July 25, 1967 J. JACOBSON 3,332,654

CLAMP AND HOLDER COMBINATION

Filed Sept. 30, 1965

Fig. 1

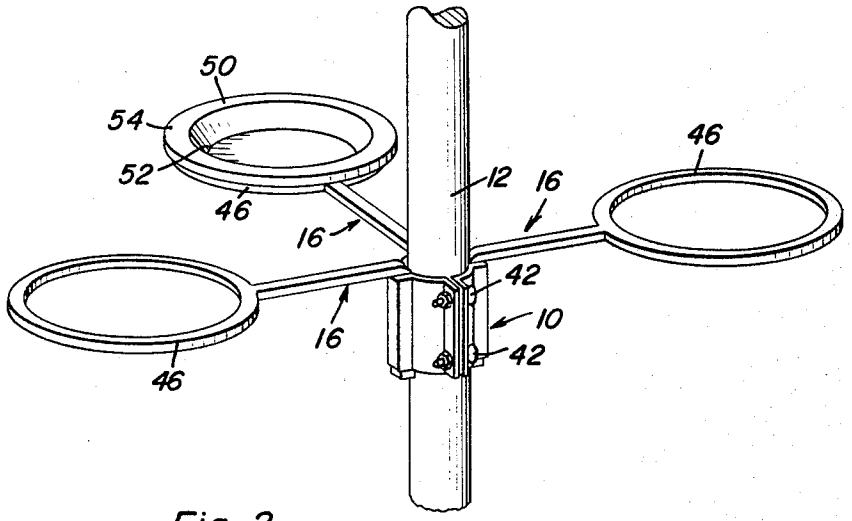


Fig. 2

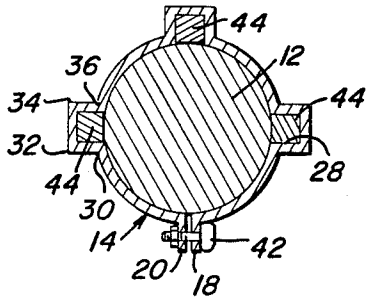


Fig. 3

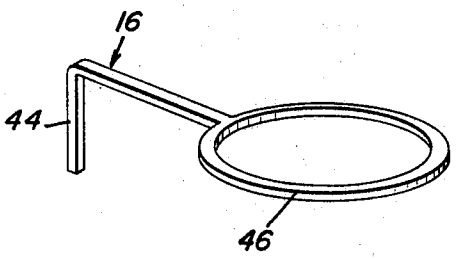
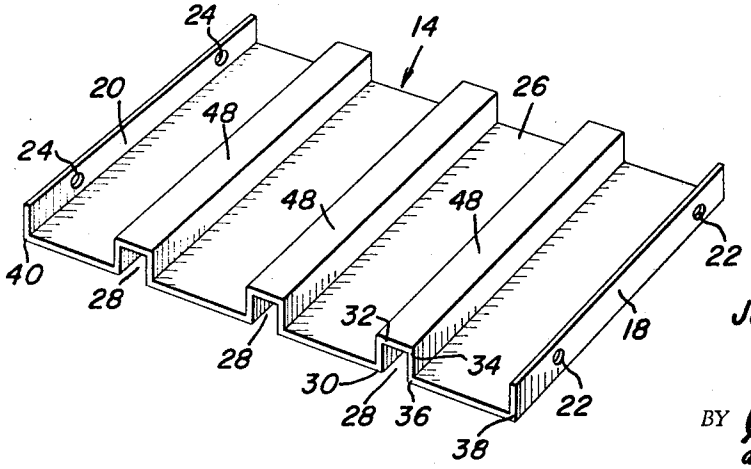


Fig. 4



Julius Jacobson
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

United States Patent Office

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CLAMP AND HOLDER COMBINATION

Julius Jacobson, 69—11 226th St.,
Bayside, N.Y. 11364

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ABSTRACT OF THE DISCLOSURE

A clamp assembly including an elongated strap of stiff but resilient sheet material adapted to encircle a cylindrical upstanding support member with its opposite ends spaced at least slightly apart and means connected between its opposite ends operable to clamp the strap about the support member, the strap including transversely extending 90° bends formed therein defining a plurality of inwardly opening upstanding channels open at their upper and lower ends and closed along their inner sides by means of the cylindrical support member and the clamp assembly including elongated support arms provided with angulated end portions snugly receivable in the channels with the remote end portions of the support arms extending generally radially outwardly of the strap at points spaced circumferentially thereabout and angulated end portions being clampingly retained within the channels by the clamped engagement of the strap about the cylindrical support.

This invention relates to a novel and useful clamp and holder combination and more specifically to a clamp assembly adapted to be secured to and about a generally cylindrical member. The clamp assembly includes means adapted to support one or more articles therefrom and the assembly comprises an elongated arcuate band of stiff but resilient material including opposite end portions adapted to be drawn toward and secured to each other after the band is disposed in position at least substantially completely encircling the cylindrical member from which it is to be supported. By drawing the opposite ends of the elongated arcuate band together the clamp assembly is caused to clampingly engage the cylindrical member. The band includes at least one inwardly opening channel extending transversely of the band and adapted to be closed at its inner portion by the cylindrical member to which the band of the clamp assembly is secured. An elongated support arm is provided and includes one angled end portion adapted to be clampingly secured within the channel of the arcuate band as the bottom of the channel is drawn toward the cylindrical member about which the band is secured when the free ends of the band are drawn together to cause the band to clampingly engage its supporting cylindrical member.

The channel and angulated end of the elongated support arm of the clamp and holder combination are of complementary non-circular cross-sectional shape and in this manner the free end of the support arm is secured against swinging movement relative to the clamp assembly about an axis generally paralleling the longitudinal axis of the cylindrical member to which the clamp assembly is secured.

The main object of this invention is to provide a clamp and holder combination specifically adapted to provide a means whereby one or more articles may be supported in rigid fashion from an upstanding support member such as a cylindrical structural post, a patio umbrella standard, or other generally cylindrical uprights which may be available.

Another object of this invention, in accordance with the immediately preceding object, is to provide a clamp and holder combination constructed in a manner whereby

its use on a cylindrical upright to support varied articles would present a pleasing appearance.

A final object of this invention to be specifically enumerated herein is to provide a clamp and holder combination in accordance with the preceding objects which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long-lasting and relatively trouble-free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a fragmentary perspective view of an upright cylindrical member shown with the clamp and holder assembly operatively mounted thereon;

FIGURE 2 is a horizontal sectional view taken substantially upon a plane passing through the center of the clamp and holder combination illustrated in FIGURE 1 and on somewhat of an enlarged scale;

FIGURE 3 is a perspective view of one of the support arms of the clamp and holder combination; and

FIGURE 4 is a perspective view of the elongated band comprising the clamp portion of the clamp and holder combination with the band being illustrated in a substantially straightened position.

Referring now more specifically to the drawings, the numeral **10** generally designates the clamp and holder combination which may be seen in FIGURE 1 of the drawings to be mounted upon an upstanding generally cylindrical upright **12**. The clamp and holder combination includes an elongated band generally referred to by the reference numeral **14** and a plurality of cooperating support arms generally referred to by the reference numeral **16**. The band **14** is constructed of any suitable stiff but resilient material such as spring steel, sheet aluminum, and some types of plastics and includes opposite end laterally directed mounting flanges **18** and **20** which are suitably apertured as at **22** and **24**, respectively, and which project outwardly of the outer surface **26** of the band **14**. In addition, the band **14** includes a plurality of longitudinally spaced and transversely extending channels which open toward the inner surface of the band **14** and are each defined by a set of four 90° bends **30**, **32**, **34** and **36** formed in the band **14**. In addition, the flanges **18** and **20** are also integral portions of the band **14** and are formed by right angle bends **38** and **40**, respectively, formed in the band **14**.

In mounting the band **14** on the upright **12**, the band **14** is bowed so as to be arcuate in configuration and is wrapped around the upright **12** with the channels **28** opening inwardly toward the upright **12**. Then, suitable fasteners **42** may be secured through corresponding aligned pairs of apertures **22** and **24** formed in the flanges **18** and **20**, and the fasteners **42** may be tightened so as to draw the band **14** about the upright **12** with the former clampingly engaging the latter.

Each of the support arms **16** includes an angulated end portion **44** on one end and a generally cylindrical or annular frame **46** on the remote end.

From FIGURES 2–4 of the drawings, it may be seen that the channels **28** are substantially square in cross-sectional shape and that the angulated end portions **44** are also square in cross section and of a size complementary to the size of the channels **28**. After the band **14** has been secured to the upright **12** in the manner hereinbefore set forth, the angulated end portions **44** of each of the arm members **16** may be slid into a corresponding channel **28**. Then, if it is desired, the fasteners **42** may be

further tightened so as to cause the portions of the band **14** defining the inner open ends of the channels **28** to spread apart and to thereby shift the portions **48** of the band **14** disposed between the bends **32** and **34** inwardly toward the upright **12**. In this manner, the angulated end portions **44** will be clampingly engaged between the upright **12** and the portions **48** of the band **14**.

In order to support articles from the free ends of the arms **16**, suitable shallow dishes **50** may have their dished center portions **52** disposed within the annular frames **46** and their diametrically larger rim portions **54** resting on the upper surfaces of the corresponding frames **46**. Thereafter, any suitable article may be disposed within the dishes **50** for support therefrom.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In combination, a generally cylindrical support member, a clamp assembly for securement about said cylindrical member and for supporting a plurality of articles from said cylindrical member, said assembly comprising an elongated band of stiff but resilient sheet material whose thickness is constant throughout said band, said band including a plurality of longitudinally spaced transversely extending channels formed therein, said channels including first and second sets of narrow and wide channels alternately spaced along said sheet and opening outwardly of opposite sides of said sheet, said narrow channels each being defined by a series of four right angle bends formed in said sheet and the adjacent pairs of bends defining each pair of adjacent narrow channels defining the wide channel disposed between said pair of adjacent

narrow channels, said band being bowed into an arcuate configuration extending about said cylindrical member with said narrow channels opening inwardly toward said cylindrical member, a plurality of support arms, one set of corresponding end portions of said support arms being laterally angulated relative to the other set of corresponding end portions of said arms and being of a rectangular cross-sectional shape and size complementary to the cross-sectional shape and size of said narrow channels and snugly disposed in the latter, said other set of corresponding end portions of said arms projecting generally radially outwardly of said band and including means adapted to support articles therefrom, the opposite ends of said band including coacting means adjustably drawing said opposite ends together so as to clamp said band tightly about said cylindrical member with one set of end portions of said arms snugly received between the confronting side walls of said narrow channels and clamped tightly between the opposing narrow surface portions of said cylindrical member and the bottom wall portions of said narrow channels.

2. The combination of claim **1** wherein said other end portions of said arms terminate in frame-like members adapted to have an article to be supported thereby disposed therein.

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ROY D. FRAZIER, *Primary Examiner.*

CLAUDE A. LE ROY, *Examiner.*

R. P. SEITTER, *Assistant Examiner.*