(No Model.)

W. S. KISINGER.

WATER SPRINKLER.

No. 421,729. Patented Feb. 18, 1890.

FIG. 1.

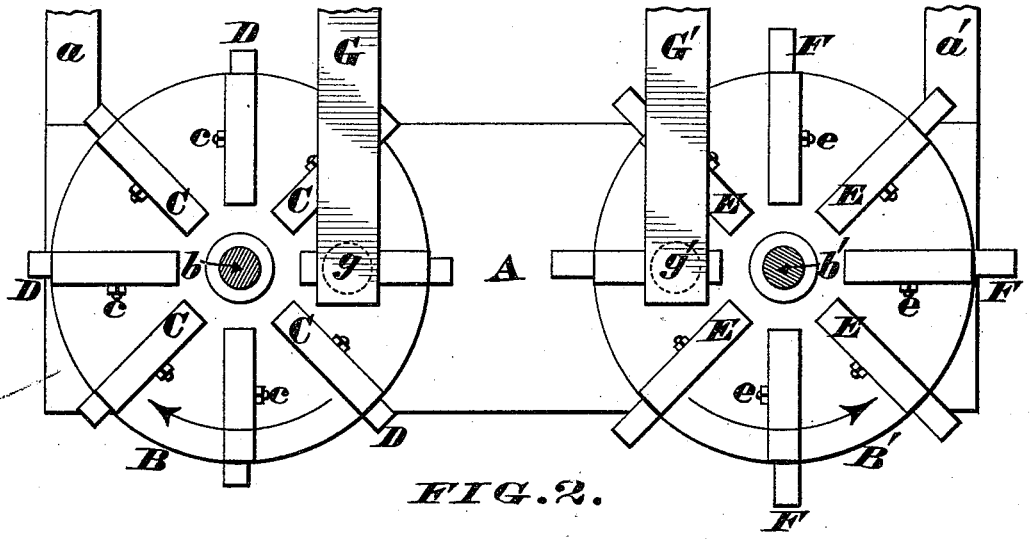


FIG. 2.

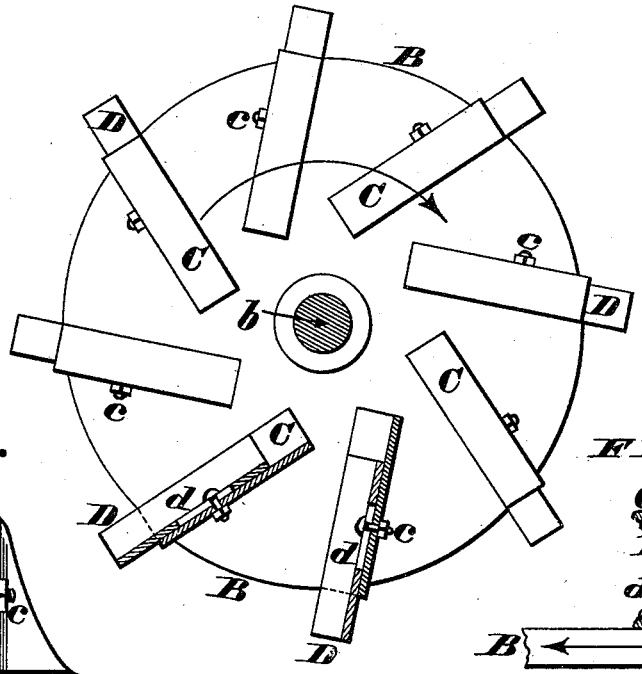


FIG. 3.

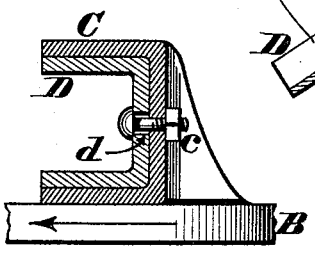
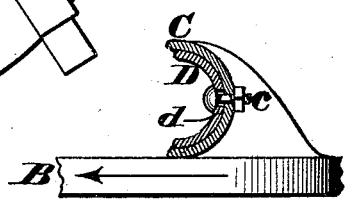


FIG. 4.



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WATER-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 421,729, dated February 18, 1890.

Application filed November 6, 1889. Serial No. 329,449. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. KISINGER, a citizen of the United States, residing at Bellevue, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Water-Sprinklers; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form a part of this specification.

My improved water-sprinkler consists of a plate or disk whose upper surface is armed with a series of longitudinally-adjustable vanes or buckets that disperse the water by the centrifugal velocity of said disk, which latter is usually driven by geared connections with one of the ground-wheels of a wagon, cart, or other appropriate vehicle. Said vanes are disposed either radially or tangentially upon the disk, and are hollow or concave in front, or, in other words, on the side that first comes in contact with the stream of water discharged from the tank or other reservoir, the invention being more especially applicable to wagons used for sprinkling streets, roads, &c., as hereinafter more fully described.

In the annexed drawings, Figure 1 is a plan of a pair of disks provided with my adjustable vanes or buckets. Fig. 2 is an enlarged plan of one of said disks, a pair of the vanes being sectioned horizontally. Fig. 3 is an enlarged vertical section of one of said vanes. Fig. 4 is a similar section of a modified form of the vane.

Referring to Fig. 1, A represents a platform or frame, and *a a'* are hangers wherewith it is supported from the rear end of a sprinkling-wagon, said platform having suitable bearings for a pair of vertical shafts *b b'*, which carry plates or disks B B', although the disk shape is preferred. The upper surface of disk B is armed with a series of long, narrow guides C, which are here shown as being disposed radially with reference to the axis of said disk, and each guide is furnished with one or more bolts or screws *c*, that traverse longitudinal slots *d* of the adjustable vanes or buckets D. These vanes are hollow or concave, as seen in Fig. 3, and their open sides are presented in the direction the disk turns.

E represents the fixed guides, *e* the clamp-screws or bolts, and F the longitudinally-adjustable vanes or buckets of the other disk B'.

The dotted circles *g g'* represent discharge-openings in the bottom of conductors G G', which receive water from the tank of the wagon.

The operation of this sprinkler is as follows: The water discharged from the ventages or nozzles *g g'* falls directly upon the rapidly-revolving disks B B' and is instantly scooped up by the concave buckets D F, which throw the fluid to a considerable distance in finely-divided jets or spray, the two disks being run in opposite directions, as indicated by the arrows in Fig. 1. If the water is to be thrown but a limited distance, the vanes need not project beyond the end of their respective guides, and by simply shifting said vanes outwardly the distance to which the water can be thrown will be regulated accordingly. In Fig. 1 the vanes F project farther than the vanes D, in order that the sprinkler B' may throw water a greater distance than the other disk B. In Fig. 2 the guides C, and consequently their inclosed vanes D, are arranged tangentially upon the disk B, thereby indicating that these devices D may be disposed in any manner that will be the most effective. In Fig. 3 the vane D takes the shape of a three-sided rectangular trough, while in Fig. 4 the vane is a semicircular tube. Therefore it is apparent that the exact shape of the vane is immaterial, provided it has the desired scooping action on the water and is capable of being adjusted longitudinally for the purpose of regulating the distance to which the spray can be thrown.

In another application, filed by myself and Henry G. Stiebel, Jr., July 6, 1889, Serial No. 316,699, the concave vanes or buckets are shown and claimed more broadly than in the present case. Therefore I disclaim from this application whatever is shown and claimed in the joint application above referred to.

I claim as my invention—

1. A centrifugal sprinkler consisting of a

plate or disk whose upper surface is provided with a series of fixed guides carrying longitudinally-adjustable concave vanes or buckets, which buckets are open at their outer ends and have their concave sides presented in the direction said disks turn, substantially as herein described, and for the purpose stated.

2. The combination, in a centrifugal sprinkler, of the plate or disk B, provided on its upper surface with a series of fixed guides C, carrying longitudinally-adjustable concave vanes or buckets D, which buckets are open at their outer ends, have their concave sides presented in the direction said disk turns, and are slotted at *d* to admit clamp-screws *c*, wherewith they are secured to said guides C, for the purpose described.

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

WILLIAM S. KISINGER.

Witnesses:
JAMES H. LAYMAN,
A. W. MCCORMICK.