

Fig. 1.

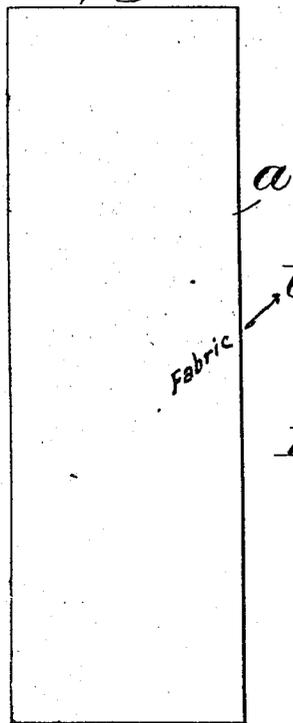


Fig. 2.

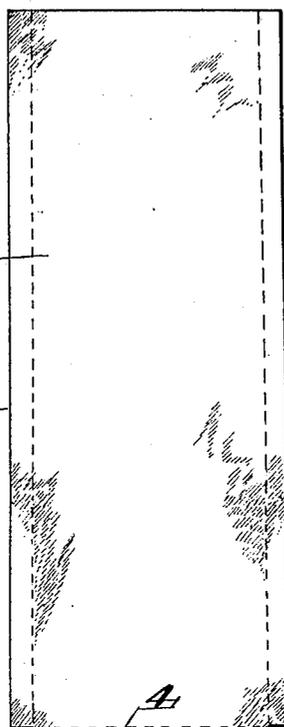


Fig. 3.

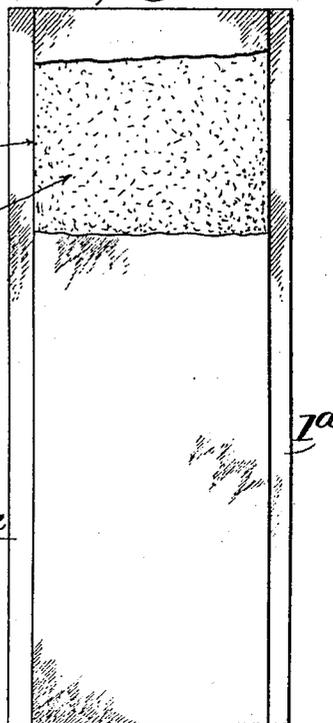


Fig. 4.

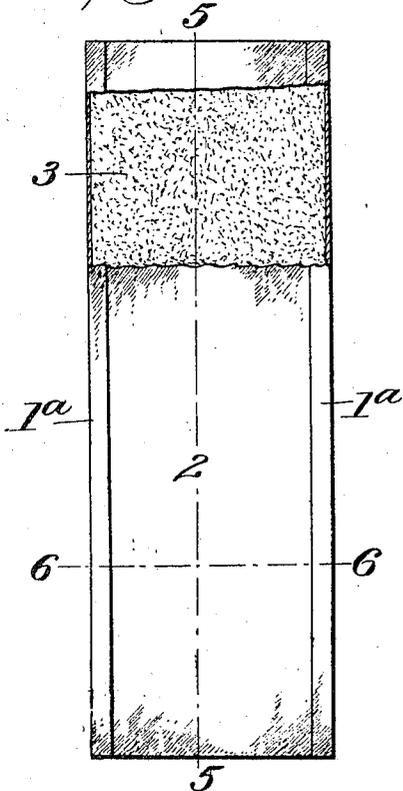


Fig. 5.

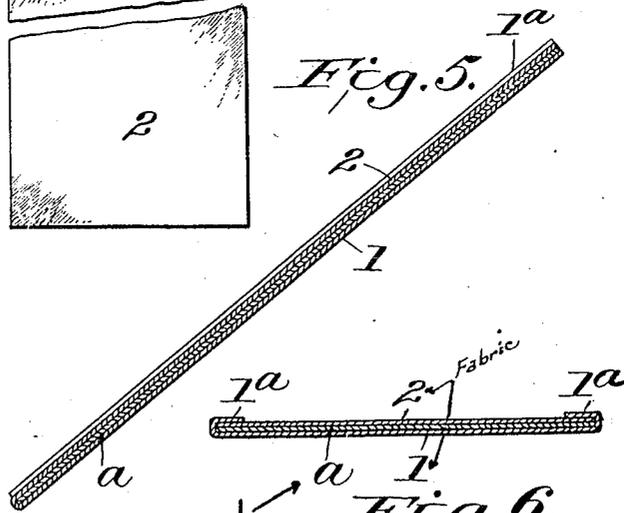


Fig. 6.

Sheet Metal → a

Inventor

T. D. Miller

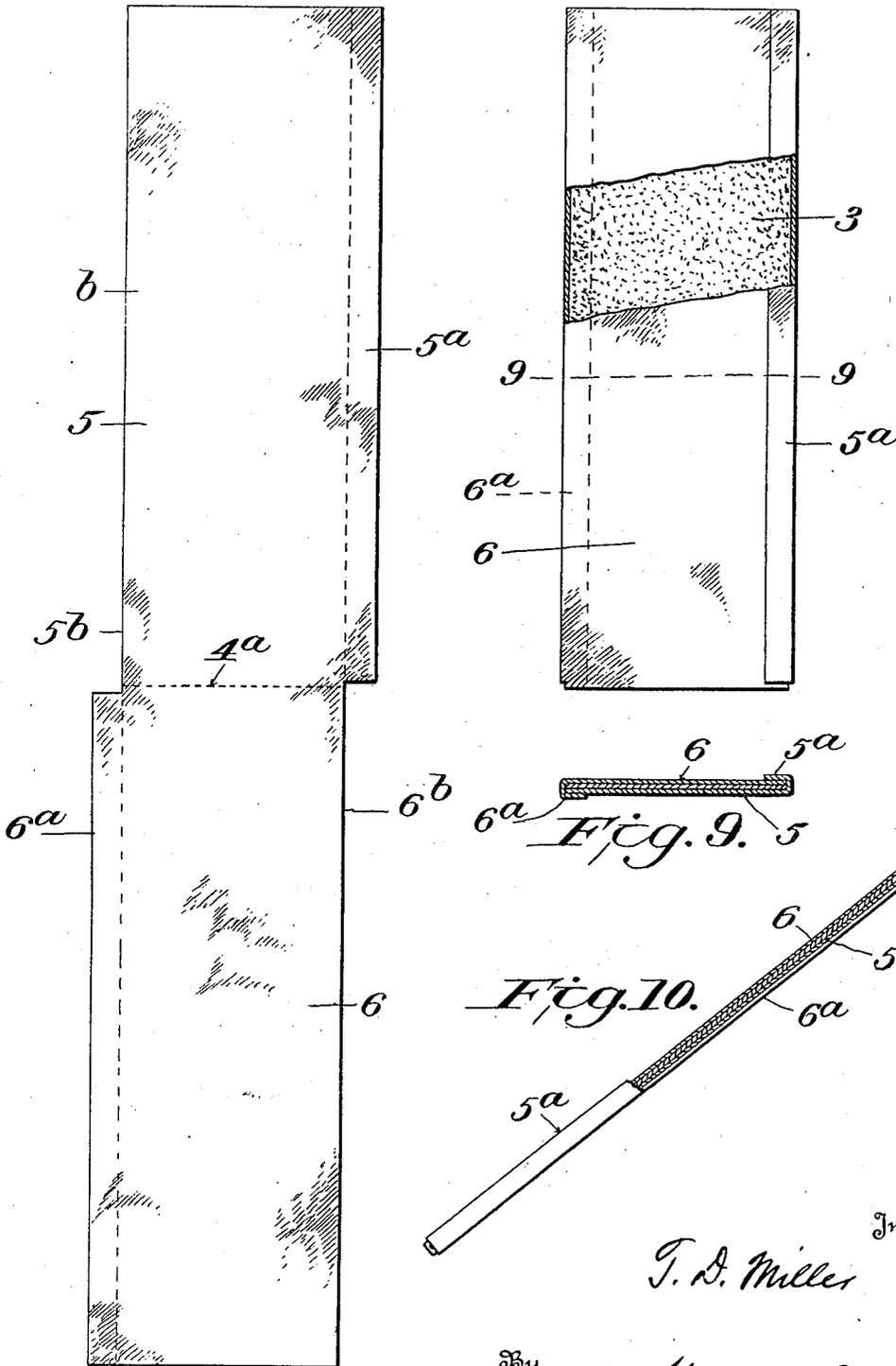
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Fig. 7.

Fig. 8.



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UNITED STATES PATENT OFFICE.

THOMAS DENTON MILLER, OF CATONSVILLE, MARYLAND.

SHEET-METAL COVERING.

1,298,541.

Specification of Letters Patent.

Patented Mar. 25, 1919.

Application filed August 16, 1917. Serial No. 186,618.

To all whom it may concern:

Be it known that I, THOMAS D. MILLER, a citizen of the United States, residing at Catonsville, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Sheet-Metal Coverings, of which the following is a specification.

The purpose of this invention is to provide metal sheets of the dimensions suitable for shingles, siding, roofing, etc., with protective coverings which can be readily manufactured and applied by automatic machinery, which coverings not only protect the faces of the metal sheets, but the edges thereof which would otherwise be exposed to the weather. While the invention is applicable to metal sheets of various dimensions for various purposes, it is particularly desirable in connection with sheets of suitable size to form shingles, and, for convenience, the invention will be described as applied to shingles.

In the accompanying drawing, which illustrates my invention,

Figure 1 is a plan view of a sheet metal strip suitable for forming the core of a shingle;

Fig. 2 is a similar view of a protecting covering, adapted to fit the core shown in Fig. 1;

Fig. 3 is a similar view, showing the covering folded at its center around one end of the core, the two halves of the covering being laid against the opposite faces of the core;

Fig. 4 shows in plan view the completed shingle, the marginal edges of the wider portion of the covering being folded over the side edges of the core and overlapping the marginal edges of the narrower half of the covering;

Fig. 5 is a section on the line 5-5 of Fig. 4;

Fig. 6 is a section on the line 6-6 of Fig. 4;

Fig. 7 is a plan view of a modified form of covering;

Fig. 8 is a similar view of a shingle with the covering of Fig. 7 applied thereto;

Fig. 9 is a section on the line 9-9 of Fig. 8; and,

Fig. 10 is an edge view, partly in section, of the shingle shown in Fig. 8.

Referring to Figs. 1-6, inclusive, of the drawing, *a* represents a strip of sheet metal of suitable dimensions to form a core for a shingle, and *b* represents the covering. The covering *b* consists of a fabric, preferably asbestos, and it is pre-formed to fit the core, said covering, for one-half of its length, indicated at 1, being somewhat wider than the core, and the other half 2, of the covering, being substantially of the same width as the core.

The core, prior to applying the covering thereto, is coated with a cement, preferably asphaltum, indicated at 3, which protects the core against rust and also serves to secure the covering to the core. In applying the covering to the core, the covering is folded at its center, along the dotted line 4, around one end of the core, and the parts 1 and 2 of the covering are then pressed by rollers on to the opposite faces of the core, as indicated in Fig. 3, the marginal edges of the narrower part of the covering registering substantially with the marginal edges of the core, while the marginal edges of the wider part of the covering project laterally beyond the core, as shown at 1^a in Fig. 3. The margins of the wider part of the covering are then folded around the edges of the core and overlapped on the margins of the narrower part of the covering, as shown in Fig. 4, this folding operation being performed by suitable rollers while the asphaltum cement is still plastic.

It is desirable to protect the edges of the metal core from the weather, and more particularly the lower end, as the lower part of the shingle is always exposed to the weather when in use. It will be seen that in the shingle illustrated in the drawing, the protective covering is folded around one end, which may be considered the lower end of the core, and thus this end is completely protected from the weather and from the sunlight which is injurious to asphaltum. The side edges of the core are also protected by the overlapping of the covering, and the upper end of the core is protected by the asphaltum which is squeezed out during the rolling operation. This latter end of the core is protected from sunlight and the weather when the shingle is in use by the overlapping of other shingles upon it, and

it is not so essential to cover the upper edge of the shingle, although this may be done, if desirable, by slightly lengthening the covering so that the two parts thereof will extend slightly beyond the upper edge of the core.

In applying the coverings to the metal cores, the cores are fed by automatic machinery at right angles to the coverings and engage the latter at the folding line 4, each core and covering then passing through the rolls which press the covering on to the core and turn in the marginal edges of the wider half of the covering. The coverings can thus be applied expeditiously and cheaply.

In Figs. 7 to 10, inclusive, a modified form of covering is shown. This form, while proportioned in the drawing to suit a metal core of the dimensions of an ordinary shingle, is well adapted for sheets of metal of various dimensions suited for other building purposes, such as roofing and siding.

Referring to Figs. 7-10, inclusive, the covering indicated at *b*, in Fig. 7, is approximately twice the length of the core *a*, to which it is to be applied, and the two halves, 5 and 6, of the cover sheet have marginal portions 5^a and 6^a, each one-half the length of the sheet and alternately arranged on opposite sides of the sheet. The distance between the edge 5^b of the part 5 of the sheet, and the edge 6^b of the part 6 of the sheet is approximately equal to the width of the core—preferably a trifle less than the width of said core, while the marginal portions 5^a and 6^a extend outwardly in opposite directions from the line of the edges 6^b and 5^b, respectively. When the cover sheet is applied to the core, the former is folded on the line 4^a, around one edge or end of the core, and the two parts 5 and 6 are then rolled on to the opposite surfaces of the core, and the marginal portion 5^a is turned over one of the side edges of the core and lapped on to the part 6, while the marginal part 6^a of the cover is folded around the opposite edge of the core and lapped on to the part 5, as shown in Figs. 8 and 9. The asphaltum or other cement used oozing out under the pressure of the rolls serves to secure the

marginal portions of the covering to the body of the covering.

What I claim is:

1. A metal sheet provided with a one-piece cover of fibrous material adhesively secured thereto in fixed relation and extending around one end of said sheet and entirely covering said end, the opposite surfaces and the side edges of said metal sheet.

2. A metal sheet provided with a one-piece cover of fibrous material adhesively secured thereto in fixed relation and extended around one end of said sheet and covering the said end, the opposite surfaces and the side edges of said metal sheet, with the portions of the fibrous material which cover the side edges of the metal sheet adhesively affixed to the portions of the cover which are affixed to the opposite surface of said metal sheet.

3. A building material comprising a sheet-metal core having adhesively secured thereto, in fixed relation, a one-piece cover of fabric entirely inclosing the core, said cover being approximately twice the length of the core and having at its lateral edges two marginal portions each approximately the length of the core, the body of said cover extending around one end and covering the faces of the core, and each marginal portion extending around one lateral edge of the core and overlapping and cemented to the fabric on the opposite face of the core.

4. A building material comprising a sheet-metal core having adhesively secured thereto, in fixed relation, a one-piece cover of fabric entirely inclosing the core, said cover being approximately twice the length of the core and having at its lateral edges two marginal portions each approximately the length of the core and alternately arranged on the different halves of fabric, the body of said cover extending around one end and covering the faces of the core, and each marginal portion extending around one lateral edge of the core and overlapping and cemented to the fabric on the opposite face of the core.

In testimony whereof I have affixed my signature.

THOMAS DENTON MILLER.