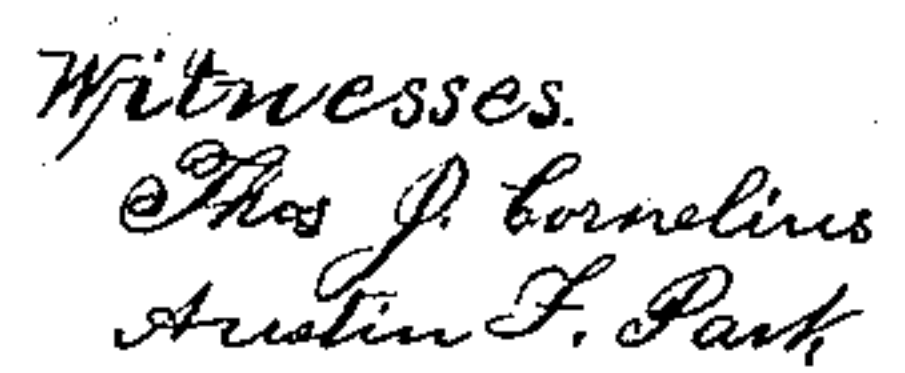


*Water Snout,*

*Patented Dec. 18, 1860.*





# UNITED STATES PATENT OFFICE.

GEORGE M. SELDEN, OF TROY, NEW YORK.

## EAVES-TROUGH.

Specification of Letters Patent No. 30,934, dated December 18, 1860.

*To all whom it may concern:*

Be it known that I, GEORGE M. SELDEN, of the city of Troy, in the county of Rensselaer and State of New York, have invented a new and useful improvement in eaves-troughs and their conductors when combined with and arranged upon buildings, as usual, for the purpose of preventing the damage which would otherwise result to the building from the freezing within and consequent overflowing of the conductor and eaves-trough by the water which occasionally runs from melting snow or ice on the roof in freezing weather; and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings, making a part of this specification, in which—

Figures 1, 2, and 3, are vertical sections through eaves-troughs and their conductors attached to buildings and with my invention applied.

A is an eaves-trough and B is its conductor, applied to the side, C, of a building, in the usual manner.

D is a flue-space, formed by a casing E, along the whole, or nearly the whole, under side of the eaves-trough.

F, Fig. 1, is a flue-space made by a casing, G, around the conductor; and H, Fig. 2, is a flue-space in a tube or pipe, I, within the conductor.

J, J', J<sup>2</sup>, J<sup>3</sup>, are pipes or air passages through which warm or hot air passes from the warm apartment or apartments, (K,) or hot-air furnace, (L,) within the house, out into the flue-spaces, D, F, and H, and conductor, B, Fig. 3.

M, M', M<sup>2</sup>, M<sup>3</sup>, are dampers or registers by means of which the passage of the warm or hot air into the flue-spaces and the conductor is controlled.

N, N', N<sup>2</sup>, are openings through which the warm air may escape from the flue-spaces or chambers into the open air. I generally arrange a row of the apertures, N, just under the eaves, O, so that the warm air which escapes through them may help melt the snow and ice, P, from the eaves.

Q is an aperture between the flue-space along the conductor, and the one along the eaves-trough, so that the warm air may pass from one flue-space into the other.

The arrows in the annexed drawings indicate the courses of the currents of hot or warm air as they spontaneously pass from

within the building, through the air-passages, conductor, flue-spaces, and apertures, out into the cold atmosphere; and also indicate the course of the water as it drips from the roof into the eaves-trough, and runs down through the conductor to the ground.

It is obvious that it is not generally necessary to provide a special warm apartment or hot-air furnace to supply the warm or hot air to the eaves-trough and conductor, for in most cases the warm or hot air may be supplied by the kitchen or some other warm room or apartments of the building, or from the furnace, heater or stove which warms the building or its apartments; and it is apparent that the number, form, and position of the flue-spaces or air-passages by which the warm or hot air is directed from the warm apartment or hot-air furnace, to and into, through or along the outside of the conductor and eaves-trough, may be greatly varied from the representation given in the annexed drawings without materially affecting the result and consequently without departing from the distinguishing characteristic of my invention.

The subject matter of my invention is a certain combination of at least four elements, all conditioned and arranged together as follows, viz:—1st. A house, edifice or building so located and in such a condition that snow or sleet will fall and lodge upon its roof and be sometimes melted thereon so that water therefrom will occasionally run from the roof in freezing weather, by reason of heat derived from warm air in contact with the under side of the roof or from some other sufficient source of caloric. 2d. An eaves-trough and its conductor arranged upon the said building as usual, to conduct to the ground the water that runs from the roof. 3d. A warm or hot air apartment, chamber, furnace or heater which will supply warm or hot air. 4th. A suitable air-passage or air-passages or flue-space or flue-spaces, the last two elements being so combined and arranged with the first two that warm or hot air will rise or pass from the said apartment or other source of warm or hot air, through the said air-passages or flue-spaces to and into, through, or along the outside of the eaves-trough and its conductor, substantially as above specified and illustrated by the annexed drawings. It is therefore evident that to simply surround pipes with heating jackets of warm or hot air, or to inclose a water-



pipe in a larger pipe into which exhaust steam, or hot air even, is allowed to pass, as has doubtless been heretofore done for the mere purpose of keeping up a supply of  
5 water through the inner pipe in freezing weather, does not involve the use of the above described combination and arrangement of the four essential parts which it is necessary to employ in practicing my invention;  
10 nor does it produce the same beneficial result that is accomplished by my invention or improvement.

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

15 The combination and arrangement, sub-

stantially as herein described, of the air passages or flue-spaces, with an eaves-trough and its conductor located upon a building as usual, and with a warm-air apartment or hot-air furnace, for the purpose of preventing the damage which ordinarily results to the building from the freezing within and consequent overflowing of the conductor and eaves-trough by the water which sometimes runs from melting snow or ice on the roof in  
20 freezing weather. 25

GEO. M. SELDEN.

Witnesses:

THOS. J. CORNELIUS,  
AUSTIN F. PARK.