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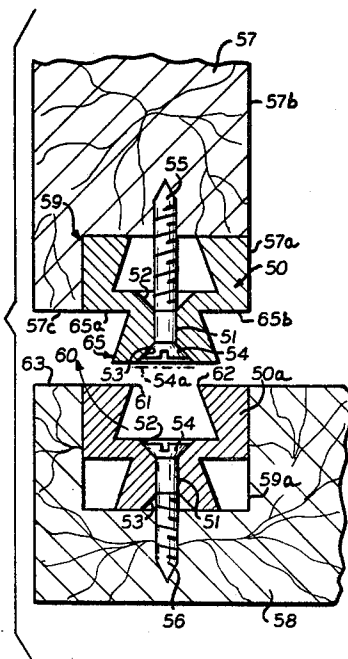
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[54] **CONNECTOR MEANS AND LIKE ELEMENTS FOR JUNCTURE PURPOSES**
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 586, 591, 594

ABSTRACT: The invention is directed to the production of profiled strip-shaped elements of indeterminate length, but of equal width throughout which elements can be easily cut to sections of predetermined dimension and may be incorporated or firmly inserted and secured to carrier bodies to be joined together, the cut, strip-shaped sections being identical, complementary to each other and interengageable when brought into slidable assembly for installation.

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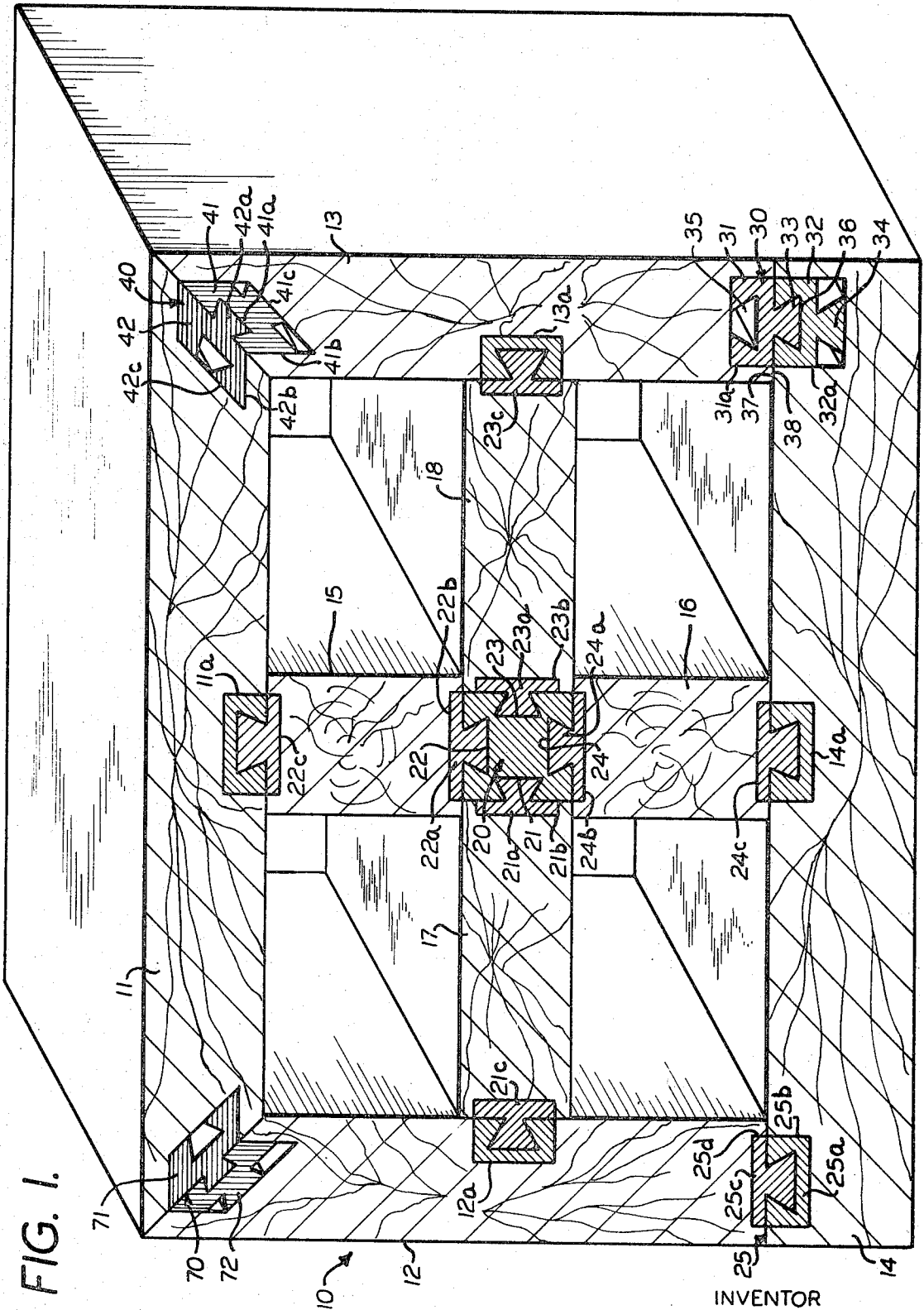
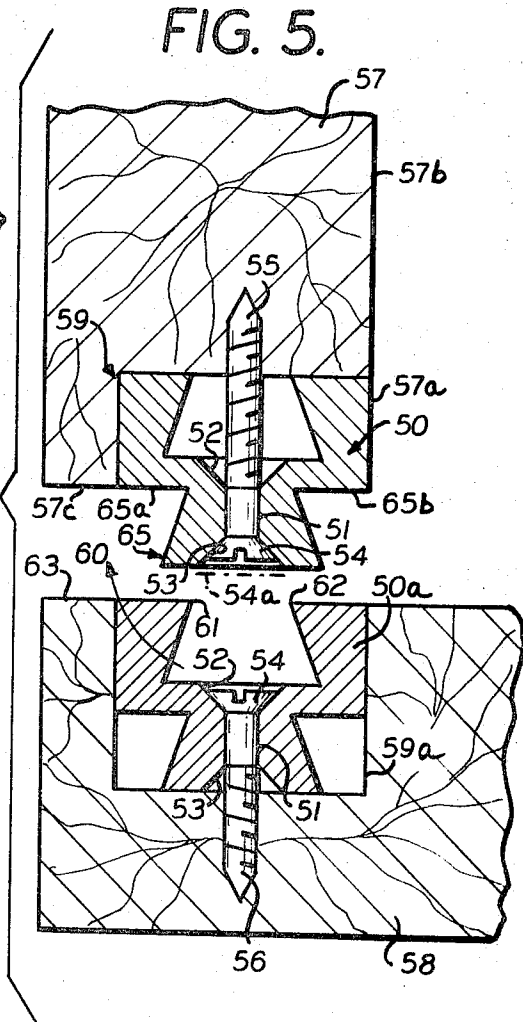
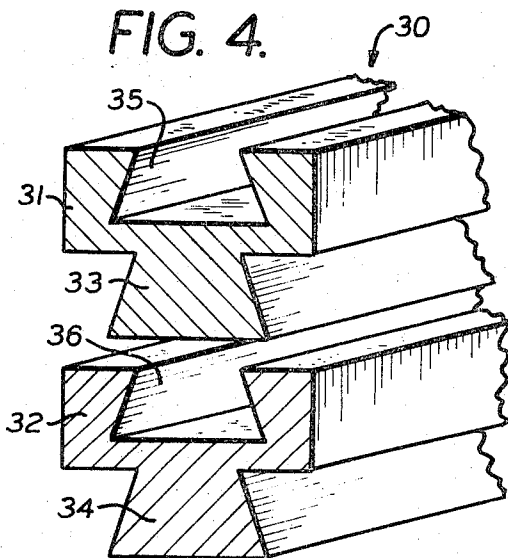
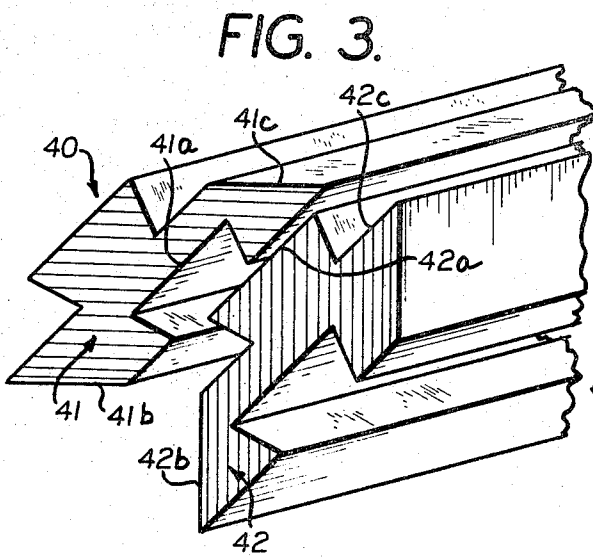
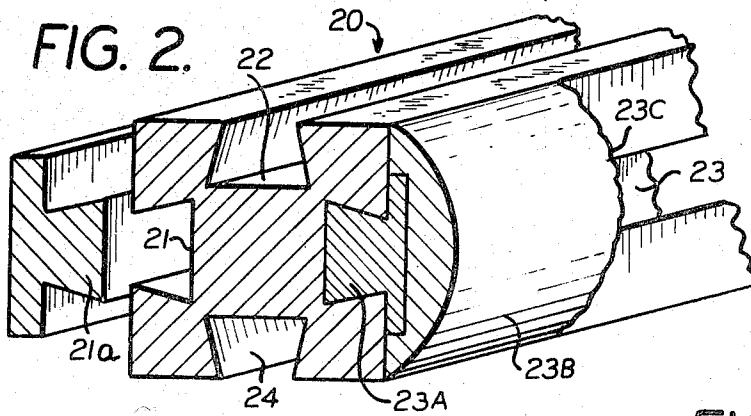


FIG. 1.

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CONNECTOR MEANS AND LIKE ELEMENTS FOR JUNCTURE PURPOSES

SUMMARY OF THE INVENTION

The invention is applicable to and useful in a great variety of industries, such as furniture, building and similar manufacturing fields and requires only one or two types of extruded strips which may be subsequently cut to size in order to fit same into corner recesses or elongated recesses provided in carrier or plate-shaped base material to which said cut strips of equal width may be fixed by any suitable fasteners or even by glue or like adhesive substance.

It is, therefore, one of the objects of the invention to provide means leading to the production of an extruded strip-shaped element, which possesses axially aligned male and female parts each including an enlarged portion, so that upon cutting such element to size after extrusion the one or other (opposite) face of the piece or cut or severed pieces of the element may be employed and connected to respective base material or carrier portions, thereby to achieve durable joints thereof, which are substantially invisible from the outside of thus assembled portions.

It is another object of the invention to provide means conducive to the production of extruded strips, which contain female sections or grooves and corresponding male sections which are directed or located in opposite relation to each other, so that the cross section of the strip or strips assumes a cross-shaped conformation offering the possibility to be selectively engaged by corresponding male or female parts of separate or composite strips.

Still a further object of the invention resides in the provision of means facilitating the employment of unskilled labor and a marked reduction of the manufacturing cost in erecting or creating shelflike particles or furniture pieces, which ordinarily would require accurate fit of plate-shaped materials within small tolerances and without regard or paying attention to the aging state of such materials.

Yet another object of the invention is to provide means affording the creation of strip-shaped metallic or plastic material through extrusion and like process which may be equipped with integral male and female parts provided with complementary enlarged portions and having openings for the insertion or passage of fastening means therethrough, such as screws, predetermined heads of which may be readily employed as bracing or abutting points or areas in the assembly of two or more slidably engageable pieces or parts of furniture, whereas the aforesaid respective openings or passageways may contribute to a certain degree to a desirable flexibility for the insertion or accommodation of the strip-shaped material in the walls or carriers.

These and other objects and aims of the invention ensue from the detailed description of the invention and the attached drawings which disclose some preferred embodiments of the invention.

DETAILED DESCRIPTION OF THE DRAWINGS

FIG. 1 is a sectional view of the front of a casing which is partly shown in perspective made according to the invention.

FIG. 2 is a transverse cross section of strip element embodying the invention together with a complementary strip element, all shown in perspective and represented on an enlarged scale and seen in an exploded view.

FIG. 3 shows in perspective and partly in section a miter-shaped strip element indicated in FIG. 1, but depicted on an enlarged scale and designed for the assemblage of corner pieces.

FIG. 4 illustrates a fragmentary and perspective exploded view of two strip-shaped portions or sections identical in size and cut from a single strip according to the invention.

FIG. 5 is an exploded and sectional view of two strip-shaped sections of substantially equal width embodying the invention, as seen prior to their assembly as suggested in FIG. 1.

DETAILED DESCRIPTION

Referring now more particularly to FIG. 1, there is disclosed a cabinet or casing 10 with top wall 11, sidewalls 12, 13 and a bottom wall 14 to which are joined intermediate upright partitions 15, 16 and intermediate horizontal partitions 17, 18, which partitions constitute shelflike dividers for any desired purpose and use.

As further exemplified according to the invention, there is disclosed in FIG. 1 a variety of tie or connector means, such as designated by numerals 20, 30, 40 and 70, which interconnect sidewalls 12, 13 with each other and top and bottom walls 11, 14 respectively. These connector means are obtained and produced through extrusion or similar manufacturing processes and constitute strips preferably with integral male and female parts, with complementarily shaped enlarged portions as will be further explained.

It will be visualized from FIG. 2 there is partly indicated a center or core forming strip piece 20 having female parts or grooves 21, 22, 23, 24 into which are slidably received and retained the metallic male parts 21a, 22a, 23a, 24a of the respective aforesaid wooden or plastic plates or partitions 17, 15, 18 and 16, into which these male parts are inserted in recesses 21b, 22b, 23b, 24b provided in these partition boards or wooden beam-shaped supports as indicated (FIG. 1).

The male parts may be glued or otherwise anchored in said recesses in a manner known per se.

In the embodiment shown in FIG. 1 the metal core strip 20 may be loosely maintained in position, when the metal female parts 21-24 are engaged with the corresponding metal male parts 21a-24a. Opposite metal male parts 21c-24c are likewise inserted in respective recesses of boards 17, 15, 18, 16; are likewise affixed thereto as hereinabove disclosed, and come into slidable engagement with metal female parts 12a, 11a, 13a and 14a, as it is evident from FIG. 1. These latter female parts are inserted and fixed in position in the walls 12, 11, 13 and 14 as shown.

Walls 12 and 14 are also provided at their abutting end surfaces at 25 with similar metal male and female parts 25a, 25c inserted in the wooden walls at 25b and 25d without regard to the quality of the aforesaid walls 12, 14. The slidable strip assembly 25a, 25c made of metal or suitable plastic composition affords accurate fit of the casing or cabinet components.

The strip conformation 30 as seen in section in FIGS. 1 and 4, has been formed to be of great advantage if the identical strip sections are first produced in a single strip piece, e.g. by extrusion, and then cut in a transverse direction thereof to obtain equally shaped strip units or sections 31, 32 whose male parts (projections) 33, 34 and female parts (troughs) 35, 36 are so-shaped (e.g., dove-tail) and axially aligned to each other that they may be easily engaged and coupled, respectively, through sliding movement. Strip units 31, 32 are suitably set in and affixed in position in recess 31a of wall 13 and in recess 32a of wall 14, respectively, both said recesses being equal in width, but dissimilar in depths, as it is depicted in FIG. 1. Tongue or projection part 33 of strip section 31 is shown in engaged (superposed) position in female or trough part 36 of strip section 32 so that wall 13 abuts flush against wall 14 at their respective end surfaces 37, 38, as shown.

While strip portions or sections 31, 32 of equal width and height are shown inserted at a location about the median region of walls 13 and 14 and are adhesively anchored in position thereat, FIG. 3 illustrates a modified form of engageable dove-tail sections 41, 42. Sections 41, 42 are obtained by cutting a single profiled strip in transverse direction thereof and then assembling the resultant sections in a manner that section 42 with corresponding male part forms a mirror image or a reflected image of strip section 41 with its female part accessible for assemblage. Thus in assembled condition as a miter joint 40, as seen in FIG. 1, the projection 42a engaged in groove or trough 41a effectuates that sides 41b and 42b of said strip sections form an angle of 90° to each other and are em-

bedded and adhesively retained in recesses 41c and 42c of walls 13 and 11, respectively. Side ledges 41c' and 42c' (FIG. 3) form likewise an angle of 90° in engaged and assembled condition of said miter joint consisting of the profiled strip sections 41, 42.

FIG. 5 elucidates the employment of identical strip sections 50, 50a of somewhat further modified form, insofar as the latter possesses space-apart bores or passageways 51 with opposed countersunk cavities 52, 53 for the reception of the heads 54 of screw bolts 55, 56, as shown.

Strip section 50, in this example, is located with its one side face or ledge 57a flush and in abutment with surface 57b of wall 57 and runs along a recessed corner 59 of the latter.

Strip section 50a is inserted in a recess 59a of wall 58, the outer ends 61, 62 of groove or trough 60 of the section 50a being flush with the surface 63 of wall or board 58.

In the embodiment of FIG. 5 the heads 54 of screw bolts 51 may be either completely sunk or moved into the respective cavity 52 or 53 as the case may be, or some of these heads may be employed to bring about a braking type action during sliding engageable movement of one carrier or plate 57 with respect to the other carrier 58. To this end such screw head or heads 54 may be located somewhere beyond the male part 65 (as indicated by dot and dash lines 54a in FIG. 5), so that such screw head or heads will be moved in tight fit within groove 60, or its corresponding screw head 54 may be moved for similar action into the hollow of female part of groove 60, to form therein either a braking area for the sliding movement of male part 65 or an abutment therefor, thereby to define the extent of the sliding movement of one wall or carrier 57 to the other carrier 58, as may be easily realized. It is further to be noted that the end faces 65a and 65b of the male part 65 terminating in an enlarged (dovetail) portion, as shown, lie flush or in alignment with corresponding end face 57c of carrier or wall 57 in assembled condition, as seen in FIG. 5. The aforesaid sections 50, 50a may be consequently located or embedded in a corner portion and/or in any appropriate median position or confines of such wall or carrier, the material of the latter being preferably softer, more yieldable and less rigid than the metal or plastic material of which the profiled strip may be manufactured or extruded.

If a strip 20 (FIG. 2) with only female parts or recesses 21, 22, 23 and 24 is to be employed, whose grooves 21, 22 and 24, however, are engaged by corresponding boards for carrying male parts (only male part 21 a being shown in exploded view), while groove 23 is to remain unused, then it is proposed according to the invention to make use of a male part 23A set into and retained in a decorative strip 23B of any desired design 23C.

It is well understood that miter joint or juncture 70 (FIG. 1) is constructed and composed in a manner similar to that disclosed with respect to miter joint 40. Male part of section 71 is then engaged by female part of section 72, which parts are both retained in respective recesses of carriers or walls 11 and 12 as hereinabove explained with respect to sections 41, 42.

Although FIG. 1 illustrates the application of various modes of the invention to junctures of a wooden cabinet 10 equipped with shelflike compartments, it is well understood that the invention is also of great advantage for other purposes. The relatively rigid strip sections may be incorporated in rubber plates or like yieldable base material. The interengagement of the sections will nevertheless permit bending or arching of portions of the rubber plates located intermediate said strip sections. The distance between two or more passageways 51 (FIG. 5) in sections 50, 50a may be chosen at will (only one passageway being shown passing through the center axis of each of the projection and groove parts 65, 60 of these sections 50, 50a).

It can thus be seen that there has been provided according

to this invention a novel profiled, elongated, substantially rigid strip with two opposite faces, one of said faces being provided with a male forming offset part including an enlarged portion, the other face being provided with a female part forming groove, which includes a complementarily shaped enlarged portion and extends along said other face and is complementarily to said offset or male part, so that when the strip is severed in sections the latter may be mutually interconnected, as disclosed herein.

These strip sections may be fitted on carrier surfaces of any description, such as wood, rubber, yieldable or bendable plastic, and function together completely independently of the carrier material.

Many forms of these strips are usable, the dovetail configuration of male and female parts being only shown for the sake of simplicity.

Summarizing the above disclosure there has been created according to the invention a structural juncture having a first wall with an end surface and a second wall with an end surface; comprising, in combination, two sections cut from a single strip of material including an enlarged portion, said two sections constituting a first strip and a second strip each substantially identical in configuration and with their enlarged portions complementarily and engageable with each other, said first strip and said second strip being recessed and retained in said first wall and in said second wall, respectively, and to an extent sufficient that said first strip and said second strip with their respective enlarged portions in slidably engaged position result in an arrangement of said end surfaces of said first and second walls in contiguous relation to each other.

I claim:

1. In a structural juncture having a first wall with an end surface and a second wall with an end surface; the combination of a first strip of material, with a second strip of material, each of said strips being substantially identical in configuration and being each provided with opposed faces, one of said faces of both said strips comprising an offset part profiled and including an enlarged portion to present a projection and the other face comprising a trough part profiled and including an enlarged portion complementarily to said enlarged portion of said offset part to present a groove, said grooves and said projections of both said first and second strips being engageable with each other, respectively, said first strip being recessed and retained in the end surface of said first wall to a rate that the projection of said first strip extends from about said end surface of said first wall therebeyond, said second strip being recessed and retained in said end surface of said second wall to an extent that the groove of said second strip reaches from said end surface of said second wall into the latter sufficient, so that when said projection of said first strip is engaged in interlocked position with the groove of said second strip a joint for said first and second walls results with the end surfaces of both said walls arranged in contiguous relation.

2. In a structure according to claim 1, wherein said grooves and said projections of both said first and second strips are axially aligned to each other.

3. In a structure according to claim 1, wherein each of said strips is provided with a passageway extending through the center axis of said projection and groove of each strip, and fastening means anchoring said strips, respectively, in recesses provided in said walls.

4. In a structure according to claim 3, said passageways terminating in opposite countersunk cavities in which the respective end of each fastening means is positioned.

5. In a structure according to claim 1, wherein one of said strips is a mirror image of the other strip, both said strips having respective end edges extending at right angles to each other in engaged position of both said strips to provide a structural joint in miter formation.