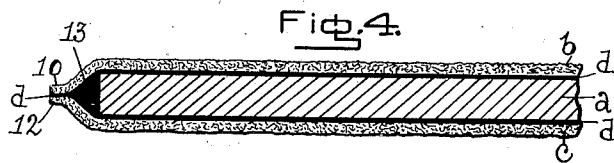
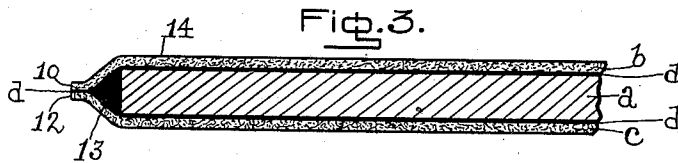
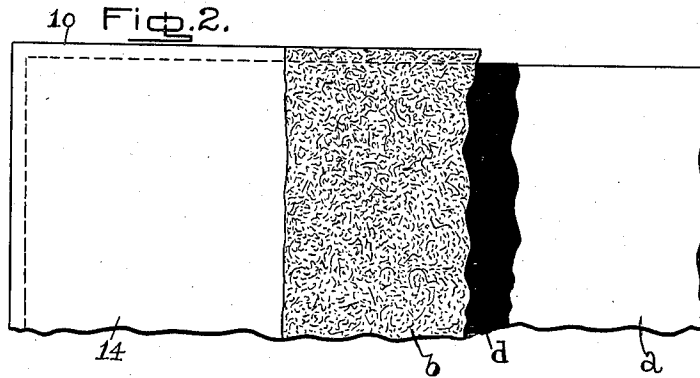
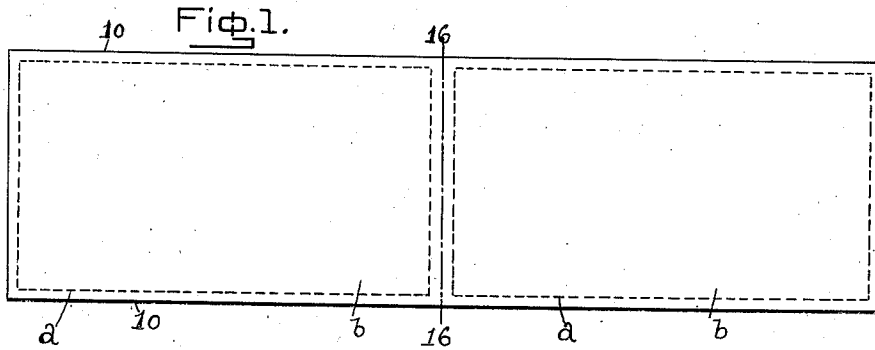


E. T. NEWSOME.  
PROTECTED METAL SHEET.  
APPLICATION FILED DEC. 15, 1910.

1,002,301.

Patented Sept. 5, 1911.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

EDGAR THOMAS NEWSOME, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO ASBESTOS PROTECTED METAL COMPANY, OF CANTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

PROTECTED METAL SHEET.

1,002,301.

Specification of Letters Patent.

Patented Sept. 5, 1911.

Application filed December 15, 1910. Serial No. 597,450.

*To all whom it may concern:*

Be it known that I, EDGAR THOMAS NEWSOME, a citizen of the United States, residing in Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Protected Metal Sheets, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to roofing and siding material for building and other purposes of that class in which a metal sheet has affixed to its opposite sides protective layers of asbestos, mineral wool or other fibrous material.

The present invention has for its object to provide a superior roofing and siding material of the class described. To this end, the protective layers are made wider and longer than the metal sheet to be protected and have their overlapping edges cemented or affixed together air and moisture tight by the asphalt or other cement which is used to affix the said protective layers to the metal sheet, whereby the latter is hermetically sealed and thoroughly protected from extraneous influences. The protective layers may have their exterior surfaces left in their natural state, or as is preferred in some cases, said exterior surfaces may be smoothed, compacted or calendered and provided with a waterproof composition, which imparts to the smooth exterior surface of the protected metal sheet, a finished and attractive appearance, which particularly adapts the protected sheet for use on the exterior of buildings.

Figure 1 represents in plan view two protected sheets embodying this invention. Fig. 2, a detail in plan with the parts broken away to more clearly show the construction. Fig. 3, a detail in section on an enlarged scale of the waterproofed sheet, and Fig. 4, a detail in section on an enlarged scale with the waterproofing composition omitted.

Referring to the drawings, *a* represents a sheet of metal, preferably annealed steel and, for the best results, free or substantially free from perforations, and *b*, *c*, layers or sheets of asbestos, mineral wool or other fibrous material, which are firmly united to the metal sheet *a* by coatings or layers *d* of asphalt or like cement. The

layers or sheets *b*, *c*, in accordance with this invention are made longer and wider than the metal sheet *a*, so as to overlap the latter on all sides, and the overlapping edges 10, 12, (see Figs. 3 and 4), of said protective layers are united together and hermetically sealed by the cement *d*, which latter also fills the space between the united edges of the layers *b*, *c*, and the edges of the metal sheet *a*, said filling being marked 13 in Figs. 3 and 4.

The sheet as thus far described is represented in Fig. 4, wherein the exterior surfaces of the asbestos sheets are represented in their rough, fuzzy or natural condition. The protected sheets represented in Fig. 4, are capable of being used on the exterior or interior of a building, but in many cases, it is desired that the protected sheets designed to be used on the exterior of a building should have a more finished and attractive appearance, and also have waterproofing properties. To this end, the sheet shown in Fig. 4, has applied to its exterior a suitable waterproof composition, which moistens the exterior surface, and while in this moistened condition, said exterior surface is subjected to pressure, which serves to calender and compact the moistened fibers of the exterior surface and impart to the same a smooth, attractive and finished appearance, which is represented by the black line 14 in Fig. 3, and by the plain portion of the sheet shown at the left in Fig. 2.

In Fig. 1, I have represented the manner in which the sealing is effected between contiguous metal sheets *a* on a practical scale, the metal sheets *a* being passed up through a bath of the asphalt in a heated condition and between the layers *b*, *c*, of asbestos, which are in the form of continuous webs or sheets, the metal sheets being fed through the bath of asphalt so as to leave a space between succeeding sheets so as to allow the two webs of asbestos to be cemented together between the metal sheets and of such width as to allow of the same being cut on the line 16 and form a sealing edge for each sheet.

From the above description, it will be observed that the metal sheet is hermetically sealed by the protective layers or sheets of asbestos or other fibrous material and the interposed asphalt or other cement, thereby greatly adding to the durability of material for either exterior or interior use and es-

pecially for use where acid or other fumes are present.

Claims:

- 5 1. A material of the character described, comprising a metal sheet, independent pre-formed layers of asbestos or like material of greater length and width than said metal sheet and applied to the opposite surfaces of said metal sheet to entirely cover the same and overlap the edges thereof, and cementitious material interposed between the said metal sheet and said layers to affix the pre-formed layers to the metal sheet and the overlapping edges to each other, substantially as described.
- 10 2. A material of the character described, comprising a metal sheet, independent pre-formed layers of asbestos or like material of greater length and width than said metal sheet and applied to the opposite surfaces of said metal sheet to entirely cover the same and overlap the edges thereof, and cementitious material interposed between said metal sheet and said layers to affix the pre-formed layers to the metal sheet and the overlapping edges to each other, said protective layers having their exterior surfaces smoothed

and compacted and provided with a waterproof coating, substantially as described.

3. A material of the character described, comprising a metal sheet having on each side a layer of asbestos or like material entirely covering the same and overlapping the edges of said metal sheet and affixed to said sheet and to each other by an asphalt cement to form a hermetically sealed protected metal sheet, substantially as described.

4. A material of the character described, comprising layers of protective fibrous material, a plurality of metal sheets interposed between said protective layers and separated from each other, said protective layers overlapping the edges of said metal sheets on all sides, and adhesive material uniting said layers to said metal sheets and to each other between said metal sheets, substantially as described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

EDGAR THOMAS NEWSOME.

Witnesses:

JAS. H. CHURCHILL,  
J. M. MURPHY.