Aug. 3, 1948. J. C. YOUNG 2,446,256

DOWN SPOUT STRAINER

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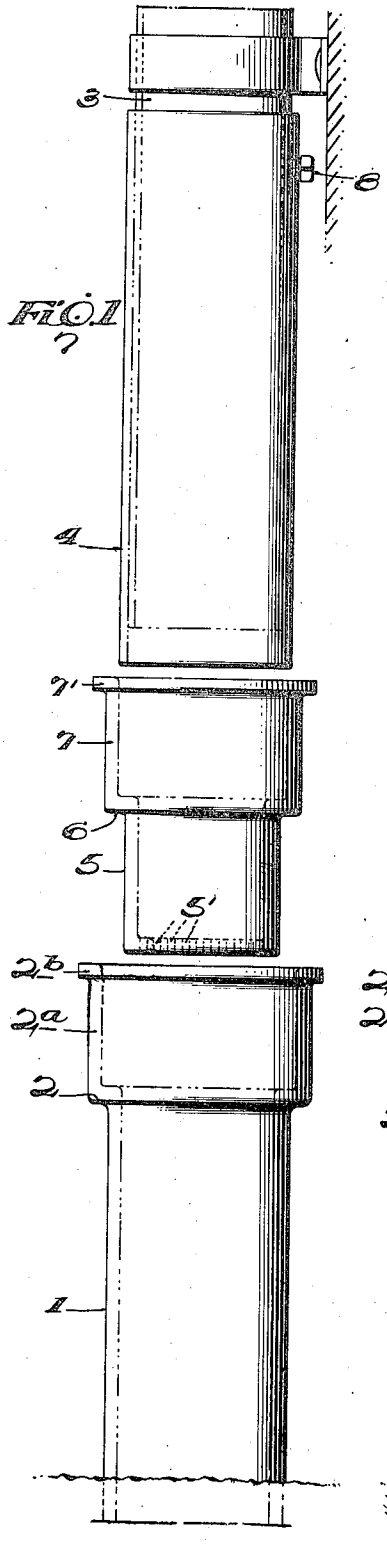


FIG. 1.

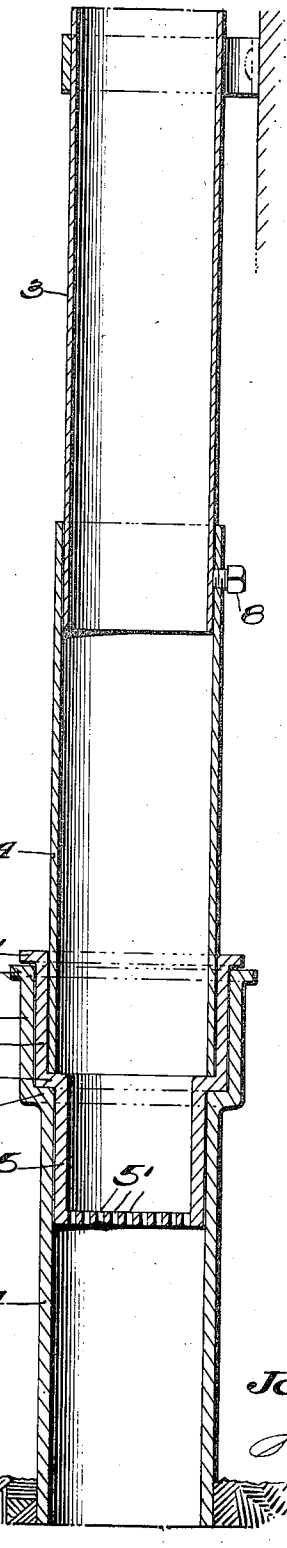


FIG. 2.

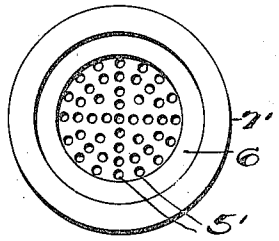


FIG. 3.

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DOWNSPOUT STRAINER

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2 Claims. (Cl. 210—88)

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This invention relates to improvements in down spout strainers.

In the draining of water from the roofs of houses, in order to prevent leaves and other objectionable matter from passing from the roof down the down drain conductor into the soil pipe section and stopping up the same, it is common practice to place a filter or strainer in the upper end of the conductor near the eaves trough. It has also been proposed to provide openings in the wall of the down drain conductor adjacent the location of the filter or strainer to afford access thereto for removal of trash therefrom, a door either hinged or secured by bolts being provided for the opening. Such prior constructions present serious difficulties because they cannot be easily reached and when the filter or strainer is located near the eaves trough it often happens that sufficient trash accumulates to cause overflowing of the eaves trough. Then again, in the case of door-equipped conductor sections, there is the inconvenience and trouble in removing the objectionable matter from the filter or strainer by reaching in through the door opening from the side, and also in loosening the door and refastening the same when bolts are employed to secure the same in place. There is also the matter of the expense incurred in providing door-equipped pipe sections and making the doors watertight.

The present invention provides an improved down drain strainer device of a simple, efficient, practical nature and by which the difficulties hereinbefore referred to are entirely overcome. The invention comprehends a strainer member interposed between sections of a down drain conductor and readily removable therefrom. In accordance with the invention, two sections of the conductor are fixedly supported with the lower end of one of the sections spaced a substantial distance above the upper end of the other. A pipe section is provided that slidably fits over the uppermost of these separated conductor sections for vertical adjustment thereon. The strainer member is of cup formation. It has a body part of a diameter to fit within the upper part of the lowermost of the separated conductor sections and has an outstanding annular flange at the upper end of the body part to rest upon an upper end portion of said conductor section. The strainer member also has a collar projecting upwardly from said flange which is of a diameter to telescopically receive within the same the lower end portion of the adjustable pipe section. With this construction, in order to clear the strainer member of trash, all that is necessary is to simply

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raise the adjustable pipe section and remove the debris and the strainer member. The strainer member can then be readily washed and after it has been replaced, the adjustable pipe section is moved down to seat its lower end portion within the collar of the strainer member.

The invention also contemplates interposing the adjustable pipe section and the strainer in the down drain conductor at the upper end of the conventional cast iron soil pipe that projects a short distance above the ground level so that the adjustable pipe section and strainer can be easily reached from the ground.

The invention, with other objects and advantages thereof, and the particular construction, combination and arrangement of parts comprising the same will be understood from the following detail description when considered in connection with the accompanying drawings forming part herewith and illustrating one embodiment of the invention.

In the drawings:

Figure 1 is a side elevation of a down drain conductor strainer device constructed in accordance with the present invention, the vertically adjustable pipe section being shown in its upper position with its lower end portion spaced above the upper end of the strainer member;

Figure 2 is a part vertical section and side elevation of the strainer device illustrated in Figure 1, the vertically adjustable pipe section being shown in its lower position with its lower end fitting into the collar of the strainer;

Figure 3 is a detail top plan view of the strainer.

While a preferred embodiment of the invention is illustrated in the drawings, it will, of course, be understood that minor changes and modifications may be made in the particular construction shown, and the invention may be embodied in other forms as will appeal to those skilled in the art and falling within the scope of the appended claims, without departing from the spirit of the invention.

Referring to a detail description of the particular embodiment of the invention illustrated in the drawings, 1 designates the conventional cast iron soil pipe projecting a short distance above the ground level, the same having at its upper end an outstanding shoulder or flange 2 and an enlarged upper collar 2^a having a thickened reinforcing band 2^b at its upper end. 3 designates the lower end section of a tin down spout of conventional form for conducting water from a roof, said pipe section being supported with its lower end spaced a substantial distance

above the upper end of the soil pipe. Slidably fitting over the section 3 of the down spout for vertical adjustment thereon is a pipe section 4. This pipe section, which is preferably formed of cast iron, is as shown in the drawing, of a length to extend well down from the down spout section 3 to near the upper end of the soil pipe. A strainer member is provided that comprises a body part 5 of cylindrical cup formation and of a diameter to fit within the upper part of the soil pipe 1. The strainer member has an outstanding flange 6 and is also provided with an enlarged collar 7 projecting upwardly from the outer marginal portion of said flange to telescopically receive within the same the lower end portion of the vertically adjustable section 4, the collar 7 being shown as having at its upper end an outwardly extending reinforcing band 7'. The strainer member is adapted to be positioned within the upper part of the soil pipe as shown in Figure 2 of the drawings, the body part 5 fitting within the upper part of the soil pipe with its flange 6 resting upon the outstanding shoulder or flange 2 of the soil pipe, the collar 7 of the strainer member being disposed within the enlarged upper collar 2^a thereof with its reinforcing band 7' spaced above the reinforcing band 2^b on the upper end of the soil pipe. The strainer member, which is preferably constructed of cast iron, has the bottom wall of its body part 5 provided with perforations 5^1 of a size so that the resulting sieve formation, while not interfering materially with the free passage of water through the down spout conductor, will prevent the passage of leaves or other material which might clog the same.

Means is also provided on the adjustable pipe section 4 for clamping the section 3 of the down spout thereto when the adjustable section is in its lowered position with its lower end portion fitting within the collar 7 of the strainer member and resting upon the flange 6 thereof. The means for this purpose is shown in the drawings as comprising a set screw 8 that engages a threaded opening in the wall of the adjustable section 4.

As will be understood, in the use of the device, to remove leaves or other objectionable material from the down drain conductor, the set screw 8 is loosened and the adjustable pipe section 4 is slid upwardly on the down spout section 3. The trash and the strainer member are then removed. After the strainer has been washed, it is replaced in the soil pipe, the lower end portion of the adjustable pipe section 4 is slipped into the collar 7 of the strainer and the set screw 8 is turned up to firmly clamp the down spout section 3 to the adjustable pipe section 4.

By the special construction and arrangement of parts hereinbefore set forth, a down drain conductor strainer device is provided that can be easily reached from the ground and that provides for quickly clearing the strainer of trash. The construction is simple, compact, can be produced at low cost and will be durable and efficient in use.

What I claim is:

1. The combination with a down drain conductor pipe having two sections supported in spaced relation, of a pipe section slidably fitting over the upper one of said sections for vertical adjustment thereon, and a strainer member having a body part of cup formation and of a diameter to fit within the upper part of the lowermost of said pipe sections, and said strainer having an outstanding flange to fit upon an upper end portion of said lowermost pipe section and having a collar projecting upwardly from said flange of a diameter to telescopically receive the lower end portion of the vertically adjustable pipe section, the lower end of the vertically adjustable section resting upon the outstanding flange of the strainer when said vertically adjustable section is in its lower position.

2. The combination with a soil pipe having an outstanding flange at the upper end thereof with an enlarged collar extending upwardly from the outer marginal portion of said flange, and a down spout having its lower section supported with its lower end spaced above the soil pipe, of a pipe section slidably fitting over the lower section of the down spout for vertical adjustment thereon, and a strainer of cup formation of a diameter to fit within the upper part of the soil pipe having an outstanding annular flange to rest upon the outstanding flange of the soil pipe, and having a collar projecting upwardly from its annular flange of a diameter to telescopically receive the lower end portion of the vertically adjustable pipe section, the collar of the strainer member being disposed within said enlarged collar of the soil pipe.

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