United States Patent

[11] **3,542,294**

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[54] **SPRINKLER SUPPORT**
4 Claims, 2 Drawing Figs.

[52] **U.S. Cl.** **239/201,** 239/276; 248/68
[51] **Int. Cl.** **A01g 25/00**
[50] **Field of Search** 248/68, 49, 76, 87, 85, 125; 239/276, 279, 280.5, 281, 282, 201; 285/61

[56] **References Cited**

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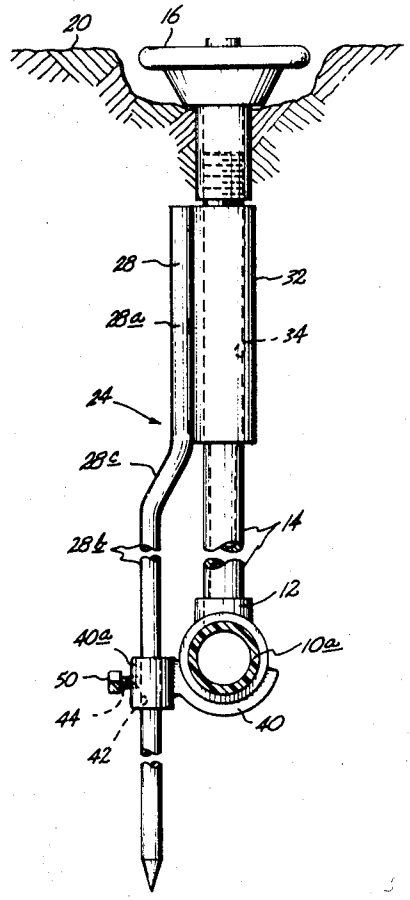
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ABSTRACT: A support device for a horizontal main and a riser assembly projecting upwardly therefrom in a lawn sprinkler system. The support device includes a riser support sleeve snugly receiving the riser assembly and a post extending downwardly from the sleeve adapted to be driven into the ground. A saddle movably mounted on the post below the sleeve provides vertical support for the main.



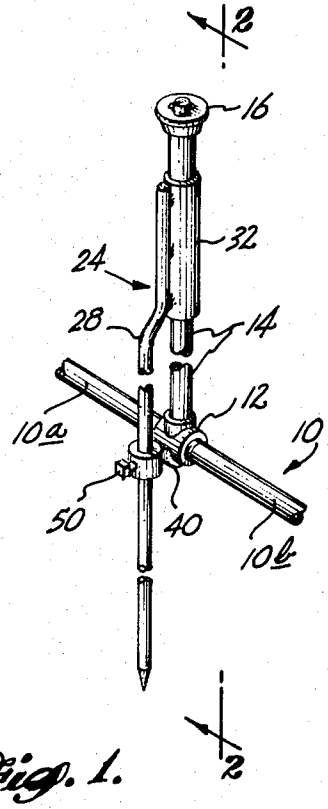


Fig. 1.

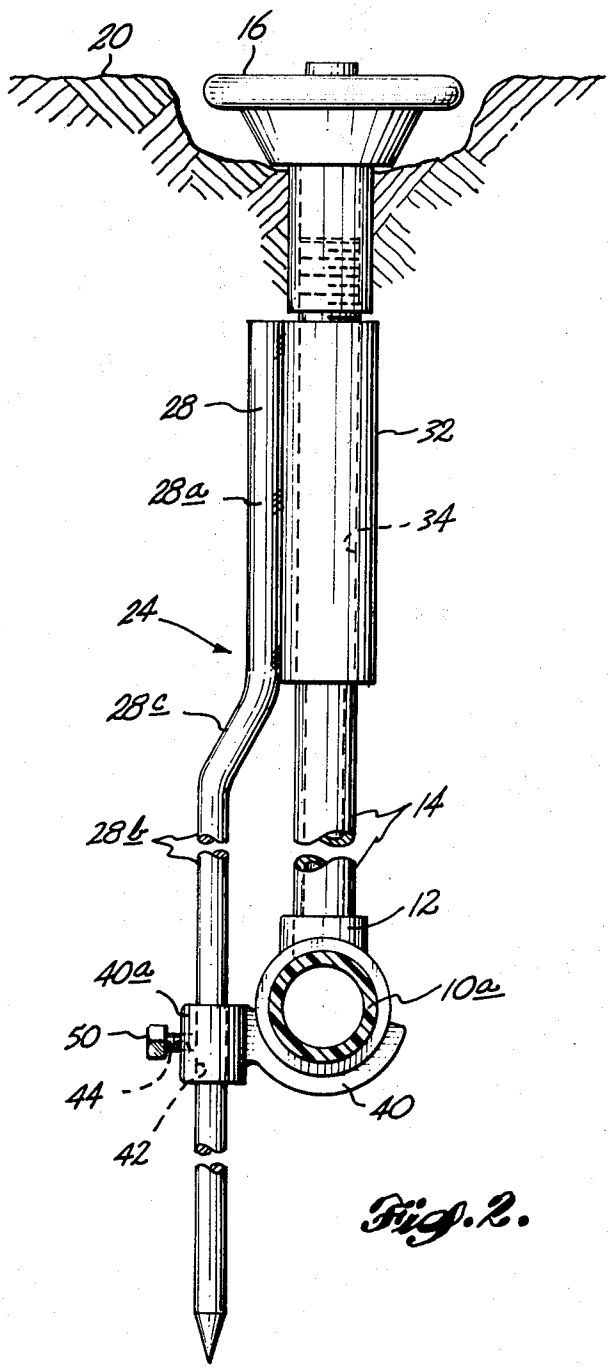


Fig. 2.

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SPRINKLER SUPPORT

This invention relates to lawn sprinkler systems and, more particularly, to a device for supporting a riser assembly and a main in such a sprinkler system.

In a conventional lawn-sprinkling system, one or more riser assemblies project upwardly from a substantially horizontal supply main and these include sprinkler heads attached to the upper ends of riser pipes in the riser assemblies. The mains in such a system are generally buried in the ground, whereas the riser assemblies are at, or protrude above, ground level. In place, a riser assembly and main are subjected to shocks and jarring by the riser assembly being struck by a lawn mower and the like, or through an act of vandalism. This results in breakage of components in the system, which has become more serious in recent years due to the increased use of non-metallic pipes, such as polyvinyl chloride pipes.

A general object of the invention is to provide a novel support device for supporting a riser assembly in a sprinkler system which functions to brace the assembly and inhibit breakage in the system.

Another object is to provide a novel support device for a riser assembly and main, which facilitates the installation of a system with the main at different elevations relative to a post in the support device.

Thus the invention features a novel vertically adjustable saddle in a riser support device which is fixable on a post in the device at different elevations. This permits driving of the device into the ground to obtain a firm footing, and subsequent proper positioning of the main at a desired elevation.

Another object is to provide a support device which permits relatively easy repair of a sprinkler system when such is necessary.

In a particular embodiment of the invention, the support includes a post adapted to be driven into the ground, a sleeve mounted thereon for snugly receiving and supporting a riser assembly, a saddle mounted for movement on the post for supporting a main, and locking means for locking the saddle in a fixed position on the post.

These and other objects and advantages will become more fully apparent as the following description is read in conjunction with the drawings, wherein:

FIG. 1 is a perspective view of a support device constructed in accordance with an embodiment of the invention, the device supporting a riser assembly and main in a sprinkler system; and

FIG. 2 is a view, somewhat enlarged, taken generally along the line 2–2 in FIG. 1.

Referring now to the drawings, at **10** is indicated generally a supply main for a lawn sprinkling system adapted to carry water under pressure. The main includes horizontal pipe sections **10***a*, **10***b*, which are interconnected by a T-fitting **12**.

A riser pipe **14** is secured to the top outlet of T-fitting **12** and projects upwardly from the main. A sprinkler head **16** is secured to the upper end of riser pipe **14**. Water supplied from the main through the T-fitting to the riser pipe under pressure is sprayed upwardly through the top of sprinkler head **16**. The riser pipe and sprinkler head are referred to, collectively, herein as a riser assembly.

As is best seen in FIG. **2**, the main and riser pipe in an installed sprinkler system are buried in the ground, with the top of sprinkler head **16** usually lying substantially level with the surface of the surrounding ground **20**. Adjacent a hedge or in other installations, however, the riser pipe may extend considerably above ground level. In either case, striking of the exposed parts produces jarring of underground components.

A support device constructed in accordance with an embodiment of the invention is indicated generally at **24**. The support device comprises an elongated post, or rod, **28**. The post has a substantially straight upper portion **28***a*, a substantially straight lower portion **28***b* paralleling and offset laterally from portion **28***a*, and an angled portion **28***c* intermediate and interconnecting portions **28***a*, **28***b*. The lower end of post **28** is pointed accommodating driving the post into the ground.

A riser support sleeve **32** is secured, as by welding, to portion **28***a* of the post. The support sleeve has an internal opening or passage **34** extending vertically therealong which snugly receives the riser pipe.

An open-topped saddle **40** is mounted for movement vertically along lower portion **28***b* of the post. The saddle is mounted on the post through a substantially cylindrical mounting portion **40***a* with a bore **42** defined vertically therethrough which receives post **28**. A threaded bore **44** extends through the wall of mounting portion **40***a*, and a screw **50** screwed into threaded bore **44** is adapted to be tightened against post **28** to secure the saddle in various fixed positions on the post. The saddle, when secured in a fixed position on the post, as shown, provides a support upon which the main rests, with such spaced some distance below sleeve **34**.

Describing now the placement and operation of the support device in conjunction with a sprinkler system, in installing a system commonly a trench is dug which conforms to the desired layout of the supply main in the system. Supply main pipe sections are laid in the trench, with a T-fitting, such as that illustrated at **12**, connecting the main pipe sections in each region where it is desired to have a riser assembly.

Post **28** of the support device may be driven into the ground within the confines of the trench, with passage **34** of the pipe sleeve positioned in the path along which riser pipe **14** eventually will follow. It will be noted at this point that the upper end of sleeve **32** is substantially flush with the upper end of post **28**, and provides additional hammer contact area to facilitate driving the post into the ground.

After the post has been driven into the ground to a point where its upper end is sufficiently below the ground surface, riser pipe **14** may be inserted through sleeve **32** and screwed into, or otherwise connected to, the top outlet of T-fitting **12** to secure the riser assembly to the main.

Saddle **40**, which had been mounted on the post prior to its being driven into the ground, is next adjusted vertically on the post to support the main and riser assembly at the desired elevation. Further explaining, with screw **50** loosened and with the saddle positioned below the T-fitting, the main and riser assembly are positioned vertically so that sprinkler head **16** will be substantially flush with the top of surrounding ground **20** (if this is the type of installation desired). Saddle **40** is moved up under the T-fitting and into contact with its bottom. Tightening of screw **50** on the post secures the saddle in position and the main and riser assembly will be supported at the desired elevation. This could be accomplished also by presetting and locking the saddle on the post with the main spaced from the support, and then shifting the main laterally and into the saddle. Filling the trench with dirt completes the installation process.

With the trench filled, it should be evident that the post and riser support sleeve will support the riser assembly against lateral movement and the saddle and post will support the riser assembly and main against settlement.

Should it be necessary at a future time to work on the riser assembly or main, this is accomplished easily due to the novel construction of the support device. The open space extending between the riser support sleeve and the open top of the saddle along one side of the post permits the use of suitable tools for dismantling, reassembling or otherwise repairing the riser assembly and main. Further, with dirt removed from an area around the support and riser assembly, and with the riser assembly removed from the T-fitting, the main may be moved laterally of and away from the support device without disconnecting the supply main pipe sections and the T-fitting.

While an embodiment of the invention has been described, variations are possible without departing therefrom. It is desired to cover all such modifications and variations as would be apparent to one skilled in the art and that come within the scope of the appended claims.

I claim:

1. A support device for a sprinkler system including a riser pipe projecting upwardly from a horizontal main connected to the riser pipe comprising:

an upright elongated post;

a riser pipe support sleeve disposed with its axis upright, and secured to and held laterally outwardly of one side of said post adjacent the post's upper end, said sleeve having an internal circumferential opening extending therealong for snugly receiving the riser pipe; and

a saddle mounted on and projecting laterally outwardly from said one side of said post, at a point below said sleeve, for providing a rest for the main, said saddle having a concave upwardly facing seating surface curved about a larger radius than the radius of the sleeve's internal opening and said radius being aligned with the axis of the sleeve.

2. The device of claim 1, wherein said saddle is mounted for movement vertically on said post, and wherein said device further comprises locking means operable to secure said saddle at different locations on said post.

3. The device of claim 2, wherein said post has upper and lower end portions with the axis of the upper end portion offset laterally from the axis of the lower end portion, the sleeve is on the upper end portion and the saddle is on the lower end portion, and the offset of the upper end portion is in the direction of said one side of said post.

4. In combination with a sprinkler system including a horizontal main buried in the ground, and an upright riser pipe in fluid communication and joined to the main projecting upwardly from said main:

a saddle supporting the base of said main, said saddle having an open top to accommodate removal of the main from the saddle by lateral movement of the main;

a post buried in the ground mounting the saddle with the saddle intermediate the ends of the post and to one side of the post; and

an upright sleeve buried in the ground disposed to one side of said post and encircling said riser pipe, said sleeve being secured to an upper portion of said post and having a bottom end which is spaced a distance upwardly from the top of said saddle to leave an open space between the bottom of the sleeve and the top of the saddle on one side of said post.