Jan. 14, 1969 F. E. WOOD 3,421,632

ROD-HOLDING RACK

Filed Aug. 18, 1966

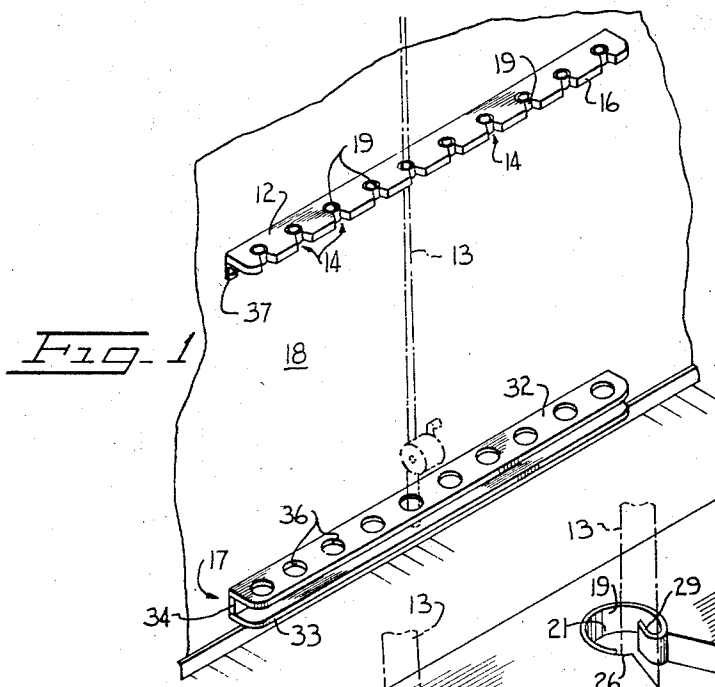


Fig. 1

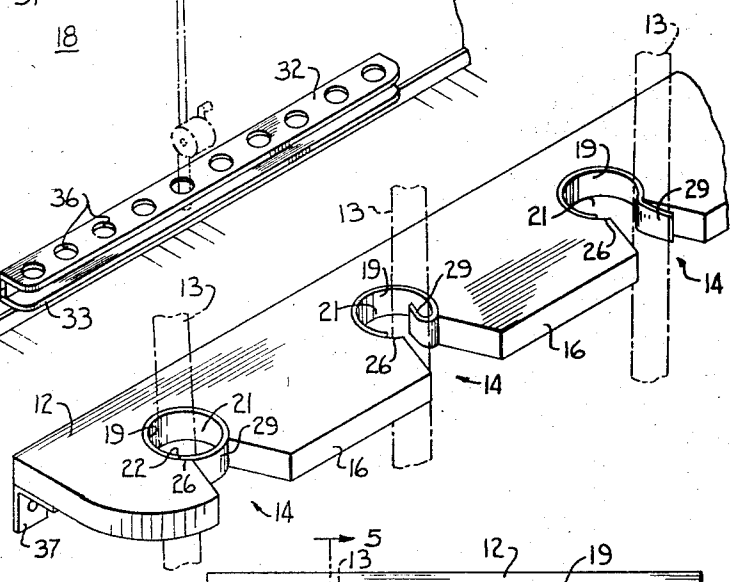


Fig. 2

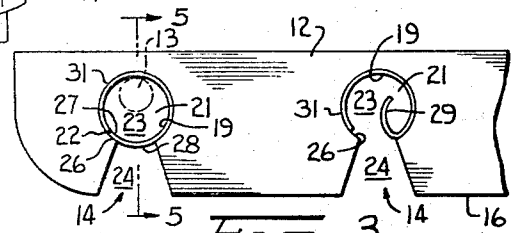


Fig. 3

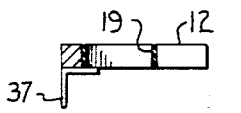


Fig. 5

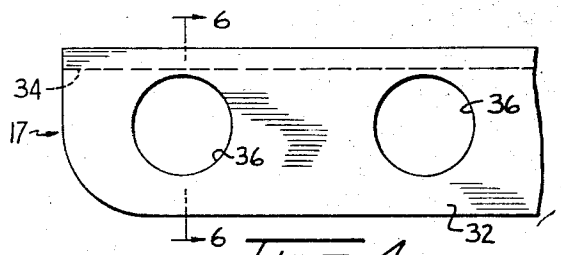


Fig. 4

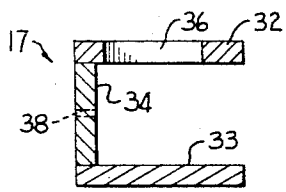


Fig. 6

INVENTOR.
FRANCIS E. WOOD
BY
Gardner + Zimmerman
ATTORNEYS

United States Patent Office 3,421,632
Patented Jan. 14, 1969

3,421,632

ROD-HOLDING RACK

Francis E. Wood, 2960 Montana St.,
Oakland, Calif. 94602

Filed Aug. 18, 1966, Ser. No. 573,386
U.S. Cl. 211—60 8 Claims
Int. Cl. A47f 7/00

ABSTRACT OF THE DISCLOSURE

A rack for holding rods in an upright position is described which is capable of reliably holding rods of different diameters in position. The rack includes a lower U-shaped horizontal member having an apertured slat member through which one end of the rods is to be inserted for support on a solid member beneath the aperture member. Spaced above the U-shaped member is a slat member having notches extending into one edge for holding the upper portion of the rod members. Each notch has a restricted opening across which a tab of flexible material normally extends. The tab is secured within the notch on one side of the opening and has an unsecured free end normally in overlapping relationship to the inner surface of a shoulder at the outer side of the opening. The shoulder acts to prevent the free end of the tab from moving outwardly relative to the notch and thereby maintains the opening closed for confinement of a rod within the notch. However, upon a rod being forceably inserted through the opening, the tab resiliently yields from the opening to permit insertion or withdrawal of a rod.

The present invention relates to racks for storing rod members and more particularly to a rack which can store rod members of different sizes.

Racks for holding rod members often are employed for displaying the rod members or for storing them ready for use. Such racks frequently are secured to walls to hold the rod members, such as fishing rods or cues, vertically against the wall. Generally, such racks are able to hold rod members of only limited sizes. For example, racks commonly employed in storing cues have spaced apart resilient fingers between which the rod members are wedged and held. Because of the spacing between the fingers, rod members having a diameter less than the finger spacing can fall from the rack. Besides the inconvenience of having to replace the fallen rods, rods which fall from the rack may be damaged. Hence, in order to properly store rod members of different sizes, it has been necessary either to use different racks having different finger spacings, or to use a single rack whose fingers are spaced at different intervals.

Considerable advantage is therefore to be gained by the provision of a single multi-purpose rack of uniform construction which is characterized by being able to store rod members of any size without the likelihood that rods of certain sizes will occasionally fall from the rack. Additional advantages will be realized where the rack of the present invention is constructed so that rod members of all sizes only forcibly can be placed on and removed from the rack.

The present invention provides an improved rack for storing rod members as characterized above. More particularly, the present invention is a multi-purpose rack including at least two spaced apart members. One of the members is provided with notches along one of its edges for storing rod members. For confining the rod members in the notches, each notch has a resilient band, for example, of rubber, placed therein and secured to the portion of the member defining the notches. Each band is transversely cut to allow rod members to pass therethrough to be inserted and withdrawn from the enclosure defined by the resilient band. In its most preferred embodiment, the resilient band is cut without removing any material, i.e., sliced. In this way, any rod member, no matter how small its diameter, can be placed within the enclosures, and the resilient bands will constrain them within the enclosures. To further aid in constraining the rod members within the enclosures, each band is sliced at a location adjacent the portion of the member defining the notch proximate the notch opening. Rod members are inserted and withdrawn from the enclosures by leaving the free end portion of each band between the slice and notch unsecured. The unsecured portion of each band forms a flexiblie tab which normally extends across the notch opening to close the same, but gives way to a rod being forcibly inserted and withdrawn from each notch enclosure to allow the rod members to pass through each band.

In use the rack generally is mounted to a wall with the notched member spaced above a second member. The second member vertically supports one end of the rod members being stored by the multi-purpose rack. The notched member serves to hold the opposite end of each rod member against the wall. Because of the ability of the rack to properly hold rod members of any size, the rack of the present invention can be used to store various types of rod members, for example, fishing rods, cues, rifles as well as other devices having rod shaped members. Hence, the rack of the present invention can be employed for a variety of purposes, most notably for display, temporary storage and permanent storage purposes. Furthermore, a single rack constructed in accordance with the present invention can be used to store simultaneously different kinds of rod members, large and small.

Accordingly, it is an object of the present invention to provide a multi-purpose rack for storing rod members of any size.

More particularly, it is an object of the present invention to provide a multi-purpose rack for storing different size rod members without the likelihood that rods of certain sizes will occasionally fall from the rack.

Another object of the present invention is to provide a multi-purpose rack wherein rod members of all sizes only forcibly can be placed on and removed from the rack.

It is still another object of the present invention to provide a multi-purpose rack of uniform construction which simultaneously can store different size rod members.

The invention possesses other objects and features of advantage, some of which, with the foregoing will be set forth in the following description of the preferred form of the invention which is illustrated in the drawing accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by the said drawing and description may be adopted within the scope of the invention as set forth in the claims.

FIGURE 1 is a perspective view of one embodiment of the multi-purpose rack of the present invention.

FIGURE 2 is a partial perspective view of the rod holding member of the rack of FIGURE 1.

FIGURE 3 is a plan view of the rod holding member of FIGURE 2.

FIGURE 4 is a plan view of the rod supporting member of the rack of FIGURE 1.

FIGURE 5 is a cross sectional view of FIGURE 3 taken along line 5—5.

FIGURE 6 is a cross sectional view of FIGURE 4 taken along line 6—6.

Referring to FIGURE 1, the multi-purpose rack **11** of the present invention includes a first member **12** for holding rod members, such as a fishing rod **13**. Member **12** defines a plurality of notches **14** along an edge **16** thereof within which rod members **13** are inserted and held. A second member **17** is mounted spaced from the member **12** and serves to give additional support to the rod members **13** placed on rack **11**. The distance between the members **12** and **17** is adjusted in accordance with the lengths of the rod members **13** to be stored on the rack **11**. In most uses of the multi-purpose rack **11**, the members **12** and **17** are arranged horizontally to hold the rod members **13** vertically against a wall **18**.

The rod members **13** are held within the notches **14** by a resilient rubber band **19** secured within each notch **14** to the portion of the horizontal member defining each notch **14**. As shown in FIGURES 2 and 3, each band **19** defines an enclosure **21** for receiving the rod members **13** to be stored on rack **11**. In order to insert and withdraw rod members from the enclosures **21**, each band **19** is transversely cut at **22**, preferably sliced so that any rod member **13** which can fit into the enclosure **21** will be firmly held by the rack **11**.

To insure that the rod members **13** are securely held by rack **11**, one embodiment of the rack of the present invention is constructed so that each notch **14** defined by horizontal member **12** has an inner region **23** of larger width for holding the rods which are separated from edge **16** by an outer region **24** having a smaller or restricted width portion to define the notch opening. Horizontal member **12** defines a shoulder **26** interiorly of the notch opening and extending from the smaller width portion of the outer region **24** to the larger width of the inner region **24**. The resilient bands **19** are secured to the portion of the horizontal member **12** defining the inner region **23**. Each band **19** is oriented so that its transverse slice **22** is positioned adjacent the inner surface of shoulder **26**. The segment **27** of each band **19** adjacent shoulder **26** between slice **22** and the notch opening or smaller width portion of the outer region **24** is kept unsecured. The unsecured segment **27** of band **19** forms with the segment **28** of band **19** extending across the smaller width portion of the outer region **24** (see left hand notch of FIGURE 3) a flexible tab **29** which normally engages the inner surface of shoulder **26** to confine a rod within the inner region, but which (see right hand notch of FIGURE 3) gives way to a rod member **13** being inserted and withdrawn from each enclosure **21**.

With the rack **11** constructed to have the slice **22** of band **19** lying adjacent the shoulder **26**, the rod members **13** must be forcibly inserted and withdrawn from the rack **11**. Hence, with such a construction, the liklihood that the rod members **13** will occasionally fall from the rack **11** will be remote.

To facilitate inserting and withdrawing the rod members **13** from the enclosure **21**, the horizontal member **12** is constructed to define saddle shaped notches **14** having adjoining trapezoidal outer region **24** and circular segment inner region **23**. Each notch **14** is formed so that the longer of the parallel sides of the trapezoidal region **24** is at the edge **16** of the horizontal member **12**. The trapezoidal region extends from the edge **16** to join at its smaller parallel side the circular segment region **23**. The circular segment region **23** of each notch **14** is a circular segment greater than 180 degrees to define an arcuate shoulder **26** sloping towards the joint formed by the adjoining trapezoidal and circular segment regions. Each enclosure **21** is defined by circular resilient bands **19** secured to the portion **31** of horizontal member **12** defining the circular segment region **23**. Because the arcuate shoulder **26** slopes towards the trapezoidal region **24**, the rod members **13** can be inserted and withdrawn from the enclosure **21** more easily.

With reference to FIGURE 2, the manner in which the rod members are inserted, withdrawn and held within enclosure **21** is shown. More particularly, the left hand notch **14** illustrates the rod member **13** positioned within the enclosure **21**. The center notch **14** shows the manner in which the rod members **13** are inserted into the enclosure **21**. As illustrated, the rod members being inserted within the enclosure **21** force the flexible tab **29** inwardly away from the shoulder **26** to allow the rod members to pass from the trapezoidal region **24** into the circular enclosure **21**. The right hand notch **14** shows how the rod members **13** are withdrawn from the enclosure **21**. As portrayed, the rod members being withdrawn froce the flexible tab **29** outwardly to allow them to pass from the circular enclosure **21** to the trapezoidal region **24**.

The foregoing description has been concerned with the detailed manner in which the rack **11** holds one end of the rod members to be stored thereon. Considering now horizontal member **17**, attention is directed to FIGURES 1, 4 and 6. To fix in position the rod members being stored, horizontal member **17** is a U-shaped member having an apertured upper member **32** and a solid lower member **33** interconnected by a web member **34**. The U-shaped horizontal member **17** is mounted so that the apertured member **32** faces the notched horizontal member **12**. The apertures **36** defined by U-shaped member **17** preferably are in vertical registry with the notches **14** defined by member **12** so that each aperture **36** receives the end of the rod member **13** held in the registered notch **14**. Solid member **33** receives the ends of the rod members **13** thereon and renders vertical support to the rod members **13**.

By employing the aforedescribed U-shaped horizontal member **17**, further insurance against rods occasionally falling from the rack **11** is obtained. As noted hereinabove, the solid member **33** provides vertical support to the stored rod members **13**. The apertured member **32** prevents the stored rod members **13** from slipping sideways along or off the solid member **33** whereby the rod members **13** can vertically slip out of enclosure **21**. It should be noted that the side slipping could be prevented without using the aperture member **32** by providing recesses in solid member **33**.

In its simplest form, the horizontal members of rack **11** are separately mounted to the wall **18**. With reference to FIGURES 5 and 6, the rack **11** can be mounted to wall **18** by securing L-shaped brackets **37** to the notched horizontal member **12** at spaced locations, and fastening the brackets to wall **18**. The U-shaped horizontal member **17** can be fastened to the wall **18** by screws (not shown) passed through screw holes **38** provided at spaced locations along web member **34**. Of course other techniques can be employed to secure the rack **11** to the wall **18**, for example, the horizontal members could be placed in a frame which in turn could be secured to the wall **18**.

In one rack constructed in accordance with the present invention for storing fishing rods, the horizontal members **12**, **32**, **33** and **34** were slats 2 inches wide and $\frac{3}{8}$ inch thick, the apertures **36** were 1 inch in diameter, the large parallel side of the trapezoidal region **24** of notch **14** was $\frac{7}{8}$ inch, the small parallel side $\frac{7}{16}$ inch, the depth of region **24** was $\frac{3}{4}$ inch, the distance from edge **16** to the center of curvature of circular segment region **23** was $1\frac{1}{8}$ inches, the radius of curvature of the circular segment region **23** was $\frac{15}{32}$ inch, the spacing between members **32** and **33** was $1\frac{1}{2}$ inches, the spacing between horizontal members **12** and **17** was 48 inches, and rubber resilient member was $\frac{3}{16}$ inch thick.

While the multi-purpose rack of the present invention has been described in detail with reference to a single embodiment, it is apparent that numerous modification are possible within the scope of the invention. For example, instead of using a band of resilient material in each notch **14**, a length of resilient material placed across

each notch opening could be employed, the length of resilient material arranged to function in the manner of resilient tab **29**. Also slice **22** could be positioned in the notch opening. Hence, the present invention is not intended to be limited except by the terms of the following claims.

What is claimed is:

1. A rack for holding rod members comprising a first member for supporting one end of a rod member, a second member mounted in spaced relationship to said first member and having at least one notch at an edge thereof adapted to receive and support a rod member, said notch having a restricted width portion defining an opening into an enlarged rod holding portion thereof, and a tab of flexible material extending across said restricted portion to normally close said opening, said tab being secured within said notch on one side of said restricted width portion and having an unsecured free end overlapping the inner surface of a shoulder defined at the other side of said restricted width portion, said shoulder normally blocking movement of the free end of said tab outwardly of said notch to thereby maintain said tab in closing relation across said opening to confine a rod member within the rod holding portion of said notch, and said tab yielding resiliently to a forceable insertion of a rod member through said opening to permit intentional insertion or wthdrawal of such rod member.

2. The rack according to claim **1** further including a third member mounted closely spaced from said first member between said first and second members, said third member defining an aperture in vertical registry with each notch to receive therethrough the end of said rod members supported on said first member.

3. The rack according to claim **1** wherein each notch is saddle shaped having an arcuate portion defined by said second member distal its notched edge to define said enlarged rod holding portion, and said resilient member is a band secured to said second member along its portion defining the arcuate portion of said saddle shaped notch and is transversely sliced to provide said unsecured free end allowing rod members to pass therethrough.

4. The rack according to claim **3** wherein each saddle shaped notch defined by said second member has a trapezoidal portion extending inwardly from said notched edge with its base at said notched edge and adjoining a circular segment portion greater than 180 degrees which provides said rod holding portion.

5. The rack according to claim **4** wherein said resilient band is circular and is secured to said member along its portion defining said circular segment portion of said notch, said resilient band is sliced at a location adjacent the portion of said member defining said circular segment portion proximate the joint formed by said adjoining circular segment and trapezoidal portion of said notch.

6. The rack according to claim **5** wherein said first and third members are joined by a web member to define therewith an integral U-shaped channel member.

7. The rack according to claim **6** wherein said first member is a slat, said second member is a slat defining a plurality of said saddle shaped notches along one of its edges, and said third member is a slat defining a plurality of apertures in vertical registry with said saddle shaped notches.

8. The rack according to claim **7** further including a first means for horizontally mounting said second member to a wall with said notched edge facing away from said wall, and a second means for horizontally mounting said U-shaped channel member to said wall.

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CHANCELLOR E. HARRIS, *Primary Examiner.*

FRANK DOMOTOR, *Assistant Examiner.*

U.S. Cl. X.R.

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