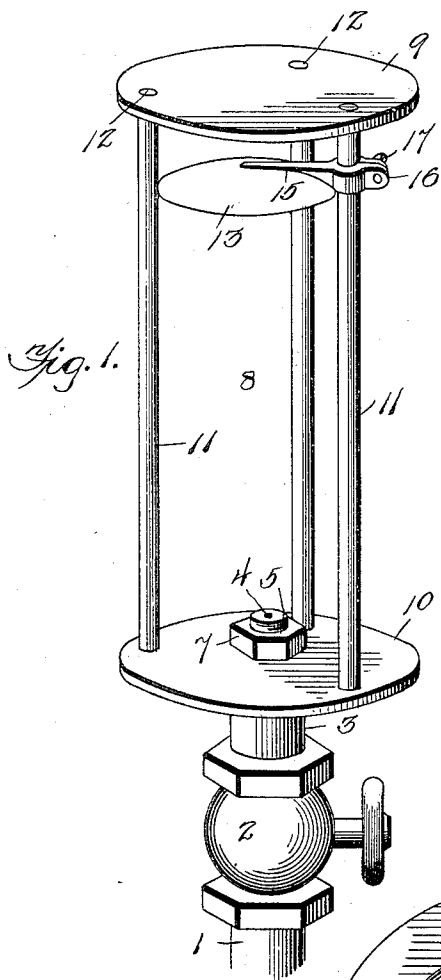


Fig. 1.

Fig. 2.

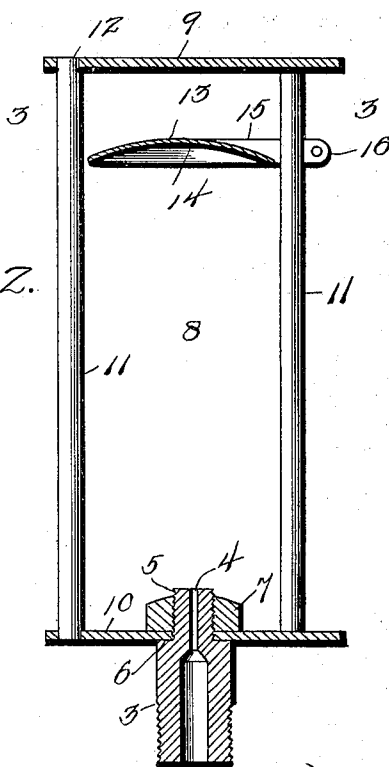
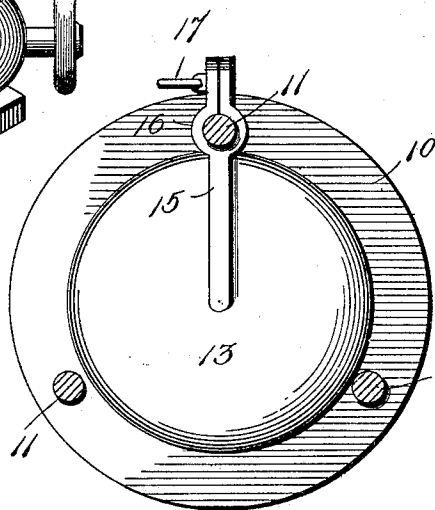
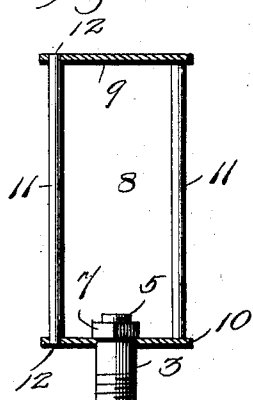


Fig. 3.

Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES T. CHILDERS, OF GALESBURG, ILLINOIS.

SPRAYING DEVICE.

SPECIFICATION forming part of Letters Patent No. 693,496, dated February 18, 1902.

Application filed June 27, 1901. Serial No. 66,278. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. CHILDERS, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Spraying Devices, of which the following is a specification.

This invention relates to sprayers or spraying devices, and has special reference to an improved type of spraying device designed for breaking up a jet or stream of water into a mist or fine spray.

While the spraying device is necessarily capable of general application, still the present invention contemplates a construction possessing special utility in connection with display-stands, such as are employed for displaying green vegetables and fruits, whereby means may be provided for supplying enough moisture to keep the products fresh and crisp. This special use of the invention is disclosed and explained in my companion application, Serial No. 62,279, filed of even date herewith.

With these and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a preferred construction of the spraying device. Fig. 2 is a vertical sectional view thereof. Fig. 3 is a sectional view on the line 3 3 of Fig. 2. Fig. 4 is an elevation showing a simplified form of the device in which a separate impact-plate is dispensed with.

Like numerals of reference designate corresponding parts in the several figures of the drawings.

In carrying out the invention the spraying device is necessarily associated with a suitable water-supply, preferably conducted thereto through a water-supply pipe 1. In the application of the invention as a sprayer or mist-producing device for display-stands, such as disclosed in my other application aforesaid, a water-supply pipe 1 constitutes the support for the spraying device and is preferably associated with a suitable controlling-valve 2; but these features may of course be changed to suit the particular use of the sprayer.

The spraying device proper includes a jet-nipple 3, which is coupled with the water-supply pipe and is provided at one end with a contracted jet-orifice 4, through which the water passes in a very fine stream or jet, and at the same end the said jet-nipple is provided with an exteriorly-threaded nozzle portion 5, and at the base of the latter there is provided a bearing-shoulder 6, with which co-operates a binding-nut 7 to detachably clamp in position the open distributing-cage 8, which is supported upon and extends beyond the jet-nipple 3 within the longitudinal plane thereof.

The open distributing-cage 8 essentially consists of a pair of upper and lower end plates or disks 9 and 10, respectively, and a plurality of tie-rods 11, connecting the said end plates or disks and riveted or otherwise rigidly fastened at their ends, as at 12, to the said plates. The end plates or disks 9 and 10 are spaced a distance apart and are securely bound together by the series of interposed tie-rods 11, thus forming an open cage which is removable and replaceable upon the nipple as an entirety, and at this point it will be observed that one of the said end plates or disks 10 is held clamped upon the bearing-shoulder 6 by the binding-nut 7. This construction admits of the spraying device being easily repaired or adjusted and a worn-out part readily replaced.

In its simplest form the end plate or disk 9 constitutes the impact-plate against which the fine stream or jet of water is directed, thus serving to break the same up into a mist or fine spray, which is distributed out laterally from the cage from beneath the plate. This form of the invention is shown in Fig. 4 of the drawings; but the preferable construction involves the employment of a separate adjustable impact-plate 13, working inside of the circle of the tie-rods 11 and provided with a dished or concave impact-face 14, against which the jet of water is directed. The separate impact plate or disk 13 may be adjustably supported in any suitable manner; but a convenient way of accomplishing this is shown in the drawings and consists in fitting the plate or disk to a holding arm or bracket 15, provided with a clip 16, slidable upon one of the rods 11 and held in any adjusted position by the fastening device or nut 17. The

adjustment of the plate or disk 13 serves to determine the character of the mist or spray produced.

Various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A spraying device comprising a jet-nipple, an open distributing-cage consisting of spaced end plates and a plurality of tie-rods connecting the same, clamping means for detachably binding one of said plates to the nipple, and an adjustable impact-plate arranged within the cage and having an adjustable connection with one of the tie-rods.

2. A spraying device comprising a jet-nipple having a threaded nozzle portion, an open distributing-cage consisting of spaced end plates and a plurality of tie-rods connecting

the same, one of said plates fitting over the threaded nozzle portion, and a binding-nut also engaging said threaded nozzle portion and the end plate fitting thereover.

3. A spraying device comprising a jet-nipple, an open distributing-cage supported by said nipple and having a rod member, and an adjustable impact-plate arranged inside of the cage and having a support adjustably engaging said rod member.

4. A spraying device comprising a jet-nipple an open distributing-cage supported by said nipple and extending beyond the same, said cage having a rod member, and a concaved impact-plate located within the cage and having a holding-arm provided with a clip adjustably engaging said rod member.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES T. CHILDERS.

Witnesses:

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