July 30, 1957 E. H. SCHULTZ, JR 2,800,679

CASTER MOUNTING

Filed July 7, 1953

Fig. 1.

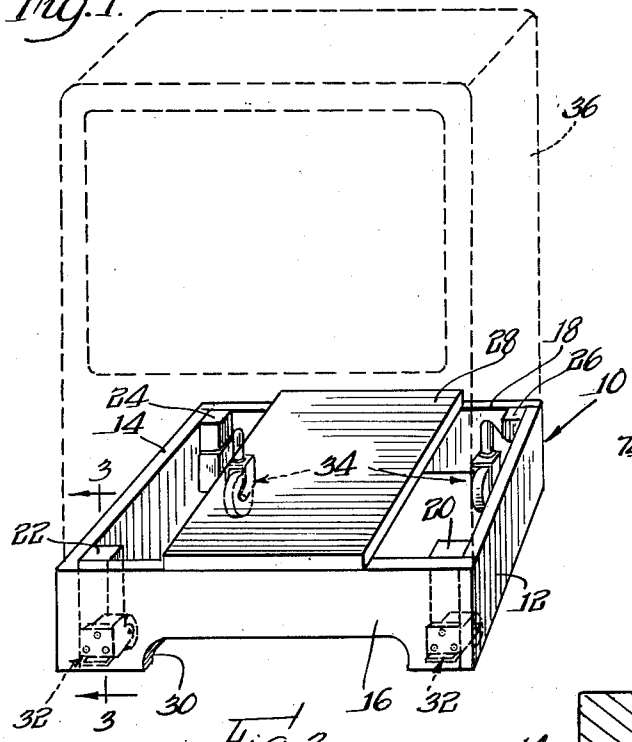


Fig. 2.

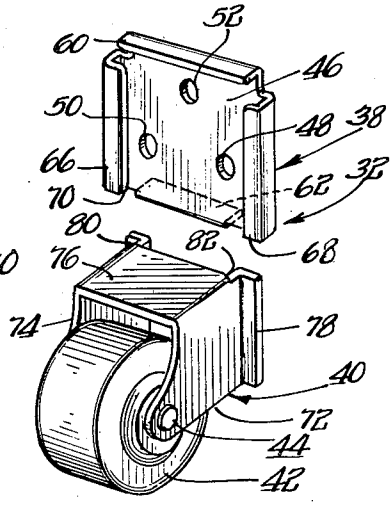
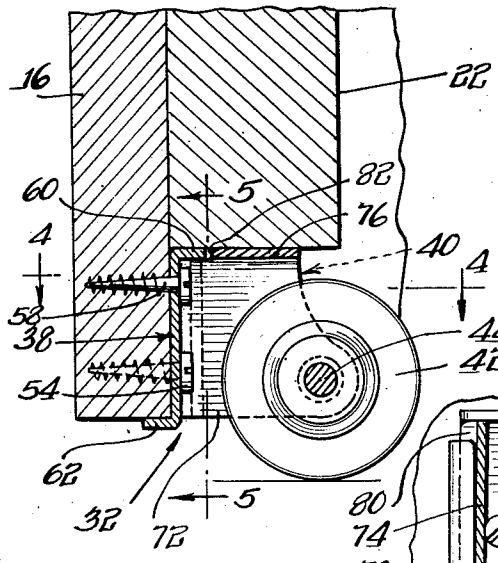


Fig. 3.



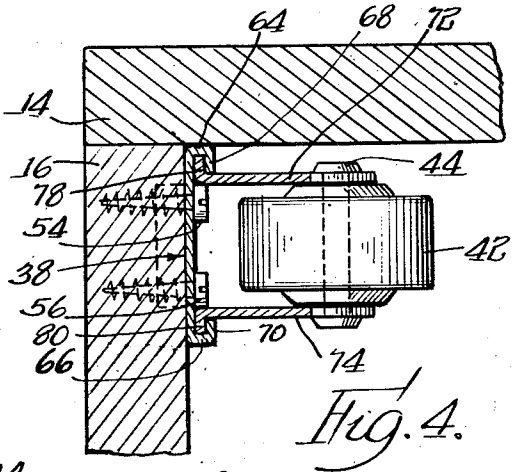
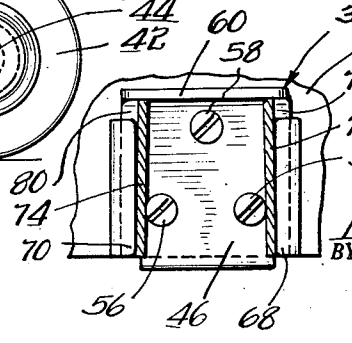


Fig. 4.

Fig. 5.



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United States Patent Office 2,800,679 Patented July 30, 1957

2,800,679

CASTER MOUNTING

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Application July 7, 1953, Serial No. 366,451

5 Claims. (Cl. 16—29)

The present invention relates to a novel structure for supporting articles of furniture and the like, and more particularly to a novel structure for mounting a caster wheel to an article of furniture to be supported.

Articles of furniture, such as television sets, have heretofore been mounted on casters to enable the article to be moved easily. If the caster wheels are mounted directly to the bottom of the article of furniture, they are rather unsightly, and, therefore, it has been proposed to mount the swivel-type casters on brackets extending from an inside wall of the television cabinet or other article of furniture so that the caster wheels project only slightly below the bottom of the cabinet. In many instances, lower portions of the cabinet structure are cut away to give the cabinet a pleasing design, and this cutting away of the cabinet uncovers the swivel-type casters mounted on the inside of the cabinet. This is especially true when a front portion of the cabinet is cut away so that the large swivel-type casters present an unpleasant appearance. It is, therefore, an object of the present invention to provide a novel structure of the above described general type for supporting an article of furniture in a manner so that the caster wheel and bracket means for supporting the wheel are substantially hidden from view.

Another object of the present invention is to provide a novel supporting structure of the above described general type, whereby a caster wheel may be quickly and easily attached to or removed from the article of furniture to be supported.

Still another object of the present invention is to provide a novel bracket structure for connecting a supporting wheel to an article of furniture to be supported, which bracket structure has one portion mounted to the article of furniture and another portion carrying the wheel with the bracket portions being constructed in a manner so as to be quickly and easily connectable with each other.

Another object of the present invention is to provide a novel bracket structure of the type described in the preceding paragraph, wherein the bracket portions are securely retained against accidental disassembly by frictional engagement with each other.

Still another object of the present invention is to provide a novel bracket structure of the above described type which is of simple construction and which may be economically manufactured from sheet material.

Other objects and advantages of the present invention will become apparent from the following description and the accompanying drawings, wherein:

Fig. 1 is a perspective view illustrating an article of furniture incorporating the novel features of this invention;

Fig. 2 is an exploded perspective view illustrating novel elements of this invention;

Fig. 3 is an enlarged fragmentary cross sectional view taken along line 3—3 in Fig. 1;

Fig. 4 is a fragmentary horizontal cross sectional view taken along line 4—4 in Fig. 3; and

Fig. 5 is a fragmentary vertical cross sectional view taken along line 5—5 in Fig. 3.

Referring now more specifically to the drawings, wherein like parts are designated by the same numerals throughout the various figures, a movable base or dolly **10** supported in accordance with the principles of this invention is illustrated in Fig. 1. The dolly **10** includes a pair of side wall members **12** and **14** and front and back vertically disposed wall members **16** and **18**, respectively. The corners of the dolly are reinforced by block-like members **20**, **22**, **24**, and **26**, which are secured to adjacent wall members by any suitable means, such as bolts, screws, or glue. A top member **28** is secured between opposite walls **16** and **18** to add strength and rigidity to the dolly. The front wall **16** may be cut away, as at **30**, and the front portion of the dolly is supported at opposite corners thereof by supporting structure **32** embodying the principles of this invention. Preferably, the rear portion of the dolly is supported by swivel-type casters generaly designated by the numeral **34**. The dolly **10** is adapted to support an article of furniture, such as a television set **36**, shown in dotted lines, but it should be understood that the dolly might be eliminated, and the casters and the supporting devices **32** may be secured directly to the television cabinet in accordance with the principles of this invention.

As shown best in Figs. 2, 3, and 4, the supporting device **32** includes a bracket member **38** which is adapted to be secured to the front wall **16** of the dolly and a bracket member **40** carrying a wheel **42** by means of a pin **44**, which bracket member **40** is adapted to be detachably connected with the bracket member **38**. As will appear from the description, hereinbelow, these bracket members may be quickly and easily assembled together and are retained in their assembled relationship by frictional contact with each other.

The bracket member **38**, which is preferably made of sheet metal, includes a relatively broad substantially flat body portion **46** having a plurality of apertures **48**, **50**, and **52** therethrough. The bracket member **38** is adapted to be positioned against the inner surface of the front wall member **16**, as shown in Fig. 3, and secured thereto by headed screws, bolts, rivets, or the like extending through the apertures **48** through **52** and designated by the numerals **54**, **56**, and **58**. Preferably, the apertures and the screws are arranged in the triangular relationship shown in Figs. 2 and 5. As indicated in Figs. 2 and 3, the block-like reinforcing member **22** terminates above the lower margin of the front wall **16**, and the bracket member **38** is mounted directly below the block-like member. In order to relieve the screws **56** through **58** from any substantial shearing stresses, the upper edge of the bracket member **38** is provided with an inturned flange **60** which abuts against the bottom or downwardly facing surface of the block-like member **22**. In addition, the lower edge of the bracket member **38** is provided with an outturned flange **62** which engages the bottom edge of the front wall member **16**.

In order to provide means for interconnecting with the bracket member **40**, the opposite vertical marginal portions of the bracket member **38** are bent to provide oppositely facing generally U-shaped sections **64** and **66**. The free leg portions **68** and **70** of the U-shaped sections preferably are disposed generally parallel to the body section of the bracket member and are spaced therefrom so that the U-shaped sections provide guideways adapted to receive flanges on the bracket member **40** in the manner described below.

The bracket member **40**, which is also preferably con-

structed from an integral blank of sheet metal, includes a pair of opposed generally vertically disposed sections 72 and 74 which embrace the wheel 42. The side sections 72 and 74 are connected by a top section 76. Flanges 78 and 80 extend perpendicularly from the side sections 72 and 74, respectively, and are adapted to enter slidably the guideways on the bracket member 38. As shown best in Figs. 2 and 5, the upper corners of the flanges 78 and 80 are preferably slightly rounded to facilitate entry of the flanges into the guideways.

As suggested above, the bracket member 40 is assembled with the bracket member 38 merely by inserting the flanges 78 and 80 into the opened lower ends of the guideways and sliding the bracket member 40 upwardly. As shown best in Fig. 3, the bracket member 40 may be moved upwardly until the top section 76 thereof engages the bottom surface of the block-like member 22. In order to accomplish this, the top section 76 is cut away, as at 82, to provide a recess for receiving the upper flange 60 of the bracket member 38. By this structure, the greatest portion of the load is transmitted directly from the block-like member 22 to the bracket 40, whereby the securing means, such as the screws 54 through 58, are not unduly stressed. In addition, it should be noted that the upper flange 60 of the bracket 38 provides a positive stop which normally cooperates with the block member 22 in providing an abutment means limiting the upward movement of the bracket 40. By also utilizing the flange 60 to limit the upward movement of the bracket 40, the member 22 which is usually made of wood is protected against undue wear.

As set forth hereinabove, the bracket member 40 is retained against vertical disassembly from the bracket member 30 by means of frictional engagement between the flanges 78 and 80 and the guideways. It will be understood that the sheet metal side sections 72 and 74 of the bracket 40 might become flexed or bent after use so that the flanges would not properly engage the guideways with sufficient force to hold the bracket members in assembled relationship. Therefore, in order to insure proper frictional engagement between the flanges and the guideways, the securing screws or other headed members 54 and 56 are positioned so that the heads thereof provide cam or abutment means engageable with the inner surfaces of the bracket side sections 72 and 74 to space the side sections so that their respective flanges properly frictionally engage the guideways of the bracket member 38. While the headed fasteners 54 and 56 provide a convenient and simple cam or abutment means on the bracket member 38, it will be understood that other abutment means might be provided.

From the description hereinabove and by referring particularly to Figs. 1 and 3, it is seen that the present invention has provided a novel caster-like supporting structure mounted to an article of furniture in a manner so as to be substantially hidden from view.

In addition, it is seen that the present invention has provided a novel bracket structure, whereby a supporting wheel may be quickly and easily detachably secured to the article of furniture. It is also seen that the bracket structure is of simple and economical construction and is secured to the article of furniture to be supported in a manner so that a strong and durable supporting structure is provided.

By referring to Fig. 1, it is seen that in the embodiment illustrated, the novel supporting devices 32 of this invention have been provided only at the front of the article of furniture, while swivel-type casters 34 have been provided at the back of the article of furniture. In many instances, it may be desirable to support all corners of the article of furniture by the novel supporting structure 32 of this invention, but it is usually preferable to provide the swivel-type casters at the rear since this structure enables the furniture to be guided and turned easily as it is moved while presenting a neat appearance.

While the preferred embodiment of the present invention has been illustrated and described herein, it is obvious that many structural details may be changed without departing from the spirit and scope of the appended claims.

I claim:

1. An article of furniture and the like adapted to be supported on the floor, comprising a generally vertically disposed wall, a block-like member connected with said wall and having a downwardly facing surface disposed above a lower margin of said wall, a bracket member on said wall below said block-like member, securing means for mounting said bracket member to said wall, a second bracket member detachably interfitting with the first bracket member and having integral spaced apart fixed members rotatably carrying a roller, one of said bracket members having a pair of oppositely facing generally vertically disposed guideways, the other of said bracket members having a pair of oppositely directed flange means, each of which flange means is slidable into and cooperative with one of said guideways upon upward movement of the roller carrying bracket member for detachably connecting said bracket members together, and said roller carrying bracket member having a portion engageable with said downwardly facing surface of the block-like member to limit upward movement of said roller carrying bracket member.

2. A device for detachably mounting a wheel on a wall of an article to be supported by the wheel, comprising a bracket of sheet material adapted to be secured to the wall, a second bracket member of sheet material including a pair of spaced integral sheet material generally vertically disposed side sections, and a top section connecting said side sections, a wheel rotatably supported between said side sections and substantially embraced thereby, one of said bracket members having a pair of oppositely facing generally vertically disposed integral sheet material guideways, the other of said bracket members having a pair of oppositely directed integral sheet material flange means, each of which flange means is slidable into and cooperable with one of said guideways for detachably connecting said bracket members together, and integral sheet material abutment means for limiting sliding movement between said bracket members, said abutment means including a flange extending from said first mentioned bracket member, said top section having a recess therein to receive said last mentioned flange so that said top section and said last named flange are substantially coplanar when the bracket members are assembled.

3. A device for detachably mounting a wheel on a wall of an article to be supported by the wheel, comprising a bracket member of sheet material secured to said wall by headed fastening members extending through apertures in a wall of said bracket member, a second bracket member of sheet material, a wheel rotatably mounted on said second bracket member, one of said bracket members having a pair of oppositely facing generally vertically disposed integral sheet material guideways, the other of said bracket members having a pair of oppositely directed integral sheet material flange means, each of which flange means is slidable into and cooperable with one of said guideways for detachably connecting said bracket members together, said headed fastening members projecting beyond the wall through which they extend for wedging engagement with said second bracket member so as to hold each cooperating guideway and flange means in frictional engagement with one another to prevent inadvertent disassembly of said bracket members, and integral sheet material abutment means on one of said bracket members for limiting relative sliding movement between said bracket members.

4. A device for detachably mounting a wheel on a

wall of an article to be supported by the wheel, comprising a bracket of sheet material adapted to be secured to the wall, a second bracket member of sheet material including a pair of spaced integral sheet material substantially vertically disposed side sections, and a top section connecting said side sections, a wheel rotatably supported between said side sections and substantially embraced thereby, one of said bracket members having a pair of oppositely facing substantially vertically disposed integral sheet material guideways, the other of said bracket members having a pair of oppositely directed integral sheet material flange means, each of which flange means is slidable into and cooperable with one of said guideways for detachably connecting said bracket members together, and integral sheet material abutment means on one of said bracket members for limiting relative sliding movement between said bracket members.

5. An article of furniture and the like adapted to be supported on the floor, comprising a vertically disposed wall, a bracket member mounted on said wall adjacent a lower margin thereof and including a vertical wall portion lying against said vertically disposed wall, headed fastening members extending through said vertical wall portion and into said wall with the heads of the fasteners exposed, said bracket member having a pair of confronting vertically disposed guideways thereon defined by confronting flange means resiliently movable toward and away from one another, a second bracket member including a wall section mountable substantially perpendicular to said wall portion and means depending therefrom and rotatably carrying a roller with at least a part of said

roller depending below said wall section, said second mentioned bracket member having a pair of outwardly projecting, vertical flanges, each of which flanges is slidable into and cooperable with one of said guideways upon upward movement of the roller carrying bracket member for detachably connecting said bracket members together, the heads of said fastening members frictionally engaging the depending means of the roller carrying bracket and the flanges thereon resiliently being held against said heads by the resiliency of the flange means defining the guideways, and abutment means forming a positive stop on said first mentioned bracket member and engageable with the roller carrying bracket member for limiting upward movement thereof with the roller projecting below the lower margin of the wall.

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