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METALLIC RECEPTACLE

Filed May 5, 1923

Fig. 1.

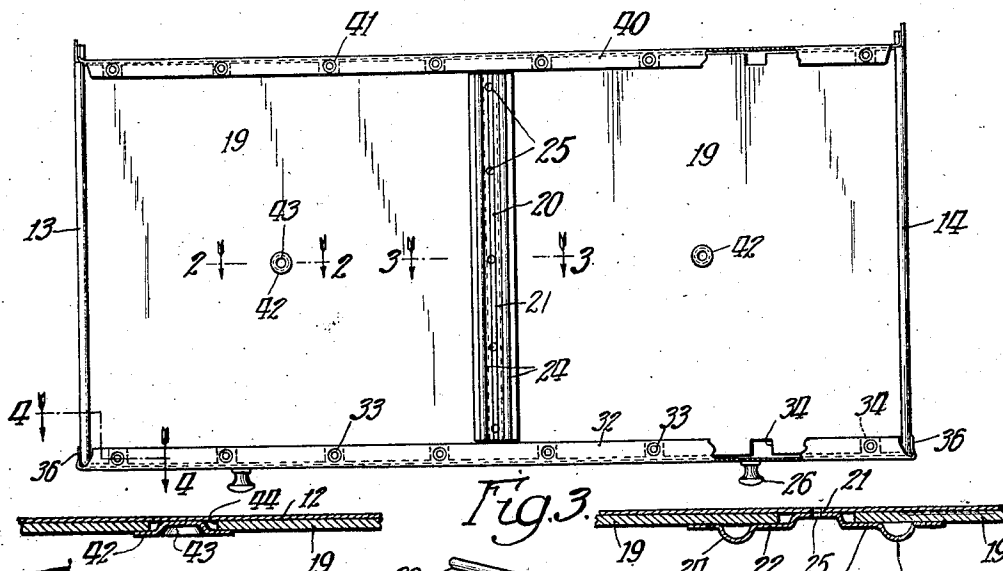


Fig. 2.

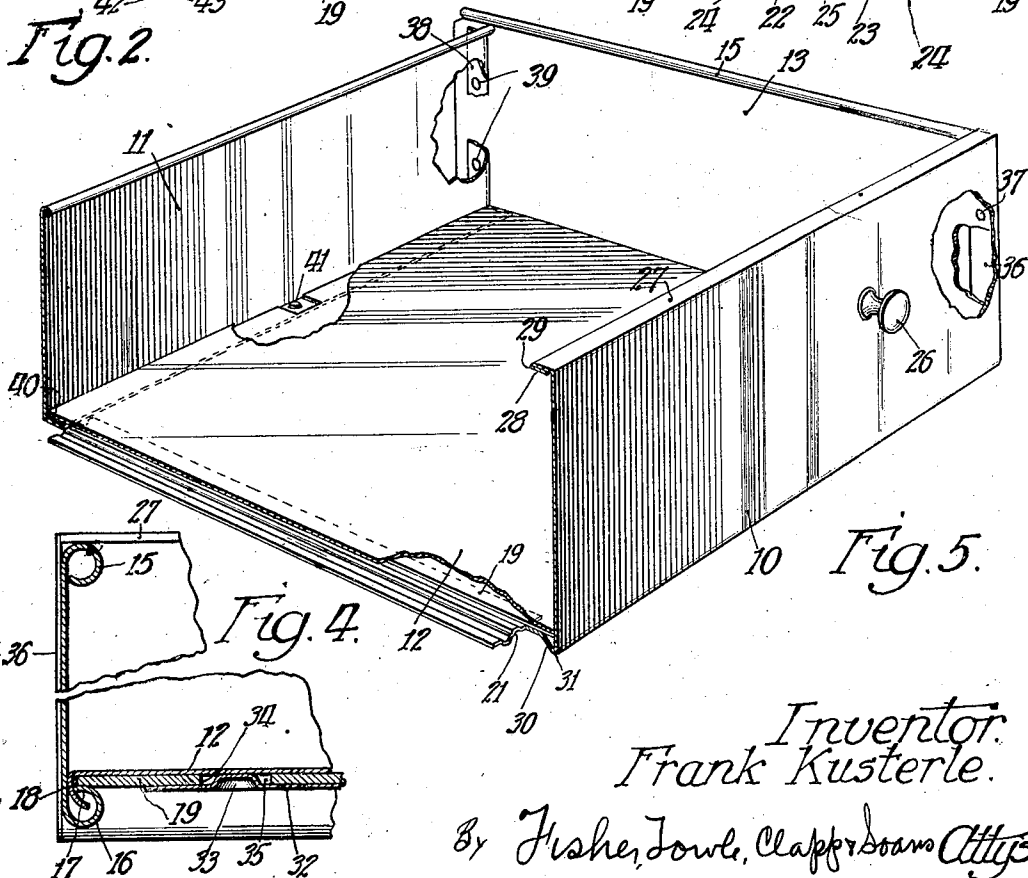


Fig. 3.

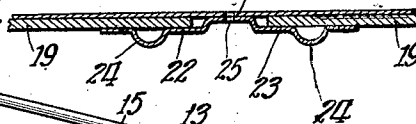


Fig. 4.

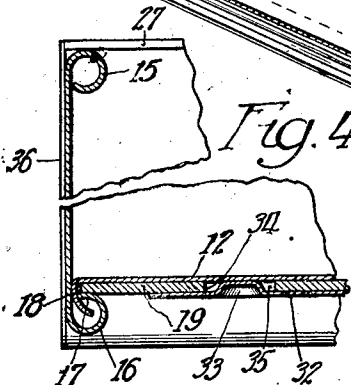
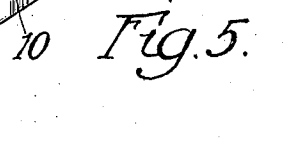


Fig. 5.



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By Fisher, Towle, Clapp & Doane Attys.

UNITED STATES PATENT OFFICE.

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METALLIC RECEPTACLE.

Application filed May 5, 1923. Serial No. 636,791.

My invention relates to improvements in metallic receptacles and has particular reference to articles of metal furniture and parts thereof.

5 The principal object of the invention is to provide means for deadening the metallic clang or resonance from the sound heard when manipulating or moving articles of furniture made in whole or in part of metal and particularly sheet metal.

Further objects of the invention are to provide a construction of sheet metal furniture which will permit the deadening means to be inexpensively, conveniently and securely 15 applied and in such manner that climatic conditions will not impair the deadening effect or otherwise seriously affect the deadening means on the article of furniture to which it is applied; and in general to provide an economical, rigid, slightly and efficient construction of the character referred to.

In the drawings which illustrate my invention as embodied in a metallic drawer such as is suitable for bed room dressers or analogous furniture,

Fig. 1 is an underside plan view of said metal drawer.

Fig. 2 is a section taken on the line 2—2 of Fig. 1.

30 Fig. 3 is a section taken on the line 3—3 of Fig. 1.

Fig. 4 is a section taken on the line 4—4 of Fig. 1, and

Fig. 5 is a perspective view of a portion of 35 said drawer.

Referring to the drawings, it will be observed that the drawer in its main elements is constructed of five wall members of sheet metal, 10 being the front sheet, 11 the back sheet, 12 the bottom sheet, and similar side sheets 13 and 14.

As shown best in Figs. 4 and 5, each of the sides of the drawer comprises a vertically disposed sheet of metal preferably light 45 gauge steel, the top and bottom edges of which are curled over to form hollow beads 15 and 16, which beads provide a substantial stiffening effect to the side of the drawer while the upper bead 15 constitutes a neat finish for the upper edge of the drawer side. It will be observed that the upper bead 15 is closed, whereas the bottom bead 16 is either left slightly open or made resilient enough to permit the insertion between the sheet 13 and

the edge 17 of the bead of the turned down 55 vertical flange 18 at the side of the bottom sheet 12. Between the underside of the bottom sheet 12 and the upper edge of the hollow bead 16 there is inserted or interposed the side edge of a sheet 19 of felt, box board, or 60 analogous sound deadening material. The bottom sheet 12 is preferably of sufficient weight to be self-sustaining, so that substantially no weight or supporting strain is imposed on the sheet of sound-deadening material. 65

For a small or medium sized drawer, the sound deadening sheet 19 may be constructed in a single piece underlying the entire bottom area of the drawer, but in the example 70 shown I have illustrated the said sheet as being made in a pair of symmetrically disposed sections separated by a junction strip designated as a whole at 20. Said junction strip, as shown best in Figs. 1, 3 and 5, includes a central depressed groove or channel 75 21 which, throughout its length, contacts directly with the underside of the bottom sheet 12, the side portions 22 and 23 of said junction strip 20 being spaced from the underside 80 of the bottom sheet 12 a sufficient distance to admit somewhat snugly the inner edges of the two sections of the sound deadening sheet. Also, in order to impart a slight resiliency to the marginal portions of the junction strip 85 20 so as to allow for slight variations in manufacture, or in thickness of the sound deadening sheet, said side portions 22 and 23 are made with raised hollow rib formations as at 24. The junction strip 20 is rigidly united 90 to the underside of the bottom sheet 12 as by a series of spot welds 25 and, besides serving as a means of securing the sound deadening sheet to the bottom of the drawer, also has the effect of materially stiffening the 95 bottom sheet itself. Said beads or rib formations 24, just referred to, contribute materially to said stiffness.

The front sheet 10 which carries the handles or knobs 26, by which the drawer is 100 manipulated, is made from somewhat heavier or thicker material than the other walls of the drawer. The top edge of said front end is formed with a right angle flange 27 which flange is folded upon itself as indicated at 105 28 to provide a slightly smooth edge 29 of double thickness. The bottom edge of said drawer front sheet 10 is also flanged, said

flange however being inclined upwardly and inwardly as shown at 30 and joining the bottom of the sheet 10 with a curve of appreciable radius as shown at 31 so as also to provide a slightly, smooth and finished bottom edge. The inward end 32 of said bottom flange is bent horizontally so as to parallel the bottom sheet 12 and is made with a series of depressions 33 as shown best in Fig. 4, the bottoms of said depressions contacting directly with the underside of bottom sheet 12 while the main body portion of the horizontal flange portion 32 is spaced from the underside of said bottom sheet 12 a sufficient distance to admit the front edges of the sections of the sound deadening sheet 19. Said sound deadening sheet 19 is notched out as indicated at 34 at suitably spaced intervals in order to accommodate the embossed depressions 33. The notches 34 in the side of the sheet are made amply large enough to provide a slight space as at 35 so as to allow for inaccuracies of manufacture and also to permit the sheet 19 to expand or contract under the influence of varying climatic conditions.

It may be stated that for the same purpose the central channel shaped portion 21 of the junction strip 20 is made substantially narrower than the distance between the adjacent edges of the sound deadening sheet sections, and in fact at all points where the said sound deadening sheet is secured between the metal parts of the drawer a similar provision is made for slight relative sliding movements of the sound deadening sheet and the metal sheet to which it is applied. Such difference in expansion or contraction of the sound deadening sheet and the metal sheet to which it is applied, occurs not only in service due to change in atmospheric conditions, but occurs, to a considerable extent, during the course of manufacture if the drawer, with a sound deadening sheet applied, is subjected to a high temperature for the purpose of baking on a paint or other finish as is desirable.

The side edges of the front sheet are secured to the front vertical edges of the side members 13 and 14 by flanging back the side edges of the front sheet as indicated at 36, said flanges 36 being secured to the side members 13 and 14 by spot welding as indicated at 37 or in any approved manner. Similarly, the rear sheet 11 is flanged back at the sides as indicated at 38 so as to facilitate securing of same to the rear portions of the side members 13 and 14, said securing being effected by spot welding as indicated at 39 or in any other convenient and approved manner.

In order to secure the bottom edge of the back sheet 11 to the rear edge of the bottom sheet 12, said back sheet 11 is formed with a forwardly extending horizontal flange 40 having circular embossed depressions 41 formed in said flange 40, said formations 41

being similar to the formations 33 and serving a similar purpose.

Where, as in the present case, the sections of the deadening sheet 12 are of considerable area, it is found desirable, in order to prevent separation of the sound deadening sheet and foundation sheet to which it is applied, to provide one or more additional supports for the sound deadening strip. In the present instance, I have illustrated the use of a single additional support for each section of the deadening sheet, said additional support being located substantially in the center of the area of the section and comprising a metal disk or washer 42, the central portion of which is formed with a circular embossed depression 43 contacting with the underside of the bottom sheet 12 and rigidly united thereto as by spot welding. Said supporting disk 42 is considerably larger than the depression 43 so that the edge 44 of a circular aperture punched in the sound deadening sheet will substantially overlap the edges of said disk and at the same time be spaced from the central embossed portion of the disk a sufficient distance to allow for the desired expansion and contraction of the sound deadening material.

It will be noted that I have described a receptacle formed of sheet metal, and having a deadening or noise reducing sheet applied to only one of its walls. Ordinarily in a receptacle such as a furniture drawer which I have selected as an example of the application of my invention, it will be sufficient in most cases to apply the sound deadening material only as indicated. However, it will be manifest that the same principle of construction can be utilized in applying the sound deadening material to additional surfaces of a drawer or other receptacle.

The described details of construction and operation being merely illustrative of one phase of my invention, it will be understood that the scope of the invention should be interpreted by reference to the appended claims, said claims being construed as broadly as possible, consistent with the state of the art.

I claim as my invention:

1. In sheet metal furniture, the combination of a sheet metal wall, a layer of noise reducing material overlying and contacting with said wall and a plurality of sheet metal securing members integrally and permanently united to said wall and between which members and wall, portions of the layer are slidably interposed whereby portions of said layer are permitted to slide on said wall in the event of unequal expansion of said wall and layer.

2. In sheet metal furniture, the combination of a sheet metal wall, a layer of noise reducing material overlying and contacting with said wall and having an opening therein, and a sheet metal part overlying said

layer and having an intermediate portion thereof depressed and extending through said opening, said portion being attached to the face of said wall to hold said layer between said sheet metal part and said wall.

3. In sheet metal furniture, the combination of a self sustaining sheet metal wall, a layer of fibrous noise reducing material overlying and contacting with but movable relative to said wall and having an opening therein, a sheet metal member overlying said layer and a connection extending through the opening in said layer for securing said sheet metal member to said wall to retain said layer between said sheet metal part and said wall, said connection being a loose fit in said opening and being adapted to maintain the operation of the member which engages the noise-reducing material in fixedly spaced relation to the wall, thereby to prevent binding of the noise-reducing material against said wall.

4. In sheet metal furniture, the combina-

tion of a sheet metal wall, a layer of noise reducing material overlying and contacting with said wall and having an opening therein, and a sheet metal strip overlying said layer and having an intermediate portion thereof depressed and extending through said opening, said portion being attached to the face of said wall to hold said layer between said sheet metal strip and said wall.

5. In an article of furniture, the combination of a metal wall, a sheet of deadening material contacting with said wall, means for maintaining said sheet in contact with said wall but permitting relative movement therebetween, said means comprising a member united to said wall and having a portion fixedly spaced from said wall so as to form with the wall a recess adapted to slidably receive a portion of the sheet of deadening material.

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