

G. D. Volkmar,

Metallic Roof.

No. 102451.

Patented Apr. 26. 1870.

FIG. 1.

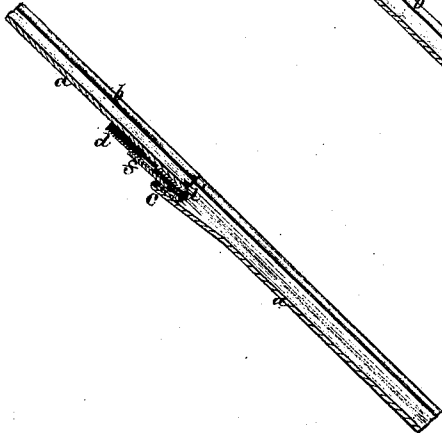


FIG. 3.

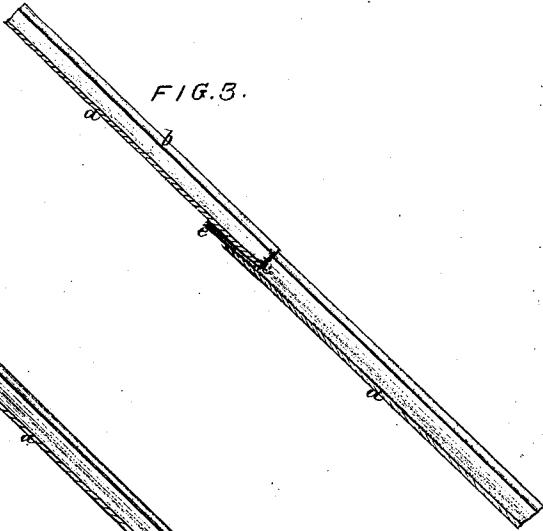


FIG. 2.

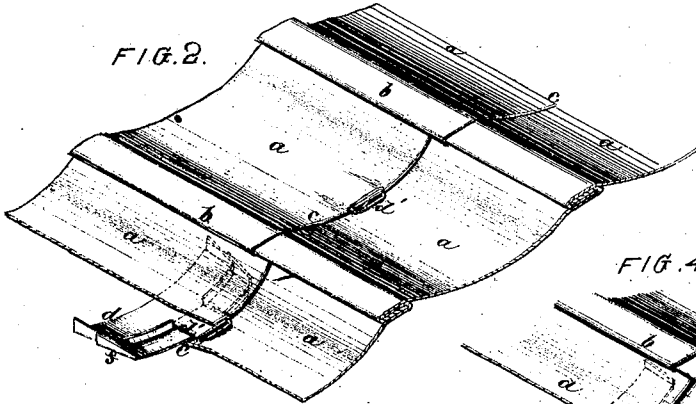
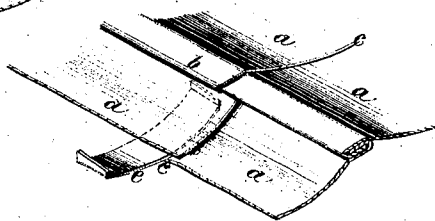


FIG. 4.



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GEORGE D. VOLKMAR, OF BALTIMORE, MARYLAND

Letters Patent No. 102,451, dated April 26, 1870; antedated April 15, 1870.

IMPROVED METAL-ROOF PROTECTOR.

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

I, GEORGE D. VOLKMAR, of Baltimore, in the State of Maryland, have invented a new and useful Metal-Roof Protector.

Nature and Object of the Invention.

It has long been conceded that for railroad buildings and large sheds of other descriptions, sheet-iron roofs are very superior, owing to their great economy, safety, and strength.

Certain serious defects, however, have hitherto existed in roofs of this character, forming serious drawbacks to their use.

To obviate these by a simple and permanent remedy is the object of this invention.

All metal roofs, unless protected by a sheathing of wood, will "sweat" or gather moisture by condensation on their inner surface, more or less, all the year round, especially when the temperature without is lower than that in the building.

This moisture, collecting at prominent points of the surface, drops in considerable quantities, causing annoyance, and, at times, considerable damage to goods stored in the building, and, in passenger-depots, &c., to the clothes of passengers and others walking beneath. It further penetrates the grooves and seams between the plates composing the roof, some essential to its support, causing rust and ultimately premature decay.

I render this moisture harmless to the roof, preventing its dropping on the inside and collecting in and rusting the seams, by providing means for conveying it to the outer surface, consisting of suitable funnels or conductors applied at the transverse seams or joints, which conductors, including their application to the roof, constitute the subject of my invention.

Description of Drawings.

In the accompanying drawings—

Figure 1 represents a longitudinal section, and

Figure 2 a sectional perspective view of a portion of a seamed roof, provided with my protector in the form adapted therefor; and

Figures 3 and 4, similar views of a roof, the plates of which simply overlap, having my protector, adapted for that form, applied.

General Description.

In the drawings—

a a represent the plates composing the roof;

b, the longitudinal joints of the same; and

c, their transverse joints.

The latter form the projections at which the moisture collects and drops from, in roofs unprovided with my protector, and, therefore, form the most effective

places for its application, beside the facility afforded by the seams or joints for its introduction.

d e represent the conductor.

f, figs. 1 and 2, an additional part or socket, for the securement of the conductor *d*.

The conductors *d e* are of flaring form, presenting sufficient opening at the outer end for the discharge of the water, and sufficiently larger at the inner to readily receive it, and are preferably of nearly the width of the plates composing the roof, curved, to correspond therewith, and of about the proportions shown, and may be made of sheet-iron or other suitable material.

They are applied at the end of each plate, or at suitable intervals in the length or depth of the roof, and transversely in each of the gutters or concavities of the same.

The form *d* for seamed roofs is provided, in addition to the general construction named, with a tubular extension, *d'*, and with end flanges, for conducting the water thereto, in order to restrict the water to the opening through the roof, which, in that class of roofs, has to be made for it.

These provisions render it so thick as to prevent its ready insertion in the open edge of the seam, which is provided for it in the socket *f*, which, being introduced into the seam, receives and holds it.

The opening for the tubular extension *d'* may be made with a chisel or other suitable instrument, being made at the center or lowest part of the seam, as shown.

The form *e* for lap-joint roofs may be of the general description before given, as represented; the open form of said joints rendering unnecessary the special provision (made in *d*) for conducting the water therethrough.

The socket *f* of the form *d* may be of substantially the shape of form *e*, as shown, having, in addition, a depression to accommodate its tube *d'*, and may be either separate therefrom or suitably attached thereto.

It is obvious that precise form and proportions may be varied, without essentially changing the operation of the device.

Being applied as shown, the conductors operate by receiving in their flaring mouths any water which may collect and run down on the under side of the roof, conducting it through to the outside, where it may, without objection, run off.

The advantages of the invention are obvious. Besides effectually and permanently removing the nuisance of the drip from the roof, it, at a trifling cost, preserves the roof from the deleterious rust occasioned by such water, when not so disposed of, and thus improves the wear of the roof, and, con-

sequently, effects a great saving in expenditures for renewal and repair.

Claims.

I claim as my invention—

1. The conductors *d d' e*, constructed substantially as described, to operate as and for the purpose set forth.
2. The provision, in the transverse seams or joints

of a metal roof, of conductors *d d' e*, adapted to carry off the water resulting from moisture or sweat from its inner to its outer surface, substantially as set forth.

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Witnesses:

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