G. K. REBER.

Water-Conductor.

No. 225,237. Patented Mar. 9, 1880.

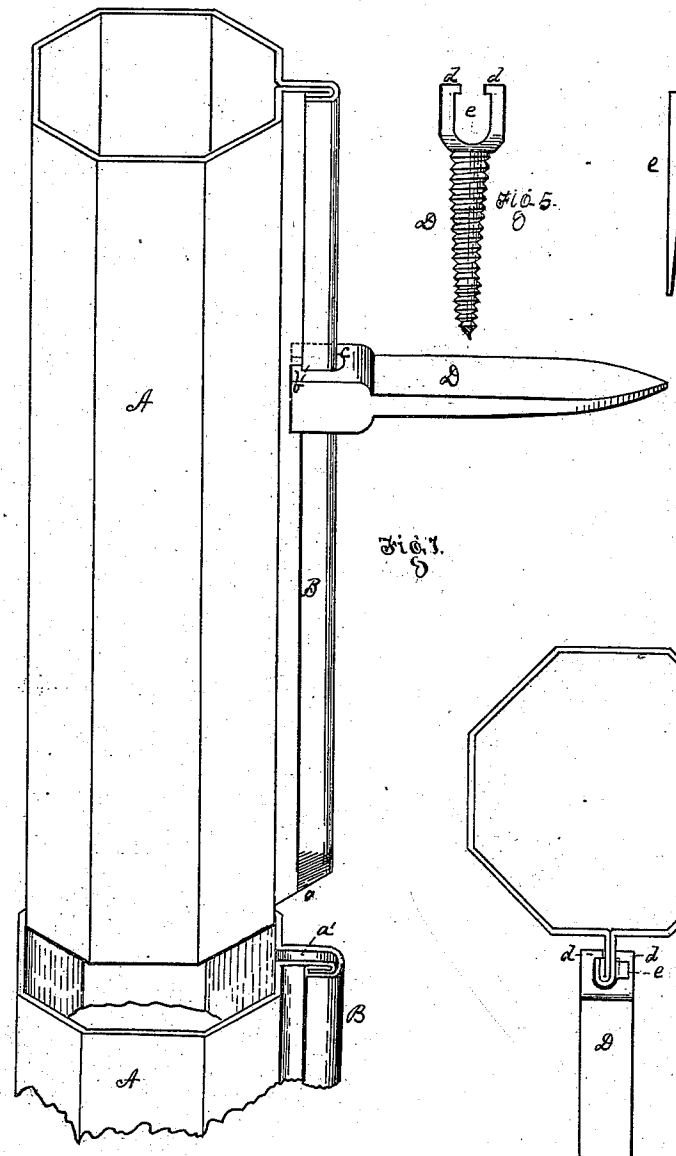


Fig. 1.

Fig. 5.

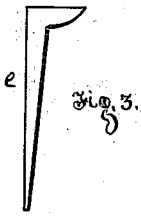


Fig. 3.

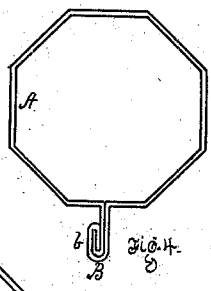


Fig. 4.

Fig. 2.

Witnesses.
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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 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—

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 sectional view of the conductor with double-locked seam, and Fig. 5 is a view of a wood-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 buidings, for the purpose of carrying the 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 bent into various shapes, and having their edges united by means of a flat seam or soldering. The pipes or conductors thus formed were secured to the side of the house in such position that the pipe rested directly against 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 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 connection with the roof and causing leakage.

By my invention these objections are entirely overcome.

It consists, first, in a water-conductor provided with a standing seam adapted to be turned toward the wall when the conductor is secured in place, and so prevent the conductor 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 provided with a slot or recess for the reception of the standing seam; and, finally, in details of construction hereinafter specifically set forth.

One of the chief advantages of my invention is, that it requires no fastening devices 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 fastenings and secured without any other work than securing the fastening into the wall.

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 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 held up against and in position with the section above it. Therefore the work of putting the flanges on the conductor was often necessarily done at the building, which was inconvenient, while the securing of fastening devices to the conductor is saved with my conductor.

An incidental advantage of my construction is, that it is not injured by the expansion of water freezing therein. Water freezing in conductors 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.

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

In the drawings referred to, A represents the water-conductor, which is made of sheet-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 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 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 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 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 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 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.

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 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 conductor is to drive or screw the fasteners D in the required line, place the seam of the conductor 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 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 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 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 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 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*, substantially 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.