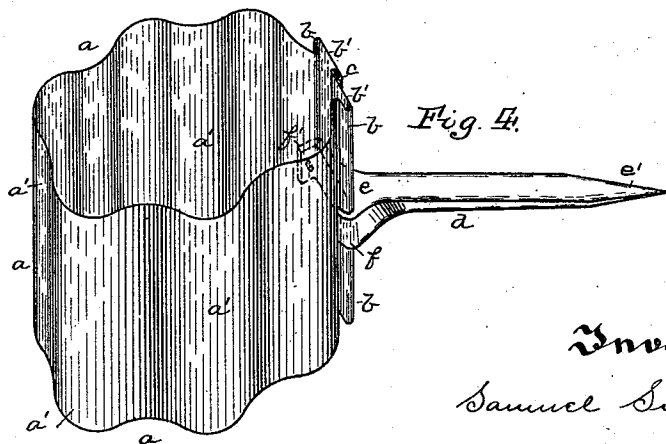
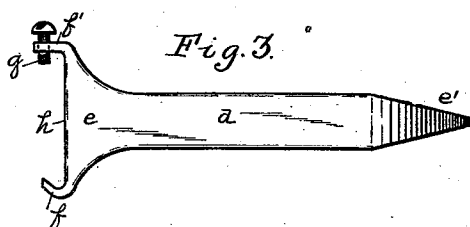
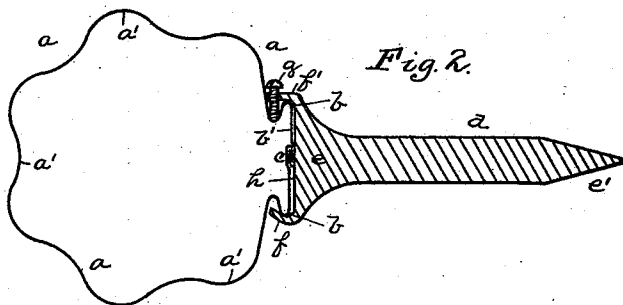
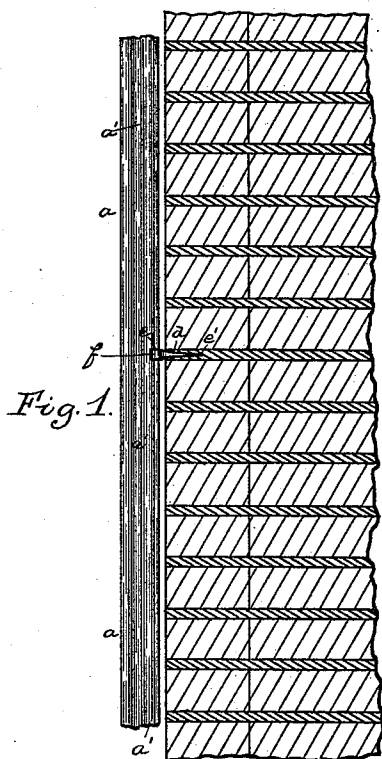


(No Model.)

S. SILBERSTEIN.
WATER CONDUCTOR.

No. 466,578.

Patented Jan. 5, 1892.



Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL SILBERSTEIN, OF PITTSBURG, PENNSYLVANIA.

WATER-CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 466,578, dated January 5, 1892.

Application filed January 17, 1891. Serial No. 378,095. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL SILBERSTEIN, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Conductors or Spouts and Fasteners therefor; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to conductors or spouts for carrying off water from the roofs of buildings and to a fastening device for retaining the conductor or spout rigidly in place. These conductors are usually secured to the walls of the building depending for support on brackets or similar supports which engage the conductor, the said brackets being supplied with pointed shanks adapted to be driven into the spaces between the bricks or stones of the walls or with threaded ends to screw into the wood-work.

The most approved form of conductors or spouts are formed of corrugated sheet metal of suitable thickness, the corrugations permitting of the expansion and contraction of the metal due to the frost, to which the conductors are directly exposed, and so obviating the liability of the bursting of the conductors under the strain of undue contraction and expansion. As the corrugations are composed of grooves with rounded surfaces, it has been a matter of great difficulty to provide a fastening device which will engage rigidly with the corrugations of the conductor and at the same time not bind the conductors to such an extent as to interfere with the requisite expansion and contraction of the corrugations due to the effects of sudden changes of temperature.

The object of my invention, therefore, is to provide a form of conductor and fastener therefor which engages rigidly with the conductor and yet allows of the expansion and contraction of the corrugations, as the state of the weather may demand.

To these ends my invention consists, generally stated, in a water conductor or spout having a dovetailed rib formed thereon, said rib having a broad face and having a space nearly as broad as the face between its inwardly-extending edges and a fastener engaging with said dovetailed rib.

It also consists in certain other improvements, as hereinafter described.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a side view of a conductor secured to the wall of a building. Fig. 2 is a cross-section. Fig. 3 is a plan view of the fastener removed, and Fig. 4 is a perspective view of the conductor with the fastener engaging therewith.

Like letters indicate like parts.

The conductor or spout *a* is constructed of galvanized or other sheet metal of suitable thickness, the main portion of its circumference being corrugated in the usual manner to provide for the ordinary expansion and contraction of the conductor. The rear portion of the conductor *a* is shaped to form the dovetailed rib or ridge *b* in distinction from the ordinary corrugations *a'*. As the formation of the dovetailed rib *b* presents a flat back face *b'*, it is at the mid-point of this face *b'* that the seam *c* of the conductor is formed, the flat back face *b'* affording the means for obtaining a much closer connection than could be obtained were the seam formed on the rounded surface of one of the corrugations. It will be noticed that this dovetailed rib has a broad face and has a space nearly as broad as the face between its inwardly-extending edges. By this construction a much firmer hold of the fastener to the conductor can be obtained, this broad flat face of the dovetailed rib distributing the weight of the conductor more evenly and extending the support further around the body thereof.

The fastener *d* is composed of the head *e* and the pointed or threaded shank *e'*. Extending beyond the head *e* and formed integral therewith are the lips *f f'*. The lip *f* is inwardly extending to engage one side of the dovetailed rib *b* of the conductor, as shown in Fig. 2, the opposite lip *f'* extending directly at right angles to the head *e* of the fastener *d*. The lip *f'* is provided with a threaded opening therein, through which the set-screw *g* passes, so that when the fastener *d* is secured to the dovetailed rib *b* the flat back face *b'* thereof will be in contact with

the flat face *h* of the head *e* of said fastener, while the inwardly-extending lip *f* engages one side of the dovetailed rib *b* and the lip *f'* the opposite side when the said set-screw is tightened, thereby rigidly securing the fastener *d* to the conductor *a*, the action of the set-screw being to force the opposite side of the dovetailed rib into the recess formed by the inwardly-projecting lip *f*, thus providing a very rigid connection and one that may be tightened from time to time, as occasion may require.

The above-described manner of forming the connection between the conductor and fastener in no way interferes with the expansion and contraction of the several corrugations, there being no binding action around them. The binding action of the fastener does not extend beyond the dovetailed connection, the corrugations directly adjacent thereto being perfectly free to expand or contract, as occasion may require, since the lips of the fastener have no connection whatever with any portion of the conductor, with the exception of the dovetailed connection.

To secure the conductor to the wall of the building the shank *e'* is driven in the ordinary way into the mortar between the bricks or stones, as illustrated in Fig. 1. As the dovetailed rib or ridge *b* extending along the conductor provides a body of metal which can be expanded, it is evident that it may also be employed to advantage with the ordinary circular, hexagonal, or other shaped pipes, in which case the conductor would be sufficiently expansible between the fasteners, while the dovetailed connection between the

fasteners and rib gives such a strong hold that the conductor is enabled to sustain heavy weights.

The fact that the fastener engages with such a broad flat face as that presented by the dovetailed connection tends to increase the stability of the connection between the conductor and the fastener, thus more evenly distributing the weight of the conductor and relieving the shank from undue strain and decreasing the liability of its loosening its hold on the mortar in which it is driven.

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

1. A water conductor or spout having a dovetailed rib formed thereon, said rib having a broad face and having a space nearly as broad as the face between its inwardly-extending edges, and a fastener engaging with said dovetailed rib, substantially as and for the purposes set forth.

2. A corrugated conductor or spout having a dovetailed rib formed thereon, a fastener having an inwardly-extending lip thereon engaging one side of said dovetailed rib and a straight lip engaging the opposite side of said dovetailed rib, and a set-screw passing through said lip to bind said fastener to the dovetailed rib, substantially as and for the purposes set forth.

In testimony whereof I, the said SAMUEL SILBERSTEIN, have hereunto set my hand.

SAMUEL SILBERSTEIN.

Witnesses:

J. N. COOKE,

ROBT. D. TOTTEN.