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3,010,202

METHOD OF FORMING THIN METAL PANELS HAVING BIFURCATED EDGES

Filed March 10, 1958

Fig. 1.

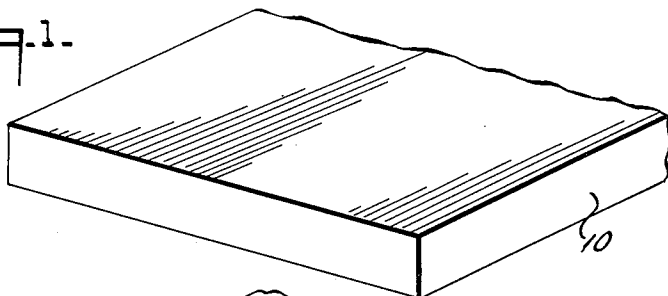


Fig. 2.

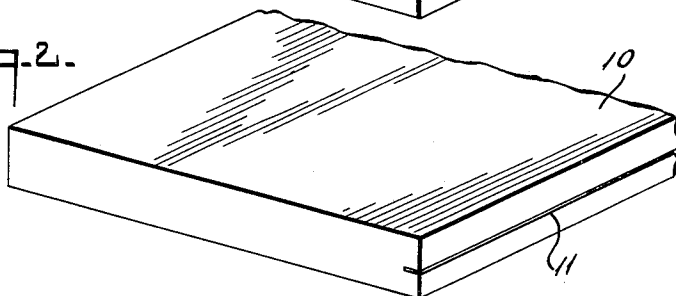


Fig. 3.

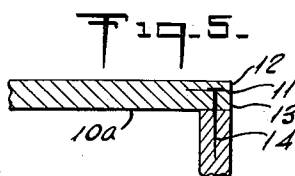
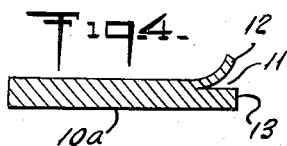
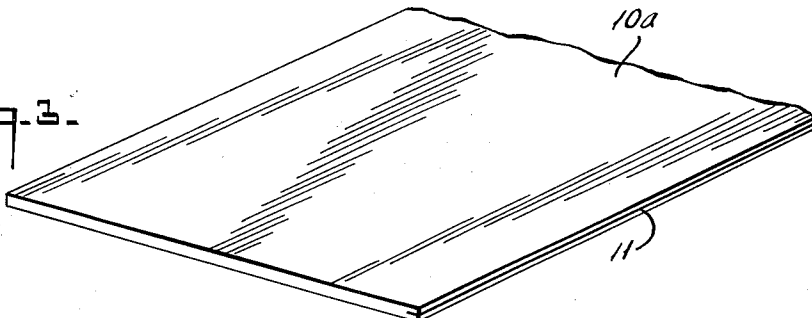
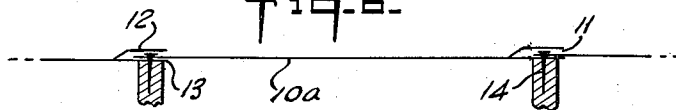


Fig. 6.



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3,010,202
METHOD OF FORMING THIN METAL PANELS
HAVING BIFURCATED EDGES
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2 Claims. (Cl. 29—533)

The present invention relates to a novel and improved method of making thin metal sheets having bifurcated edges at the sides thereof.

An object of the present invention is to provide an economical and practical method of making thin metal sheets having bifurcations extending lengthwise along one or both of the sheet edges from which panels suitable for use as siding or roofing may be formed. When used as roofing or siding panels, such sheets or panels may have a thickness of the order of .030 inch and hence are too thin to be slit in such form. However, in accordance with the present invention, sheets of such thickness having bifurcated edge flaps with a combined thickness equal to the thickness of the sheet can be readily formed integrally with the sheet or panel at very little expense in addition to the usual rolling costs.

Other objects and advantages of the invention will be apparent from the following description and the accompanying drawings in which:

FIG. 1 is a perspective view illustrating a portion of a slab of metal prior to treatment in accordance with the present invention;

FIG. 2 is a perspective view of a portion of the slab shown in FIG. 1 after a side edge thereof is slit in accordance with the present invention;

FIG. 3 is a perspective view of a sheet having a bifurcated edge produced from the slab shown in FIG. 2 in accordance with the invention;

FIG. 4 is an enlarged section of the bifurcated edge of the sheet shown in FIG. 3;

FIG. 5 is an enlarged section illustrating a use of the sheet shown in FIG. 3; and

FIG. 6 is a schematic view illustrating the sheet shown in FIG. 3 used as siding or roofing.

Referring to the drawings in detail, FIG. 1 shows a slab 10 of metal which may be of any desired dimensions as to length, width, and thickness.

In carrying out the present invention, a slit 11 of the desired depth is first cut in one or both of the side edges extending lengthwise of the slab, as illustrated in FIG. 2, by means of a cutting tool. The width of the slit will depend on the thickness of the cutting tool, but it is desirable to make the cut as narrow as possible to prevent wastage of metal.

In cutting the slit, a heavy lubricating oil may be applied to the cutting tool so as to provide the opposing surfaces of the slit with a coating of lubricating oil which will prevent bonding of such surfaces during subsequent rolling operations. However, if desired, a coating of a suitable resist or stop-off, such as graphite or the like, may be applied separately to the opposing surfaces of the slit for this purpose.

It should also be noted that the slit can be located at any desired point between the upper and lower surfaces of the sheet and that both side edges of the slab may be slit if desired.

After the slit 11 has been cut in the side edge of the slab 10, the slab is then rolled in a lengthwise direction in the usual manner between conventional pressure rolls which simultaneously elongates and reduces the thickness of the slab. The rolling is continued until a sheet 10a of the desired final thickness has been produced. During the rolling, the opposing surfaces of the slit are brought into contact but due to the coating remain unbonded as the entire slab is elongated and reduced in thickness.

When the rolling has been completed, the side edge of the sheet has two integral bifurcations or flaps 12 and 13 extending lengthwise along the side edge thereof and the combined thickness of the two flaps is equal to the final thickness of the sheet. Further, the relative position of the slit defining the flaps with respect to the upper and lower surfaces of the sheet will be the same as the position of the slit cut in the slab relative to the surfaces thereof.

As shown in FIGS. 4 and 5, the flaps at the edge of the sheet or panel may be separated so that a nail 14 can be driven through the lower flap to secure the sheet to a support 15. As illustrated in FIG. 6, the edge of an adjacent sheet or panel may be inserted and held between the flaps when a sheet or panel is nailed to supports with a weatherproof joint being formed adjacent sheets or panels as would be desirable when the sheets are used for roofing or siding.

Another way of forming a thin metal sheet or panel having a bifurcated edge is described and claimed in my copending application S.N. 629,330, filed December 19, 1956, now Patent No. 2,828,533, for Method of Forming Integral Sheet and Tubing Products. However, the present invention does not require the use of a tube or the cladding of the tube to a strip of metal as disclosed in said application.

It will be understood that various modifications and changes may be made in carrying out the invention as described and illustrated herein without departing from the scope of the following claims.

I claim:

1. The method of producing a thin sheet metal panel having a flat body with a bifurcated edge extending along one side thereof which comprises cutting a narrow slit in a vertical side of a slab of metal and along the length thereof and coating opposing surfaces of said slit with a resist to prevent bonding of said surfaces; and then rolling said slab between a set of pressure rolls into an elongated panel of thin sheet metal.

2. The method of forming a thin sheet metal panel as defined in claim 1 wherein the opposing surfaces of the slit are simultaneously coated with a resist in the form of a lubricating oil during the cutting of said slit.

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