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3,160,384

TORQUE RESISTING DETACHABLE BRACKET AND HANGER

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FIG. 2.

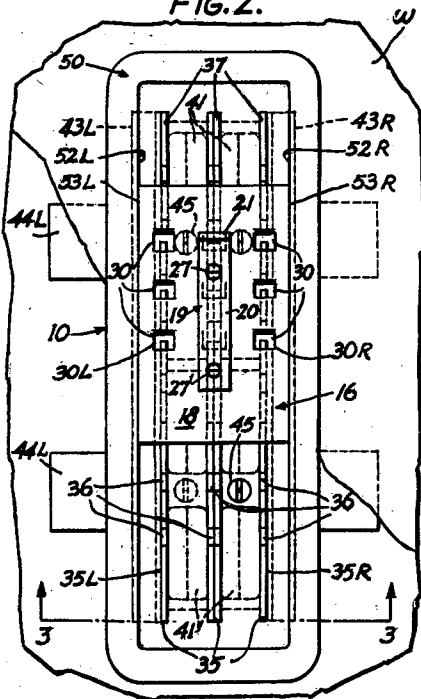


FIG. 1.

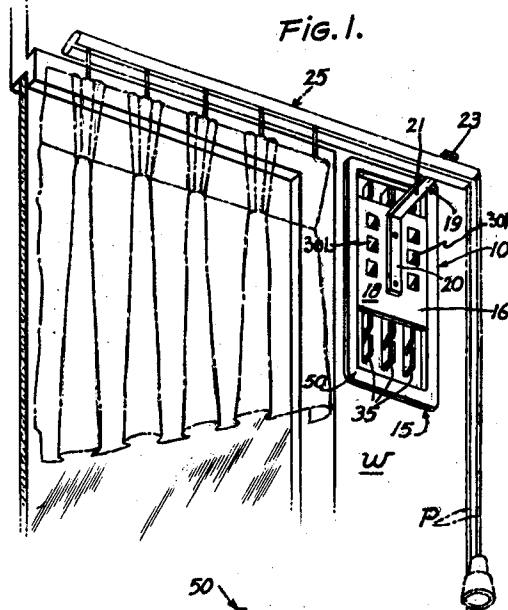
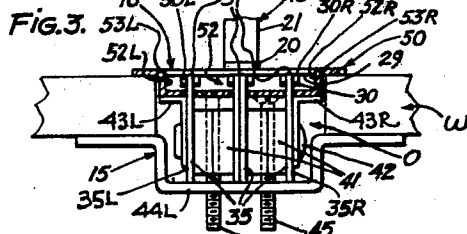


FIG. 4.

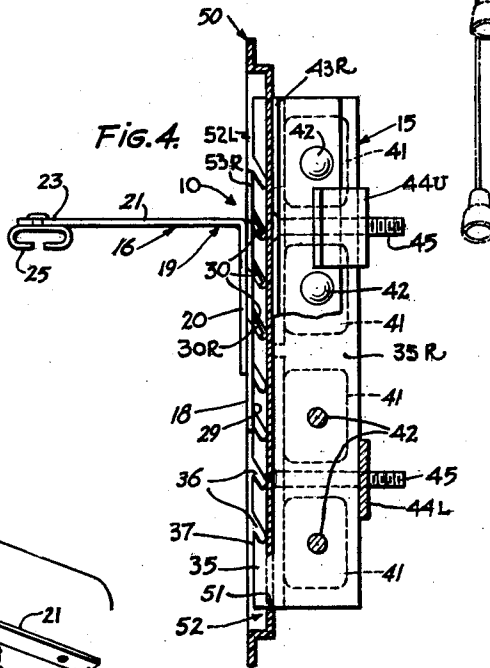
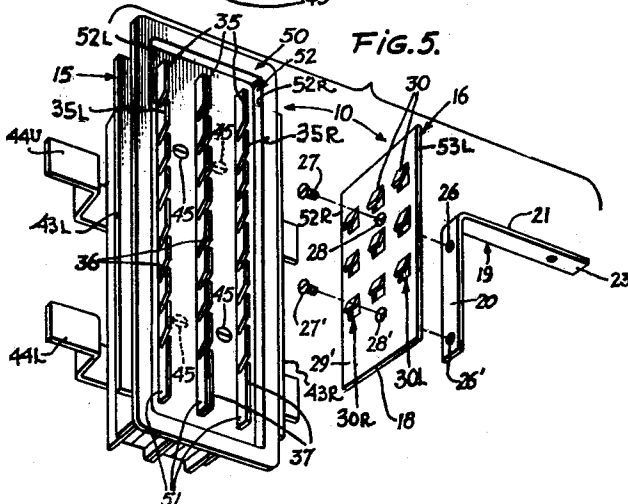


FIG. 5.



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TORQUE RESISTING DETACHABLE BRACKET AND HANGER

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This invention relates to hangers and more particularly to a detachable hanger for brackets and the like.

The invention herein is most suitable for hanger brackets which may be subjected to variable loads and sudden stresses from time to time. In its simplest form the present invention is best suited for releasably attaching to wall structures the hanger brackets for supporting traverse rods or pull curtains.

One of the principal objects of the present invention is to provide interlocking members one of which is permanently secured to a wall or wall structure and the other interlockingly but releasably connectable to the first for supporting a bracket therefrom.

It is another object of this invention to provide a simple yet effective arrangement for releasably securing a bracket member to a wall in such a manner as to resist the torque or leverage afforded by any downward pull or thrust upon the extended end of such bracket.

It is yet another object to provide a stationary member having two or more serrated bars protruding therefrom to receive tongue or tabs on a removable member and in which the serrations and tabs are so disposed as to set up a maximum resistance to the leverage created by loads applied to the extended end of the bracket portion of the removable member.

In this connection the present invention contemplates the provision of a torque resisting interlocking pair of detachable stationary and removable hanger members.

These and other objects and advantages of the invention, will be apparent from the following description and the accompanying drawings, wherein:

FIG. 1 is a perspective view of an upper corner of a window opening showing my new hanger associated therewith.

FIG. 2 is a front view of my hanger unit.

FIG. 3 is a cross section through FIG. 2 as seen from line 3-3 thereof.

FIG. 4 is a side elevational view of FIG. 2 with parts thereof broken away and in section for purposes of illustration.

FIG. 5 is a perspective view of my hanger with parts disassembled.

The present invention designated 10 in the drawing consists of two main parts, namely, one part 15 adapted to be secured to a wall W and the other part 16 adapted to be releasably or detachably secured to the first part 15. Accordingly part 15 is considered a stationary member adapted to be built into or applied permanently to a wall whereas part 16 which is so constituted as to become interlocked with a portion of part 15, is considered a removable part.

The removable part 16 consists of a plate 18 having an angle bracket 19 including a mounting leg 20 secured thereto and another leg 21 extending outwardly from the front face 22 of plate 18. The free end 23 of bracket arm or leg 21 is thus disposed outwardly from the plate 18 to receive and support any kind of a load.

As best illustrated in FIG. 1 the bracket 19 is suited to support one end of a traverse rod 25. Such traverse rods are well known and form no part of the invention but do have a bearing on the same because of the pull cords P by which periodic downward loads are applied to the free end 23 of the extended arm 21 of the bracket 19. These downward thrusts on pull cords plus the leverage afforded by the length of the bracket arm 21

more often than not, cause attaching screws through the mounting leg 20 of brackets to be pulled out of plaster walls or wooden trim to which such hanger brackets are normally secured.

In accordance with the present invention the mounting leg 20 has tapped bores 26-26' adapted to receive the threaded shanks of countersunk head screws 27-27' the heads of which fit flush into countersinking 28-28' at the back face 29 of the plate 18. If desired the mounting leg 20 can be spot welded to the front face 22 of plate 18 but for standard procedure the boring, countersinking and tapping operations are thought to be more uniform and suitable for packaging.

The plate 18 has a plurality of tongues 30 which extend rearwardly and downwardly from the back face 29 of plate 18. These rearwardly protruding, downwardly extending tongues 30 are punched out from the front 21 toward the back face 29 and may be spaced in any desired pattern conducive to securement of the plate 18 to the stationary part 15 of the hanger 10.

The stationary part 15 of hanger 10 includes two or more serrated bars 35 aligned and registerable with the rows of tongues 30 on the removable member 16. The serrations on the bars 35 are a plurality of slots 36 formed on the protruding edges 37 of the bars 35 adapted to receive the tongues 30. The slots 36 are disposed at a downwardly tending backwardly extending angle relative to the front edges 37 of the bars 35, such angle conforming to the angular disposition of the tongues 30 so that the plate 18 of the releasable member 16 will rest flush against the edges 37 of bars 35 when the tongues 30 are disposed in the slots 36.

The several bars 35 are secured to a mounting means 40 adapted to be secured to a wall or the like. In the present disclosure the several bars 35 are shown as having separators 41 between them so that the bars 35 are spaced from each other horizontally. Thus there are at least two outer bars 35L and 35R spaced horizontally from each other to receive the left and right tongues 30L and 30R, respectively, of the plate 18.

The several bars and their separators 41 are secured together by rivets 42 along with side flanges 43L and 43R. Thus the several bars 35, the separators and side flanges form a unit adapted to be set into an opening "O" in the wall board or plaster layer of the wall W. The flanges 43L and 43R are adapted to bear against the front face of a wall board panel or plaster layer of the wall W while a pair of vertically spaced upper and lower toggle bars 44U and 44L, respectively, are disposed to span the gap of the opening O through which the bars extend.

The toggle bars 44U and 44L are drawn up tight against the back face of the wall W by screws 45 which extend through the separators 41 from the front or exposed face of the assembly.

In the present disclosure I have shown the stationary member 15 as provided with a front face escutcheon plate 50 for covering the rough edges of the opening O in the wall and for providing a finished, pleasing surface over the spacers 41 and flanges 43L-43R heretofore mentioned. The plate 50 has a plurality of slots 51 formed therein to allow the several bars 35 to extend therethrough at least as far as the depth of the serrations 36 formed therein so that the tongues 30 can become fully seated in such serrations.

In addition to the foregoing the escutcheon plate 50 is recessed as at 52 to receive the plate 18 of the removable member 16. Therefore, the recess 52 is of a width horizontally just sufficient to clear and receive the horizontal width of the plate 18. Since there are more sets of serrations vertically than the number of sets of tongues 30 the recess 52 is of a greater dimension vertically than the

plate 18. In this manner the removable member 16 with its hanger bracket 19 can be adjusted up and down to suit. However, the entire plate 18 has its side edges 53L and 53R confined between the walls 52L and 52R of the recess 52 so that the removable member cannot tip side-wise or become misaligned with respect to the stationary member 15.

With a pair of units 10 mounted in a wall W, one on each side of a window opening as illustrated in FIG. 1, the brackets 19 can support a rod such as the traverse rod 25 shown. Since the plates 18 are securely held by means of their tongues 30 fitting into the slanted slots 36 in the bars 35 the brackets 19 with rods attached are safely supported adjacent the window opening. Moreover, since the plates 18 are limited against sidewise movement and/or rocking relative to the stationary member 15 there is no danger of the brackets 19 slipping out of interlocking relation with the stationary member mounted in the wall. Thus it will be appreciated that even though there be excessive pulling of the pull cords P the brackets 19 will remain in place as will the stationary member 16.

Incidental to the above arrangement the present invention is conducive to the use of magnetism as a holding agent or force between the stationary and movable members 15 and 16. In other words, with the present arrangement the separators 41 may be cobalt magnets which develop eddy currents in the region between the several bars 35 and into the latter. With the plate 18 being made of magnetically attractable material it will be appreciated that the plate 18 will be attracted toward and against the fore edges 37 of the bars 35.

Having thus described my hanger bracket arrangement in specific detail it will be appreciated by those skilled in the art that the same may be susceptible to variations, modifications and/or alterations without departing from the spirit of my invention. I therefore desire to avail myself of all variations, modifications and/or alterations as fairly come within the purview of the appended claims.

What I claim as new and desire to protect by Letters Patent is:

1. In combination a detachable hanger and a bracket adapted to have periodic downward pull loads applied to their extreme ends, a stationary member including two or more bars having serrated leading edges, means for securing such bars to a wall with their leading edges protruding therefrom, and a removable member including a magnetically attractable plate having a bracket extending from its fore face, and a plurality of tongues protruding from its back face in alignment with the protruding serrated leading edges of said bars for interlocking relation therewith, and magnetic separators between said bars

for magnetically attracting said plate toward the leading edges of said bars.

2. In combination a detachable hanger for a bracket adapted to support pull cord rods comprising a stationary member including at least two magnetic bars with serrated leading edges protruding therefrom, means for securing such bars to a wall, and a removable member including a magnetically attractable plate having a bracket extending from its fore face, and a plurality of tongues protruding from its back face in alignment with the protruding serrated leading edges of said bars for interlocking relation therewith.

3. In combination a torque resisting hanger and a releasably attachable bracket for mounting pull cord rods on a wall comprising a stationary member including a plurality of vertically extending horizontally spaced bars each having a serrated leading edge, magnetic spacers between said bars, means securing said stationary member to said wall with the serrated leading edges of said bars exposed in a plane substantially parallel to the surface of said wall, and a removable member comprising a magnetically attractable plate having a bracket extending therefrom, and a plurality of tongues on the after face of said plate interlockingly receivable in the serrated leading edges of said bars.

4. In combination a hanger and a releasably attachable bracket for mounting pull cord rods on a wall comprising a stationary member including a plurality of vertically extending horizontally spaced bars each having a serrated leading edge, means for securing said stationary member in an opening formed in said wall with the leading edges of said bars exposed substantially in the same plane as the surface of said wall, an escutcheon plate for covering the opening in said wall and having a slotted central recess through which the serrated leading edges of said bars extend, and a removable member comprising a mounting plate having said bracket extending therefrom, a plurality of tongues on the after face of said plate interlockingly receivable in the serrated leading edges of said bars, and said plate fitting within the central recess of said escutcheon plate for maintaining the tongues on the after face of said mounting plate in vertical alignment with the serrated leading edges of said bars.

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