J. PETERSON.

IRRIGATING DEVICE.

APPLICATION FILED FEB. 20, 1915.

1,204,309. Patented Nov. 7, 1916.

Fig. 1.

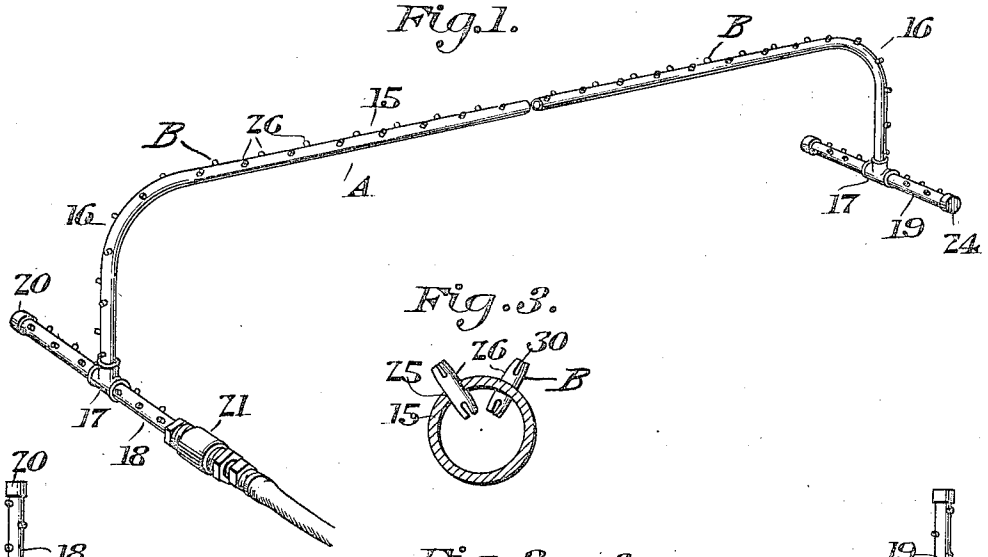


Fig. 3.

Fig. 2.

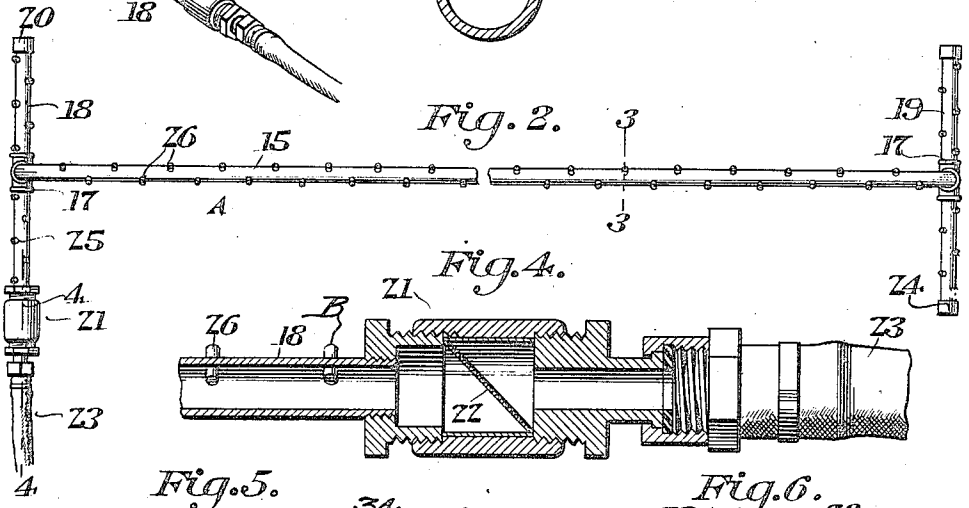


Fig. 4.

Fig. 5.

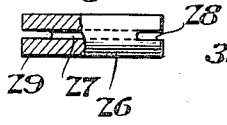


Fig. 7.

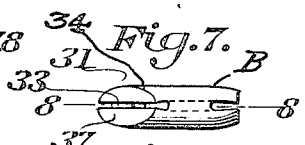


Fig. 6.

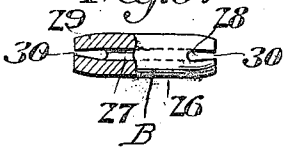
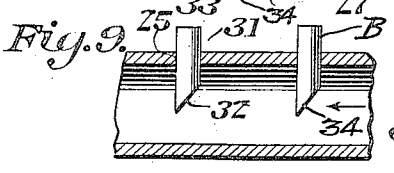


Fig. 8.



Fig. 9.



Inventor

John Peterson

Witnesses

M. H. Slifer

Wm. Bagger

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

JOHN PETERSON, OF SARATOGA SPRINGS, NEW YORK.

IRRIGATING DEVICE.

1,204,309. Specification of Letters Patent. Patented Nov. 7, 1916.

Application filed February 20, 1915. Serial No. 9,672.

To all whom it may concern:

Be it known that I, JOHN PETERSON, a citizen of the United States, residing at Saratoga Springs, in the county of Saratoga and State of New York, have invented new and useful Improvements in Irrigating Devices, of which the following is a specification.

This invention relates to irrigating devices of that type which are known as sprinklers.

The prime object of the invention is to simplify and improve the construction of the nozzle or outlet and the manner of connecting the same with the supply pipe.

A further object of the invention is to produce a sprinkler nozzle which to a large extent will operate as a strainer to exclude obstructions whereby the bore of the nozzle might become clogged.

A further object of the invention is to produce a sprinkler nozzle which may be easily and thoroughly cleansed by flushing the supply pipe with which it is connected.

A further object of the invention is to simplify and improve the construction and arrangement of the supply pipe and to produce in connection therewith a primary strainer whereby obstructions of a coarse nature will be prevented from reaching the sprinkler nozzles.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawing,—Figure 1 is a perspective view of an irrigating device constructed in accordance with the invention. Fig. 2 is a top plan view. Fig. 3 is a transverse sectional view taken on the line 3—3 in Fig. 2. Fig. 4 is a sectional detail view taken on the line 4—4 in Fig. 2. Fig. 5 is a side view partly in section, showing one form of the improved sprinkler nozzle before completion. Fig. 6 is a side view partly in section showing the nozzle completed. Fig. 7 is a side view showing a modified construction of the nozzle. Fig. 8 is a sectional view taken on the line 8—8 in Fig. 7. Fig. 9 is a sectional detail view of the supply pipe showing the same equipped with the form of nozzle shown in Figs. 7 and 8.

Corresponding parts in the several figures are denoted by like characters of reference.

The irrigating stand A, which may be of many different forms, has in the drawing been shown as comprising a pipe 15 having downturned ends 16 which are connected by T-couplings 17 with horizontally disposed foot pipes 18 and 19 which are intended and adapted to rest on the ground, thereby supporting the pipe 15 in an approximately horizontal position and at an elevation which is determined by the dimensions of the downturned portions 16.

The foot pipe 18 is obstructed at one end by a cap 20. The other end of said foot pipe carries a cylindrical casing 21 containing a diagonally disposed strainer 22, said strainer casing being in turn connected with the source of supply by means of a hose 23 or in any other convenient manner. The foot pipe 19 is terminally obstructed by detachable caps 24.

The main pipe 15, as well as the pipes 18, 19, are provided with apertures 25 for the reception of sprinkler nozzles B. Each of said nozzles comprises a cylindrical body 26 which may consist of a short piece of wire, such as a copper wire of suitable thickness, said cylindrical body having an axial bore 27 and being provided at the ends thereof with slits or kerfs 28 which may be of a width approximately equal to the diameter of the bore, each of said kerfs producing two spaced lugs 29. By bending or pressing said lugs in the direction of each other without causing them to impinge on each other, narrow slits 30 will be produced at the ends of the body in spaced relation to the ends of the bore, and by so bending the lugs, it will also be seen that the ends of the nozzle will become slightly tapered externally, as clearly seen in Fig. 6. The nozzles are to be made of a diameter equal to or very slightly exceeding the internal diameter of the apertures 25, so that by inserting the nozzle into one of the apertures it may readily be driven home by slightly tapping it with a hammer or similar imple-

ment, causing it to be held or retained in position by frictional engagement with the walls of the aperture. The pipes 15, 18 and 19 may be ordinary iron pipes with walls of a thickness materially less than the length of the nozzles, so that the nozzles when applied will project partly within and partly outside of the pipes, as will be very clearly seen in Figs. 3 and 9 of the drawing.

Under the modified construction of the nozzle shown in Figs. 7, 8 and 9, one end of the same is cut off obliquely, as seen at 32, prior to the formation at this end of the kerf or slit, which is here designated by 33. It follows that when the terminal lugs, here designated by 34, are bent in the direction of each other, an inclined slit will be produced which is of greater length than would otherwise be the case, thereby facilitating the admission of water to the bore 27 and also increasing the straining area.

When water is turned into the irrigating stand it will find its way through the nozzles which, as seen in the drawing, may be faced or pointed in various directions. The compressed lugs at the outer ends of the nozzles will spread the water in the form of a fine spray closely imitating a gentle rain.

It is obvious that the irrigating stand may be readily moved from place to place, as required. Should the nozzles become obstructed, the caps 20 and 24 may be removed, after which by turning water through the pipes under pressure the said pipes will be flushed and obstructions removed from the inner ends of the nozzles.

It will be readily seen that the shape and formation of the irrigating stand may be greatly varied without departing from the spirit and scope of the invention. The strainer casing 21 may be dispensed with when desired. It may be also stated that the slit or kerf producing the wings or lugs at the outer or discharge end of the strainer nozzle may be dispensed with when preferred.

At the inner end of the strainer nozzle the kerf or slit producing the wings or lugs is highly essential as well as the subsequent bending of the wings or lugs in the direction of each other to produce a tapering formation of the end portion of the nozzle. This is partly in order that a narrow slit may be formed through which water may pass, while sediment and dirt will be excluded from the bore of the nozzle, thus producing a distinct strainer action. This formation is also highly desirable, inasmuch as the tapered end of the nozzle may be readily inserted into one of the apertures of the irrigating pipe and secured there by a simple tap with a hammer or other tool. The apertures in the irrigating pipe need not be tapered or otherwise specially formed for the reception of the nozzle. The nozzle itself is also free from external threads or from any special structural feature for connection with the irrigating pipe.

Having thus described the invention, what is claimed as new is:—

1. A combined sprinkler nozzle and strainer consisting of a cylindrical body having a longitudinal bore and provided at its intake end with a terminal slit producing spaced lugs, said lugs being bent toward each other to produce an intake opening of less width than the diameter of the bore from which obstructions will thus be excluded.

2. The combination with an irrigating pipe having an aperture in the wall thereof, of a sprinkler nozzle consisting of a cylindrical body having a longitudinal bore and provided at its intake end with a terminal slit producing spaced lugs which are bent toward each other producing an external beveled portion which may be frictionally engaged in the aperture and producing also an intake opening of a width less than that of the longitudinal bore from which obstructions will thus be excluded.

3. A combined strainer and sprinkler nozzle consisting of a cylindrical body having a longitudinal bore and provided at each end with a terminal slit producing spaced lugs which are bent toward each other to form intake and exit openings of less width than the diameter of the bore.

4. The combination with an irrigating pipe, the wall of which is provided with a cylindrical aperture, of a strainer nozzle consisting of a cylindrical body having a longitudinal bore and provided at its intake end with a terminal slit producing spaced lugs which are bent toward each other to produce an external beveled portion for frictional engagement in the aperture.

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

JOHN PETERSON.

Witnesses:
ROBERT O. WARD,
EDWARD QUINLO.