

(No Model.)

E. CULVER.

STRAINER AND FILTER FOR CONDUCTOR PIPES.

No. 603,554.

Patented May 3, 1898.

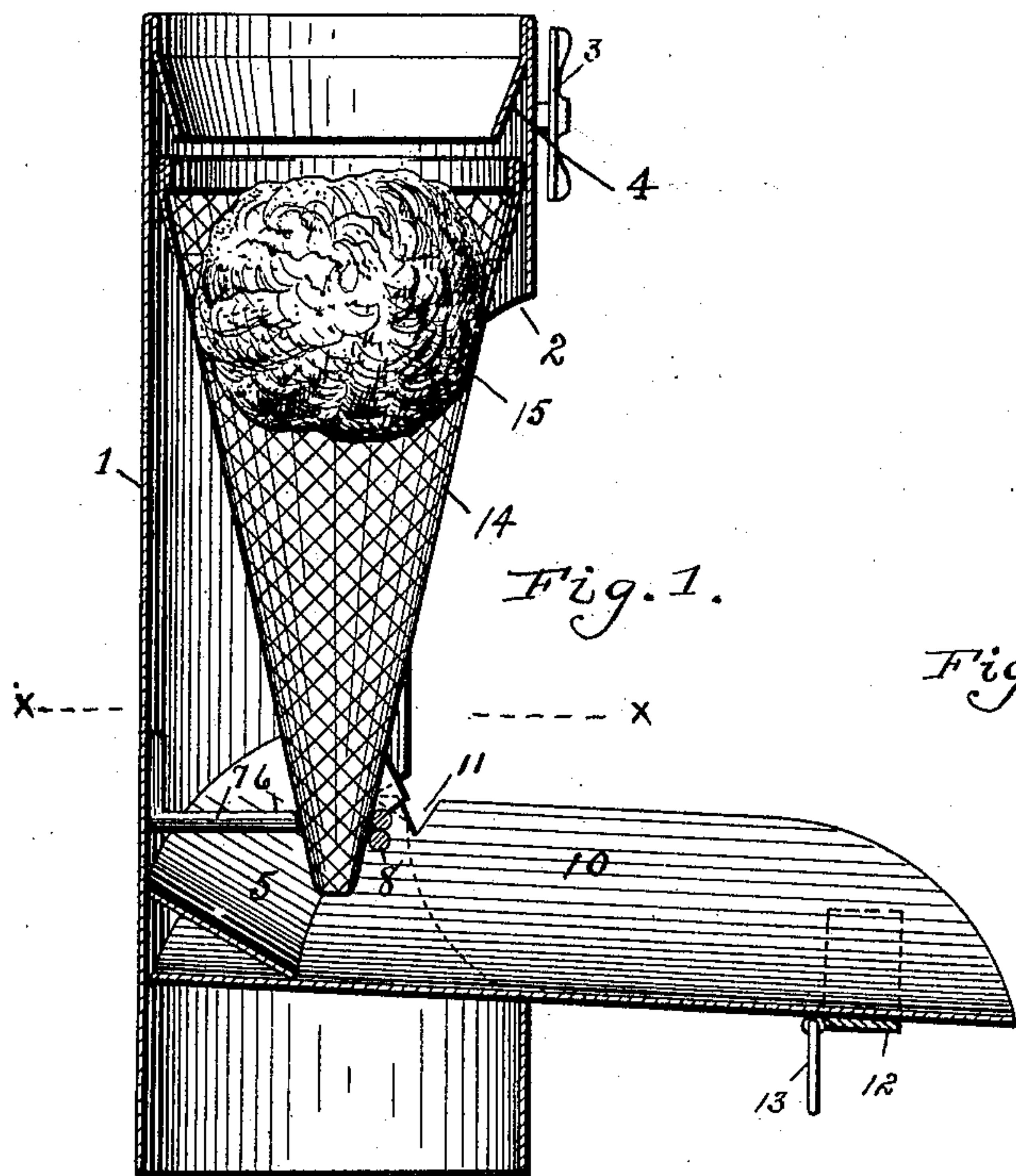


Fig. 1.

Fig. 2.

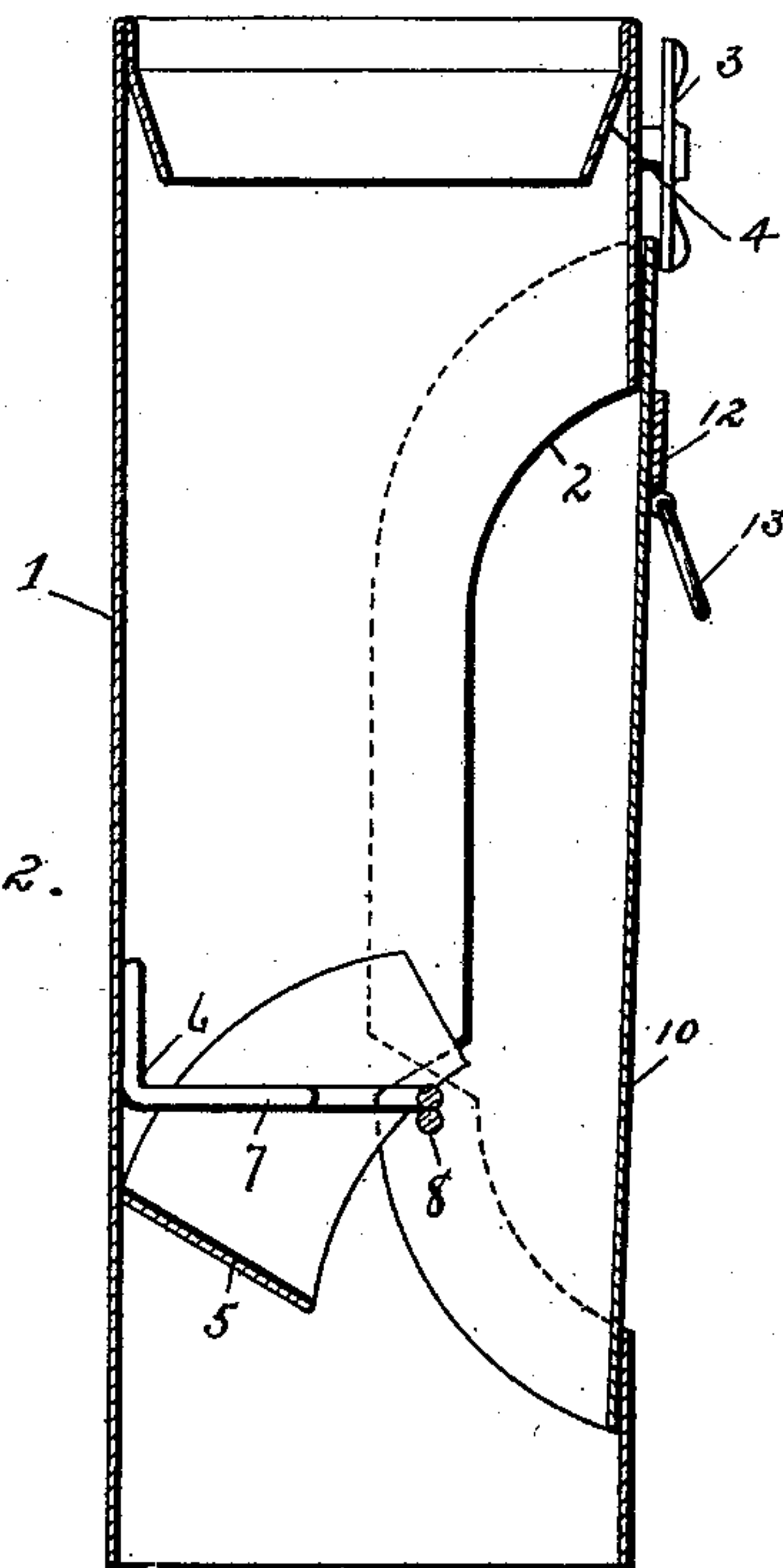


Fig. 3.

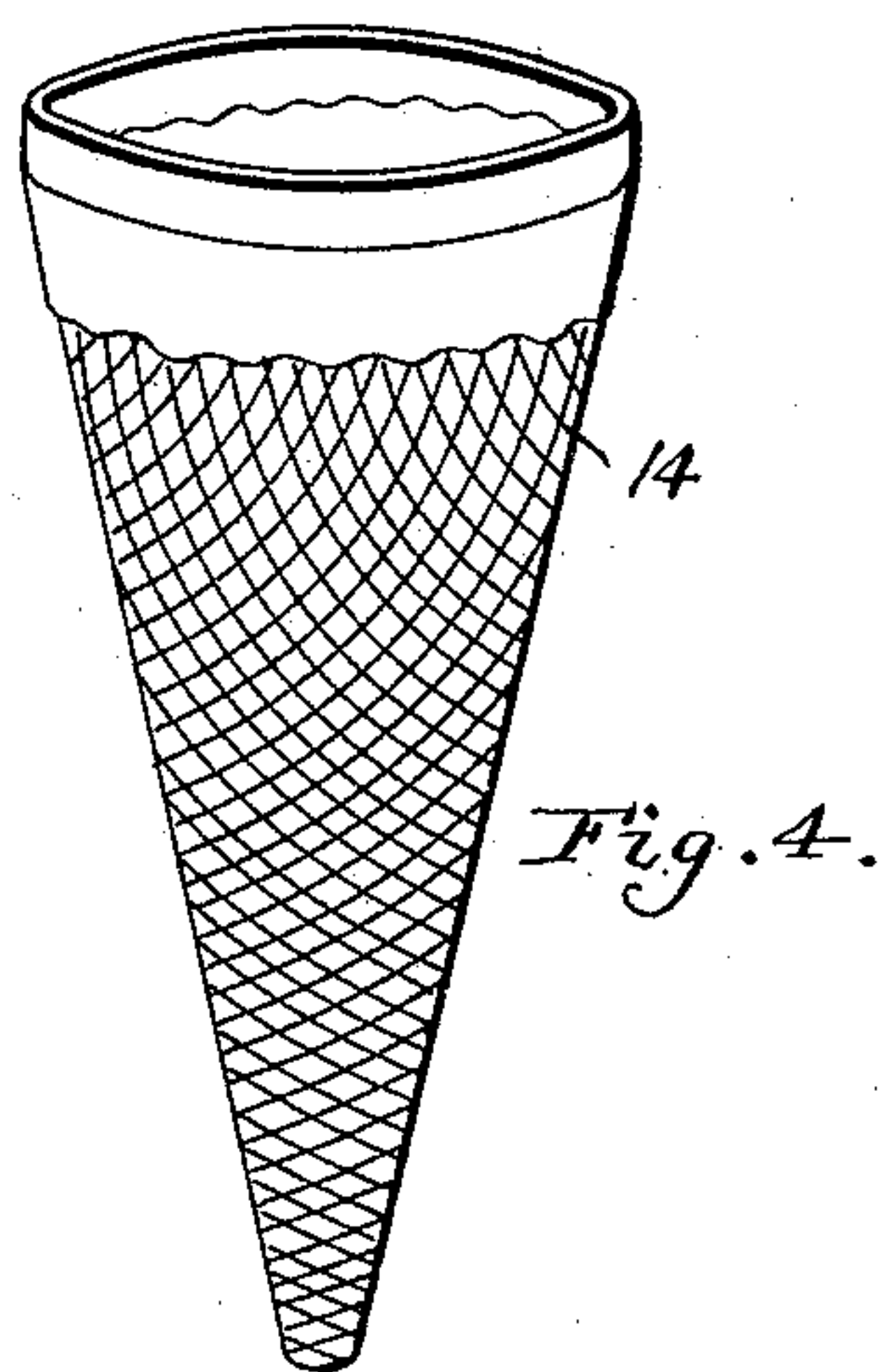
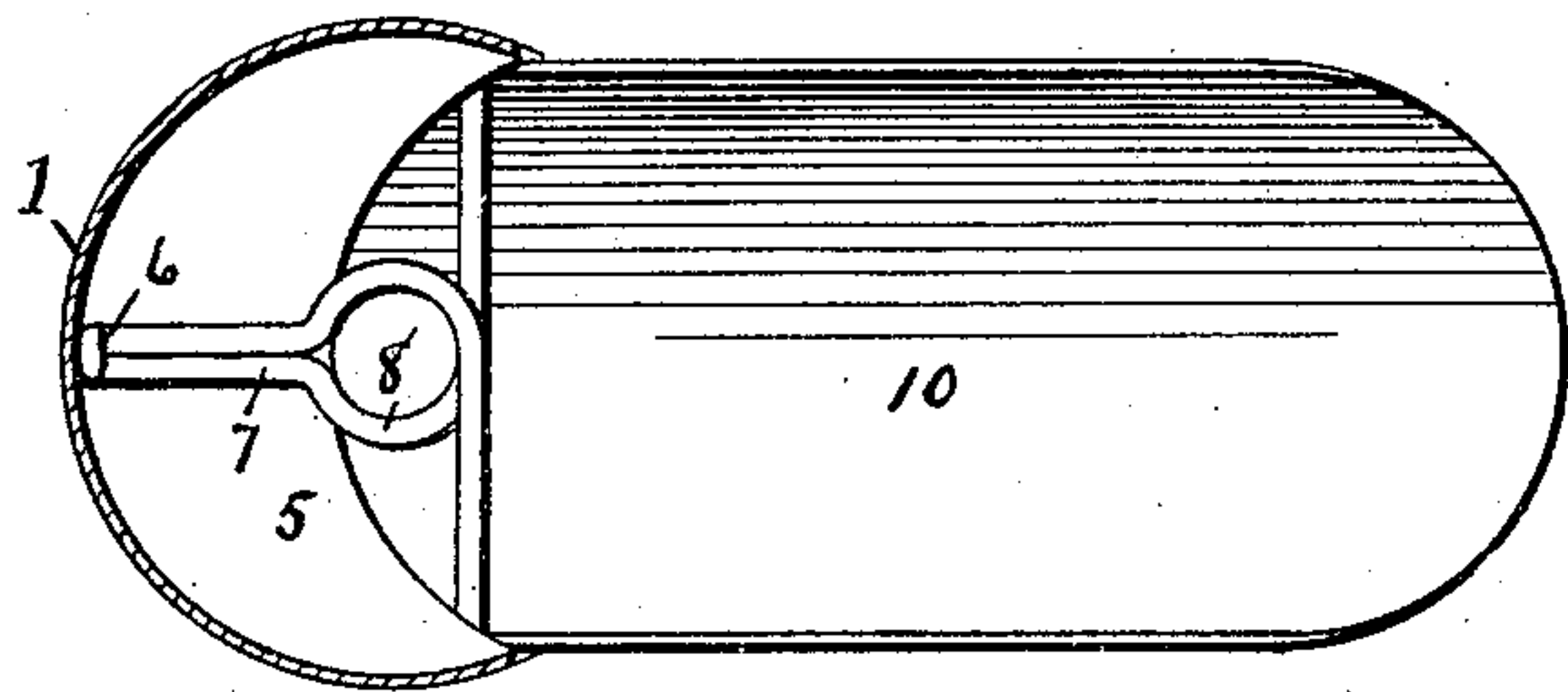


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

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STRAINER AND FILTER FOR CONDUCTOR-PIPES.

SPECIFICATION forming part of Letters Patent No. 603,554, dated May 3, 1898.

Application filed June 9, 1897. Serial No. 640,044. (No model.)

To all whom it may concern:

Be it known that I, ELLIS CULVER, of Huntington, in the county of Huntington and State of Indiana, have invented certain new and useful Improvements in Strainers and Filters for Conductor-Pipes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a filter and cut-off for water-conductors and other purposes; and it consists, essentially, of placing in the line of pipe, somewhere in an accessible place between eaves-troughs and the cistern, a section of pipe or filtering-chamber having a bracket or support and to which is detachably secured a straining device or sieve and having a deflecting-spout coextensive therewith and coacting with the bottom of the strainer under certain conditions.

The invention further consists of the details of construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

The object of the invention is to guide a current of water through a filtering-chamber and thence to a cistern or other receptacle or to deflect the said current of water from the filtering-chamber and in another direction at will, the parts being separable for cleaning and other convenient manipulation.

In the event of a shower it is desirable to let the first flow of water go to waste to carry off the dust, bird-lime, and the like which settles or falls upon a roof. To attain this operation, the deflector is let down and closes the chamber by cutting off the flow of water through the line of pipe below, and after the water becomes clear and when it is desirable to allow the water to flow into a cistern or other receptacle the said deflector is elevated, so as to close the said opening in the filtering-chamber and permit the water to pass directly into the said cistern or other receptacle.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of the improved filtering-chamber, showing the deflector arranged in operative position. Fig.

2 is a similar view of the deflector shown closed. Fig. 3 is a horizontal section on the line *xx*, Fig. 1. Fig. 4 is a detail perspective view of the strainer.

Referring to the drawings, wherein similar numerals of reference are employed to indicate corresponding parts in the several views, the numeral 1 designates a filtering-chamber which consists in the present instance of a cylindrical pipe-section, preferably of the same diameter as the line of pipe in which the said chamber is mounted. One side of the chamber is formed with an opening 2, and above the said opening is a turn-button 3. In the upper part of the chamber 1 is an inwardly-extending crimped flange 4, which is arranged at an inward angle of inclination, and the crimped formation thereof renders the same rigid and reinforces it against bending. Upon the inner lower portion of the chamber, adjacent to the lower termination of the opening 2, an inclined guard-flange 5 projects into the said chamber from one side thereof, and slightly above the said guard-flange a bracket 6 is located and consists of a pair of parallel arms 7, having the outer portion thereof bent upwardly at an angle and secured to the inner side of the said chamber. The said arms are continued into a loop 8 and thence extend at right angles outwardly through the opposite portions of the said chamber to form pivots for the attachment thereto of a deflector 10. The said bracket is preferably formed of a continuous piece of wire, and the arms forming the pivots are located below the adjacent edge of the guard-flange 5. The deflector 10 is extended inwardly into the chamber 1 far enough to take under the lower edge of the guard-flange, and adjacent to the pivotal point thereof the upper edges of the opposite portions of said deflector are cut away, as at 11, to permit the same to be closely folded in over the cylindrical section forming the said chamber. The lower end of the deflector when closed rests against the inner lower portion of the chamber, while the upper end bears against the outer surface of said chamber and is secured in locked position by the turn-button 3. To stiffen the end of the deflector

farthest from its pivotal point, a curved metallic brace 12 is secured thereover, and adjacent thereto is mounted a movable ring or loop 13, which is adapted to be grasped in operating the said deflector.

Removably mounted in the filtering-chamber is a conical sieve 14, which has its upper entrance end under the flange 4 and its lower reduced end loosely seated in the loop 8 of the bracket, and the relative length of the sieve 14 permits the latter to be pushed upwardly under the said flange to disconnect the lower end from the loop 8, when the said sieve may be drawn out through the opening 2 for cleaning or other manipulation. In the top of the sieve is mounted a sponge 15 or analogous porous material, which acts as a filter and which is readily removable with the strainer and may be cleaned from time to time when found necessary. The conical form of the strainer permits the water to have a free flow downward therethrough, and clogging of the said strainer by the collection of refuse or other material therein will be less liable to occur in view of the form set forth.

In operation the first flow of water through the line of pipe into the filtering-chamber will be directed away from the lower end of said chamber by throwing the deflector 10 downwardly, and thus all dust and dirt which may be washed down with the water, as well as sticks and leaves, will be prevented from going into the cistern or other receptacle. After the water begins to run clear the deflector is closed and the cistern or other receptacle is filled with the filtered water.

It is obviously apparent that the size of the device as an entirety may be varied, and the details of construction and arrangement of the several parts might be slightly changed and substituted for those shown and described without in the least departing from the nature or spirit of the invention.

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

1. The combination with a conductor-pipe of a filtering-chamber, consisting of a pipe-section having an opening in one side thereof, and a deflector adapted to close over the said opening, a bracket mounted in the lower portion of said chamber and having a loop therein, and a conical strainer removably positioned in said chamber and having its lower reduced end engaging the loop of the bracket, substantially as and for the purposes specified.

2. The combination with the conductor-pipe of a filtering-chamber, consisting of a cylindrical section having an opening in one side thereof with a deflector adapted to close thereover, an upper inwardly-extending flange, a lower bracket with a loop therein, and a conical strainer movably retained in position between the said flange and the bracket and having the lower reduced end thereof seated in the said loop, substantially as and for the purposes specified.

3. The combination with the conductor-pipe of a filtering-chamber, consisting of a cylindrical section having an opening in one side with a deflector closing thereover, a bracket comprising a loop and having arms extending outwardly therefrom in lateral directions and forming pivots for the said deflector, and a conical strainer removably supported by the said bracket and having its lower reduced end removably mounted in the said loop, substantially as and for the purposes specified.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ELLIS CULVER.

Witnesses:

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