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COMPOSITE TIE RACK

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Fig. 4

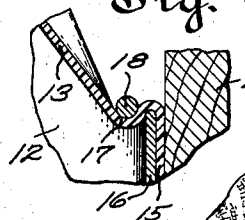


Fig. 1

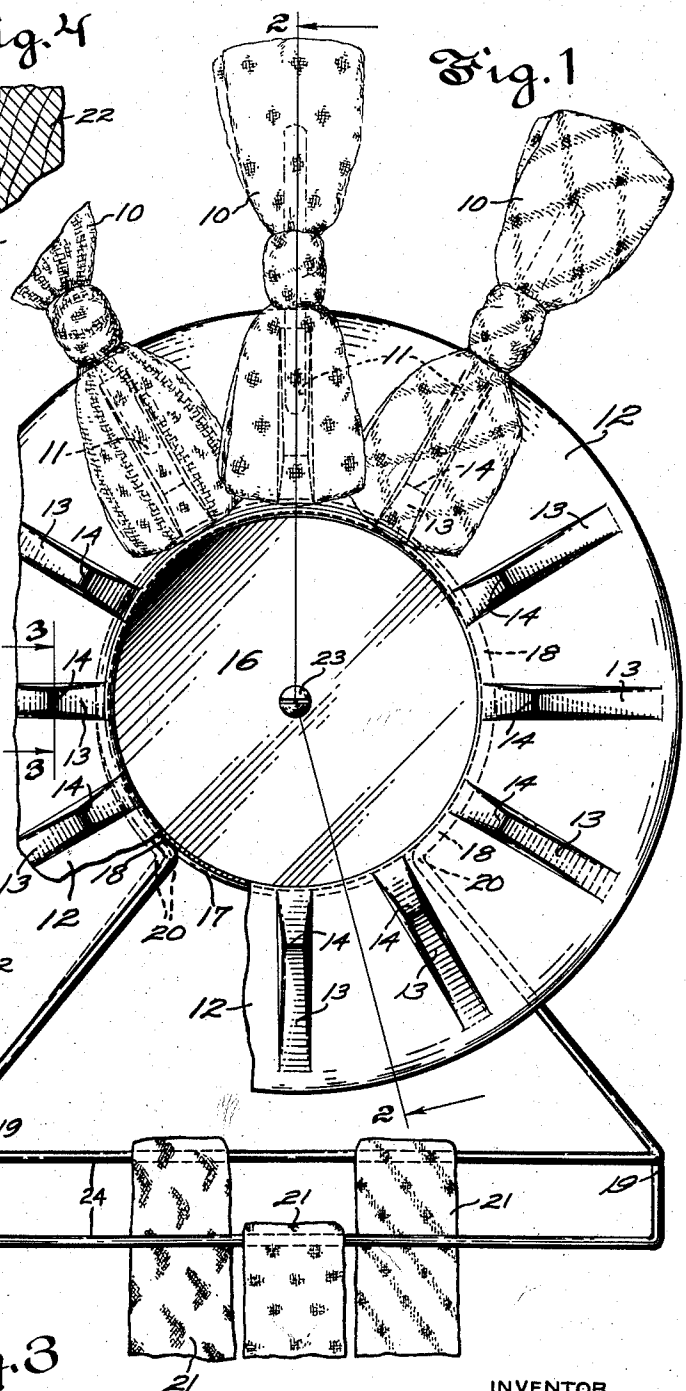
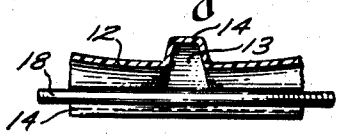


Fig. 2

Fig. 3



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COMPOSITE TIE RACK

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This invention relates to a tie rack of extremely simple and sturdy form designed to be mounted on the wall or door of a room so as to present a holding anchorage for an assortment of bow ties making it easy to choose quickly a particular tie for wear and to restore the tie to the rack. The improvements further concern supplementary tie holding structure affording equally accessible storage for an assortment of four-in-hand ties or ties in string form to be selected and then tied into bows.

A common objection to conventional racks for storing ties selectably is the necessity of rummaging through an assortment of different kinds of ties in order to find or choose a particular tie or kind of tie when hurriedly dressing.

A prime object of this invention is to provide means for displaying in full view and making individually accessible a selection of clip-on ties of the pre-tied bow type distinguishable if desired from an associated selection of string ties.

Another object is to provide a tie rack of sturdy yet low cost construction composed of not more than two or three parts, one part being shaped somewhat like a dish and the other part comprising a skeleton wire hanger readily attachable and detachable from the dish-shaped structure without the use of tools.

A further object is to provide a tie rack of the above character that is mountable with adequate firmness against the wall by use of a single fastening screw.

A further object is to incorporate in the tie rack a mirror so disposed that it will reflect an image of the neck region of a person positioned as he would naturally stand for mounting and detaching ties at the rack so that individual ties can be removed from the rack one at a time and instantly viewed in their to-be-worn position for testing the appearance of a selected tie to be worn with a given shirt or suit of clothing.

A further object is so to construct a tie rack in dish form that it may be composed of flexible sheet material vacuum drawn to a rigid ultimate shape and so that the rigid ultimate shape shall support and imprison a mirror without the aid of extraneous fastening means.

A still further object is to incorporate in the shape of the dished sheet of material tie orienting means serving to predetermine particular positions in which bow ties can best be applied to and held on the rack.

These and other purposes of the present improvement will be evident in fuller detail from the following description of a successful embodiment of the invention having reference to the appended sheet of drawings wherein:

Fig. 1 is a front view of my improved composite tie rack with an assortment of bow and string ties removably supported thereon, a portion of the rack being broken away to expose structural detail.

Fig. 2 is a view taken in section on the planes 2—2 in Fig. 1 looking in the direction of the arrows.

Fig. 3 is a fragmentary view taken in section on the plane 3—3 in Fig. 1.

Fig. 4 is an enlarged fragmentary view of a portion of Fig. 2.

The dish-shaped unit 12 or body of the rack which novelly affords holding anchorage for bow ties 10 comprises a preferably vacuum-drawn shape of sheet material that was originally flexible and insufficiently stiff but which in its dished shape becomes sufficiently body stiff to make the unit 12 virtually rigid. Such rigidity is accomplished with a minimum thickness of original sheet material partially with the aid of spoke-like channeled or hollow bosses 13 that are offset forwardly or inwardly in the arcuate flange of the dished shape of the rack body 12 which causes said flange to be of arcuately undulating cross section. Bosses 13 increase in depth from near the rim of the rack to a maximum depth at their crest points 14. Thence they decrease in depth until the boss runs out near the periphery of a central flat circular panel-like mounting wall portion 15 of the unit 12. Tie clip 11 nests in the boss channel and thereby for better display holds the bow tie adequately spaced away from said mounting wall and at a less angle of inclination with respect to the plane thereof than is the angle of inclination of said conical flange.

At this peripheral region of the panel portion 15 the sheet material of the rack conforms to an ogee curvature in radial cross section as best shown in Fig. 4. Since such cross sectional shape was imparted to the sheet material by suction drawing it about the periphery of a flat rigid thin mirror disc 16 and since the cross sectional shape is continuous all around the rim of the rack, it hugs and imprisons the periphery of the mirror disc 16. The mirroring function of disc 16 may be produced by making the disc of silvered glass or by chrome plating or polishing the front face of a metallic disc.

The aforesaid ogee cross-sectional curvature further affords a circumferential groove 17 into which may be snapped and firmly anchored the mounting loop 18 of a skeleton rack for string ties composed of a single continuous length of somewhat resilient wire whose free end portions are made fast in the relationship shown in Fig. 1. Such end portions may be welded or otherwise fastened at their terminals 19. There results enough ability of the bends 20 to spring apart to make the wire loop capable of snapping over the relatively greater diameter of the panel 15 at the edge of the mirror disc and then automatically contracting into snugly seated occupancy of groove 17 with an incompletely encompassing hugging grip thereby to reinforce and resist distortion of the thin sheet material of the rack. Thus the skeleton wire structure 18 becomes firmly lodged on the dished unit 12 without the use of extraneous fastening means and can readily be removed by springing it out of groove 17 in similar manner.

In Fig. 2 the spaced parallel rails 24 afforded by the horizontal spans of rack wire are shown to be offset forwardly in relation to each other as well as in respect to the wall so that string ties 21 can be hung thereon in two separate rows and conveniently held away from the wall or door surface 22 to which the composite rack can be attached with sufficient firmness by means of a single central holding screw 23. If the mirror disc 16 incorporates glass, a washer with a compressible gasket will preferably be placed under the head of screw 23.

An example of the art of vacuum or suction drawing in a plastic sheet forming process involving preheating of a thermoplastic blank sheet and suitable for producing the rack body 12 is set forth in U.S. Patent No. 1,856,694. Various compositions and thicknesses of thermoplastic sheet material may be used in the vacuum drawing of body 12 or it may be molded from a thermoplastic or a thermosetting plastic substance by injection or other conventional molding methods. In a rack body like 12

having an outside diameter of 8" I find it practical to start with a .040" thick blank sheet of thermoplastic material such as styrene resin or cellulose acetate which when drawn into its shape herein illustrated can result in a thickness of, say, 3/64" in the conical flange wall. This wall may be given a more fanciful conformation than conical by the introduction of curves, beads, ornamental embossing etc. The thermoplastic sheet may be ornamented by coloring on its surface or throughout to represent natural wood or other artificial surface textures.

While maximum strength results from making the conically flared annulus of body **12** fully circular, a possibly fan-shaped flange less than a complete annulus will afford many of the advantages of these improvements. The rack lends itself to use for storing clip-on articles other than bow ties such as clothing ornaments or costume jewelry. It also well serves to display articles of merchandise on a store counter for ready selection by a customer.

The appended claims are directed to and intended to cover obvious equivalents and substitutes for the particular shapes and arrangement of parts herein particularly described to illustrate the invention.

I claim:

1. As an article of manufacture, a rack for firmly supporting clip-on bow ties in removable manner for selective use and display, embodying a dish-shaped body comprising a substantially flat central mounting wall bordered by a surrounding flared flange of single conical contour integral therewith inclined thereto and having an arcuate outer edge, said flange having a circular sequence of angularly spaced apart portions elongated radially of the flange and longitudinally disposed relatively to said flat mounting wall at a less abrupt angle of inclination than is said single conical contour, whereby bow ties clipped onto said spaced apart elongate portions of said flange parallel respectively therewith are laterally separated and spaced away from the plane of said mounting wall and slanted at a less angle of inclination thereto than is said conical contour for maximum broadside display.

2. As an article of manufacture, a rack for firmly supporting clip-on bow ties in removable manner for selective use and display, embodying a dish-shaped body comprising a substantially flat central mounting wall bordered by a surrounding flared flange of single conical contour integral therewith inclined thereto and having an arcuate outer edge, said flange having formed therewithin angularly spaced embossments defining channels elongated radially of the flange and of uniform width less than the angular spacing of said embossments, each of said channels opening outward of said dish-shaped body and increasing in depth from its radially outer end near said outer edge of said flange to a maximum depth nearer the junction of said flange with said flat mounting wall, whereby the holding clip of a bow tie when occupying one of said channels firmly holds the tie in predetermined angular position on the rack against and longitudinally parallel with one of said embossments spaced forward from the plane of said flat mounting wall and slanted at a less angle of inclination with respect to said plane than is the angle of inclination thereto of said conical flange.

3. As an article of manufacture, a rack for firmly supporting clip-on bow ties in removable manner for selective use and display, embodying a dish-shaped body comprising a substantially flat central mounting wall bordered by a surrounding flared flange of single conical contour integral therewith inclined thereto and having an arcuate outer edge, said flange having formed therewithin angularly spaced embossments defining channels elongated radially of the flange and of uniform width less than the angular spacing of said embossments, each of said channels opening outward of said dish-shaped body and increasing in depth from its radially outer end near said outer edge of said flange to a maximum depth at a crest point intermediate the length of the embossment and decreasing in depth from said crest point to near the junction of said flange with said flat mounting wall, whereby the holding clip of a bow tie when occupying one of said channels firmly holds the tie in predetermined angular position on the rack against and longitudinally parallel with one of said embossments spaced forward from the plane of said flat mounting wall and slanted at a less angle of inclination with respect to said plane than is the angle of inclination hereto of said conical flange.

4. As an article of manufacture, an inexpensive lightweight rack for firmly supporting clip-on bow ties in a removable manner for selective use and display embodying, a single ply sheet of thermoplastic material insufficiently rigid in its flat shape to support a bow tie with requisite firmness at the edge thereof, said sheet being formed into a dish-shaped body comprising a substantially flat central mounting wall bordered and stiffened by a surrounding flared flange of single conical contour integral therewith inclined thereto and having an arcuate outer edge, said flange having formed therewithin angularly spaced embossments defining channels elongated radially of the flange and of uniform width less than the angular spacing of said embossments, each of said channels opening outward of said dish-shaped body and increasing in depth from its radially outer end near said outer edge of said flange to a maximum depth nearer the junction of said flange with said flat mounting wall, whereby the holding clip of a bow tie when occupying one of said channels firmly holds the tie in predetermined angular position on the rack against and longitudinally parallel with one of said embossments spaced forward from the plane of said flat mounting wall and slanted at a less angle of inclination with respect to said plane than is the angle of inclination thereto of said conical flange.

5. An an article of manufacture a rack as defined in claim 4, in which the said ply of thermoplastic material conforms to an ogee curve in cross section in a manner to define a circumferential groove opening outward of the said dish-shaped body at the said junction of the said flange with the said flat central mounting wall whereby to increase the stiffness of the rack in radial directions.

6. A rack for accessible storage of clip-on articles, comprising a shallow thin-walled dished body having a central planar mounting portion adapted for attachment against a rack supporting surface and bordered by an arcuate flange presenting a peripheral edge offset from the plane of said mounting portion thereby to be spaced away from said supporting surface when said rack is mounted on said surface, whereby said flange edge is located to be free from said supporting surface and accessible for being straddled by the holding clip of a clip-on article thereby to lodge the article detachably on the rack, there being a circumferential groove externally formed in the dished shape of said rack body at the curved junction of said arcuate flange with said central mounting portion of said body, together with a loop of stiff wire conforming to and nested in said groove and snugly embracing said rack body in a manner to reinforce the same and resist distortion of said flange.

7. A rack as defined in claim 6, in which the said wire loop incompletely encompasses the rack body and is sufficiently resilient to spring in directions to spread said loop to a degree of enlargement enabling it to be lodged in the said external groove without exceeding the elastic limit of distortion of the wire.

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