P. Ahn.

Eaves-Trough Fastening.

No. 71941 Patented Dec. 10, 1867.

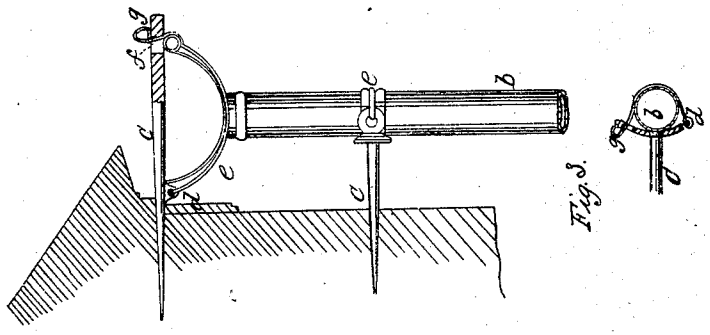


Fig. 3.

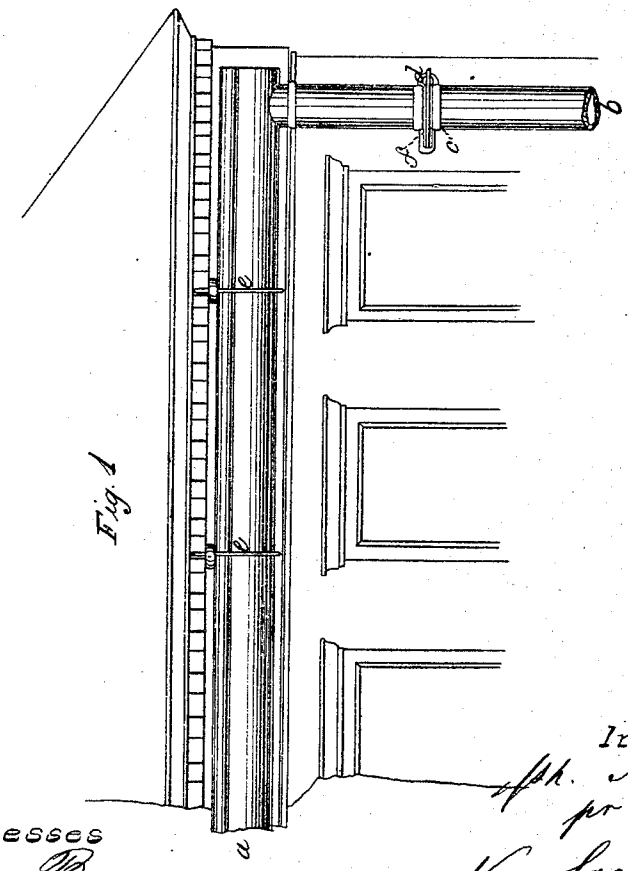


Fig. 1

Witnesses

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per

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Attys

United States Patent Office.

PHILIP AHN, OF BRANDON, VERMONT.

Letters Patent No. 71,941, *dated December* 10, 1867.

IMPROVEMENT IN EAVES-TROUGH FASTENING.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, PHILIP AHN, of Brandon, in the county of Rutland, in the State of Vermont, have invented a new and useful Improvement in Fastenings for Eaves-Troughs and Conductors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 is an elevation of an eaves-trough and conductor, supported by fastenings made according to my invention.

Figure 2 is a side view of the fastening applied to the trough and conductor, the trough being seen in cross-section.

Figure 3 is a plan of the fastening as applied to a conductor.

Similar letters indicate corresponding parts.

This invention consists of the combination of a spike or bolt with a spring-wire, or its equivalent, in such a manner that the spring-wire embraces a trough or conductor, and attaches it to the spike or bolt, which is previously driven or screwed into the wall of a building.

The letter *a* designates an eaves-trough, and the letter *b* a conductor, each of ordinary construction, such as are commonly applied to buildings. *c* is a bolt, sharp-pointed, and intended to be driven into the wall of a building. The bolt may have a screw-thread on it, in cases where it is desired or preferred to screw it into a wall. It may also be modified in form so as to be fastened, by nails or screws, to the wall of a house, in which case its end, instead of being sharp-pointed, is made broad, in the form of a plate; but for ordinary uses the form here shown is preferable, both for economy in material, and in labor of applying the fastening. The spikes or bolts are provided with straps *e* of wire, or other material, one end of which is fastened to the bolt at *d*, and the other is formed with a shoulder, *g*, which goes through a slot, *f*, that is cut in the head of the bolt, as seen in the drawings.

I prefer to make the strap of spring or elastic wire, galvanized to prevent rust. The shoulder *g* of the strap is sprung into and forced through slot *f* of the bolt, where the elasticity of the wire suffices to retain it by pressing it against the end of the slot, in which position the shoulder *g* is prevented from slipping out. In order to release the wire, the shoulder *g* is pushed inwards, so as to bring it into coincidence with the slot, when it can be withdrawn, and the trough or conductor be thereby released from the fastening.

In putting up or taking down a semi-cylindrical sheet-metal eaves-trough, *a*, like that shown in the drawing, advantage is taken of the elasticity of the metal, in putting in and taking out the shoulder *g* from the slot in the bolt.

In the example here shown of the manner of applying my invention to an eaves-trough, I make the bolt long enough to allow it to extend across the trough, its head coming outside of the trough, and a shoulder at *d*, where the spring-strap is fastened, serving to prevent the trough from moving inwardly along the bolt. The spring-strap or wire is brought round beneath the trough, and outside thereof, and its end is passed through slot *f*, the shoulder *g* on the wire operating to lock the strap to the bolt.

Fig. 2 shows how the outer edge of the trough is made to assist the elastic action of the strap in holding the shoulder *g* in place, at the outer end of the slot *f*.

The bolt shown in fig. 3 is modified in form, but the principle of construction and operation is the same. In said fig. 3 the head of the bolt is widened out and curved, so as to partly embrace the inner side of the conductor *b*, the elastic strap being fastened at *d* to one end of the head of the bolt, whence it goes around the outside of the conductor until it meets the slotted end of the head.

In applying my fastening to conductors, I select those parts where the beads are made at the joints, so that the conductors will not be liable to slip through the straps, or I form beads on the conductors for the purpose. The spikes or bolts are of malleable or wrought iron.

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

The bolt *c* combined with the elastic strap *e*, substantially as and for the purpose described.

PHILIP AHN.

Witnesses:

J. Q. HAWKINS,

CHARLES W. BRIGGS.