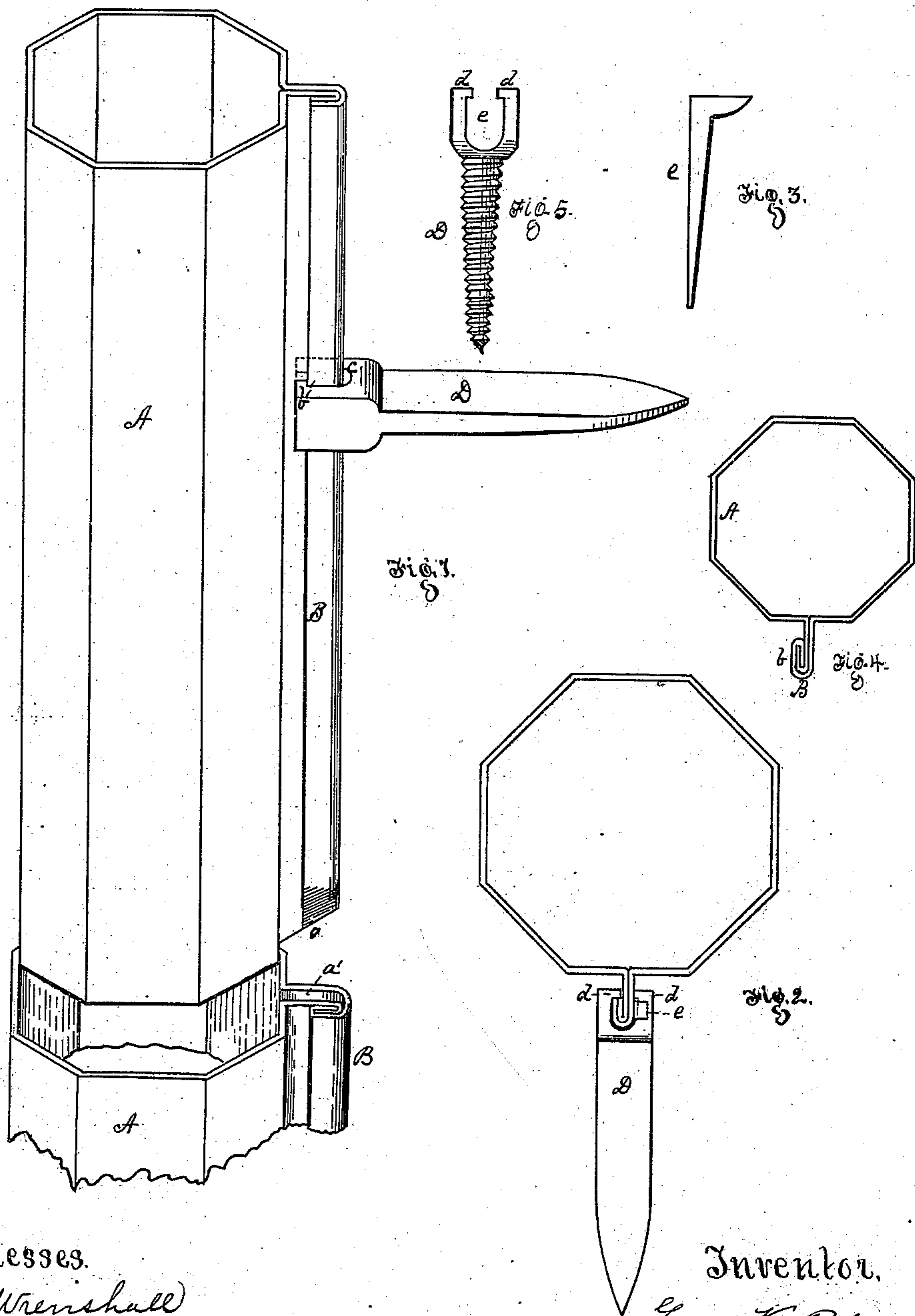


G. K. REBER.
Water-Conductor.

No. 225,237.

Patented Mar. 9, 1880.



Witnesses.
R. b. Wrenshall
J. no k Smith

Inventor.
George K. Reber
by Bakewell & Kerr
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE K. REBER, OF PITTSBURG, ASSIGNOR TO THE SOLDERLESS
STANDING SEAM CONDUCTOR COMPANY, (LIMITED,) OF ALLEGHENY,
PENNSYLVANIA.

WATER-CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 225,237, dated March 9, 1880.

Application filed December 2, 1879.

To all whom it may concern:

Be it known that I, GEORGE K. REBER, of
Pittsburg, in the county of Allegheny and State
of Pennsylvania, have invented a new and
5 useful Improvement in Water-Conductors; and
I do hereby declare the following to be a full,
clear, and exact description thereof, reference
being had to the accompanying drawings,
forming a part of this specification, in which—
10 Figure 1 is a side elevation in perspective.
Fig. 2 is a cross-section, and Fig. 3 is a view
of the key of the fastener. Fig. 4 is a sec-
tional view of the conductor with double-
locked seam, and Fig. 5 is a view of a wood-
15 screw fastener for the conductor.

Like letters of reference indicate like parts.

My invention relates to water-conductors
placed upon the sides of houses, stores, and
other buildings, for the purpose of carrying the
20 rain-water from the roof to the surface of the
ground, or to tanks or other receptacles when
it is used for different purposes.

Heretofore these water-conductors have been
formed of sheet-iron or other suitable metal
25 bent into various shapes, and having their
edges united by means of a flat seam or sol-
dering. The pipes or conductors thus formed
were secured to the side of the house in such
position that the pipe rested directly against
30 the wall, and any leakage or overflow from
the pipe would be absorbed by the brick or
wood and cause dampness in the wall along
the line of the conductor. To obviate this the
conductors have been hung on brackets, so
35 that they did not touch the wall; but these
brackets are frail, expensive, unsightly, and
sometimes permit the conductors to be swung
by the wind, thereby loosening their connec-
tion with the roof and causing leakage.

40 By my invention these objections are en-
tirely overcome.

It consists, first, in a water-conductor pro-
vided with a standing seam adapted to be
turned toward the wall when the conductor
45 is secured in place, and so prevent the con-
ductor from coming in contact with the wall;
second, in a water-conductor provided with a
double-locked standing seam to prevent the
breakage of the same; third, in a fastener pro-

vided with a slot or recess for the reception 50
of the standing seam; and, finally, in details
of construction hereinafter specifically set
forth.

One of the chief advantages of my inven-
tion is, that it requires no fastening devices 55
to be attached to it, and can be completely
finished in the shop, and, when taken to the
building, can be simply inserted into the fast-
enings and secured without any other work
than securing the fastening into the wall. 60

The old forms of sheet-metal conductors
were generally secured to the houses by flanges
soldered or riveted to the conductors; but
with brick buildings these could not be put
on until the position of the conductor on the 65
building was first ascertained, because it was
necessary for the flanges to come opposite
to a place between the bricks where the nails
could be driven in, and which was so related
to the length of the section that it would be 70
held up against and in position with the sec-
tion above it. Therefore the work of putting
the flanges on the conductor was often neces-
sarily done at the building, which was incon-
venient, while the securing of fastening de- 75
vices to the conductor is saved with my con-
ductor.

An incidental advantage of my construction
is, that it is not injured by the expansion of wa-
ter freezing therein. Water freezing in con- 80
ductors of round or similar form acts upon the
sides and ruptures the seams. In case of my
conductor the seam spreads at its front edge,
but, being held tight at the rear edge, does not
rupture at the fastening and become leaky. 85

To enable others skilled in the art to make
and use my invention, I will describe its con-
struction and manner of use.

In the drawings referred to, A represents
the water-conductor, which is made of sheet- 90
iron or other suitable metal, and may be of
any desired shape, either round, angular, or
corrugated.

B is the seam uniting the two sides of the
sheet from which the pipe is made. This seam 95
B is formed so as to stand up from the pipe,
preferably at a right angle to a tangent of the
pipe, at the point from which the seam extends.

The seam B may be united in different ways, though the following is the way preferred by me, as it gives the firmest and best joint: By machinery suitable for the purpose a crease is
 5 made along one side of the sheet and a bend along both sides, so that when brought together the portions bent out will lie flat together, the edge along one side fitting within the crease on the other side, and the whole extending out from the pipe. Another crease or
 10 lock is then made by turning over part of the standing or bent-out portions, so that the first crease will come against the extension or standing seam, thus forming what may be termed
 15 a "double-locked standing seam." This seam, as it is double-locked, needs no soldering to make it water-tight, and will stand a heavy strain before a leak will be sprung in it, and thus makes the seam of the pipe as strong as
 20 any other portion. The standing seam B may, however, be united by riveting or soldering.

The pipes or conductors are formed in lengths or sections and the upper section slipped within the lower one to form any length of conductor
 25 desired. In order to do this the lower end of the seam B of each section is sheared off in a beveling line, as at *a*, and the seam of the upper end of the next section is opened, as at *a'*, and the upper section slipped down into it.

30 D represents my improved fastening, which is a nail, spike, or screw having a slotted head with inwardly-extending lips *d*. The seam B being placed in the slot, the overlap *b* stands back of one lip *d*, and a tapering or headed
 35 key, *e*, is dropped or driven into the slot back of the other lip *d*. This secures the conductor firmly to the fastener.

The manner of putting up my improved con-

ductor is to drive or screw the fasteners D in the required line, place the seam of the con- 40 ductor in the slots of the fasteners, and then drop the keys into place. Thus there is no work to be done at the building upon the conductor, and no care to be expended in placing the fasteners, except to get them into line. The 45 fastener is concealed from sight by the body of the pipe, giving to the conductor a neat appearance. The seam being toward the wall prevents the body of the conductor from touching the wall, so that no overflow or leakage 50 of the conductor can be absorbed by the wall, thus protecting the wall from dampness caused by the overflow or leakage so common in water-conductors. The conductors can be set any desired distance from the wall by regulating 55 the length of the fastener accordingly.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A water-conductor provided with a standing seam, substantially as and for the purposes 60 set forth.

2. A water-conductor provided with a double-locked standing seam, substantially as and for the purposes set forth.

3. In combination with the standing seam 65 of the conductor, a slotted fastener and key, substantially as and for the purposes described.

4. The slotted headed nail or screw fastener, having inwardly-extending lips, as at *d*, sub- 70 stantially as and for the purposes described.

In testimony whereof I, the said GEORGE K. REBER, have hereunto set my hand.

GEO. K. REBER.

Witnesses:

JNO. K. SMITH,
 T. B. KERR.