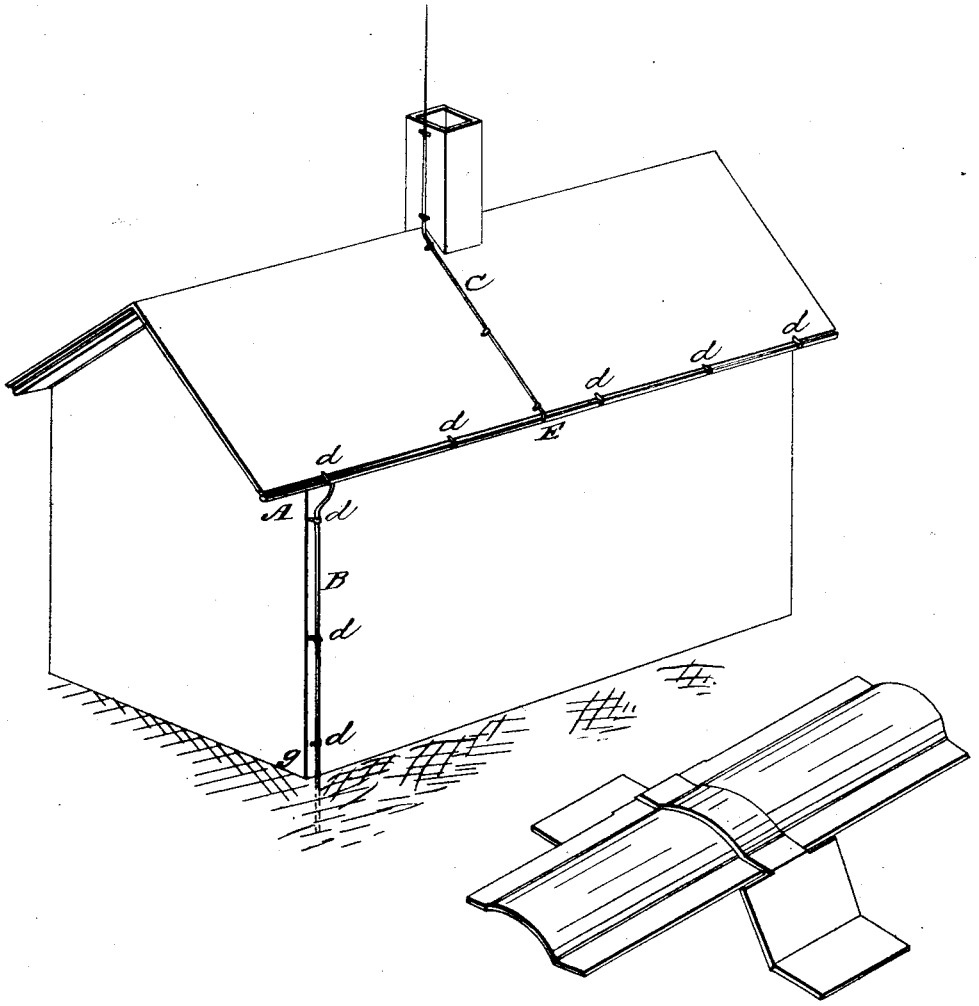
HANKENSON & BAKER.

Lightning Rod.

No. 108,354. Patented Oct. 18, 1870.



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JAMES W. HANKENSON AND WINSLOW BAKER, OF MINNEAPOLIS, MINNESOTA.

Letters Patent No. 108,354, dated October 18, 1870.

IMPROVEMENT IN COMBINED EAVES-TROUGHS AND LIGHTNING-RODS.

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

Be it known that we, JAMES W. HANKENSON and WINSLOW BAKER, both of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements consisting of a Combined Eave-Trough and Lightning-Rod, of which the following is a specification.

Our invention relates to the construction of eave-troughs, and the conducting-pipes connected therewith, of continuous copper strip, having a tin coating upon the inside; to the insulation from the building of the same by means of brackets, which are non-conductors of electricity, and to their connection at the eaves of the building with a lightning-rod.

The advantages to be secured are—

First, the gutter being thus constructed of durable material, without joints, and with a perfectly smooth surface, no particles of water can remain in it to occasion corrosion and leakage, as in metallic gutters now in use.

Second, the eave-trough and pipe being of copper, being insulated, and being connected with the lightning-rod, are made to serve the additional purpose of a lightning-conductor.

To enable others to make and use our invention, we will describe its construction and operation, reference being had to the accompanying drawing and the letters of reference marked thereon, which make a part of this specification.

A is an eave-trough, made of one continuous strip of copper, rolled out the required width and thickness, and having the inner surface tinned over to prevent the possibility of any injurious effect from the copper upon the water.

A wire may be rolled into the edges of the strip-trough to add stiffness and preserve its shape.

B is a water-pipe, of the same material as A, to which it is jointed, and which runs down the building and into the ground.

d d d are insulating-brackets, for attaching the eave-trough and pipe to the building.

C is a copper lightning-conductor, attached to the roof by insulators, and jointed to trough A at E.

G is a pipe, of non-conducting material, jointed to B, for the purpose of carrying the water to the cistern, while the electric fluid follows conductor B.

What we claim as our invention, and desire to secure by Letters Patent, is—

I. The eave-trough A, when constructed of one continuous strip of copper, with the inside surface coated with tin, or other non-corrosive substance, and connected with water-pipe B, made of same material, substantially as and for the purpose described.

2. The combination, with rod C, of the copper eave-trough and pipe A B, whereby the latter is made to serve the additional purpose of a lightning-conductor, substantially as and for the purpose described.

3. The combination, with the electrical conducting-pipe B, of non-conducting pipe G, for the purpose of carrying the water from the copper conductor to the cistern, substantially as and for the purpose described.

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