Nov. 21, 1950 V. C. CERASI 2,530,808

WATERWORKS DEVICE

Filed March 8, 1949

Fig. 1

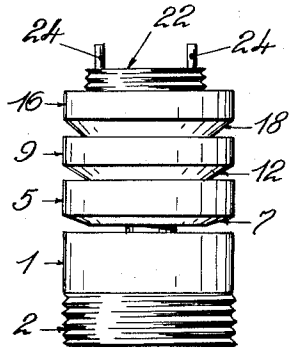


Fig. 2

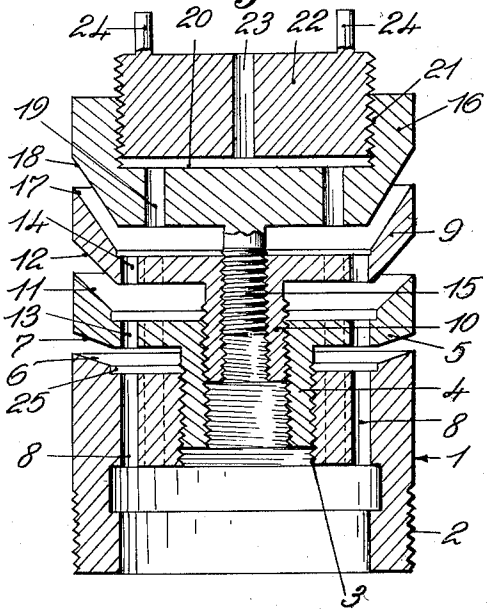


Fig. 3

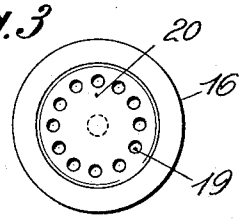


Fig. 4

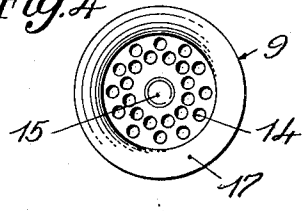


Fig. 5



Fig. 6

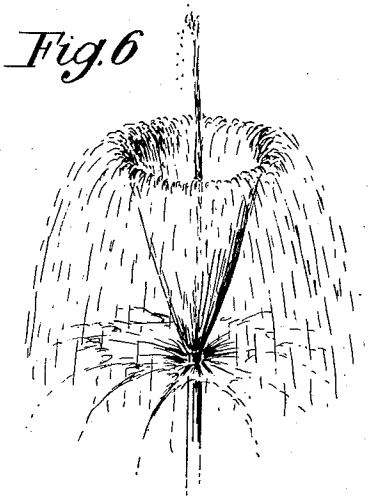
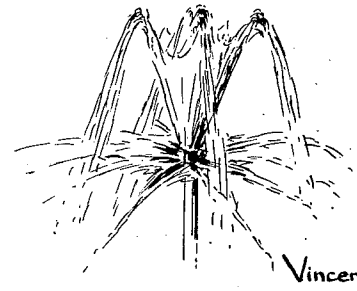


Fig. 7



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Patented Nov. 21, 1950 2,530,808

UNITED STATES PATENT OFFICE

2,530,808

WATERWORKS DEVICE

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Application March 8, 1949, Serial No. 80,188
In Italy January 12, 1949

2 Claims. (Cl. 299—141)

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The present invention relates to a device for water-spouts in ornamental forms which allows the embodiment of water-works having decorative character, which may be easily applied to the sprayers for fields, plantbeds, garden fountains and the like.

The device according to the present invention, can be installed on any water-plug under pressure, preferably directed upwards, and allows as well, through simple displacements of the elements which compose it, to vary the form of the water-spout which comes out of the device, in order to obtain different esthetic effects.

The device consists substantially in a series of elements facing one another and connected so as to permit the variation of the relative distance, so as to embody between the two substantially frusto-conical shapes which confer to the water-spout under pressure which enters the device, a conoidal shape of different inclination according to the thickness of the out-flowing water and of its pressure.

The thickness of the out-flowing water between the various elements of the device may be controlled by nearing or diverting the very elements; same control may be operated so as to obtain the water out-flowing rather than in a continuous shape, with a fine sprays-enevelope, which results in a very particularly esthetic effect.

The device is preferably composed by more elements screwed in one another, and allows the embodiment of as many-blades as are the conoidal shapes comprised between the elements.

In order to diminish the number of water-blades out-flowing, it is sufficient to tightly-screw, among themselves, the two elements which define the water-blade to be abolished.

Finally, over the superior element is provided a central spout obtained through a stopper which by being screwed in the very element, allows the control or the obstruction of the spout.

In order to confer to the water-blades which out-flow from the device the required effect, the various shapes between the elements form frusto-cones each of which become flatter progressively from top to bottoms.

In order to allow the passage of water when the conical surfaces are in contact, water chambers are provided between the central zones of said surfaces.

A preferred form of embodiment of the invention is illustrated in the attached drawings, in which:

Fig. 1 shows a lateral elevation of the device;

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Fig. 2 shows a vertical diametral section of the device;

Figs. 3 and 4 show the plan views of two elements composing the device, and

Figs. 5, 6 and 7 show some forms of water-works obtainable through the device.

With reference to drawings:

The device is embodied by a series of elements screwed within one another and particularly by an inferior element 1, substantially cylindrical, through which the water is fed to the device. Element 1 has in its lower part a thread 2 for the connection to the water plug to be used and in its central position a hole 3 with thread in which can be screwed the shank 4, which is also threaded, of the upper element.

The superior surface of the element 1 and the inferior one of the element 5, present, facing each other, two zones constituted by annulus of equal surface. Externally to said zones and connected to them, are two conical zones 6 and 7 which give the shape to the out-flowing water.

The water, which enters from the lower part of element 1, rises along the annular row of cylindrical conducts 8 surrounding the threaded hole 3 so as to arrive between the upper disc of element 1 and the lower disc of element 5; from here the water comes out under the shape of a continuous blade or of an envelope of sprays.

Element 5 is surmounted by the substantially analogous element 9, which through the threaded shank 10 is screwed in the threaded shank 4 of element 5.

When the zones 6 and 7 are in contact, a water chamber 25 is formed between said discs.

Also elements 5 and 9 present, facing each other two annulus surrounded by the conical surfaces 11 and 12 which in their turn define the upper water-blade.

Elements 5 and 9 are pierced by a plurality of vertical conducts 13 and 14 surrounding the threaded shanks of the elements and able to adduce to the upper annulus of each of the elements, the water fed to the device from the lower inletting opening.

In the central shank 10 of element 9 is screwed the central shank which is also threaded, 15, of the element 16.

The elements 15 and 16 repeat the embodiment afore described, and have two facing annulus, surrounded by the conical surfaces 17 and 18, so as to produce the third upper blade, of the water out-flowing from the device.

Also element 16 is pierced by the vertical conducts 19 which arrive to its upper disc 20.

Around the disc **20**, is provided a sleeve **21** internally threaded in which can be screwed the stopper **22**, substantially cylindrical and pierced by the axial conduct **23**.

The stopper **22** is provided with two little projections **24** for the fitting of the key, for screwing and unscrewing it, in order to obstruct more or less the conduct **23**.

When the elements are fully screwed in one another, the water fed to the device finds no exit.

When, for instance, element **5** is unscrewed so as to create a passage between the conical elements **6** and **7**, the water passing through the conducts **8** flows out in the shape of a continuous cone through said elements.

The situation is repeated analogously for the upper passages defined respectively by the conical elements **11—12** and **17—18**.

The central spout is produced through hole **23** only when the stopper **22** is distanced from disc **20** allowing the passage to the water through conducts **19**.

Figs. from 5 to 7 show merely by way of example, some of the shapes of the water works according to: (1) the number of passages open to the out-flow of the water; (2) their thickness and to the greater or smaller pressure of the water fed to the device, which pressure can be operated by means of a valve away from the device and has nothing in common with it.

Particularly Fig. 5 shows the case where only one of the conical passages is open, whilst Figs. 6 and 7 show two water works with two conical passages; that shown in Fig. 6 has the central spout which is missing in the case of Fig. 7.

As every shape of the out-flowing water blade, owing to a constant feeding pressure, to the device, corresponds to a particular fixed-position of the various elements constituting the device, various positions indicating different water patterns may be indicated externally on the device to facilitate adjustment.

I claim:

1. A water works spray device adapted to emit sprays of varying shapes comprising, in combination, a cylindrical body threaded for connection with the water line and having an innerly-threaded bore portion, a plurality of cylindrical cup-shaped elements interconnected in superposed relationship by adjustable threaded engagement, said elements including a lower element, an upper element, and at least one intermediate element, each of said elements having a threaded bore and a threaded cylindrical projection engageable in the threaded bore of the next subjacent element, the projection of the lower element being engageable in the threaded bore portion of said body, said body, said lower element and said intermediate element having a peripheral inwardly inclined zone in which is received the base portion of the next superposed element and an axial recess defining an open space between said body and said elements, axial ducts extending through said body and said elements, the axial ducts of said body and said lower and intermediate elements extending into the respective axial recesses, and an axially-bored stopper threadedly engaged with the threaded bore of said upper element to restrict the flow of water from the axial ducts of said upper element.

2. A device according to claim 1, wherein the inwardly inclined zones have a gradually decreasing angle of inclination in progression from the body to the upper element.

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