Oct. 6, 1953 LE ROY W. PASEWALK ET AL 2,654,649

CAPPED CORNER AND METAL TOP ANCHORAGE FOR FURNITURE

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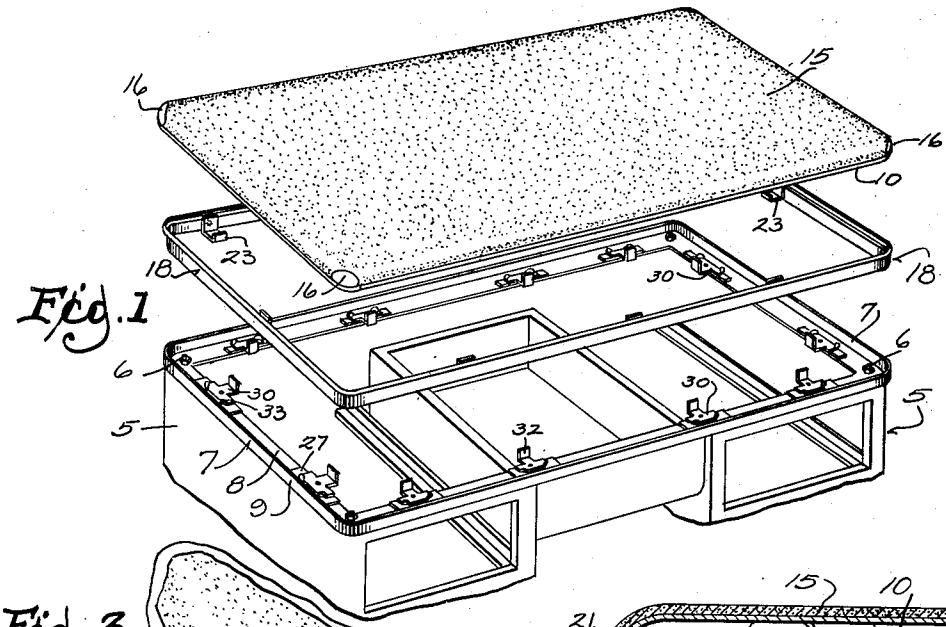


Fig. 1

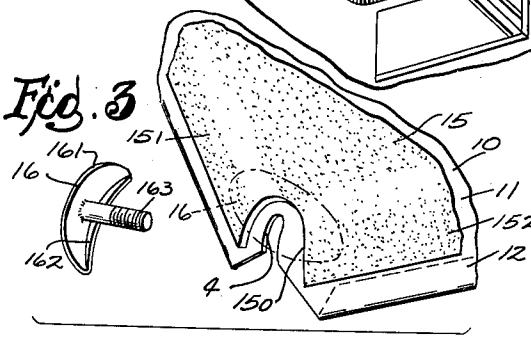


Fig. 3

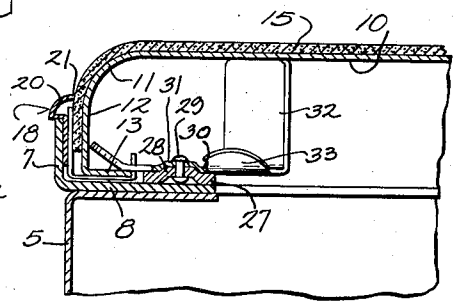


Fig. 2

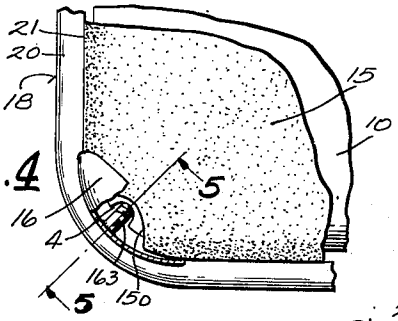


Fig. 4

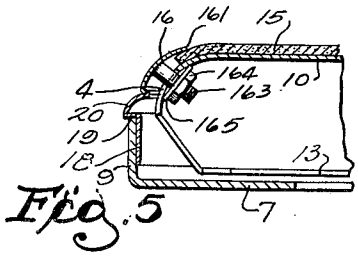


Fig. 5

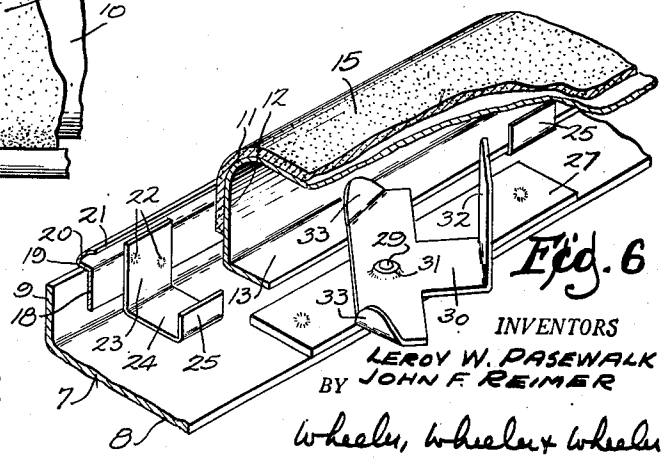


Fig. 6

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CAPPED CORNER AND METAL TOP ANCHORAGE FOR FURNITURE

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5 Claims. (Cl. 311—108)

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This invention relates to a capped corner and metal top anchorage for furniture.

The invention has particular application to metal tops for desks, tables, stands and the like which are provided with decorative cover plies of linoleum or other sheet material. The invention has for its object the provision of a novel and improved means for fastening the facing material at the corners of a metal top which has rounded edges and upright depending wall portions over which marginal flaps of the facing ply extend.

It is a further object of the invention to provide novel and improved means for anchoring such a top to the furniture with which it is used.

The present application is a companion to an application executed by Karl E. Castle on June 2, 1949, Serial No. 96,685, now Patent No. 2,644,733, and entitled Furniture With a Covered Metal Top.

In the drawings:

Fig. 1 is a fragmentary view in perspective showing in relatively separated positions certain of the component parts of a furniture top construction embodying this invention.

Fig. 2 is a fragmentary detail view showing the assembled furniture top in transverse section.

Fig. 3 is a fragmentary detail view showing in perspective portions of a covered metal top and, in separated position, a corner cover cap for application thereto.

Fig. 4 is a fragmentary detail view in plan of the corner portion of a piece of furniture equipped with a top embodying the present invention, portions of the corner cap being broken away.

Fig. 5 is a fragmentary detail view taken in section on the line 5—5 of Fig. 4.

Fig. 6 is a fragmentary detail view in perspective showing on an enlarged scale the top clamping arrangement illustrated in Fig. 2.

While the invention is shown exemplified in a metal desk construction, it will be understood that it is suitable for other furniture, and even for non-metallic furniture if desired. The desk generically designated by reference character 5 may be of any suitable metallic or wooden structure. Securely fixed thereto, as by means of the bolts 6, is a rim 7 of angular form in cross section, the rim having a horizontal inwardly directed flange at 8 and a continuous upstanding flange at 9.

The metal top 10 has a substantially flat top surface bounded by marginal cylindrically curved portions at 11 which merge with vertical wall portions 12 at the sides and ends of the top. The

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lower margins of such wall portions are flanged inwardly at 13 (Figs. 2 and 3).

The top 10 is covered with a surfacing ply 15 which conventionally is made of linoleum or the like, although any other non-metallic sheet material such as plastic or leather or fabric may be used. The surfacing ply 15 is desirably cemented as usual to the top 10, to cover the upper surface of the top, the cylindrically rounded margins 11 and at least portions of the sides 12.

As best shown in Fig. 3, the corners of the top are notched at 4 and the entire corner of the surfacing ply 15 is cut away at 150, thereby forming lateral flaps 151 and 152 which extend downwardly over the side wall portions 12 of the top, in spaced relation to the corner notch 4.

To cover the margins of the surfacing ply 15 where these are exposed at 150, the cover caps 16 are used, these being generally spherical segments having curved upper margins 161 fitted to the surfacing ply 15 and an inwardly turned flange 162 at its lower margin which is substantially horizontal and at a level to seat on the bead of the molding hereinafter to be described. The corner cover cap 16 is anchored by a single bolt 163 centrally welded thereto and passing through the corner slot 4 of the top to the interior thereof. Within the top, the nut 164 holds the washer 165 to the portions of the top adjacent the corner slot 4, as best shown in Fig. 5.

To assure the anchorage, as well as the protection of the downwardly flanged edges 17 of the surfacing ply 15, binding clips are employed to anchor a binding strip which is decorative as well as protective. The binding strip 18 extends continuously about the top, being endless as applied. Its overall dimensions are such that it fits snugly within the upstanding flange 9 of the rim 7. At 19, it is outwardly flanged to form a shoulder which rests on the top margin of the flange 9 of the rim. Thence the binding strip is reversely curved at 20 to provide a bead, the inner margin 21 of which rests against the surfacing ply as shown in Fig. 2 and Fig. 4.

Fixed interiorly to the binding strip, as by the spot welds at 22, is the angular clip 23, the horizontal leg portion 24 of which is of just sufficient length to underlie the flange 13 of the top 10. The upturned finger 25 at the inner end of the clip is engaged by the inner margin of flange 13.

In consequence of this arrangement, the binding strip may be applied to the covered top as shown in Fig. 4 in advance of the assembly of the top to the rim 7 of the furniture. When the assembly of top and binding strip is inserted into

the flange 8 of the rim, it will fit snugly therein, as shown in Fig. 2.

It will be observed in Fig. 2 that the horizontal leg 24 of the binding clip 23 does not fully seat against the flange 8 of the rim 7 when the shoulder 19 of the binding strip engages the upper margin of the flange 9 of the rim 7. The inwardly directed flange 13 carried by the side and end walls of the top is thus left without any direct support and its inherent resilience is used for anchorage purposes.

To this end the horizontal flange 8 of rim 7 is provided at intervals with mounting plates 27 which are connected thereto by any desired means such as the spot welding shown in Fig. 4. These plates 27 are desirably embossed upwardly at 28 to provide bearings, as well as clearance for the heads of the rivets 29 used to fulcrum the respective clamps 30.

While, in a broad sense, a variety of clamping means may be used to anchor the top and the binding strip to the flanged piece of furniture to be equipped therewith, the particular clamps shown at 30 and hereinafter described in detail are an important feature of the present invention. These clamps desirably have embossed bearing portions 31 complementary to the embossed bearing portions 28 of the plates upon which they are mounted. Each clamp pivots on its rivet 29 subject to manipulation by means of a handle at 32. The ends of each of the clamping members 30 are provided with upwardly turned camming wings 33 which, in the position of the clamps shown in Fig. 1, are out of contact with the top flanges 13 but, on rotation of the respective clamps to the position shown in Fig. 6, ride on to the flanges 13 to exert downward clamping pressure on such flanges and thereby securely anchor the top to the rim and to the furniture carrying such rim. In the case of a desk, the clamps are readily accessible through the drawer openings and they are provided at intervals around the entire inner perimeter of the rim, as clearly shown in Fig. 1.

The arrangement disclosed is such as to provide an exceptionally rigid connection of the top to the piece of furniture while, at the same time, making the replacement of the top surfacing ply 15 extremely easy. It is only necessary to turn all of the clamps to the center position in which they are illustrated in Fig. 1 to completely release the top, which may thereupon be lifted not only from the rim but from the binding strip, its surfacing ply being thereby completely exposed for repair or replacement when the nuts 164 are unscrewed to release the corner cover caps 16.

Yet, when the top is anchored by the several clamps as herein disclosed, the clamps not only hold the top to the desk but, by reason of the fact that the top flanges 13 are supported on the inwardly projecting arms 24 of the intervening clips 23, the binding strip is also anchored and released by the same manipulation of the clamps 30. The binding strip, in turn, has its margin 21 drawn snugly against the cover ply 15 so that regardless of what may happen in the course of years, to the adhesive originally used in the application of the cover ply 15, the ply will nevertheless remain securely bound to the top until the clamping pressure of the pivoted clamps 30 is released.

The height of the handle 32 is preferably such that as the camming action of the clamp 30 is exerted to draw the top 10 downwardly, the inner surface of the top will engage the upper end of

the handle so that the pressure thereon will tend to bind the clamp and hold it in position.

In addition, the camming wings at the ends of the respective clamps will, in the final positions of adjustment thereof, engage the inner faces of the depending wall portions of the top, further binding the parts against displacement or vibration.

The downward bias of the clamps upon the top not only securely holds the binding strip but further tends to cause the bead portions thereof to fulcrum on the upper margin of the rim, thereby pressing the free terminal margins of the bead more securely against the cover ply with which the top is surfaced.

We claim:

1. The combination with a piece of furniture having an anchor mounting means adjacent its top, of a top member for said furniture having side and end wall portions provided with inwardly projecting flanges, a series of anchor clamps mutually spaced about the periphery of the furniture and respectively pivotally connected with said means, each of said clamps comprising an oscillatory plate having a pintle connecting it with said means and movable between a first position in which said plate clears adjacent portions of said flange, and a second position in which said plate overlies an adjacent portion of said flange, the said plate having a camming surface adapted in the course of its oscillatory movement between the said first and second positions to exert a downward pressure on the said flange, said mounting means being provided with top support means supporting said flange in spaced relation to said anchorage means.

2. The device of claim 1 in which said top member is provided with a cover ply, said top support means comprising an upstanding rim and in further combination with a bezel rim having a shoulder engaging the rim, an edge fulcrumed about said shoulder and engaging the cover ply and an inwardly extending flange upon which the said flanges of the top are supported to be normally clear of said anchorage means, the camming pressure aforesaid urging said flanges resiliently toward the anchorage means and levering the bezel rim into engagement with the cover ply.

3. A furniture construction comprising a base plate, a top having depending side and end walls, the said walls having inwardly turned flanges, and clamping devices spaced about the base plate in proximity to the positions of said flanges, the said devices comprising cams each provided with a mounting pintle connected with the base plate and upon which the respective cams are oscillatable to and from clamping engagement with adjacent flanges of said walls, said pintles extending upwardly from the base plate and the respective cams comprising horizontally oscillatable plates each provided with at least one beveled corner normally engaged over said flange and movable about the pintle to a position of disengagement therefrom.

4. A furniture construction comprising the combination with a base plate having an upstanding rim about its perimeter, of a removable top fitting within the rim and having inwardly turned flanges, supports for said flanges carried by said rim, and latching cams pivotally mounted on said plate and releasably engaging the said flanges under camming pressure sufficient to bias said supports, said top having the form of an inverted pan with depending side and end

walls on the lower margin of which said flanges are disposed in spaced relation to said top, each of the said cams comprising a plate pivotally movable between a first position in which it is free of the adjacent flange and a second position in which it laps the adjacent flange, the said plate having a beveled portion for riding on to said flange in movement toward the second position.

5. A furniture construction comprising the combination with a base plate having an upstanding rim about its perimeter, of a removable top fitting within the rim and having inwardly turned flanges, supports for said flanges carried by said rim, and latching cams pivotally mounted on said plate and releasably engaging the said flanges under camming pressure sufficient to bias said supports, said top having the form of an inverted pan with depending side and end walls on the lower margin of which said flanges are disposed in spaced relation to said top, each of the said cams comprising a plate pivotally movable between a first position in which it is free of the adjacent flange and a second position in which it laps the adjacent flange, the said

plate having a beveled portion for riding onto said flange in movement toward the second position, each such cam having an upstanding handle with its upper extremity in substantial engagement with said top.

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JOHN F. REIMER.

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