

No. 725,933.

PATENTED APR. 21, 1903.

R. F. COLEMAN.
ADJUSTABLE STRAINER FOR DOWN SPOUTS.

APPLICATION FILED DEC. 5, 1902.

NO MODEL.

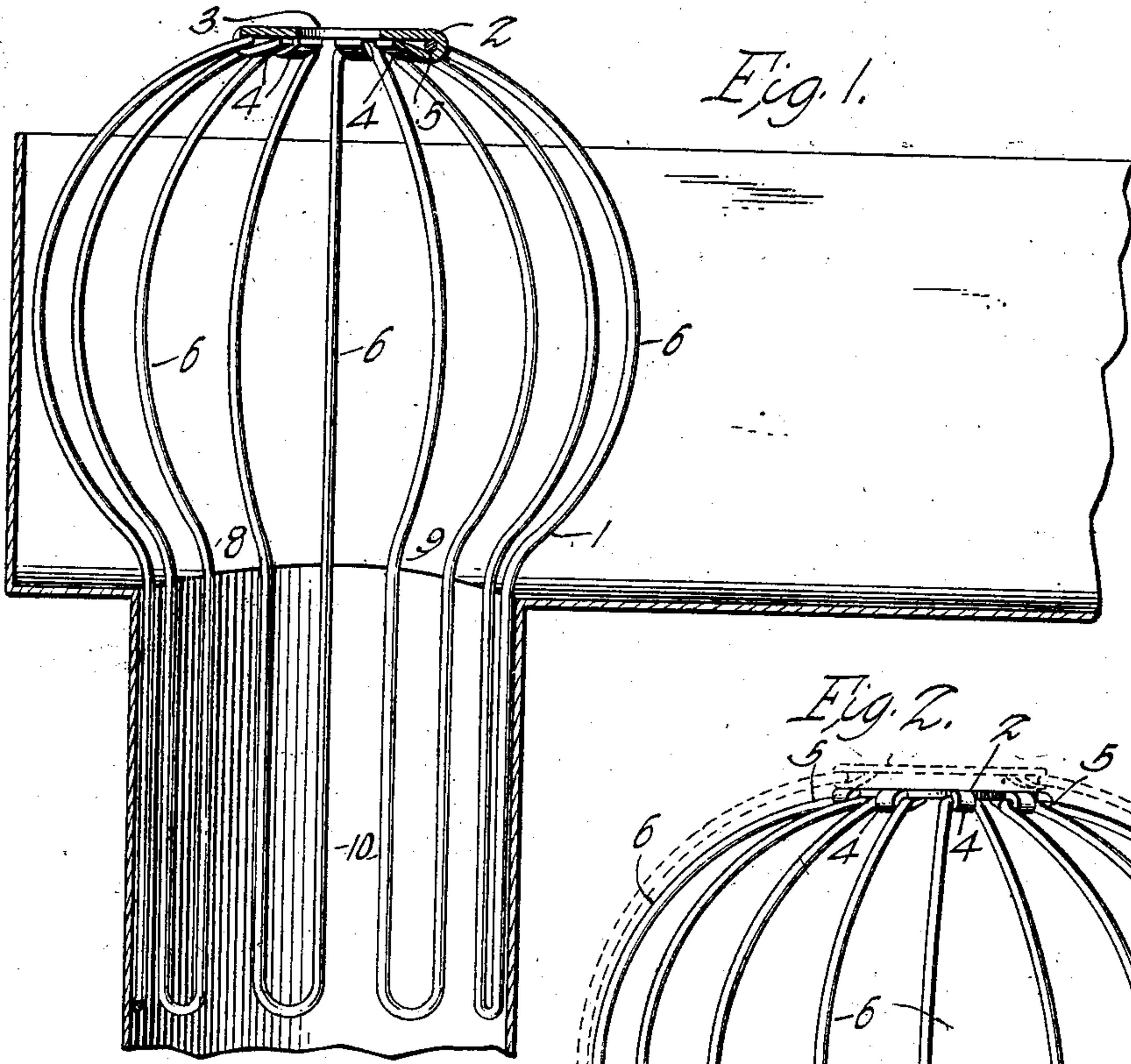


Fig. 1.

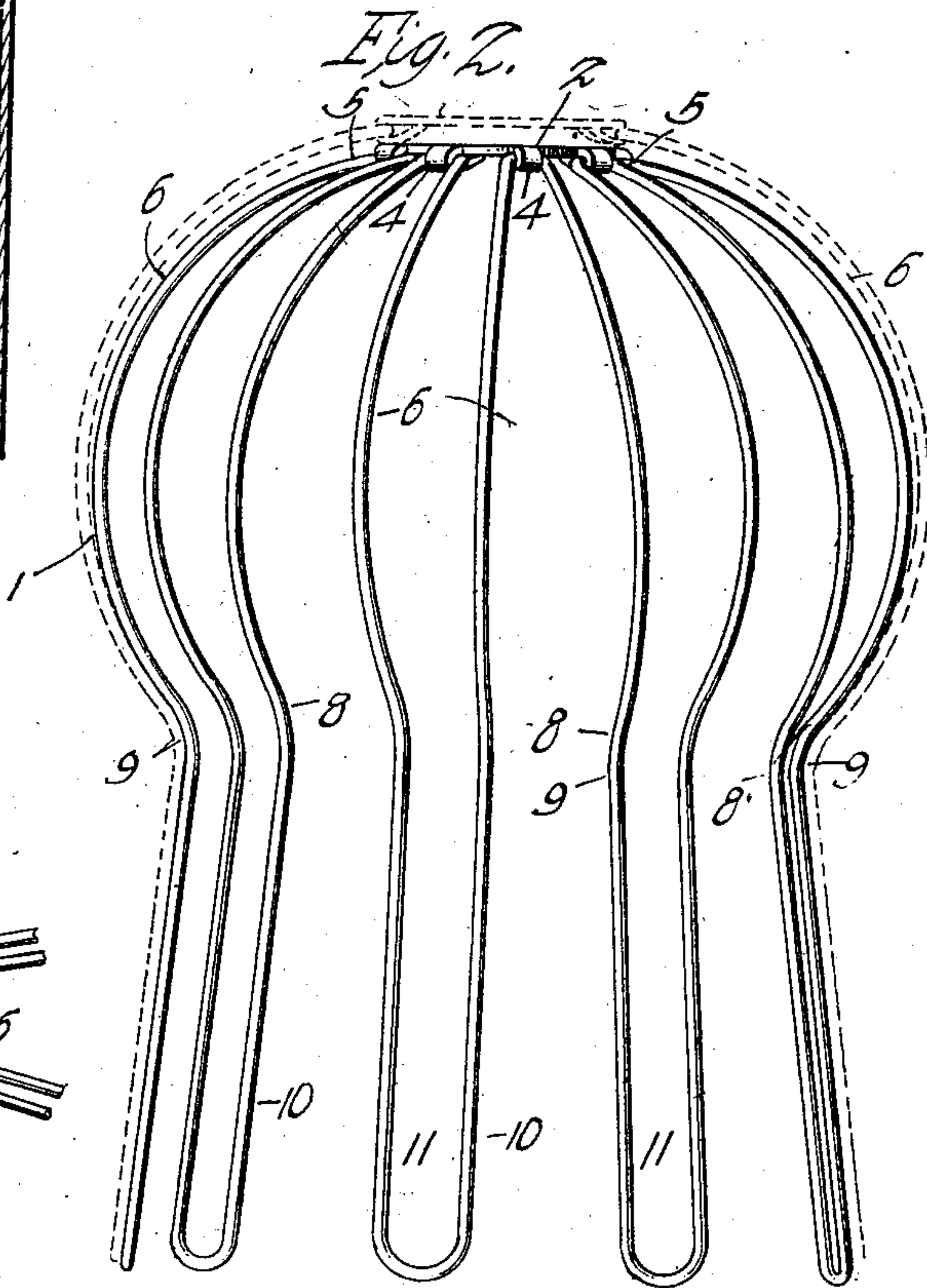


Fig. 2.

Fig. 3.

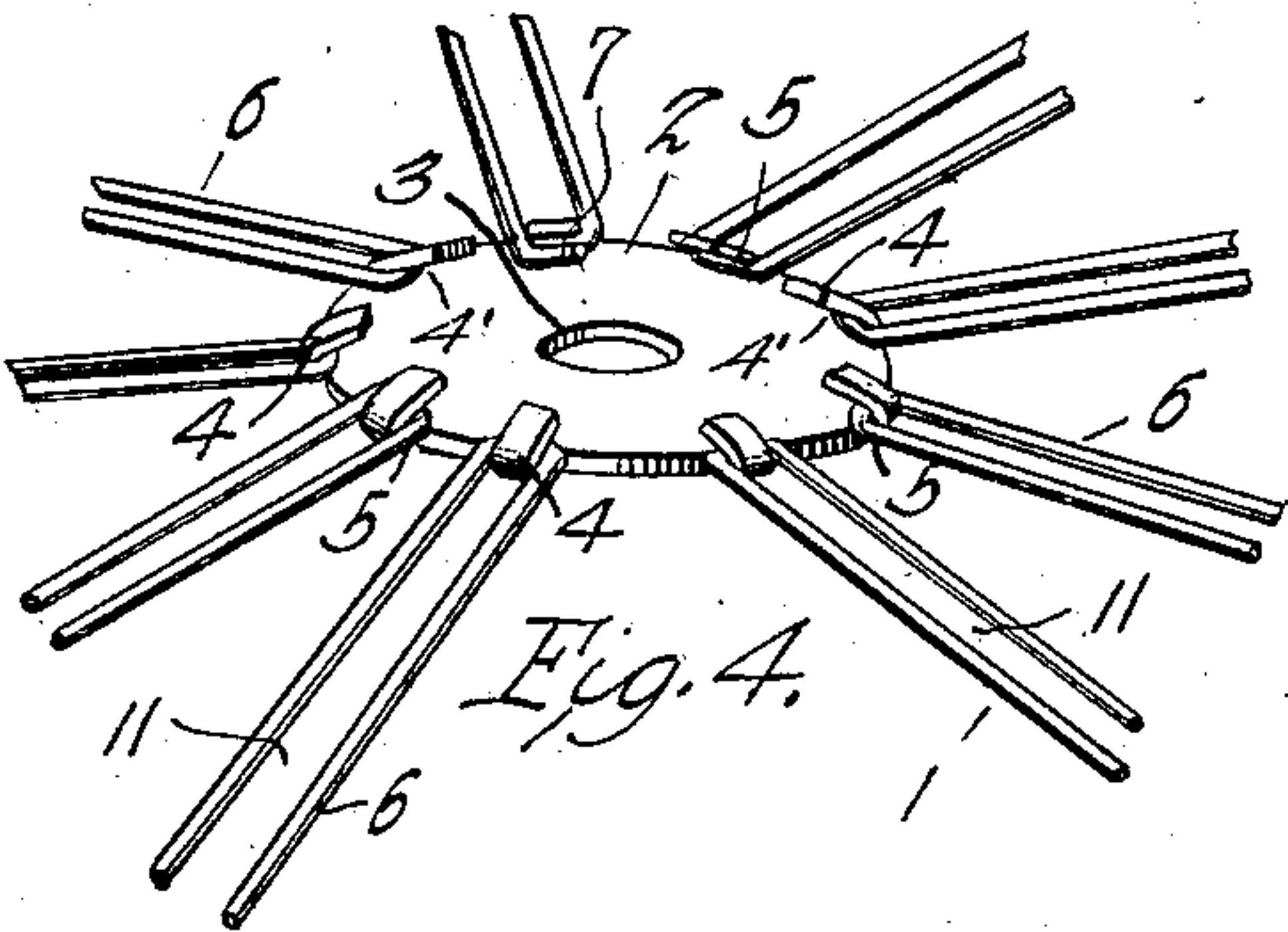
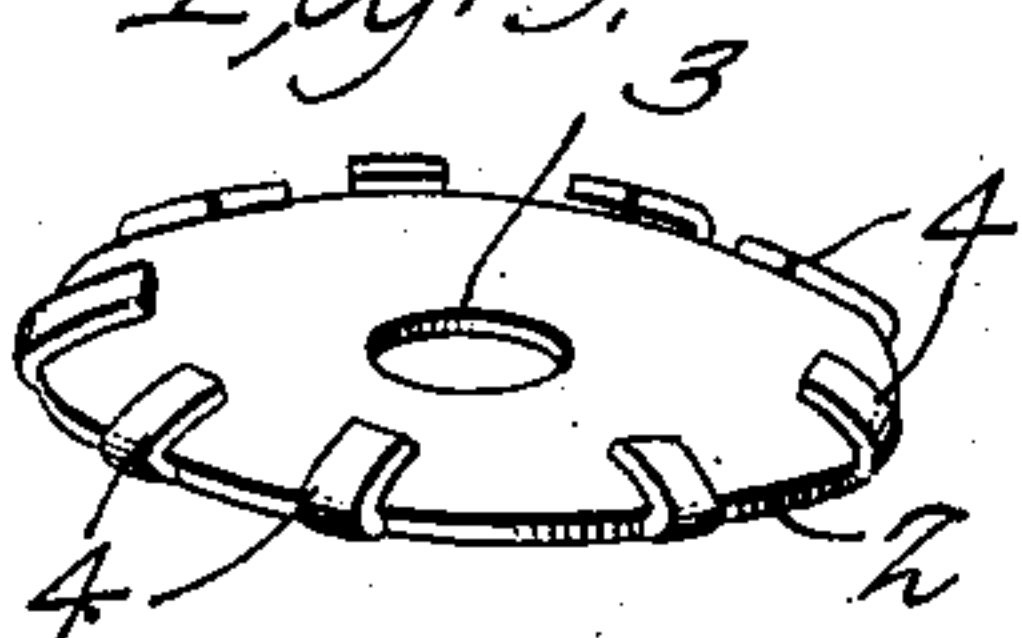


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

ROBERT FRANKLIN COLEMAN, OF PHILADELPHIA, PENNSYLVANIA.

ADJUSTABLE STRAINER FOR DOWN-SPOUTS.

SPECIFICATION forming part of Letters Patent No. 725,933, dated April 21, 1903.

Application filed December 5, 1902. Serial No. 134,044. (No model.)

To all whom it may concern:

Be it known that I, ROBERT FRANKLIN COLEMAN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Adjustable Strainer for Down-Spouts, of which the following is a specification.

This invention relates to strainers adapted for use on down-spouts to prevent the leaves and other foreign matter which generally accumulates in the eaves-trough from passing into the down-spout and clogging the same, and has for its object to produce a simple inexpensive device of this character that will readily adjust itself to the interior shape or configuration of the down-spout and by reason of the peculiar disposition of the arms securely clamp the same within the spout, thereby preventing accidental dislodgment.

Another object is to produce a device in which the clamping-arms are made from a single piece of wire and secured to a central support without the use of solder or other binding material.

A further object is to produce a device the construction and general arrangement of which is such that several of them may be compactly nested for shipment.

With these and other objects in view my invention consists in the novel combination and arrangement of parts hereinafter described, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side view of the device, showing the same applied to a down-spout. Fig. 2 is a side view showing in dotted lines the manner of nesting the strainers. Fig. 3 is an inverted plan view of the supporting-disk before the arms are applied. Fig. 4 is an inverted plan view of the supporting-disk, showing the manner of securing the arms thereto.

Referring to the drawings, in which like numerals of reference designate corresponding parts, 1 designates the strainer, comprising a central supporting disk or ring 2, made of sheet metal or any suitable material and having an opening 3 in the center thereof. The disk 2 is preferably die-formed and is provided with a series of radiating ears 4, which may be bent to form loops 4', adapted

to engage the end portion 5 of spring-arm 6 and also serve to properly space said arms. The arms 6 are preferably formed of one continuous length of wire, beginning at 7 and extending outwardly and downwardly in the arc of a circle to the point 8, where it is bent at a slight angle 9 and carried outwardly and downwardly in a straight plane to any desired length, as at 10. It is here doubled and continued upwardly and bent corresponding to the first strand in reverse order, passing through one of the loops 4', and the operation continued until a sufficient number of arms have been formed. By having the arms supported solely by the disk 2 it renders them capable of considerable lateral expansion and contraction, thereby permitting said arms to readily conform to the interior shape of the spout and also permit large quantities of the strainers being compactly nested for shipment without increasing bulk.

In the manufacture of the device the disk 2 is struck from a single piece of metal with the ears 4 formed thereon and bent upwardly and slightly inclined toward the central opening 3. The wire is then passed under each of said ears, the free portion of the wire forming a series of radiating loops 11. It is then placed in a die or former and pressed to the desired shape or configuration, the ears 3 being firmly clamped on the wires during the operation.

After the parts have been secured together and properly shaped in the manner stated they are submitted to the action of the galvanizing-bath, which finishes them and firmly secures them together. I have described the arms as being formed of one continuous piece of wire; but they may be made of several separate pieces, and various changes in form, proportions, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of my invention.

Having thus fully described my invention, what I claim is—

1. A strainer comprising a supporting-piece, and a plurality of spring-arms secured thereto and curved outwardly and downwardly and then inwardly and downwardly and continued into diverging end portions, such arms being unrestricted and free to expand at their most

contracted portions sufficiently to admit the most expanded part of the upper portion of other like strainers, to permit nesting.

2. A strainer comprising a supporting-piece, 5 and a plurality of arms formed of one continuous piece of wire secured thereto and curved outwardly and downwardly and then inwardly and downwardly and continued into diverging end portions, such arms being un- 10 restricted and free to expand at their most contracted portions sufficiently to admit the most expanded part of the upper portion of other like strainers, to permit nesting.

3. A strainer comprising a central support- 15 ing-disk, ears on the disk, a plurality of arms formed of one continuous piece of wire

clamped under said ears and curved outwardly and downwardly and then inwardly and downwardly and continued into diverging end portions, such arms being unrestricted 20 and free to expand at their contracted portion sufficiently to admit the most expanded part of the upper portion of other like strainers, to permit nesting.

In testimony that I claim the foregoing as 25 my own I have hereto affixed my signature in the presence of two witnesses.

ROBERT FRANKLIN COLEMAN.

Witnesses:

SAML. T. FOX,

W. NORMAN PRITCHETT.