

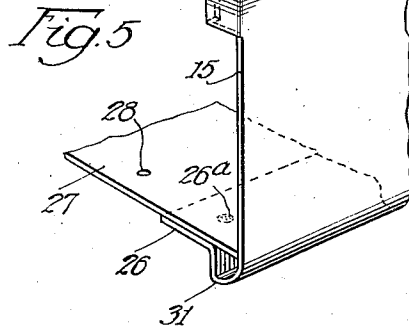
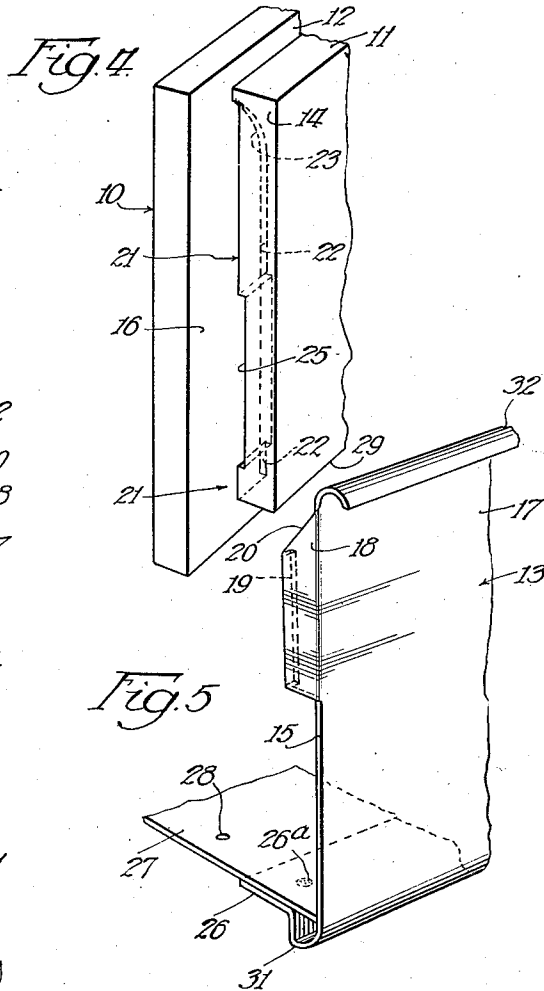
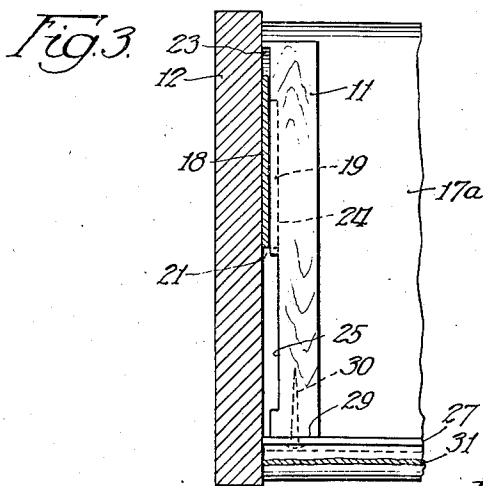
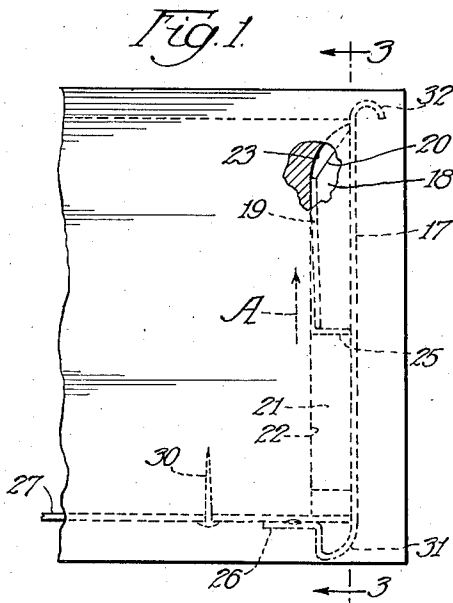
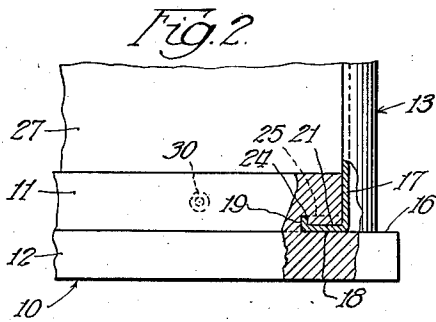
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WOOD AND METAL CONNECTION OR THE LIKE

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WOOD AND METAL CONNECTION OR
THE LIKE

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5 Claims. (Cl. 45—7)

This invention relates to wood and metal connections or the like wherein the use of nails or other visible fastening elements is avoided to enhance the sightliness of the construction and at the same time the security of the connection.

The present invention is especially adapted to the construction of drawer corners for wood and sheet metal cabinet drawers or the like and more particularly for drawers for dental cabinets, which stand open frequently closely adjacent the patient's chair and are thus readily visible to the patient.

The invention will be readily understood from the following description, taken together with the accompanying drawing, in which—

Figure 1 is a front elevational somewhat skeletal view of a drawer front end with parts here associated therewith shown in dotted lines;

Figure 2 is a plan view of the structure of Fig. 1 disclosing a drawer corner;

Figure 3 is a vertical sectional view taken on the line 3—3 of Fig. 1;

Figure 4 is a fragmentary end perspective view of the wood drawer front; and

Figure 5 is a similar view of the metal drawer side.

Referring in detail to the illustrative construction and procedure shown in the drawing, the wood drawer front 10 is here shown formed of a main portion 11 and a facing portion 12, which in this instance are integral, the facing portion extending beyond the main portion not only from front to rear of the drawer but also upwardly and downwardly and sidewise, as is well known in the art of cabinet making. The drawer side 13 is advantageously of sheet metal and is intended to be secured in lapping abutment to the end 14 of the main drawer front portion 11, with the front edge 15 of the sheet metal side 13 abutting from front to rear the extended face 16 of the drawer front facing portion 12. Heretofore it has been customary at this point to drive nails or screws through the face 17 of the metal side into the end 14 of the main drawer part to secure the parts together; but such nails or screws are thus readily visible and unsightly as well as having a tendency to pull out or become loose.

In accordance with the present invention, the drawer side front edge 15 along its upper portion has an integral holding element such as the right-angularly returned flange 18 which is formed as a continuation of the sheet metal and along its vertical free edge is again bent right-angularly to form a lip 19 at its inner side, the

whole having a somewhat channel shape. The flange 18 is desirably wedge-shaped and in this instance has a downwardly and inwardly sloping top edge 20, and the lip 19 which constitutes its free vertical edge is slightly out of parallel with the face 17, so that the lip is a little nearer the face 17 at its lower end than it is at its upper end, the flange 18 thus being vertically tapered and the lip 19 extending in the direction in which the flange is tapered.

Reverting to the wood member 10, this member, following the present invention, has an opening such as a slot by a saw cut 21 made in the main drawer portion 11 along the vertical line at which this main drawer portion 11 adjoins the facing portion 12 and extending vertically from the bottom edge of the portion 11 to just short of the top surface of the portion 11 and extending inwardly to a depth at its inner side as at 22 sufficient to accommodate the flange 18 with the side face 17 of the drawer side 13 snugly abutting the end 14 of the portion 11 and terminating adjacent its upper edge in an internal curved wall 23. The width of the saw cut 21 is just enough to snugly pass the flange 18 therethrough and is thus approximately of a width equal to the thickness of the sheet metal of the drawer side.

The next step in the practice of the invention is to assemble the parts so that the flange 18 shall occupy a position in the slot 21 whereby the lip 19 extends angularly into a kerf 24 at the inner side of the slot and thus the parts are interlocked against sidewise or transverse relative movement of the wood front and metal side. In this instance, since the front facing portion 12 is integral with the main front portion 11 this is accomplished by a relatively telescoping end-to-end movement of the flange 18 and slot 21. Furthermore, as here shown, the slot 21 may be conveniently enlarged at one end as at 25 sufficient to pass the lip 19 therethrough into the inner side 22 of the slot 21 so that the parts 10 and 13 may thus be assembled initially by a relative lateral movement, after which the lip 19 now being at the inner side of the slot, with the side face 17 abutting the drawer end 14, the parts are next forced relatively in opposite directions vertically so that the flange 18 moves upwardly in the slot 21, and, as the flange leaves the slot enlargement 25, the flange lip 19 may itself cut the kerf 24 in the slot until the flange occupies the position shown in Figs. 1, 2 and 3, thus securely interlocking the parts against transverse movement. The downwardly sloping upper edge

20 of the flange assists in this forced assembly and the taper of the flange 18 already referred to advantageously pulls the parts together laterally somewhat by a camming action as the flange and slot move into progressively greater interlock, by reason of the lip 19 being inclined progressively toward the end face 14 from the place where it first engages the kerf 24. When the flange 18 moves upwardly as indicated by arrow A and the side face 17 is caused to abut the front end 14 without objectionable play while providing a secure and slightly attachment of the parts.

As is customary in constructions here illustrated, the metal of the drawer side 13 may be turned inwardly along its lower edge as at 26 to have welded thereto as at 26a a sheet metal drawer bottom piece 27 which may have nail apertures 28 therein and which when the flange 18 has been driven home into the slot 21 abuts the lower edge 29 of the drawer main part 11. The usual nails 30 may then be driven through the apertures 28 and lodged home in the wood of the drawer part 11, these nails being unseen when the drawer is in normal use. Along the lower edge of the drawer side may be advantageously formed a downwardly looped runner 31, there being, as will be understood, one of these runners at each side of the drawer and formed in this instance from the part 13 and its counterpart at the other side of the cabinet (not shown), respectively, which directly support the drawer and upon which it moves slidingly in and out of a cabinet. Also, along the upper edge of the drawer side may be formed an arched outwardly overhanging runner 32 which may slide on a track in the cabinet or may serve as a spacing member to prevent excessive play of the drawer in the cabinet. The semi-cylindrical portions 31 and 32 also serve to reinforce the drawer side against bending stresses.

Having described my invention, I claim:

1. As an article of manufacture, in a wood and metal connection drawer construction, the combination of a wood drawer front and a sheet metal drawer side, the drawer front having a vertical opening in its end face terminating short of the upper face of the drawer front, the drawer side having an inturned vertically tapered flange received into its final position in said opening by a reciprocal vertical movement with respect to the drawer front, the flange entering the lower end of said opening, said flange being sloped along its upper edge and having an angularly turned lip along its inner side extending in the direction in which said flange is tapered and the assembly being made to cause the said opening to receive said lip as well as said flange, the material of said wood drawer front being kerfed communicating with said opening by said reciprocal vertical movement to receive said lip, a drawer bottom piece carried by the drawer side, means securing the drawer bottom piece and drawer front together to maintain said assembly, and a depending looped runner part formed integrally with said metal drawer side.

2. As an article of manufacture, in a wood and metal connection, the combination of a wood part and a sheet metal part, the wood part having a slot in its end face terminating short of the upper face of the wood part, the sheet metal part having a right-angularly inturned vertically wedge-shaped flange received into its final position in said slot by a vertical relative telescoping move-

ment of the wood part and sheet metal part, said flange having an angularly turned lip along its inner side and the material of said wood part being kerfed communicating with said slot also at its inner side to receive said lip, said kerf being cut by said vertical relative telescoping movement of the parts, and an enlargement of said slot at its lower end initially receiving the flange by a lateral relative movement of the parts prior to said vertical relative movement.

3. As an article of manufacture, in a wood and metal drawer corner construction, the combination of a wood drawer front and a sheet metal drawer side, the drawer front having a vertical opening in its end face terminating short of the upper face of the drawer front, the drawer side having a right-angularly inturned flange received into its final position in said opening by a reciprocal vertical movement of the drawer side and drawer front, the flange entering the lower end of said opening, said flange being vertically tapered and having a right-angularly turned lip along its inner side extending in the direction of said taper, said lip being nearer said drawer front end face at its lower end than at its upper end, the material of said wood drawer front being kerfed communicating with said opening by said reciprocal vertical movement to receive said lip whereby when said front and said side are assembled by said reciprocal vertical movement they are interlocked by a camming action serving to draw the said front and side together in assembly.

4. As an article of manufacture, in a non-metal and metal connection, the combination of a non-metal piece and a metal piece disposed adjacent to the non-metal piece, the non-metal piece having an elongated opening in a face thereof to which said metal piece is adjacent, the metal piece having a holding element comprising an angularly turned tapered flange, the said flange entering one end of said opening and being received into its final position in said opening by a reciprocal telescoping movement with respect to the non-metal piece with the wider end of said flange leading, said flange having an angularly turned lip along its inner side extending in the direction in which said flange is tapered, the said lip being received in a kerf in the material of said non-metal piece communicating with the said opening whereby the said wood and metal pieces are pulled together by a camming action during said reciprocal telescoping movement.

5. As an article of manufacture, in a wood and metal corner construction or the like, the combination of a wood piece and a metal piece, the wood piece having a slot in its end face terminating short of the upper and lower faces of the wood piece, the metal piece having an inturned flange received into its final position in said slot by a vertical relative telescoping movement of the wood and metal pieces, said flange having a lip along its inner side and the material of said wood piece being kerfed communicating with said slot at its inner side to receive said lip by said relative telescoping movement, and an enlargement of said slot intermedially of the ends thereof initially receiving the flange including said lip by a lateral relative movement of the said pieces prior to said vertical relative movement, to enter the flange in said slot for said vertical relative movement.

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