United States Patent

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[54] **CHINNING DEVICE**
4 Claims, 5 Drawing Figs.

[52] **U.S. Cl.** **272/62**
[51] **Int. Cl.** **A63b 1/00**
[50] **Field of Search** 272/62; 211/105.2; 223/85; 248/123

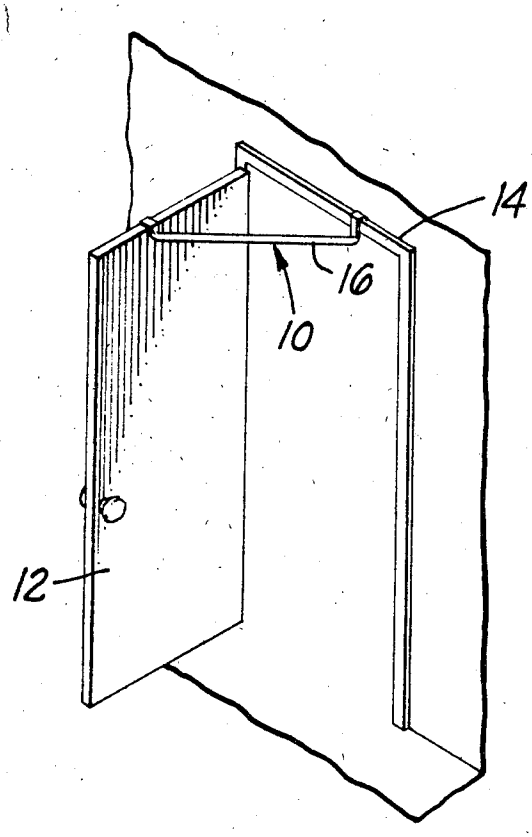
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ABSTRACT: A lightweight tubular member, designed to fit diagonally across the space between an open door and the head molding of the doorframe in which the door is hung. The ends of the member are flattened, and one is shaped to extend up and over the top of the door. The other end is shaped to extend upwardly, then outwardly, then downwardly into down-bearing contact with the top of the head molding. The member is designed to remain in place when supported on the door and doorframe head molding in the above-indicated manner, and serve as a chinning bar.



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FIG. 1.

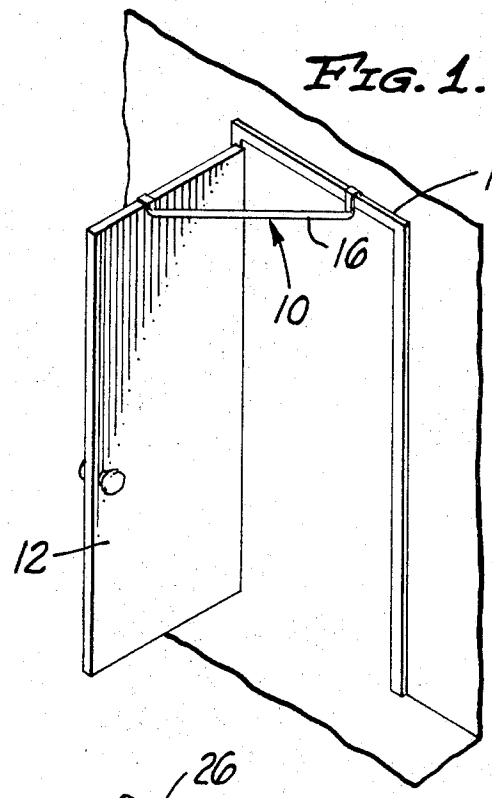


FIG. 5

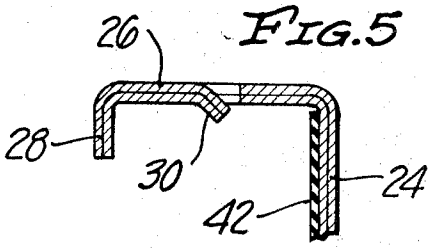
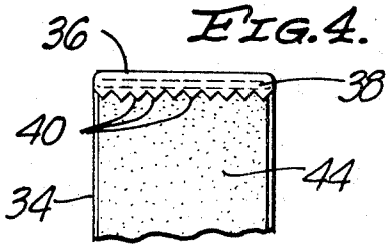


FIG. 4.



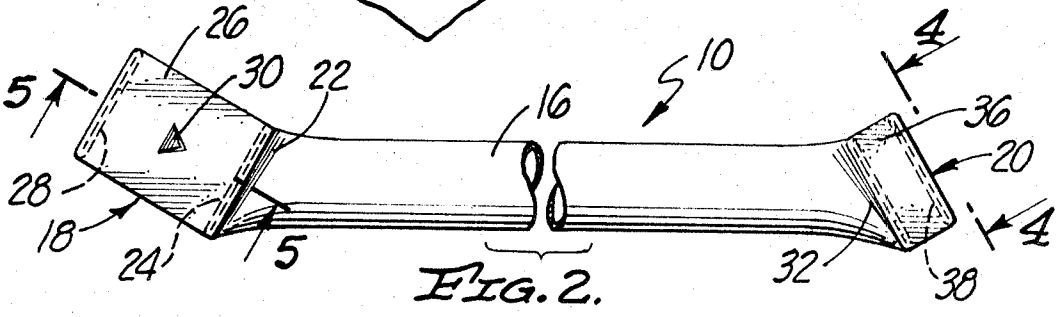


FIG. 2.

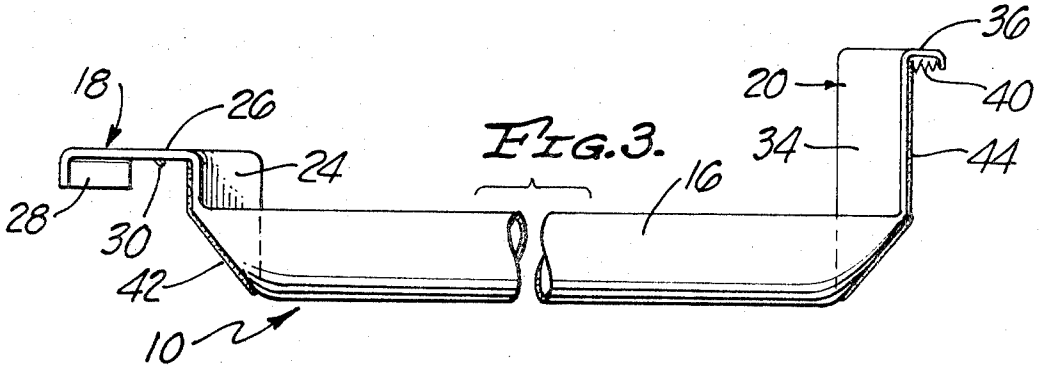


FIG. 3.

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CHINNING DEVICE

BACKGROUND OF THE INVENTION

This invention relates generally to chinning bars suitable for temporary installation and use in the home, and more particularly to such a chinning bar uniquely adapted to rest firmly on the upper edge of an open door, at one end, and on the head molding for the doorframe within which the door is mounted, at the other end, and thereby provide means for chinning in the space between the door and doorframe.

If the wide array of exercising devices presently available on the market is any criterion, there is an ever-increasing demand for exercising equipment suitable for use in and around the home. Chinning, as a form of exercise, is enjoying wide popularity today, and to a large extent is practiced indoors with the aid of chinning bars of the commonly familiar type adapted for temporary installation between the side jambs of doorway openings. Such chinning bars can be bought at almost any large department, or sporting goods, store, and consist simply of longitudinally expandable rods which can be adjusted to fit across doorway openings of various widths. The rods have rubber ends, which bear on the doorway jambs, and are adjusted to individual door sizes by means of male and female screw members, not necessary to describe in detail here.

The installation of a conventional bar of the type described above in a doorway opening is somewhat time consuming, since the rate at which it can be adjusted (shortened or lengthened) is rather slow, depending, as it does, upon the manual turning of one threaded part relative to another. While such a chinning bar can be fastened fairly tightly between doorjambs, it is thereafter held in place only be the frictional contact between its rubber ends and the doorjamb surfaces, and is, therefore, liable to loosen and slip during extended periods of use. While the aforesaid chinning bars, when properly fastened in place, can be expected to serve their purpose fairly well, they have certain inherent shortcomings, in addition to those (relative slowness of installation and possibility of slippage) mentioned above. Thus, since the bars are normally fastened between doorjambs, their height above the floor is limited by the height of the doorframe. The reason for this is, of course, the necessity of leaving space above such a bar to permit a chinner to raise his head to chin level therewith without bumping the doorframe header. This is more of a disadvantage for taller persons than shorter ones, and might even render the bar useless for an exceptionally tall individual, particularly if the doorway opening is on the low side. Traditionally, conventional chinning bars are relatively heavy, and have been know, in some cases, to leave marks on the doorjambs where their rubber ends come into tight contact therewith. Finally, because they are held in place by frictional contact between their ends and the side doorjambs, such bars are not always suitable for use by exceptionally heavy persons, and are therefore limited in their application.

While conventional chinning bars are sometimes provided with nail or screw openings by means of which they can be fastened permanently in place, this is, in a sense, a disadvantage in that it makes the bars more difficult and time consuming to install, and, additionally, results in the scarring of doorjamb surfaces.

Applicant is aware of no indoor chinning equipment, other than the chinning bars described above (which, incidentally, are relatively expensive), suitable for installation by the average homeowner, in spite of the present day emphasis on exercise, and the ready availability of a variety of home exercising devices.

SUMMARY OF THE INVENTION

The chinning device of this invention, in its preferred form, is of simple, one-piece construction, with no moving parts to manipulate or become inoperative. It is preferably fabricated from strong, thin-walled metal tubing, such as, for example, galvanized-steel electrical conduit tubing. The fabrication is

carried out by merely flattening the end segments of a piece of tubing, then bending the flattened end segments in such fashion as to provide angled rider segments shaped so that one fits over the top of an open door and the other bears downwardly on the top of the head molding of the doorframe in which the door is mounted, to thereby support the tubing in a diagonal position across the upper space between the door and the doorframe for chinning purposes. As will be seen, the geometric conformation of the door-contacting rider segment of the chinning device is such as to fit snugly down over the top edge of the door, with the main portion of the device extending diagonally away therefrom. The head molding-contacting rider is geometrically shaped to extend upwardly past the top of the head molding, in closely adjacent or flush contact therewith, then extend over the top of the molding and bend downwardly to biting contact therewith, preferably near the line of juncture between the molding and wall surface. The end of the latter rider is preferably serrated to enhance its biting contact with said molding.

Because of its unique configuration, it is a simple matter to quickly install the chinning device for use by merely fitting it down over an open door, at one end, and onto the head molding of the doorframe in which the door is mounted, at the other end. When the door is opened to the proper extent, the chinning device slips easily into place, and its weight holds it horizontally between the door and head molding, at the proper angle therebetween. The device is now positioned for chinning, and the weight of the chinning individual holds it even more firmly in position, supported at one end by the door, and at the other end by the head molding of the doorframe opening. The device, in its preferred form, is strong enough to support the weight of the heaviest individual without deformation, and I have determined, by many trial tests, that the average door and associated head molding are more than adequate to support the chinning device in use, without showing any evidence of damage. I have even determined that the device, in one of its typically contemplated forms, will support 500 pounds of hanging weight, with no observable damage to a supporting door and doorframe head molding of commonly conventional type.

Because of its simplicity of construction, the ready availability of materials from which it can be made, and the relatively low cost of these materials, the chinning device of the present invention can be manufactured and sold at a price substantially lower than that of a conventional chinning bar of the above-described type.

It will thus be apparent that the chinning device of the present invention is possessed of none of the above-noted disadvantages of conventional chinning bars. A principal object of the invention is therefore to provide a chinning device absent these disadvantages.

Other objects, advantages and features of the invention will become apparent in the light of subsequent disclosures herein.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a view, in perspective, of a preferred embodiment of a chinning device in accordance with this invention positioned for use on a partially open door and the head molding of the doorframe in which the door is mounted.

FIG. 2 is an enlarged, interrupted top view of the chinning device.

FIG. 3 is an interrupted view of the device as it appears in longitudinal elevation.

FIG. 4 is an enlarged, fragmentary end view of the device, as seen from line 4–4 of FIG. 2.

FIG. 5 is an enlarged, fragmentary, sectional view of an end portion of the chinning device, taken along line 5–5 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Considering now the drawing in greater detail, there is shown generally at 10 a preferred embodiment of a chinning device in accordance with this invention. The device is con-

structed from a single piece of thin-walled metal tubing of sufficient strength to support a chinning person in the manner taught herein without bending. Optimally suited for the purpose, I have found, in thin-walled, galvanized-steel electrical conduit of ¾-inch, 1-inch, or 1¼-inch size. The larger the size, of course, the stronger will be the chinning bar, although the ¾-inch conduit is strong enough to easily support a large man without bending or buckling.

As FIGS. 2 and 3 best illustrate, relatively short end segments of chinning bar **10** are flattened and formed into rider segments **18** and **20** respectively adapted to fit on the top of a door and the head molding of the doorframe in which the door is mounted in the manner illustrated in FIG. **1**, which shows the device supported on such a door **12** and head molding **14**. For most of its length between the two rider segments at its ends, the chinning device has the smooth cylindrical shape of the tubular stock from which it is formed. This long cylindrical portion of the device, shown at **16** on the drawing, serves to provide a comfortable handhold for individuals using the device for chinning purposes. Rider **18**, shown at the left in FIGS. **2** and **3**, is shaped to fit over the top edge of door **12** at the proper angle with the cylindrical portion **16** of the device to permit installation of the latter diagonally across the space between the open door and its doorframe molding, all as illustrated in FIG. **1**. To make this possible, the tubular stock from which the chinning device is fashioned has its left end, as seen in FIGS. **2** and **3**, flattened from a diagonal, rather than straight, line thereacross, so that the flattened segment angles away from cylindrical portion **16** of the device, in the manner illustrated in FIG. **2**. The diagonal inboard boundary of the flattened tube segment, thus resulting, is shown at **22**, and the segment is bent to extend vertically upwardly from this boundary to from a vertical segment **24**. From the top of vertical segment **24**, the flattened tube is bent into a horizontal segment **26** and a terminal flange **28**, which depends perpendicularly downwardly from the outer edge of the horizontal segment.

The dimensions of the vertical and horizontal segments, and flange, at the flattened end of the tube (which form rider **18**) are such that the vertical segment **24** fits substantially flush against the adjacent surface of door **12**, when the chinning device is installed for use as shown in FIGURE **1**, the horizontal segment **26** fits substantially flat against the upper edge of the door, and the flange **28** depends downwardly, in relatively close adjacency to the far side of the door. As will be evident from the foregoing, rider **18** fits fairly snugly over the top edge of door **12**, and its terminal flange **28** tends to prevent the door from moving when the chinning device is in use, although the device would function reasonably well even without the flange, because the down-bearing weight of the individual using it, acting on the door through horizontal segment **26** of the rider, would normally hold the door in place. To assure even less possibility of door movement, relative to the chinning device, horizontal segment **26** of rider **18** is preferably burred on its underside, as shown at **30**. The burring can be accomplished in any convenient way, as by means of a puncturing tool. While such burring permits better purchase of the door by the chinning device, it is not, of course, a critical feature of the latter, and can, if desired, be dispensed with. Likewise, alternative means for insuring better purchase of the door by the chinning device can be used in conjunction with, or in lieu of, burr **30**, within the scope of this invention. For example, rider **18** can be provided with door-gripping means of any sort, such as the downwardly projecting end of a pointed screw fitted into a tapped opening through horizontal segment **26** of the rider.

Similarly to rider **18**, rider **20** (hereinafter referred to as hanger **20**—to distinguish it from rider **18**) which fits on the head molding of a doorframe, is formed from an end segment of the chinning device which has been flattened from a diagonal line, or boundary, **32** across the body of the device. The direction of the diagonal line is such as to cause the flattened end segment to angle away from cylindrical segment **16** of the chinning device in the same direction as the flattened segment from which rider **18** is formed angles, as best illustrated in FIG. **2**. The reason for so angling hanger **20** from the cylindrical portion of the chinning device is the same as that for angling rider **18** therefrom, namely, to permit diagonal installation of the chinning device for use across the upper portion of the space between a door and doorframe molding. It will be evident, particularly in view of FIG. **1**, that without such angling of its end segments, the intermediate cylindrical portion of the chinning device could not be so positioned between the door and doorframe.

From its diagonal edge, or boundary, **32**, hanger **20** is bent into a vertical segment **34**, of greater height then vertical segment **24** of rider **18**, for a reason soon appearing, then into a relatively short horizontal segment **36**, and, finally, into a downturned lip **38**, with a serrated terminal edge **40**. When the chinning device is installed for use as illustrated in FIG. **1**, the hanger **20** fits up and over the head molding of a doorframe, such as head molding **14**, and its lip **38** bears downwardly on the top of the molding, near where the rear edge of the latter meets the wall surrounding the door frame. The serrate edge **40** of lip **38** permits the latter to grip the head molding tightly, to help hold the chinning device in place during use. Vertical segment **34** of the hanger is longer than its counterpart in rider **18** to compensate for the additional height of the average doorframe head molding above the door installed therebelow, and permit substantially horizontal orientation of the cylindrical (hand-gripping) portion **16** of the chinning device when the latter is positioned on the door and head molding for use.

The horizontal segment **36** of hanger **20** is relatively short because the head molding of the average doorframe is quite thin, by comparison with the thickness of the average door. Needless to say, the segments of the rider and hanger segments of the chinning device can be dimensionally tailored to permit use of the device on doors and head moldings of other than average dimensions. In this connection, the span of horizontal segment **36** is designed to permit close adjacency of vertical segment **34** of the hanger of the mounted chinning device to the front of the head molding, for obvious reasons of good engineering design, although the chinning device could be made to work satisfactorily without such close adjacency between the hanger and molding.

The exterior surfaces of the vertical segments of rider **18** and hanger **20** have layers of rubber **42** and **44**, respectively, secured thereto to protect the door and head molding surfaces from being scarred, or otherwise damaged, by the chinning device. The likelihood of such damage is remote, however, and the rubber layers could be dispensed with, if desired, within the scope of my invention. Or, an equivalent protective material could be substituted for rubber layer **42** and/or layer **44**, within the scope of the invention. A suitable plastic or leather material could, for example, be used in lieu of rubber to protect the door and head molding from damage by the chinning device.

The manner in which chinning device **10** is installed and used will, it is believed, be clear from the foregoing description, considered in conjunction with the drawing. The device has no working parts, and its installation is a matter of the utmost simplicity, it being necessary only to fit rider **18** over an open door, and hanger **20** over the head molding of the doorframe in which the door is mounted, adjusting the door position as necessary to insure firm anchoring of the device on the door and molding. The device is now ready for use, and can be left in position as long as desired, without fear of its being loosened or shifted from a position of firm support. The space between the open door and doorframe bridged by the installed device is more than adequate to permit the largest man to chin himself without lateral restriction. Moreover, since the chinning device is positioned outside of the doorway opening, there is plenty of headroom, by contrast with the conventional chinning bar situation in which the top of the doorframe limits the height at which the bar can be installed.

While I have shown and described in considerable detail what I believe to be a preferred embodiment of my invention, it will be understood by those skilled in the art that the invention is not limited to, and may take various forms other than, that particular embodiment. For example, the chinning device could be made wider than chinning device **10**, at its hanger end (corresponding to the hanger **20** end of the latter), to provide added holding strength and a longer biting edge for better gripping contact with doorframe head moldings. Also, the cylindrical (hand-gripping) portion of the chinning device could have a strengthening insert, such as an oak doweling insert, within the scope of the invention.

I claim:

1. An exercising device comprising:

an elongate bar member;

first bracket means at one end of said bar member and comprising an upwardly extending platelike portion defining a plane at an oblique angle to the axis of said bar and having an upper flange extending substantially horizontally outwardly therefrom; and

second bracket means at the other end of said bar member defining a downwardly facing channel arranged at an oblique angle to the axis of said bar member whereby said flange of said first bracket may be placed on the upper edge of head molding of a doorframe, with said platelike portion substantially abutting the face of said molding, and said second bracket means may be hooked over the upper edge of an open door mounted in said frame and thereby support said bar member for chinning purposes.

2. An exercising device as defined in claim **1** wherein said flange is a greater distance above said bar member than the base of said downwardly facing channel.

3. An exercising device as defined in claim **1** wherein said bar member is a hollow tubular metal bar, the ends of said bar being flattened and bent to define said first and second bracket means.

4. An exercising device as defined in claim **1** including means on said flange for releasably holding said flange on said frame.