April 2, 1940. N. C. McGANN 2,195,893

TWO-PART SUPPORT CLAMP

Filed July 28, 1938

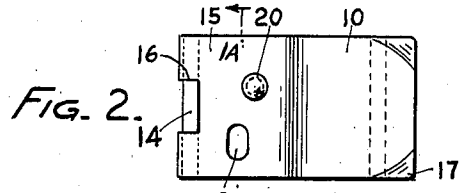


FIG. 2.

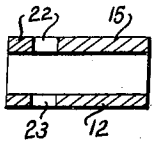


FIG. 1A.

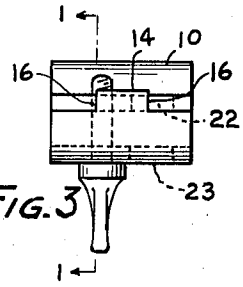


FIG. 3

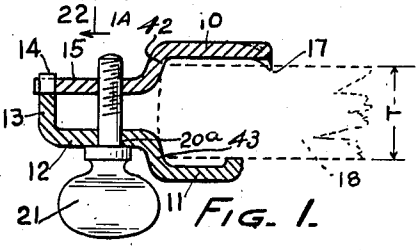


FIG. 1.

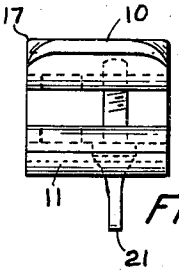


FIG. 4.

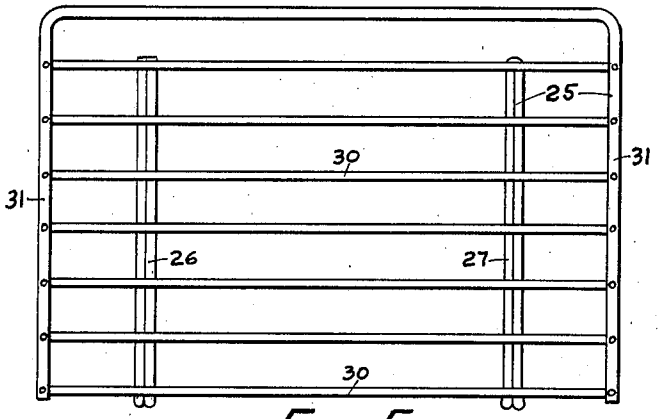


FIG. 5.

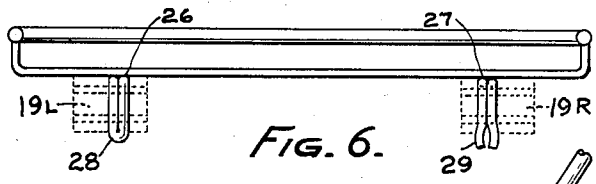


FIG. 6.

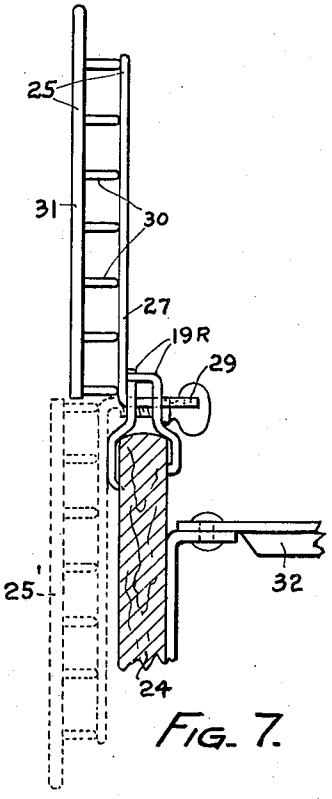


FIG. 7.

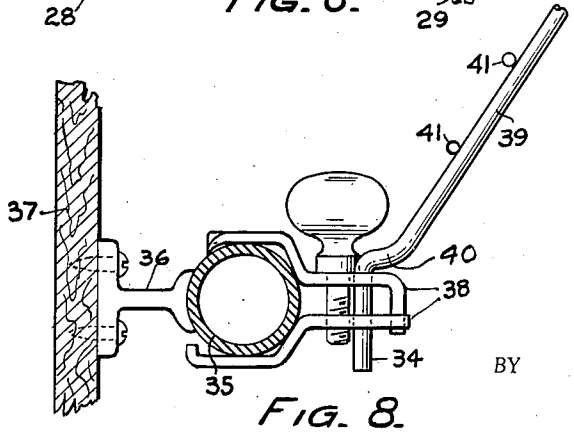


FIG. 8.

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TWO-PART SUPPORT CLAMP

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Application July 28, 1938, Serial No. 221,776

2 Claims. (Cl. 24—263)

The present improvements pertain to a simple and durable utility clamp designed to be economically stamped from heavy sheet metal in two primary pieces, and more particularly have to do with a detachable bracket clamp of this kind of which the respective gripping jaws may be tightly drawn together by jointed wing portions and thereby affixed to an overhanging ledge, a jutting molding, or the like interposed member. Each wing portion of both such clamp jaws is alignedly socketed for the reception of a demountable prop rod in axial parallelism with a thumb screw. It is generally preferred to resort to a pair of spaced clamps and provide for mated angularly shaped rods of which corresponding legs or prongs are respectively entered through their clamp sockets. The remaining overhanging prop legs may be spanned by cross rods or an auxiliary tray of considerable length, preferably of the meshed wire type.

Such clamp sustained tray finds application to a wide variety of household purposes including an extension for table edges, for flower pot or the like shelves attached to a window sill, a garment dryer mounted on a fixed pipe, also as a sad iron support or holder, especially when the latter is applied to the board of a foldable ironing stand, or the like sundry uses.

The object of my invention is to devise an inherently simple and serviceable clamp together with an associated prop rod of the character indicated that shall be capable of being cheaply fabricated on a productive basis at a sufficiently low factory cost to provide for a profitable chain store item. A further aim is to afford a neat two-part clamp adapted to firmly grip a suitable portion of different household appliances and thereby allow of conveniently attaching trays, shelves, or the like article supports in close adjacency thereto where such fixtures were not originally designed for any improvised extensions.

Reference is had to the accompanying one sheet drawing that is illustrative of alternative embodiments, and in which:

Fig. 1 represents a cross-sectional view of my assembly as clamped to a support indicated in dotted outline, and Fig. 2 is a top view thereof without support representation.

Fig. 1A shows a sectional detail of my clamp taken along line 1A—1A of Fig. 2.

Figs. 3 and 4 respectively detail opposed end views of Fig. 1.

Fig. 5 depicts in smaller scale, a plan view of a wire tray provided with mated prop rods that are intended to cooperate with different clamps, and Fig. 6 shows an edge view of such tray, the associated clamp being represented in dotted outline.

Fig. 7 is an end view of said tray as operatively installed on an ironing board, said tray being adapted to shift from its full-lined operative position into a dotted stored position.

Fig. 8 is illustrative of a modified clamp application.

Referring first to Figs. 1 to 4, the members of this two-part clamp preferably comprise an elongated male and a female jaw plate respectively designated as 11 and 10 that are adapted to be readily stamped as counterparts by simple die means from relatively heavy gauge sheet metal such as continuous strip stock. The male jaw plate 11 may be made up as a doubly furrowed strap of the so-called Z-shaped type to include an integral flat clamping wing 12 whose extremity may be upturned into a spacer lug 13 having a tongue extension as at 14. The female member 10 may be similarly formed and provided with a laterally offset wing 15 that terminates in a recessed edge 16. The mated tongue 14 engages the edge recess 16 to constitute a virtual hinged or the like wing interconnecting knuckle joint that is wholly and neatly confined between the clamp parts.

When assembled, the respective superimposed jaw plate portions of my clamp are kept more widely spaced apart than are their laterally offset wing portions. The corner regions of one or both jaw extremities may be equipped with inturned teeth 17 arranged to bitingly grip into a clamped board edge, ledge, molding or the like support means 18. The respective web components 42 and 43 of my stamped straps reversely bear as shoulders upon the longitudinal edge of such gripped ledge to counteract lateral displacement or bodily shift on part of the installed clamp. One jaw wing such as 15 may be tapped at 20 and the other jaw wing apertured at 20A to freely enter the shank of the shouldered thumb screw 21 for engagement with the tapped hole, as shown. To one side of the screw axis, each of the respective wings are also apertured in registry to provide the aligned sockets 22 and 23 (see Fig. 1A) for the reception of removable prop rods presently to be described. The jaw spacing is made adjustable to a limited extent about the aforesaid hinged wing joint by a proper setting of the clamping screw 21. The oblique medial web regions 42 and 43 of my jaw straps snugly abut opposite board edges to steady the clamped jaws

and the respective wing portions 12 and 15 lie outwardly beyond such edge confines. The specific shape and size of my two-part clamp will depend upon the heft of the ledge thickness T (see Fig. 1).

Referring now to Figs. 5 to 7, a pair of such right hand and left hand clamps 19R and 19L are shown applied to the longitudinal edge of an ironing board 24 for sustaining a sad iron holder or tray, collectively designated as 25. This tray may be equipped with mated angular prop rods 26 and 27 formed from wire in slightly different embodiments. The rod 26 may comprise a piece of flat or round wire that is doubled upon itself and shaped to provide for a round nosed prong component 28. The sharp U-turn of the other wire rod 27 is shown reversed and with the duplex prong ends 29 slightly sprung apart and arranged to snugly snap into its clamp sockets in latch fashion for tray retainment purposes. The sharp rod elbow restricts the enterable prong length. The aligned wing sockets 22 and 23 are elongated crosswise of the jaw length to accommodate such unsymmetrical prong profile but it is not essential that each prong extend through both wing sockets except for more adequate securement against rod tilt.

In order to build up a rectangular skeletonized superstructure or the like latticed shelf means upon the outwardly extended portions of the mated prop rods, I may fixedly mount thereacross a series of evenly spaced bridge pieces such as the wire 30 of which the respective ends may be upturned and spot welded or otherwise secured to an open ended rim forming guard rail 31 for such tray, as shown. The respective ends of such reenforcing wire may be placed inwardly to terminate toward the ironing board 24 to leave a gap therebetween, the plane of the bridge pieces being preferably made to align with the top face of the board as in Fig. 7. A hot flat iron may without interference be smoothly slid onto or off the tray bottom between the spaced clamps and through the rim gap without having to bodily lift the iron. To this end, the inner bridge piece 30 is kept closely spaced in parallelism with the longitudinal edge of said top face.

The board 24 is preferably provided with a collapsible leg understructure that is schematically indicated at 32. Prior to folding the legs, my tray prongs 28 and 29 are intended to be withdrawn out of their respective clamp sockets and reentered so as to reverse the projecting tray into its inactive dotted position 25' wherein it overlies the board. The split prongs such as 29 retain this stowed tray against inadvertent release while the leg understructure remains collapsed. Furthermore, the clamps may remain demountably fastened on the board edge and the tray made ready for use without having to relocate the tray clamp spacing.

Fig. 8 shows still another application of the same clamp structure. Here a pipe 35 may be bracketed at 36 in any suitable manner to the side wall 37 and has a single two-part clamp 38 operatively applied thereto, this clamp being substantially identical with Fig. 1. The prong end 34 of a modified angular prop rod 39 may again be entered into or through the registering wing sockets of such clamp. The upper prong region may be sharply offset to serve as an abutment or elbowlike stop element 40 from which the remainder of the rod may project obliquely upward to form a stanchion. A series of cross bars 41 may be transversely welded or otherwise secured to such stanchion for garment drying, towel rack or the like household needs.

By further spreading the clamps 19R and 19L of Fig. 6, the tray 25 may be correspondingly elongated. It is the intent to fabricate such latticed trays in a few standardized lengths that all cooperate with one and the same universal clamp design. This hingedly connected two-part clamp being made up from heavy stock, does not warp or otherwise spring the plates thereof out of shape when tightly clamped in place. The use of such separately stamped parts also affords a wide adjustment without correspondingly straining the metal straps or tending to bring about rupture by fatigue after being subjected to repeated clamping. As intimated, my self-contained clamp is also serviceable for many other household and the like purposes as applied to any jutting ledge of moderate thickness, particularly so where lack of room forbids the use of the ordinary triangular shelf bracket that requires an extended flat face for its leg securement.

The foregoing disclosure makes evident that the present improvements more largely reside in the socketed two-part clamp members. As will be understood by those skilled in this art, such structural refinements also find application to analogous purposes and it will be obvious that the details and disposition of my clamp and rod may be modified in likewise carrying out the illustrative embodiments, all without departing from the spirit and scope of the invention hereinbefore described and more particularly pointed out in the appended claims.

I claim:

1. In a two-part clamp assembled to grip therebetween a supporting ledge of predetermined thickness shaped to include opposed face edges, a pair of superimposed sheet metal straps respectively comprising counterparts of Z-shaped longitudinal profile and each such strap having a single ledge gripping jaw plate component, a substantially parallel wing component provided with a prop receiving socket, and a web component that integrally connects such jaw plate in offset relation to its corresponding wing, the respective webs being reversely disposed to shoulder against a contiguous ledge edge with said wings overhanging outwardly from said ledge in laterally spaced relation at a lesser distance than the ledge thickness and the respective sockets of which wings are aligned in axial registry, a single hinged lug bridgingly confined between the spaced wings in alignment with the outer marginal edges thereof, and a clamp screw operatively entered through the respective wings inwardly of said lug in closed lateral adjacency with the respective wing sockets and serving to positively retain the shouldered webs against relative displacement about the aligned socket axes when the clamp parts operatively grip said ledge.

2. In a two-part clamp assembled to grip therebetween a supporting ledge of predetermined thickness shaped to include opposed face edges, a pair of superimposed sheet metal straps respectively comprising counterparts of Z-shaped longitudinal profile and each such strap having a single flat jaw plate component provided with ledge gripping prong means, a substantially parallel wing component, and a web component that integrally connects such jaw plate in offset relation to its corresponding wing, the respective webs being reversely disposed to shoulder against a contiguous ledge edge with said wings overhanging outwardly from said ledge in laterally spaced re-

lation at a lesser distance than the ledge thickness and which wings are respectively provided with registering prop engaging means, a single hinged lug bridgingly confined between the spaced wings in alignment with the outer marginal edges thereof, and a clamp screw operatively entered through the respective wings inwardly of said lug in close lateral adjacency to the respective wing sockets and serving to positively retain the shouldered webs against relative displacement when the clamp parts operatively grip said ledge

NELLIE C. McGANN.