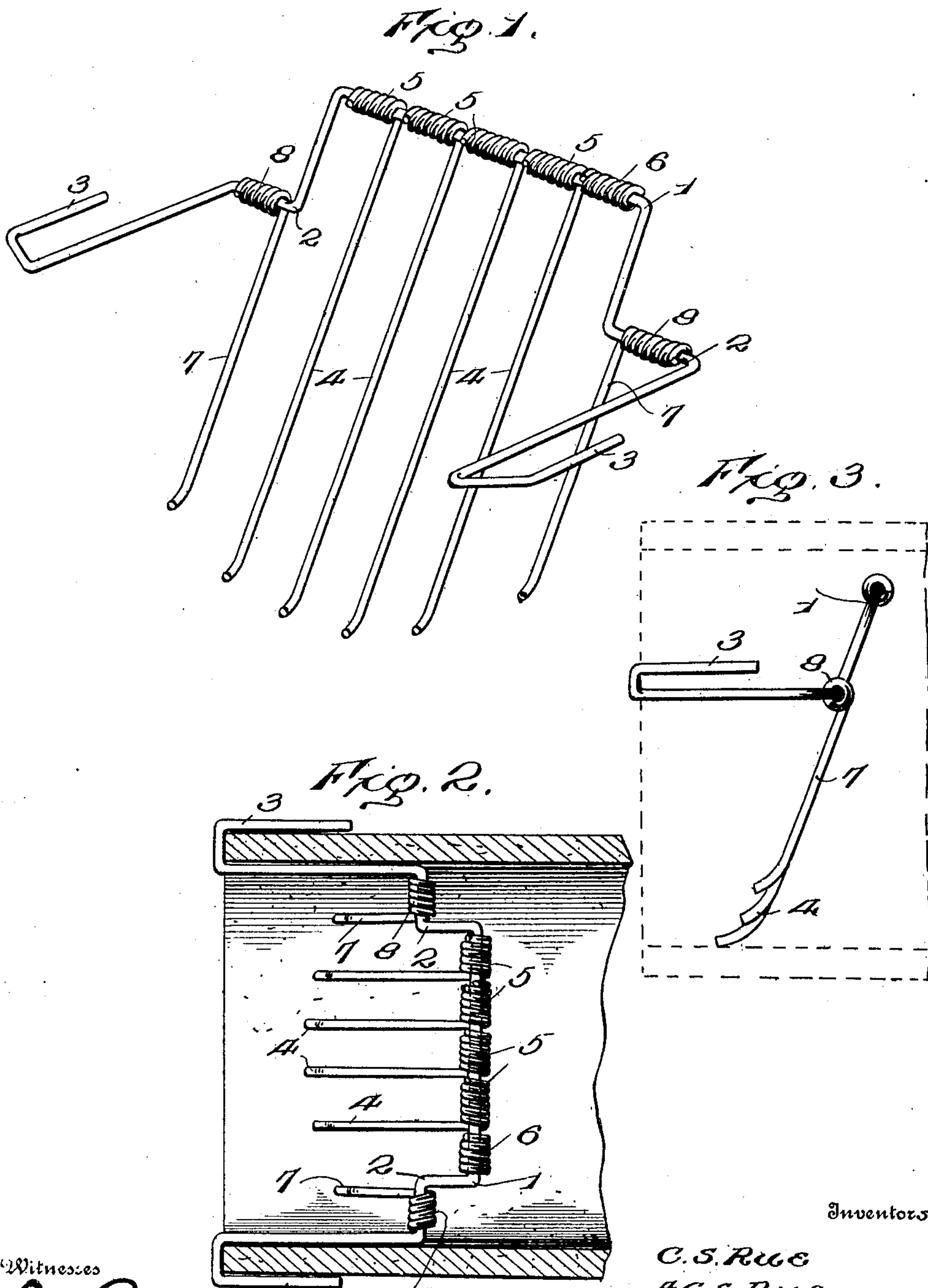


C. S. & A. C. S. RUE.
 TILE PROTECTOR.
 APPLICATION FILED MAR. 21, 1908.

906,562.

Patented Dec. 15, 1908.



Witnesses

J. M. ...

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By

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UNITED STATES PATENT OFFICE.

CARL S. RUE AND ALBERT C. S. RUE, OF NORTHWOOD, IOWA.

TILE-PROTECTOR.

No. 906,562.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed March 21, 1908. Serial No. 422,549.

To all whom it may concern:

Be it known that we, CARL S. RUE and ALBERT C. S. RUE, citizens of the United States, residing at Northwood, in the county of Worth and State of Iowa, have invented certain new and useful Improvements in Tile-Protectors, of which the following is a specification.

This invention has for its object a cheap, simple, durable and efficient construction of device for protecting the mouth of a tile, culvert, or drain of any character, and the invention consists in certain constructions and arrangements of the parts that we will hereinafter fully describe and claim.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of our improved protector; Fig. 2 is a horizontal sectional view of a tile showing our protector in place therein; and, Fig. 3 is a side edge view of the protector, the tile or drain being indicated in dotted lines.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Our improved tile protector comprises an arched supporting bar 1 preferably formed of wire with offset and outwardly extending ends 2 parallel with the cross bar of the arch and with returned extremities 3 forming hooks which are obliquely disposed, as clearly illustrated in the drawing. These hooks are designed to engage the mouth rim of a tile, drain, or the like to hold the arched supporting bar 1 securely therein, in a detachable manner. A series of rods 4, preferably of wire, are adapted to be suspended from the main portion of the supporting bar 1, the said rods preferably having one end coiled several times, as indicated at 5, around the said main portion of the bar so as to form spacing washers for the several rods. In addition to the spacing washers which are thus formed with the rod, we may provide an additional coil 6 around the supporting bar at one end of the series of rods, as clearly illustrated in the drawings. These several washers hold the rods properly upon the bar and in proper spaced relation to each other, while at the same time permitting the rods to freely swing or turn on the bar. End rods 7, preferably shorter than the rods 4 are similarly

formed with coils 8 by which they are mounted to swing on the respective offset ends 2 of the supporting rod. The rods jointly constitute a gate.

In the practical application of our improved tile protector, it will be seen, as clearly illustrated in the drawings, that the hooks 3 are engaged with the mouth rim of the tile so as to hold the arched supporting bar therein, the device being made in various sizes according to the diameter of the tiles to which they are to be applied, and the rods 4 and 7 being of such length that they will be held at an inclination with their free ends in engagement with the inner wall of the tile and pointing outwardly so as to permit a free outward swinging movement of the protector to permit straw, dirt, or other trash or rubbish to freely pass out of the tile or drain, while at the same time the opposite movement of the rods is prevented and consequently animals cannot force their way into the tile.

From the foregoing description in connection with the accompanying drawing, it will be seen that we have provided a very simple device for protecting the mouth of a tile, culvert, drain, or the like, the parts of which may be cheaply constructed and easily assembled, and which will be efficient in operation for the purposes above named.

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

1. A device of the character described, comprising an arched supporting bar provided with outwardly and oppositely extending offset ends and returned extremities beyond the ends, said returned extremities forming obliquely disposed hooks, a series of rods coiled at one end around the main portion of the supporting bar and mounted to swing thereon, and other rods coiled at one end around the offset end of said bar.

2. The combination with a tile, of an arched supporting bar located therein and formed with returned extremities forming obliquely disposed hooks engaging the mouth rim of the tile, and an outwardly opening gate hinged on said bar.

In testimony whereof we affix our signatures in presence of two witnesses.

CARL S. RUE. [L. s.]
ALBERT C. S. RUE. [L. s.]

Witnesses:

N. E. HAUGEN,
L. O. GROX.