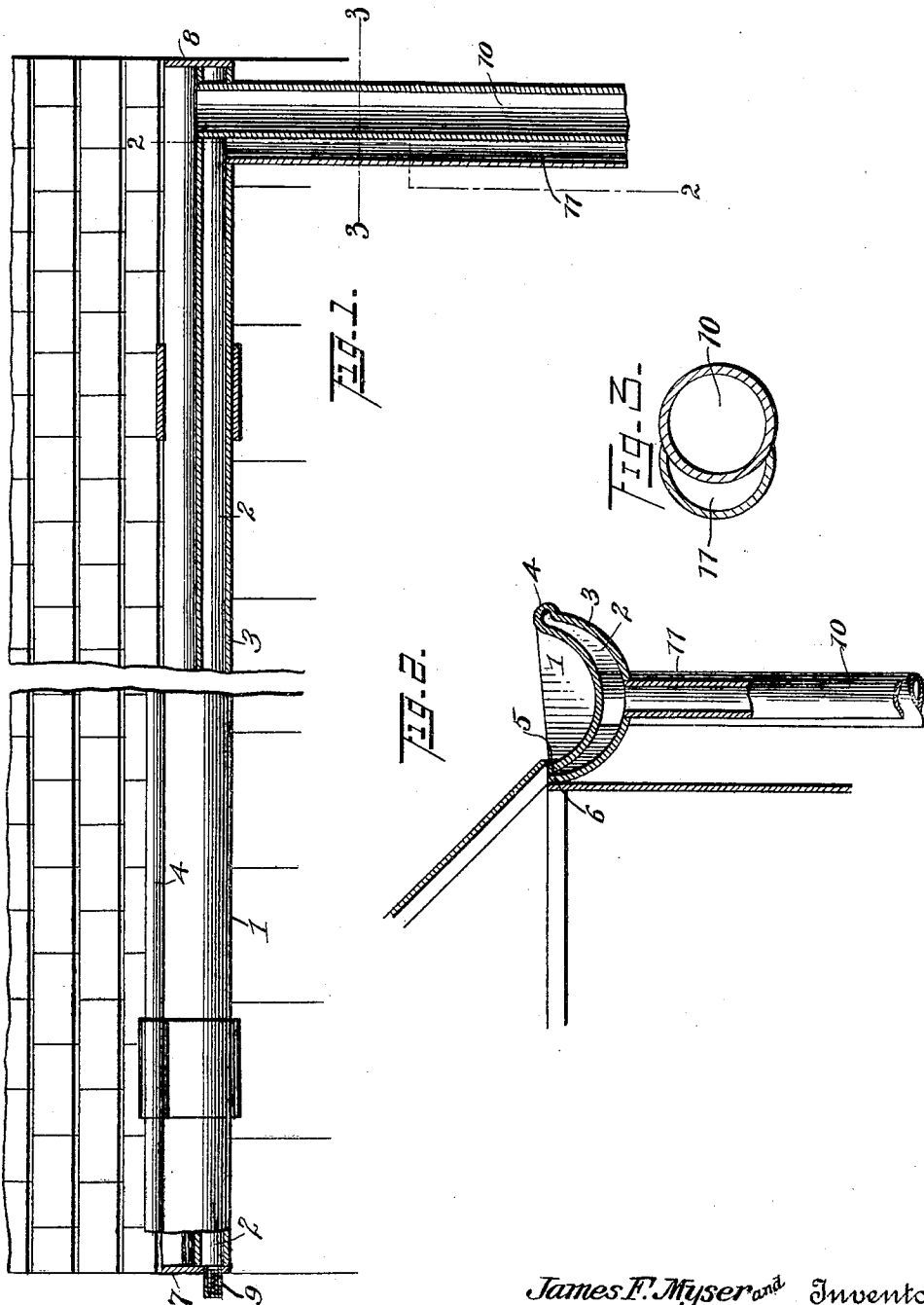


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PATENTED JUNE 26, 1906.

J. F. MYSER & A. ZIESENIS.
EAVES TROUGH.

APPLICATION FILED JAN. 22, 1906.



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JAMES F. MYSER AND ALBERT ZIESENISS, OF RIFLE, COLORADO.

EAVES-TROUGH.

No. 824,570.

Specification of Letters Patent.

Patented June 26, 1906.

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To all whom it may concern:

Be it known that we, JAMES F. MYSER and ALBERT ZIESENISS, citizens of the United States, residing at Rifle, in the county of Garfield and State of Colorado, have invented a new and useful Eaves-Trough, of which the following is a specification.

The invention relates to improvements in eaves-troughs.

The object of the present invention is to improve the construction of eaves-troughs, and to provide a simple, inexpensive, and efficient device which will possess great strength and durability and which will prevent accumulation of ice within it, and thereby avoid injury to itself and the damage both to the walls and interior of a building, that often results from water freezing within an eaves-trough, and causing a stoppage of the trough and a consequent overflowing of the same.

A further object of the invention is to enable an eaves-trough to be heated through its entire length by the hot air or steam employed for heating the building and to prevent any injury to the trough through any excessive pressure of the steam or other heating mediums.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a front elevation, partly in section, of an eaves-trough constructed in accordance with this invention. Fig. 2 is a vertical sectional view taken substantially on the line 2 2 of Fig. 1. Fig. 3 is a horizontal sectional view on the line 3 3 of Fig. 1.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an eaves-trough constructed of sheet metal and provided throughout its entire length with a heating-chamber 2, adapted to conduct hot air or steam along the bottom of the eaves-trough for maintaining the same and any water therein at a temperature above freezing to prevent the accumulation of ice within the eaves-trough and

the consequent stoppage of the passage thereof and the damage both to the eaves-trough and to the house or building resulting from an overflow of water. The eaves-trough is substantially semicircular in cross-section, and it is provided with a lower substantially semicircular bottom wall 3, formed integral with the eaves-trough and connected with the same by a circular bend or bead 4, which is arranged at the front or outer side of the eaves-trough. The bottom wall or portion 3 is curved in cross-section, and it forms a curved transversely-tapered space between it and the bottom of the eaves-trough, and the inner side edges 5 and 6 of the sheet metal of the eaves-trough and the lower wall or portion are united by means of solder; but any other suitable means may be employed for this purpose, as will be readily understood. The end walls 7 and 8 of the eaves-trough are extended to provide end walls for the heating-chamber 2, and an automatic relief-valve 9 is arranged at the end wall 7 for preventing injury to the device through any excessive pressure within the heating-chamber. The automatic relief-valve, which is provided with a spring-actuated valve member, is adapted to open when the pressure within the chamber 2 is sufficient to overcome the force of the spring, and the valve member is automatically closed by the spring when the pressure within the heating-chamber becomes less than the pressure of the spring.

The eaves-trough, which is designed to be applied to a house or other building at the eaves in the usual manner, is connected at the end opposite that at which the relief-valve is located with a rain-spout 10, and a pipe or conduit 11 is connected with the heating-chamber at this end of the device. The rain-spout pierces the lower wall or portion 3 and also the bottom of the eaves-trough, as clearly shown in Fig. 1 of the drawings, and the pipe or conduit 11, which pierces the lower wall or portion 3, is preferably arranged contiguous to the rain-spout, as shown, in order to be supported by the same. The pipe or conduit 11 consists of a substantially semicircular wall or member arranged exteriorly of the rain-spout and suitably secured to the same, as clearly illustrated in Fig. 3 of the drawings. The curved wall or member forms, with the adjacent portion of the rain-spout, a substantially crescent-shaped heating-chamber, which partially envelops the rain-spout. As the curved wall or member is

arranged exteriorly of the rain-spout, it does not necessitate any alteration in the form of the latter and may be readily applied to the same by solder or any other suitable means.

5 The pipe or conduit 11 is designed to be connected with the heating apparatus, which may be either a hot-air furnace or a steam or hot-water heater, and the heating medium circulating through the heating-chamber will
10 prevent accumulation of ice within the eaves-trough. Also the arrangement of the pipe or conduit 11, contiguous to the rain-spout, is advantageous, as the temperature of the latter will be raised to prevent it from being
15 choked up by ice.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

20 1. A device of the class described, comprising an eaves-trough constructed of sheet metal and provided with a lower wall spaced from the eaves-trough to form a lower heating-chamber and connected with the eaves-trough at the front or outer edge by an inte-

gral bead, a rain-spout piercing the said lower 25 wall and the bottom of the eaves-trough, and a heating pipe or conduit for the rain-spout communicating with the heating-chamber.

2. In a device of the class described, an eaves-trough provided at the bottom with a 30 heating-chamber, and consisting of a single piece of sheet metal folded longitudinally at an intermediate point and bent thereat to provide a front bead, the portions of the sheet metal at opposite sides of the bead be- 35 ing curved inward from the said bead to form the bottom of the trough and the bottom of the heating-chamber, and the longitudinal edges of the sheet metal being secured together at the inner side of the trough. 40

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JAMES F. MYSER.

ALBERT ZIESENISS.

Witnesses:

N. A. WALL,

W. W. SEAMENS.