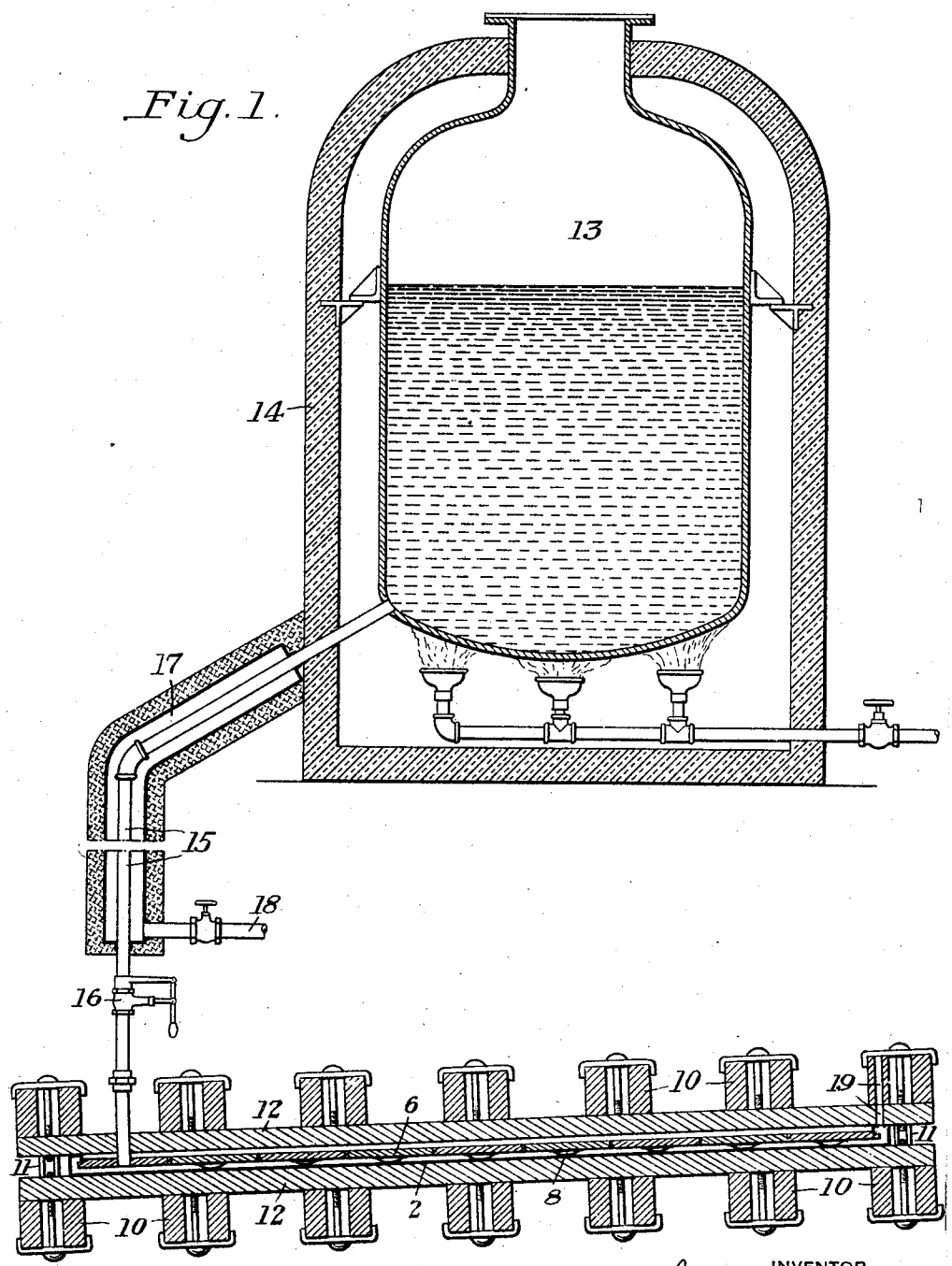
Oct. 29, 1929. L. L. KNOX 1,733,806

SOUND DEADENING TOP FOR TABLES, DESKS, COUNTERS, AND THE LIKE AND METHOD OF MAKING THE SAME

Filed Feb. 20, 1925 2 Sheets-Sheet 1

Fig. 1.



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Fig. 2.

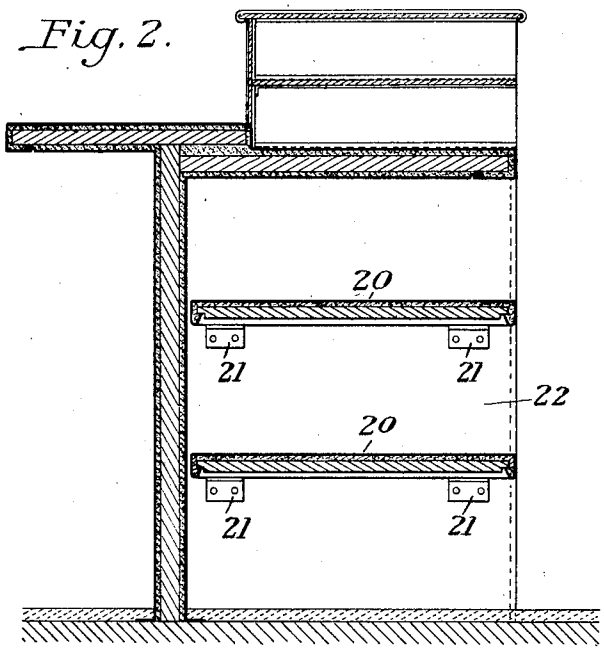


Fig. 4.

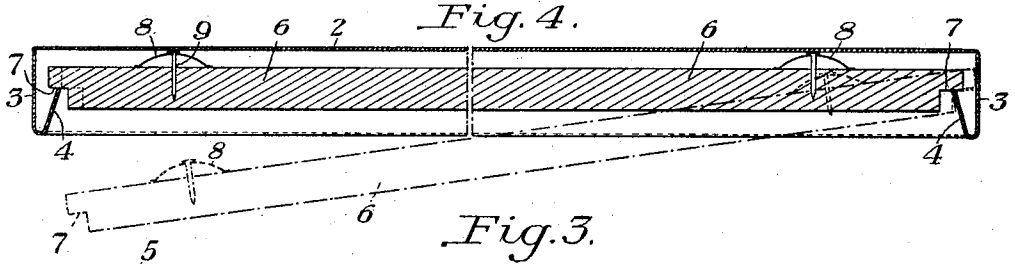


Fig. 3.

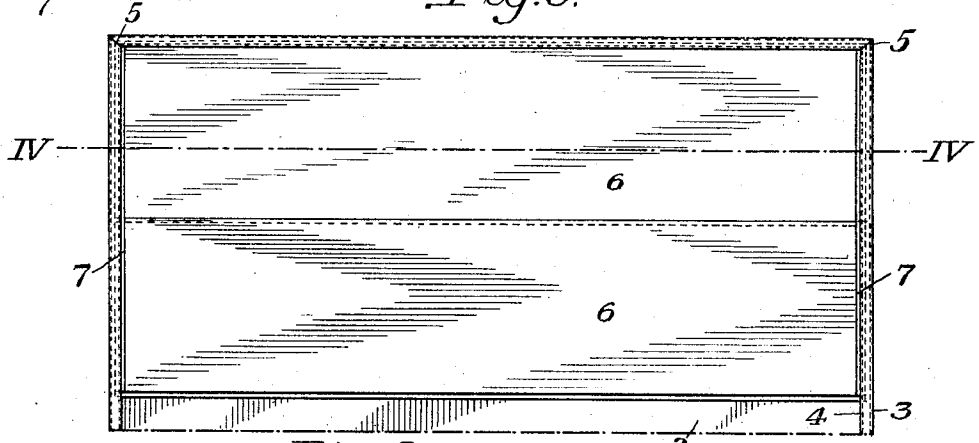
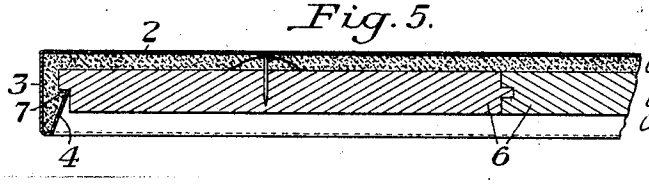


Fig. 5.



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UNITED STATES PATENT OFFICE

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SOUND-DEADENING TOP FOR TABLES, DESKS, COUNTERS, AND THE LIKE AND METHOD OF MAKING THE SAME

Application filed February 20, 1925. Serial No. 10,707.

The present invention provides a composite structure which can be economically manufactured by a comparatively simple process and which is particularly adapted for use where sound-deadening qualities are desirable, as for the tops of tables, desks or counters or for the shelves of counters.

This structure is made by taking a rectangular piece of sheet metal of the proper size, notching out the corners of the sheet, bending the edge portions of the sheet down and then back to form retaining flanges, then putting in boards to form a base supported on said flanges, and finally pouring in asphalt through a hole or holes in the boards to fill the space between the sheet metal cover and the base boards.

The invention is illustrated in the accompanying drawings, in which:

Figure 1 is a vertical section through suitable apparatus for pouring the filler material;

Figure 2 is a vertical section through a counter having shelves embodying my invention;

Figure 3 is a bottom plan view of a portion of a table top or the like showing an assembly of the sheet metal cover and the base boards before the filling material is poured;

Figure 4 is a longitudinal sectional view on the line IV—IV of Figure 3; and

Figure 5 is a fragmentary sectional view of a completed top structure.

The method of forming the sheet metal cover of the composite structure and assembling therewith the base boards is illustrated in Figures 3 and 4. Referring to these figures, 2 designates the sheet metal cover member. This member has its edge portions bent downwardly at right angles to the body of the sheet to form the vertical flanges 3, and then bent upwardly to form the retaining flanges 4. Previous to bending the edge portions of the sheet, its corners are notched out so that when the edge portions are bent to form the flanges 3 and 4, these flanges will form mitre joints 5, at the corners of the cover member. Base boards 6 are then positioned on the retaining flanges. These base boards have rabbeted edge portions 7, which rest on the retaining flanges 4 when the boards are in position. The method of assembling the base boards with the sheet metal cover member is illustrated in Figure 4, the initial position of each board when being assembled with the retaining member being shown in dot and dash lines. It will be readily appreciated by reference to this figure that each board has one of its rabbeted edge portions placed on one of the retaining flanges and the board moved to the right as far as it will go with the board in the position shown in dot and dash lines. The board is then tilted to the full line position shown and moved to the left so that the rabbeted edge portion at the other end of the board will rest on the opposite retaining flange. By reference to Figures 3 and 5, it will be seen that the individual boards have a tongue-and-groove connection at each joint.

The boards are held on the retaining flanges in spaced relation to the cover member by spacers 8, in the form of arched sheet metal disks, each disk being attached by a central nail 9, driven through it into the board.

In assembling the base boards with the cover member in the manner described, if all four edge portions of the cover member 2 are bent initially to form the flanges 3 and 4, the last board can be placed in position by springing back one of the longitudinally extending flanges 4 towards the adjacent flange 3. On the other hand, the cover member can be left with one of its longitudinal edge portions unbent until the last base board has been placed in position. In that case, the base boards could be assembled by simply sliding the boards in over the flanges 4 from the unbent longitudinal edge portion of the cover member.

In Figure 1, there is shown a section of a compression mold having transverse beams 10, arranged in pairs above and below and drawn together by clamps 11, engaging the end portions of corresponding upper and lower pairs of beams. The beams 10 bear against mold boards 12, between which is inserted the assembled sheet metal cover member and base boards. With the assembled parts clamped in this position, a melted asphalt mixture is fed from a heated vessel 13,

in a furnace 14, through a pipe 15, having its lower end inserted in an opening in one of the base boards. The flow of the filler material through the pipe 15 is controlled by a suitable valve 16. The feed pipe 15 preferably extends through an insulated conduit 17, into which heated gases may be conducted through the valved pipe 18. The mold is supported at a slight inclination to the horizontal and at the upper end of the mold there is a vent pipe 19, communicating with an opening in one of the flanged edge portions of the cover member for the purpose of permitting air to escape from the space between the base boards and the cover member as this space is filled with the asphalt. After this space has been filled with the asphalt, the filling is allowed to cool and then the completed composite structure is removed from the clamp and is ready for use.

Where an artificial or natural asphalt or similar material is used as a filling, it remains in a semi-solid condition and imparts sound-deadening qualities to the structure.

The method of pouring the filling into position while disclosed herein, is made the subject matter of my co-pending application Serial No. 109,182, filed May 14, 1926.

In Figure 2, there is illustrated a counter construction having shelves 20, each consisting of a composite structure of the character described and supported on brackets 21, secured to the end walls or partition walls 22 of the counter. This figure merely illustrates one of the many uses of the composite structure described. It may be used for the top of the counter, for desk tops, for table tops or for other analogous uses, particularly where sound-deadening qualities are desired.

In some cases I may give the inner surface of the sheet metal cover member a preliminary coating of a suitable cement before assembling the base boards therewith, in order to increase the adhesion between the sheet metal cover member and the poured filler material.

While I have illustrated one specific embodiment of my invention, it will be understood that the invention is not limited to this particular embodiment thereof, as changes may be made in the details of the construction and in the details of the method of carrying out the invention within the scope of the appended claims, without departing from the spirit of the invention.

I claim:

The method of manufacturing composite structures suitable for use as parts of furniture, comprising shaping a sheet metal cover member, mounting a backing member in cooperative relation thereto to provide a space for a poured-in filling, protecting said backing by partially enclosing it within said cover member, and pouring into said space a layer of material semi-solid at normal temperatures, substantially as described.

2. The method of manufacturing table tops, comprising providing a sheet metal cover member, forming end flanges thereon, preliminarily coating the lower surface of said cover member, and pouring into position against said lower surface a layer of material which is semisolid at normal temperatures, substantially as described.

3. As an article of manufacture, a composite structure for use as a table top or similar use, comprising a sheet metal cover member, a base plate underlying said cover member and held in such relation thereto as to provide space for a filling, and material filling the space between said members, said material being semi-solid at normal temperatures, substantially as described.

4. As an article of manufacture, a composite structure for use as a table top or similar use, comprising a sheet metal cover member, a self supporting lower member and a layer of asphalt intermediate said members and adhering to both of said members, substantially as described.

5. A composite structure for use as a table top or similar use, comprising a sheet metal cover member having its edge portions bent to form retaining flanges, a wooden base member supported on said retaining flanges beneath said cover member and in spaced relation thereto, and a layer of material filling the space between said members, said material being semi-solid at normal temperatures, substantially as described.

6. As an article of manufacture, a composite structure for use as a table top or similar use, comprising a single sheet metal cover member, and a single layer of poured-in material which is semi-solid at normal temperatures, said layer of poured-in material adhering to and underlying the sheet metal cover member and constituting a backing therefor, substantially as described.

7. As an article of manufacture, a composite structure for use as a table top or similar use, comprising a sheet metal cover member having downturned edges, and a layer of poured-in material which is semi-solid at normal temperatures underlying the sheet metal cover member and within said edges, said layer being of materially less thickness than the depth of said turned in edges, substantially as described.

8. As an article of manufacture, a composite structure for use as a table top or similar use, comprising a sheet metal cover member, a non-metallic backing therein, and a layer of asphalt intermediate said backing and said cover member, substantially as described.

9. As an article of manufacture, a composite structure for use as a table top or the like, comprising a sheet metal cover member,

a base plate underlying said cover member and having its edge portions enclosed within and supported by said cover member, means spacing said base plate and cover member, and a filling material in said space.

10. As an article of manufacture, a composite structure for use as a table top or the like, comprising a sheet metal cover member, a base plate underlying said cover member and having its edge portions enclosed within and supported by said cover member, means spacing said base plate and cover member, and a filling material in said space, said filling material being semi-solid at normal temperatures.

11. As an article of manufacture, a composite structure comprising a sheet metal cover member having downturned edge portions each provided with an upstanding retaining flange, a base plate having rabbeted edges engaging and supported by said retaining flanges, spacing means between said base plate and cover member, and a filling material embedding said spacing means.

12. As an article of manufacture, a composite structure comprising a sheet metal cover member having downturned edge portions each provided with an upstanding retaining flange, a rabbeted base plate engaging and supported by said retaining flanges, and a semi-solid filling between said base plate and cover member adhering thereto and preventing relative movement therebetween.

13. As an article of manufacture, a composite structure comprising a sheet metal cover member, a base plate, said cover member having greater width and length than said base plate and having downturned edges for engaging and supporting said base plate, and a filling between said cover member and base plate overlying said base plate and extending around the edges thereof.

In testimony whereof I have hereunto set my hand.

LUTHER L. KNOX.