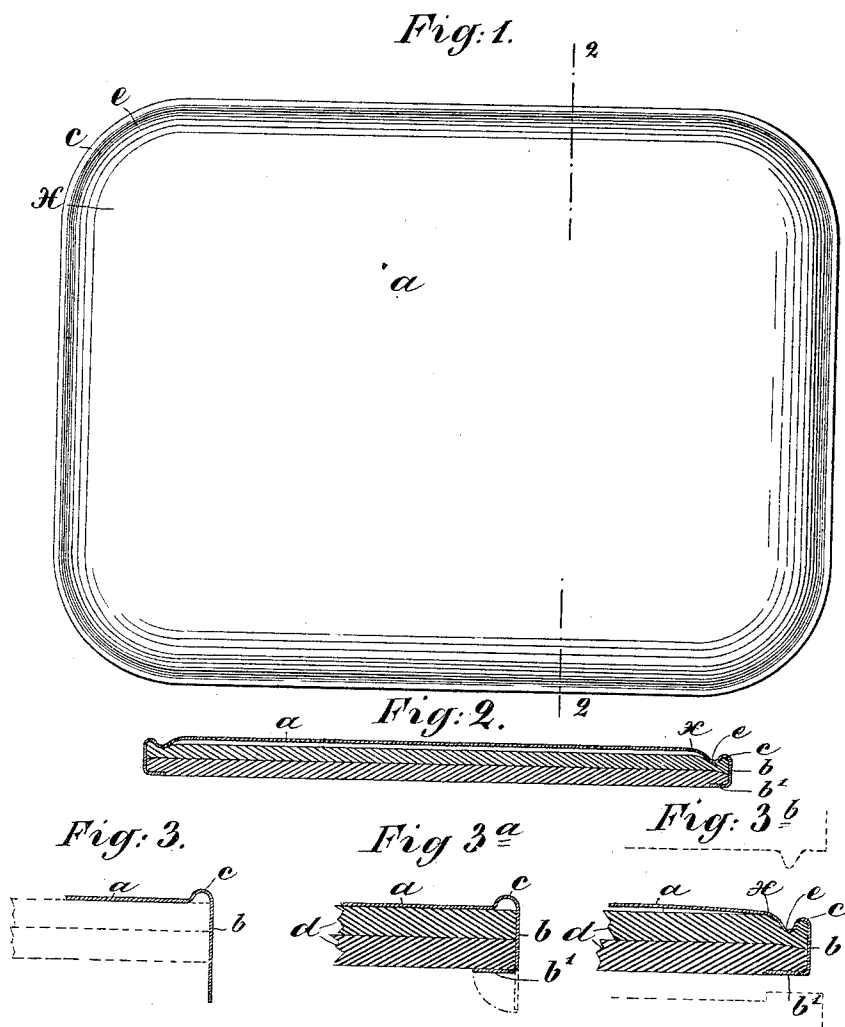


(No Model.)

J. J. SWEENEY.
MANUFACTURE OF STOVE BOARDS.

No. 461,137.

Patented Oct. 13, 1891.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN J. SWEENEY, OF NEW YORK, N. Y.

MANUFACTURE OF STOVE-BOARDS.

SPECIFICATION forming part of Letters Patent No. 461,137, dated October 13, 1891.

Application filed March 14, 1891. Serial No. 385,058. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. SWEENEY, a citizen of the United States, and a resident of New York city, New York, have invented certain Improvements in the Manufacture of Stove-Boards, of which the following is a specification.

My invention relates to the manufacture of stove-boards made from sheet metal with a thick backing or lining of wood or other similar relatively soft material; and the object of my method is to produce a board having a peculiarly-formed metallic binding about the edge.

In the accompanying drawings I have shown a stove-board constructed according to my method, and in these drawings Figure 1 is a plan view of the board; and Fig. 2 is a transverse section of the same, taken in the plane indicated by line 2 2 in Fig. 1. Figs. 3, 3^a, and 3^b are sectional views, on a larger scale, illustrating the several steps in the process.

I will say, preliminarily, that it is a common practice to make sheet-metal stove-boards or platforms with wooden "linings" or backings, the metal being extended over the edge of the wood, so as to inclose or house said edge, and this I do not, broadly, claim.

I will now describe my method of making the board, and then carefully define the novel features of the invention in the claim.

I first take a sheet of metal *a* cut to the shape the board is destined to have. Herein the board is represented as an oblong rectangle with rounded corners. The metal I prefer to employ is embossed tin-plate, but other sheet metals may be employed. I next turn back a flange *b* all around the margin of the metal sheet and form a bead *c* on the face of the sheet at the point where said flange joins the body of the sheet. The metal will now have the appearance seen in Fig. 3, which is a sectional view of the margin of the sheet as it appears after the flange and bead have been formed thereon. I next take the lining or backing *d*, which will have the proper form and dimensions to fit within and be embraced by the flange *b*, and apply it to the back of the metal sheet. This backing will usually be made of two layers of thin wood with the grain crossed. After the backing is in place a portion *b'* of the broad flange

b is turned inward and down upon the lower or outer face of the backing *d* to form a retaining-flange, as seen in Fig. 3^a, which is a section of a part of the board as it appears after this step in the process.

The final step in the process is to form in the face of the board parallel with the bead *c* and at the inner side of said bead a deep crease *e*, which presses the metal of the plate *a* down into the softer material of the backing *d*, thus drawing the metal tightly over the edge of the backing, so as to bind the latter snugly and cause the material of the backing to fill or measurably fill the hollow within the bead *c*. The metal is also drawn down at the inner side of the crease *e* in such a manner as to impart to the metal a slight convexity at *x*, which materially enhances the appearance of the board and avoids the tendency to concavity of the surface of the board incident to the use of sheet metal for such purposes.

Fig. 3^b is a section of a part of the board, showing its appearance after the final step in the process.

In order to enable the metal to be drawn tightly over the edge of the backing during the creasing operation, the retaining-flange *b'* is held firmly to the backing during said creasing operation, the pressure employed for the purpose serving also to press the flange into the softer material of the backing, so as not to project below or out beyond the general surface of the backing. The board is now completed and ready for the market.

In carrying out my invention I usually employ a die for turning the flanges on the metal sheet and a die for making the crease *e*. In Fig. 3^b the dotted lines roughly indicate the die for forming the crease and the lower die which holds the retaining-flange *b'* and presses it into the backing.

The backing *d* need not necessarily be of wood. It may be of some other relatively soft material—as "straw-lumber," for example. The backing will have, primarily, a plane upper face, upon which the metal rests.

I am aware that it is not new to emboss sheet metal and then fit a backing to said embossed sheet either by cutting the backing to fit the hollows of the embossing or by forcing a plastic material into said hollows. This I

do not claim. I am also aware that it is not new to place a thin metal tube over a cylindrical bar of wood to form a curtain-pole and then to ornament said tube by spiral creasings; and this I do not claim. My method has in view another object more important than ornamentation. By forcing the metal down into the backing, as described, I draw the metal tightly over the backing, so that it binds the edge thereof tightly and strains the metal over the surface of the backing, as set forth. In the ordinary method of applying the metal to the backing the metal is not tense, but, on the contrary, is ordinarily loose and slightly wavy, especially when the board is large.

I do not herein claim the board made according to this method, as that forms the subject-matter of another application filed by me March 14, 1891, and bearing Serial No. 385,057. Having thus described my invention, I claim—

The herein-described method of applying the sheet-metal covering of a stove-board to

the plain-surfaced relatively soft backing of the same, which consists in first forming a flange on the metal sheet and a raised bead on its face along the line where the flange joins the face portion of the same, then applying the backing within said flange, then turning the margin of the flange down upon the rear face of the backing, and then while said flange is held fast forcing the metal sheet down into the wooden backing in the form of a crease at the inner edge of the bead on the sheet and extending around the board parallel with the edge thereof, whereby the metal is drawn tightly over the edge of the backing and over the surface of the board, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN J. SWEENEY.

Witnesses:

HENRY CONNETT,
CHAS. A WALSH.