This invention relates to supporting devices, and more particularly, to a one-piece bracket adapted to be mounted on an upright peg board or plate for supporting tools and the like.

The bracket contemplated by the present invention is particularly, though not exclusively, designed for retaining tools in a secure fashion, and for permitting ready access to the tools when desired. Thus, the bracket must not only provide a strong structural support for the articles which it supports while preventing unauthorized removal thereof, but it must also facilitate quick mounting and removal of the articles from the bracket.

It is, therefore, an object of the present invention to provide an improved one-piece bracket which is adapted to retain a plurality of tools and the like, and prevent removal therefrom except by a lifting action.

Another object in accordance with the present invention is the provision of a one-piece bracket having an improved structural arrangement for strengthening the article supporting arms of the bracket. Brackets of the aforementioned type are also preferably assembled to an apertured peg board or plate so that they can be easily shifted from one location to another. As a result, the brackets must be quickly assembled to and held in a relatively permanent fashion to the peg board while permitting easy removal thereof.

Thus, it is another object of the present invention to provide an improved one-piece bracket which can be quickly and easily assembled to a supporting plate, and thereafter held in detachably secure relationship thereto.

Still another object of the present invention is the provision of a bracket having an improved fastening means for detachably securing the bracket to an upright apertured supporting plate in order to accommodate changes in the position and location thereof.

While improved structural support of and fastening of the bracket are important aspects of the present invention, consideration has also been given to the cost of manufacture and prolonged usage for a bracket of the aforementioned type.

In view of this, it is another object of the present invention to provide a plastic bracket which can be easily and economically manufactured as an integral one-piece unit by present molding techniques, and which is substantially non-corrosive and non-chipping in its use.

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, partly in section, of a bracket assembly incorporating features of the present invention;

FIG. 2 is a front elevational view of the bracket illustrated in FIG. 1;

FIG. 3 is a top plan view of the bracket, and showing the novel fastening means for the bracket as associated with a supporting plate;

FIG. 4 is a side elevational view of the bracket shown in FIGS. 1-3;

FIG. 5 is a top plan view of a modified form of bracket incorporating features of the present invention as mounted to a supporting plate;

FIG. 6 is a side elevational view of the bracket shown in FIG. 5;

FIG. 7 is a front elevational view of the bracket illustrated in FIGS. 5-6.

Referring now more specifically to the drawings wherein like parts are designated by the same numerals throughout the various figures, a bracket assembly 10 is shown in FIG. 1. The bracket assembly comprises an apertured supporting plate 20, which is usually mounted in an upright position, and a one-piece bracket 30 which is mounted thereto. Since the apertured supporting plate 20 is designed to provide support for the bracket 30, it must be made of a relatively stiff material to accommodate the bracket and the articles supported thereby.

The bracket itself is preferably made of a tough, durable, and resilient plastic material so that it can be easily and economically manufactured by present molding techniques, while providing sufficient strength and enabling prolonged usage of the bracket. Also, as will readily appear hereinafter, the resiliency of the plastic material aids in detachably securing the bracket to an apertured supporting plate.

The bracket 30 shown in FIGS. 1-4 generally comprises a substantially elongated body having a plurality of article supporting means 32 projecting in a substantially horizontal direction when the bracket is mounted to an upright supporting plate. A pair of such article supporting means cooperate together to receive and restrict downward movement of articles such as tools mounted therewithin. From an inspection of FIGS. 1-4, it will be observed that there are three pairs of article supporting means for receiving articles at three distinct locations. At the end of each of the article supporting members 32, there is provided an upstanding knob 34 which prevents unauthorized removal of the articles from the free extremities of the article supporting members. It is thus necessary to lift articles over the upstanding knobs 34 in order to remove them from the brackets.

In order to provide support for each of the article supporting members 32, the bracket is further provided with first and second brace means 36, 38 respectively for each article supporting member to provide horizontal support for the article supporting members throughout their length. The first brace means 36 essentially has a plate-like shape, and is located in the vicinity of a cooperating pair of article supporting members as will be evident from an inspection of FIG. 2. Extending substantially normal to and carried by the first brace means 36 is a second brace means 38 which underlies each of the article supporting members 32 for a portion of their length so as to retain the article supporting members in a substantially horizontal plane. This unique arrangement of parts enables the second brace means 38 to be supported by the first brace means 36 and the apertured supporting plate 20 while providing underlying support for the article supporting members. It is also to be noted that the second brace means derives substantial support from the first brace means on each side thereof so as to insure support for and prevent lateral movement of the article supporting members.

Reference is now made to FIG. 3 for the novel bracket fastening means contemplated by the present invention. Extending in a direction generally opposite to the article supporting members are a plurality of lug portions 40 which are adapted to be mounted within apertures 22 of the supporting plate 20. It will be noted that each article supporting member is associated with at least one of the lug portions 40 so as to be individually supported thereby. The lug portions thus provide support for each article supporting member in addition to the underlying support given by the first and second brace means 36, 38.

The outermost lug portions are angularly offset from one another so as to permit deflection thereof when
inserted within apertures 22 of the plate 20. These outermost lug portions are shown in the drawings as lying within the same horizontal plane, but being offset from planes which lie parallel to the projecting article supporting members 32. If desired, these lug portions may be angularly offset from a horizontal plane, or other suitable arrangements may be provided which will permit deflection of the outermost lug portions when inserted within the aperture 22.

The free extremities of the outermost lug portions are tapered to facilitate entry within the aperture 22, and for urging deflection thereof as they are inserted within the apertures. Spaced inwardly from the tapered end of the lug portions is a notch 44 which provides a shoulder means 46 for engaging the rear face of the peg board or panel 20 to prevent unauthorized removal of the bracket. The application of the bracket to the panel is generally accomplished by lining up holes 22 of the upright apertured supporting plate 20 with the lug portions 40, and then forcing the lug portions within the apertures. The apertures of the peg board or panel which cooperate with the outermost lug portions shown in the drawings must be. spacedly held to an aperture supporting plate in a novel such lug portions in order that they will be deflected upon being inserted within such apertures. When the lug portions are inserted completely within the peg board or panel 20, the outermost lug portions will snap back to their initial location and permit the shoulder means 46 to engage the rear face of the panel. Separation of the bracket from the panel may be easily accomplished merely by exerting a force on the article supporting members 32 so as to cam the shoulders 46 of the outermost lug portions against an edge of the associated apertures. Additional force will cause the shoulders to be positioned within the apertures for subsequent removal of the bracket.

In FIGS. 5-7, a modified form of the bracket is shown, and is designated by the numeral 38a. The suffix "a" has been employed in these figures to designate like parts of the FIGS. 1-4 embodiment. Substantially the only difference between the FIGS. 1-4, and the FIGS. 5-7 embodiment is the design of the article supporting members and the support which is given thereto.

The article supporting members in this embodiment are designated by the numeral 32a, and generally comprise an annular ring in which the articles are mounted so as to prevent lateral and downward movement thereof. Also, instead of using a pair of second brace means for a cooperating pair of article supporting members 32, there is provided a single second brace means 38a for each article supporting member which will give the necessary support to each of the article supporting members. Thus, when articles are mounted within the annular article supporting members 32a, they will be restrained from lateral and downward movement and supported in much the same way as articles associated with the FIGS. 1-4 embodiment.

From the foregoing, it will be appreciated that the bracket of the present invention provides a strong structural arrangement for supporting articles while being re-usable and adapted to an apertured supporting plate in a novel and unique manner. The tough, durable and resilient, yet easily moldable material from which the bracket is made enables the bracket to be manufactured in a quick and efficient manner while providing an extremely long life.

The configuration of the bracket is, of course, not limited to that shown in the drawings, and may have more or less locations for mounting articles to the bracket than that shown in the drawings. The relative spacing of the article supporting members from each other or the size of the annular supporting rings will be dictated by the tools which are adapted to be mounted therewithin so as to restrain the articles from any downward or lateral movement. The outermost lug portions may be angularly offset with respect to one another in any suitable manner which permits deflection of such lug portions when inserted within apertures of the supporting plate. It is also possible to use such outermost lug members as a means for restricting movement of the bracket from a supporting panel having a width greater than the length of the lug portions. In such a case, the outermost lug portions will yieldingly engage the peripheral wall of the apertures instead of the rear face of the panel to hold the bracket to the panel. While the preferred embodiments of the present invention have been shown 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. A one-piece bracket made of plastic material adapted to be mounted on a complementary upright apertured supporting plate, comprising an elongated body having a plurality of pairs of article supporting members projecting horizontally therefrom each being U-shaped in cross section and having an upwardly projecting member thereon, each pair cooperating with each other to restrain articles from lateral and downward movement thereof, each pair of article supporting members having first and second brace means, said first brace means adapted to rest against said apertured supporting plate, said second brace means having first and second brace means and second brace means carried by said first brace means and extending normal thereto in an underlying relationship to said article supporting members to upheld and support thereof, and means for securing said bracket to said supporting plate including a plurality of spaced lug portions projecting from said elongated body in a direction generally opposed to said article supporting members for reception within a plurality of apertures of said apertured supporting plate, each pair of said article supporting members positioned in cooperating relationship with at least one of said lug portions so as to be individually supported thereby.

2. A one-piece bracket made of a tough, resilient and durable plastic material adapted to be mounted on an upright apertured supporting plate, comprising an elongated body having a plurality of article supporting members projecting horizontally therefrom being U-shaped in section, each article supporting member consisting of an annular member of predetermined size to prevent lateral and downward movement of articles mounted therein, means for providing horizontal support for each article supporting member and including first and second brace means, said first brace means adapted to rest against said apertured supporting plate, said second brace means extending normal to said first brace means and underlying said article supporting members for a portion of their length to provide support thereto, and means for securing said bracket to said apertured supporting plate including a plurality of spaced lug portions adapted to be received within corresponding apertures formed in said apertured supporting plate, each of said article supporting members being positioned in cooperative relationship with at least one of said lug portions so as to be individually supported thereby, the outermost lug portions being adapted to be individually supported thereby, the outermost lug portions being adapted to cause deflection of said outermost lug portions when inserted therein so as to detachably retain said bracket to said apertured supporting plate, said outermost lug portions being adapted to be inserted into such apertures as to facilitate entry within said apertures and provide a shoulder means to provide a shoulder means therebetweent, said shoulder means adapted to engage the rear face of the complementary apertured supporting plate to prevent removal of said bracket when mounted thereto.
tary upright apertured supporting plate, comprising an 
elongated body member having a plurality of pairs of 
article supporting members rejects horizontally there-
from each being U-shaped in cross section and having an 
upstanding knob at their free extremities, the article sup-
porting members in each pair cooperating with each other 
to restrain articles from lateral and downward movement 
when mounted therebetween, means providing horizontal 
support for each article supporting member and including 
first and second brace means, said first brace means com-
prising a plate-like support adapted to rest against said 
apertured supporting plate, said second brace means in-
cluding a pair of arms each of which extend normal to 
and underlie one of the article supporting members in 
each pair at an inner extremity thereof to provide support 
to while preventing lateral deflection of said members, 
each arm traversing the first brace means for the entire 
height thereof, and means for securing bracket to 
said apertured supporting plate including a plurality of 
spaced lug portions adapted to be received within a plural-
ity of apertures formed in said apertured supporting plate, 
each pair of said article supporting members being 
positioned in cooperative relationship with at least one 
of said lug portions so as to be individually supported 
thereby, the outermost lug portions at opposite ends of 
said bracket being angularly offset from one another and 
received within apertures positioned from each other to 
cause deflection of said outermost lug portions when in-
serted therein so as to detachably retain said bracket to 
said apertured supporting plate, said outermost lug por-
tions also being provided with a tapered entering end 
portion to facilitate entry within said apertures and a 
notch spaced inwardly from said entering end portion 
to provide a shoulder means therebetween, said shoulder 
means adapted to engage the rear face of the complemen-
tary apertured supporting plate to restrict separation of 
said bracket when mounted thereto.

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