March 31, 1953 J. S. COCKRELL 2,633,384

HYDROSPIN SPRAY HEAD

Filed Nov. 23, 1949

Fig. 1.

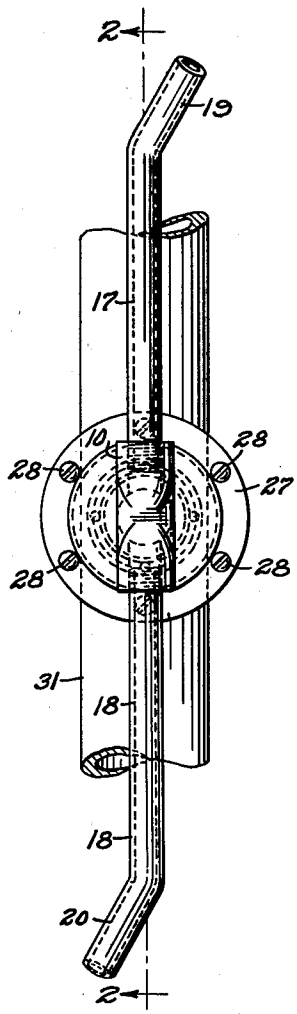


Fig. 2.

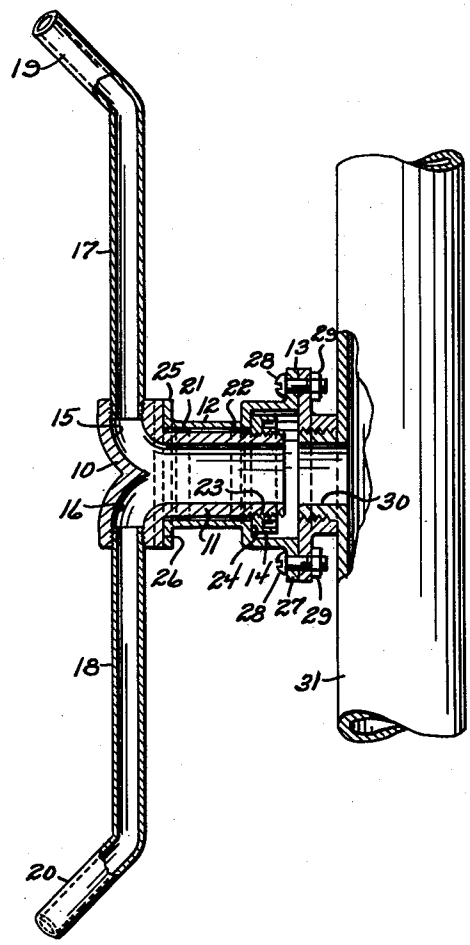
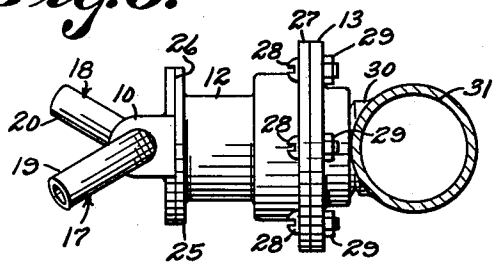


Fig. 3.



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HYDROSPIN SPRAY HEAD

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1 Claim. (Cl. 299—69)

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This invention relates to rotatable spray heads of the lawn sprinkler type where water flowing through the heads causes the head to rotate, and in particular a spray head having tubular arms with angularly extended outer ends journaled in a tubular base with the head provided with a tubular stem that is secured in the base by a lock nut threaded on the stem and positioned against the shoulder in the opposite or inner end of the base.

The purpose of this invention is to provide a rotatable spray head wherein the rotating element is locked inside of the head whereby accidental separation of the rotating elements from the head is positively prevented so that the spray head is adapted for spraying water and the like on surfaces of motor vehicles where separation of the head from the base would mar the surface of the vehicle and may break a window thereof.

Various types of rotatable spray heads have been provided but in these the locking elements are positioned on the outer end of the head and nuts, spring rings or pins may work loose and release the rotating head. With this thought in mind this invention contemplates a rotatable spray head that is positively anchored in the mounting means whereby the rotating element is not removable from the mounting elements without separating the mounting base.

The object of this invention is, therefore, to provide means for positively locking the rotatable element in a spray head whereby the holding means of the rotating element is not removable without separating parts of the mounting casing, in which it is installed.

Another object of the invention is to provide a rotatable spray head through which small resilient particles may be sprayed with water without danger of the elements clogging up the passages through the head.

A further object of the invention is to provide a rotatable spray head mounting wherein the rotatable element is positively locked to the mounting means, which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a rotating spray head and a mounting therefor wherein a flange threaded on a nipple of a supply pipe provides a base for a mounting sleeve and outwardly extended spraying arms are mounted in a head journaled in the sleeve and secured therein by a lock nut positioned against a shoulder in the sleeve.

Other features and advantages of the invention will appear from the following description

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taken in connection with the drawings wherein Figure 1 is a view showing a front elevation of the improved spray head with the head mounted on a pipe the ends of which are broken away.

Figure 2 is a longitudinal section taken on line 2—2 of Figure 1 of the spray head with parts broken away and parts shown in elevation.

Figure 3 is an end elevational view of the spray head with the pipe on which the head is mounted shown in section.

Referring now to the drawings wherein like reference characters denote corresponding parts the rotatable spraying device of this invention includes a spray head 10 having a tubular stem 11 with the stem journaled in a mounting sleeve 12 carried by a base 13, and with the stem 11 secured in the sleeve 12 by a lock nut 14.

In the design shown the spray head 10 is provided with arcuate passages 15 and 16 and tubular arms 17 and 18 are threaded in the outer ends of the passages 15 and 16, respectively. The outer ends of the arms 17 and 18 are bent to provide angularly disposed sections 19 and 20, respectively and with the sections 19 and 20 bent as illustrated in Figure 1 water rushing through the arms rotates the head 10 in a counterclockwise direction.

The tubular stem 11 of the head 10 is journaled by bearing rings 21 and 22 in the mounting sleeve 12 and the inner end of the stem is threaded as shown at the point 23 whereby the lock nut 14 is threaded thereon.

The mounting sleeve 12 is provided with a shoulder 24 against which the lock nut 14 is seated and with a flange 25 at the outer end positioned against a circular surface 26 forming the base of the spray head, the spray head is securely held in the mounting sleeve and the freedom of movement thereof is determined by the position of the lock nut 14. It will be understood however that the lock nut 14 cannot be removed from the inner end of the stem 11 without separating the mounting sleeve 12 from the base 13.

The inner end of the sleeve 12 is provided with a flange 27 by which the sleeve is mounted on the base 13 with bolts 28 and lock nuts 29. The base 13 is threaded on a nipple 30 extended from the surface of a pipe 31 through which water is supplied to the mounting of the spray head.

With the parts arranged in this manner the spray head is provided with an open unobstructed passage and small rubber balls or resilient pellets, suspended in water passing through the spray head, may pass through the passages without danger of the pellets collecting in pockets therein.

It will also be noted that with the rotating

element of the spray head mounted in this manner accidental separation of the rotating elements from the mounting is prevented.

It will be understood that modifications may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

A rotatable spray head comprising a vertically disposed tubular stem the inner end of which is threaded and the outer end of which provides a head with arcuate outwardly extended passages therein, outwardly extended arms with angularly positioned outer ends carried by the head and positioned in the outer ends of the said arcuate passages, said arms extending in horizontal planes perpendicular to the axis of the stem, a mounting sleeve in which the tubular stem is journaled, said mounting sleeve having an enlarged section on the lower end providing a shoulder in the inner surface spaced from the inner end thereof and having an annular flange around the lower end of the said enlarged section, a lock nut threaded on the said tubular stem and positioned against the shoulder of the mounting sleeve, a supply pipe having a threaded nipple extended from one side thereof, a base positioned on the threaded nipple of the supply pipe, said base having an annular flange formed to coact with the flange of the enlarged section of the mounting sleeve, and bolts securing the flange of the enlarged section through the flange of the base for securing the mounting sleeve and spray head to the base and nipple of the supply pipe.

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