June 5, 1956 B. W. GUYSI ET AL 2,749,073

UTILITY CLAMP AND HOLDER

Filed June 24, 1952

Fig. 1

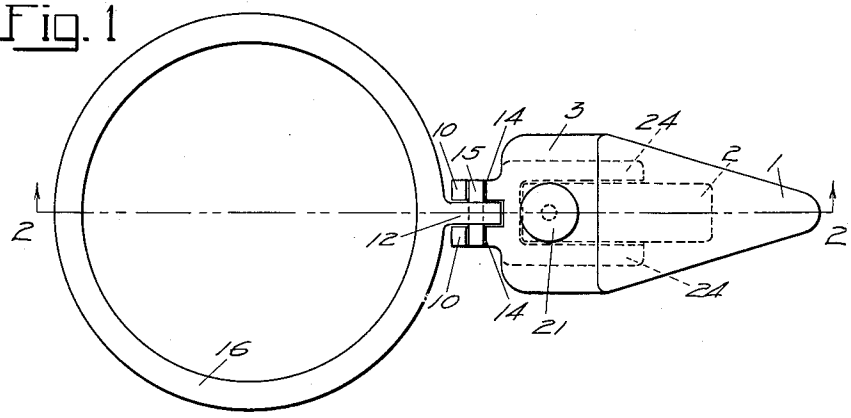


Fig. 2

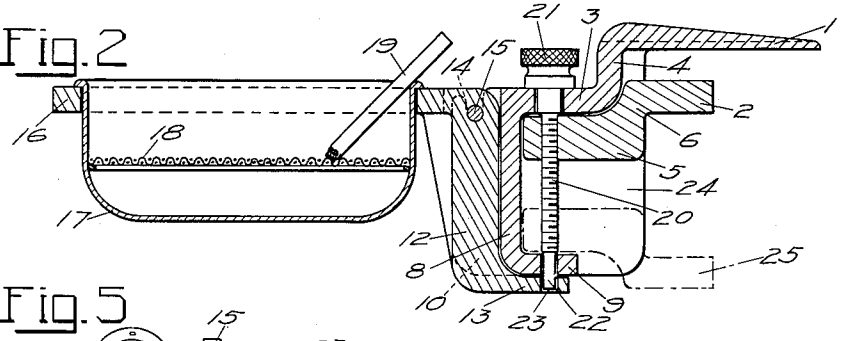


Fig. 5

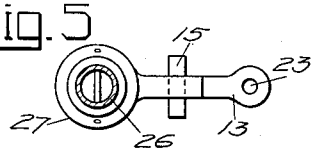


Fig. 4

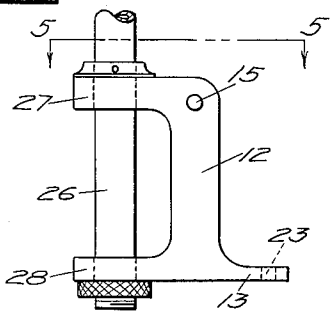
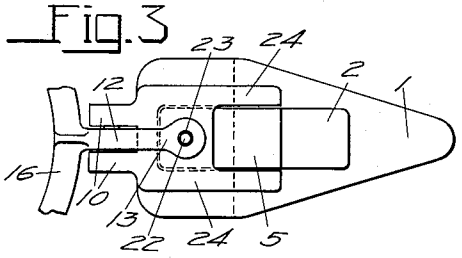


Fig. 3



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United States Patent Office

2,749,073

Patented June 5, 1956

2,749,073

UTILITY CLAMP AND HOLDER

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Application June 24, 1952, Serial No. 295,196

8 Claims. (Cl. 248—226)

This invention relates to a utility clamp and holder, and has for one of its objects the provision of a simple, economically made clamp that is readily and quickly adapted to be releasably secured to the top of a card table or similar support at its edge, and which clamp includes means for releasably securing to the top of a card table or similar support at its edge, and which clamp includes means for releasably securing a holder for an ash tray or other suitable load, to said clamp.

Another object of the invention is the provision of a utility clamp that is adapted to be releasably clamped to table tops of different vertical thicknesses, and which clamp includes a single finger actuatable screw that is adapted to both secure the clamp to the table top and to secure a holder thereto, and which screw is readily accessible from above for manual turning, yet is positioned below the plane of the upper surface of the clamp so as to be out of the way.

A still further object of the invention is the provision of a pair of clamping jaws that are adapted to grip a table top, at its edge, therebetween, with a screw connecting the jaws for movement of the lower jaw upwardly toward the upper jaw when the latter is against the upper surface of the table for clamping said top between said jaws, and which upper jaw has an extension rigid therewith supporting a holder for swinging from a position locked to an unlocked position with said screw arranged to hold the holder in locked position as long as the jaws are clamped to the table.

Other objects and advantages will appear in the description and in the drawings.

In the drawings,

Fig. 1 is a top plan view of the clamp and holder the latter being suitable for holding an ash tray, but the ash tray being omitted.

Fig. 2 is a cross sectional view taken along line 2—2 of Fig. 1, the ash tray being also shown in cross-section, and the lower clamping jaw on the clamping device being indicated in dot-dash lines in an alternative position.

Fig. 3 is a bottom plan view of the clamp and a portion of the holder.

Fig. 4 is a view showing a holder adapted to support a post instead of an ash tray.

Fig. 5 is a sectional view taken along line 5—5 of Fig. 4.

In detail, the clamp comprises an upper jaw 1 and a lower jaw 2, having their clamping surfaces in opposedly facing relationship.

The upper jaw 1 has an end portion 3 integrally connected with one end of jaw 1 by a vertical offset section 4, so that said end portions 3 is in a horizontal plane below said jaw 1.

The jaw 2 also has an end portion, designated 5, and which portion 5 is below end portion 3, and is offset downwardly relative to jaw 2 by a section 6 that integrally connects the jaw 2 with the portion 5.

A vertically downwardly extending extension 8 is integral with end portion 3, connecting with the latter along an edge of portion 3 that is remote from the jaw 1. Thus

extension 8 extends downwardly past end portion 5 on jaw 2, and at its lower end it is formed with a projection 9 that projects below end portions 3, 5.

Integral with the extension 8 and at the side thereof opposite jaws 1, 2 are a pair of vertically extending, horizontally spaced ribs 10.

Disposed between ribs 10 and alongside the extension 8 is a holder element 12. This element 12 has a laterally projecting part 13 integral therewith at its lower end, and which projection extends below the projection 9.

The upper ends of the ribs 10 are formed with upwardly opening, horizontally aligned recesses 14 in which are received the projecting ends of a pin 15 that extends through the upper end of element 12 of the holder.

The upper end of said holder has a lateral projection 16 that is shown in Figs. 1, 2, 3 as a ring or annular member adapted to support an ash tray 17, or other load therein. In Fig. 2, said tray is seen to have a screen 18 therein spaced above the bottom of the tray and below the upper rim of the latter for holding a cigarette 19 or the like therein with the burning end of the cigarette on the screen so it will stay lit. As the cigarette burns down it will descend into the tray and will not fall outwardly onto the floor.

The end portions 3, 5 and the projection 9 and part 13 are formed with aligned openings for passing a vertical screw 20 therethrough. However, the openings in the upper end portion 3, projection 9 and part 13 are unthreaded. The opening in the end portion of the lower jaw is threaded and its threads are in threaded engagement with the threads on the screw.

The upper end of screw 20 above the upper end portion 3 is formed with a knurled head 21 for easy grasping by the fingers of the hand for rotating the screw, and due to offset 4, said head is below the level of the upper surface of the jaw 1 so that it will not catch on the sleeve of a garment or other objects that move over the clamp.

In operation, the screw 20 is rotated until jaw 2 is moved downwardly a sufficient distance to enable the marginal portion of the table top to slip between said jaws, and then it is tightened to secure the clamp and the holder to the top.

In order to remove the holder, it is only necessary to turn screw 20 a sufficient distance to enable the screw to be pulled upwardly until its lower end 22 is out of the opening 23, after which the part 13 can be readily swung from below the projection 9 about the axis of pin 15, and the holder including whatever it carries, such as tray 17, can be removed.

It is pertinent to note that vertical, horizontally spaced guide members 24 are below jaw 1 and integral therewith, and that the end portion 5 of jaw 2 slides vertically between said guide members.

The offset 6 of jaw 2 enables the lower jaw to be reversed, as indicated in dot dash line position 25 (Fig. 2), thus enabling the clamp to be used on an extremely thick table top. In its full line position, as seen in Fig. 2, the clamp will be adapated to grip a thin top. Thus the clamp may be used in places where an ordinary clamp would be inoperative.

As seen in Figs. 4, 5, the holder can be changed to carry a post 26, which may in turn carry a lamp or other load. The holder itself is identical with that of Figs. 1 to 3, except that instead of a large ring 16, it may have a small annular projection 27 through which the post 26 extends, and a lateral projection 28 at lower end of the holder may be apertured for the lower end of said post.

The numbers used in Figs. 4, 5 are identical with those used for the holder of Figs. 1 to 3 where the same elements are shown.

From the foregoing, it will be apparent that the holder may be modified to carry different loads.

We claim:

1. A utility clamp comprising; a pair of jaws having clamping portions provided with opposed clamping surfaces and end portions at one of the corresponding ends of said clamping portions integral with the latter and in opposed relation, an angular extension rigid with one jaw of said pair extending past the other jaw of said pair, a screw extending rotatably through the said end portion of said one jaw and threadedly extending through the end portion of said other jaw for movement of said other jaw toward said one jaw upon rotation of said screw, guide means respectively on said end portions connecting them against rotation of said portions relative to but for movement of said portions toward and away from each other upon rotation of said screw in one direction or the other, a lateral projection on the end of said extension that is remote from said end portion on said one jaw and one end of said screw being rotatable in said projections, a holder carried by said one jaw but separable therefrom, and means including said one end of said screw for releasably holding said holder to said one jaw, said last mentioned means further including a pin on said holder in engagement with said end portion of said one jaw.

2. A utility clamp comprising; a pair of jaws having clamping portions provided with opposed clamping surfaces and end portions at one of the corresponding ends of said clamping portions integral with the latter and in opposed relation, an angular extension rigid with one jaw of said pair extending past the other jaw of said pair, a screw extending rotatably through the said end portion of said one jaw and threadedly extending through the end portion of said other jaw for movement of said other jaw toward said one jaw upon rotation of said screw, a holder carried by said one jaw but separable therefrom, and means including said screw for releasably securing said holder to said one jaw, said holder being alongside said extension, spaced ribs on said extension and said end portion of said other jaw extending slidably between said ribs.

3. A utility clamp comprising; an upper jaw and a lower jaw respectively having end portions disposed one above the other, an angular extension rigid with the end portion on said upper jaw extending downwardly past the end portion on the lower jaw, a projection on the lower end of said extension extending below said last mentioned end portion, a holder adjacent to said extension extending vertically alongside the latter and having a part at its lower end extending below said projection, said end portions and said projection and said part being formed with vertically aligned openings, a screw extending through said openings, the openings in the end portion on said upper jaw and in said projection and said part being unthreaded for free rotation and axial movement of said screw therein and threads on the end portion that is on said lower jaw in threaded engagement with the threads on said screw, and cooperating means respectively rigid with said upper jaw adjacent to its end portion and on the upper end of said holder releasably securing said upper end to said upper jaw.

4. A utility clamp comprising; an upper jaw and a lower jaw respectively having end portions disposed one above the other, an angular extension rigid with the end portion on said upper jaw extending downwardly past the end portion on the lower jaw, a projection on the lower end of said extension extending below said last mentioned end portion, a holder adjacent to said extension extending vertically alongside the latter and having a part at its lower end extending below said projection, said end portions and said projection and said part being formed with vertically aligned openings, a screw extending through said openings, the openings in the end portion on said upper jaw and in said projection and said part being unthreaded for free rotation and axial movement of said screw therein and threads on the end portion that is on said lower jaw in threaded engagement with the threads on said screw, and cooperating means respectively rigid with said upper jaw adjacent to its end portion and on the upper end of said holder releasably securing said upper end to said upper jaw, and a lateral extension on said holder at its upper end projecting away from said upper jaw for carrying a load.

5. A utility clamp comprising; an upper jaw and a lower jaw respectively having end portions disposed one above the other, an angular extension rigid with the end portion on said upper jaw extending downwardly past the end portion on the lower jaw, a projection on the lower end of said extension extending below said last mentioned end portion, a holder adjacent to said extension extending vertically alongside the latter and having a part at its lower end extending below said projection, said end portions and said projection and said part being formed with vertically aligned openings, a screw extending through said openings, the openings in the end portion on said upper jaw and in said projection and said part being unthreaded for free rotation and axial movement of said screw therein and threads on the end portion that is on said lower jaw in threaded engagement with the threads on said screw, and cooperating means respectively rigid with said upper jaw adjacent to its end portion and on the upper end of said holder releasably securing said upper end to said upper jaw, said means comprising a lateral extending element on said holder and a projection on the end portion that is on said upper jaw, said last mentioned projection having an upwardly opening recess in which said element is positioned for upward movement out of said recess when the lower end of said screw is out of the opening in said part.

6. A utility clamp comprising; an upper jaw and a lower jaw respectively having end portions disposed one above the other, an angular extension rigid with the end portion on said upper jaw extending downwardly past the end portion on the lower jaw, a projection on the lower end of said extension extending below said last mentioned end portion, a holder adjacent to said extension extending vertically alongside the latter and having a part at its lower end extending below said projection, said end portions and said projection and said part being formed with vertically aligned openings, a screw extending through said openings, the openings in the end portion on said upper jaw and in said projection and said part being unthreaded for free rotation and axial movement of said screw therein and threads on the end portion that is on said lower jaw in threaded engagement with the threads on said screw, and cooperating means respectively rigid with said upper jaw adjacent to its end portion and on the upper end of said holder releasably securing said upper end to said upper jaw, a pair of horizontally spaced guide pieces integral with and extending between said projection and said upper jaw between which the end portion on said lower jaw is vertically movable.

7. A utility clamp comprising; an upper jaw and a lower jaw respectively having end portions disposed one above the other, an angular extension rigid with the end portion on said upper jaw extending downwardly past the end portion on the lower jaw, a projection on the lower end of said extension extending below said last mentioned end portion, a holder adjacent to said extension extending vertically alongside the latter and having a part at its lower end extending below said projection, said end portions and said projection and said part being formed with vertically aligned openings, a screw extending through said openings, the openings in the end portion on said upper jaw in said projection and said part being unthreaded for free rotation and axial movement of said screw therein and threads on the end portion that is on said lower jaw in threaded engagement with the threads on said screw, and cooperating means respectively rigid with said upper jaw adjacent to its end portion and on the upper end of said holder releasably securing said upper end to said upper jaw, the end portion on said

upper jaw being offset downwardly relative to the plane of said upper jaw, and said screw having a head disposed above the end portion of said upper jaw and below the level of the upper surface of said upper jaw.

8. A utility clamp comprising; an upper jaw and a lower jaw respectively having end portions disposed one above the other, an angular extension rigid with the end portion on said upper jaw extending downwardly past the end portion on the lower jaw, a projection on the lower end of said extension extending below said last mentioned end portion, a holder adjacent to said extension extending vertically alongside the latter and having a part at its lower end extending below said projection, said end portions and said projection and said part being formed with vertically aligned openings, a screw extending through said openings, the openings in the end portion on said upper jaw and in said projection and said part being interthreaded for free rotation and axial movement of said screw therein and threads on the end portion that is on said lower jaw in threaded engagement with the threads on said screw, and cooperating means respectively rigid with said upper jaw adjacent to its end portion and on the upper end of said holder releasably securing said upper end to said upper jaw, and a lateral

extension on said holder at its upper end projecting away from said upper jaw for carrying a load, said lateral extension on said holder being substantially annular, an ash tray removably supported in said extension having a screen spaced above the bottom of said tray for supporting the burning end of a cigarette thereon.

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