Jan. 1, 1952 A. SLOAN 2,580,855

TRAY ATTACHMENT FOR TABLES

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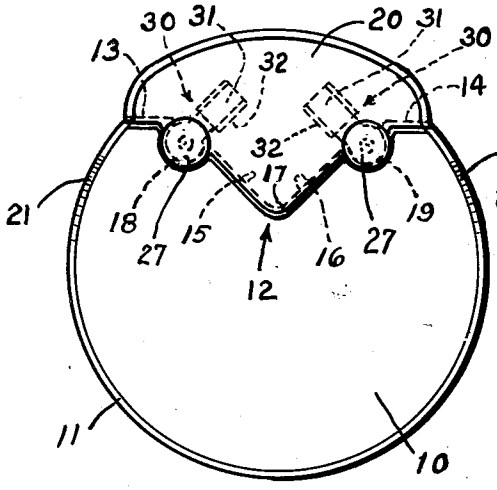

Fig. 1

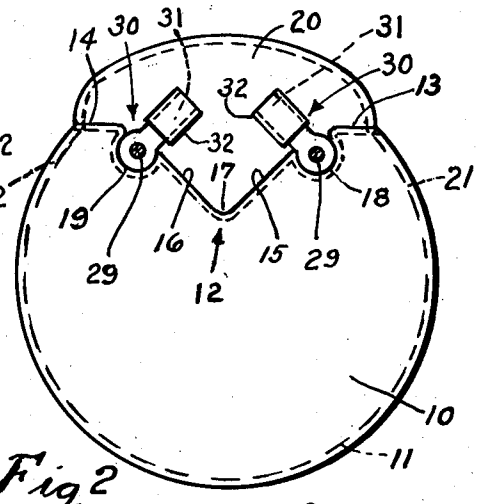

Fig. 2

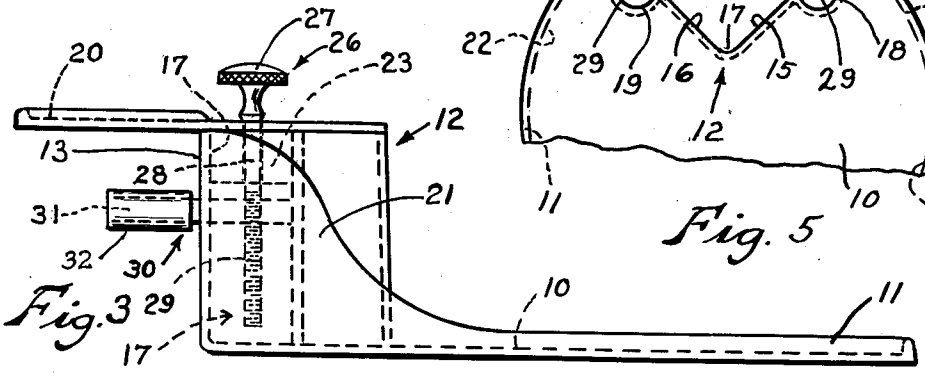

Fig. 3

Fig. 5

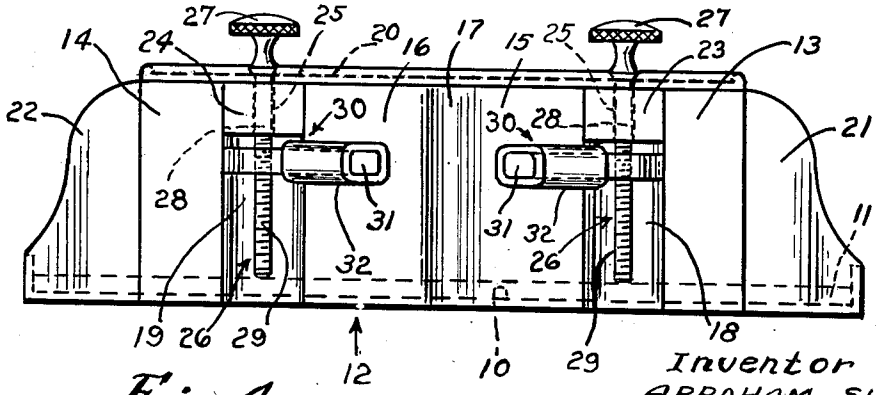

Fig. 4

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TRAY ATTACHMENT FOR TABLES

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3 Claims. (Cl. 311—103)

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The present invention relates broadly to supports for articles, and more particularly to dual adaptability tray attachments which may be demountably secured to either a side or a corner of a table top, for example, to support objects for the convenience of those using the table.

It is a common experience for those sitting at a table, particularly a card table, not to have room enough on the table top for all objects which it is desired to place there. Many persons smoke or have refreshments while playing cards, for example, but it is well known that where the playing surface must support not only cards but also ash trays, refreshments, etc., conditions may become crowded, dealing is difficult, glasses may be upset, and ash trays are frequently moved to get them out of the immediate way. In another aspect, tables are used for supporting dishes of food to be served buffet style, and it is a common experience for such dishes to require more surface than the top of a given table can provide. Card tables are often used for such purposes, but they offer a limited dish supporting area. In a still further aspect, tables of any type are not infrequently used under such conditions that they are crowded no matter how large their tops may be, and an example here is where papers are spread out on a table top. An ash tray or glasses may be in the way, even though the table per se can be said to have an extensive surface area.

To alleviate the above situations, i. e., to afford more supporting area in connection with the use of tables, for example, it is the principal object of the present invention to provide a tray attachment which may be demountably secured to either a side or a corner of a table top, thereby enabling the users to place on the attachment articles such as ash trays, cigarettes, refreshments, etc., where they will be out of the way and off the table but nonetheless readily accessible for use. It is to be particularly noted that any single given embodiment of the present invention thus has a dual adaptability, in that it may be secured to either a side or a corner of a table top.

It is a further object of the present invention to provide a tray attachment, of the type described in the immediately preceding paragraph, the article-supporting area of which is sufficiently low so that the construction may be used as a food or dish holder at which a child may sit without there being any necessity of elevating the height of his chair seat, as by books, cushions, or the like. Children may thus sit at the regular table used by their elders, but have their food

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dishes supported at a lower level for their convenience.

To the accomplishment of these objects and of such others as appear hereinafter, the various features of the present invention reside in various constructions, combinations, and arrangements of parts, all fully described in this specification and then set forth in the appended claims which possess advantages readily apparent to those skilled in the art.

The various features of the present invention will be readily understood from reading this specification in connection with the accompanying drawing which illustrates the best physical embodiment of the invention at present devised by the inventor and in which:

Fig. 1 is a view in plan of an embodiment of the present invention, the clamping members being shown in the position they occupy, preferably, when the embodiment is fitted to a corner of a table top;

Fig. 2 is a view in underside plan of the embodiment shown in Fig. 1;

Fig. 3 is an enlarged view in left side elevation of the same embodiment of the present invention;

Fig. 4 is an enlarged view in rear elevation; and

Fig. 5 is a detail view in underside plan corresponding to Fig. 2 but showing the clamping members in the position they occupy, preferably, when the embodiment is fitted to a side of a table top.

With reference to the drawing, the embodiment of the present invention there shown is provided with an article-supporting area part 10 which is substantially circular throughout the major portion of its extent but which may have any other suitable peripheral configuration. The top surface of the area 10 is illustrated as being planiform, and for about 260° is frontally provided with a bead 11 to prevent movement of articles off the area. Upstanding from the rear portion of the area 10 is a wall structure indicated generally at 12, which wall structure has a number of rear planiform and curved faces which will be described and which permit embodiments of the present invention to function in association with the corners and sides of table tops.

The wall 12 is provided rearwardly with a pair of spaced co-planar faces 13 and 14, the plane of which is at substantially 90° to the upper surface of the area 10. Between and forwardly of the faces 13 and 14 there are located forwardly con-

verging faces 15 and 16 to form a forwardly converging V-shaped recess 17. The faces 15 and 16 are disposed at substantially 90° to each other and to the upper surface of the area 10, and with this construction it will be seen that the faces 15 and 16 are each at substantially 45° to the plane of the co-planar faces 13 and 14. Joining the rear ends of the faces 15 and 16 and the inner ends, respectively, of the co-planar faces 13 and 14 are two forwardly extending, vertically disposed, and rearwardly open cylindrical surfaces 18 and 19, respectively, which are located adjacent the respective sides of the recess 17 and form guideways for the vertical and lateral movement of the forward ends of clamping members, as will be described.

The structural elements above referred to are further provided with a lip 20 which extends rearwardly from the front and top of the wall structure 12 so as to overlie the co-planar wall rear faces 13 and 14, the forwardly converging wall rear faces 15 and 16 which together form the forwardly converging recess 17, and also the cylindrical guideways 18 and 19, and as indicated in Fig. 3, the under face of the lip 20 is planiform and at substantially 90° to the co-planar rear faces 13 and 14 as well as to the faces of the V-shaped recess 17. The foregoing structure is completed by a curved vertical wall portion 21 and a corresponding curved vertical wall portion 22 which extend forwardly and downwardly from the outer ends of the co-planar rear faces 13 and 14, respectively, and merge with the beading 11.

By reason of the structure so far described, it will be seen that the illustrated embodiment of the present invention may be associated with the corner of a table top in such manner that the under face of the lip 20 may engage the upper surface of the table top flatwise while the faces 15 and 16 forming the recess 17 engage flatwise the adjacent side portions of a corner of the table top. This is possible without interference by the co-planar wall rear faces 13 and 14 because the loci of the cylindrical guideways 18 and 19 cause the surfaces 13 and 14 to be, respectively, spaced outwardly from the planes of the surfaces 15 and 16.

On the other hand, it will also be seen that by reason of the structure so far described, an embodiment of the present invention may be associated with a side of a table top in such manner that the under surface of the lip 20 may engage the upper surface of the table top flatwise while the co-planar rear faces 13 and 14 of the wall 12 engage flatwise the side of a table top. This is possible without interference by the surfaces 15 and 16 forming the V-shaped recess 17 because these surfaces lie forwardly of the plane of the surfaces 13 and 14 by reason of the loci of the cylindrical guideways 18 and 19. It is thus apparent that while the lip 20 engages the top surface of the table at all times, as it were, the co-planar rear wall faces 13 and 14 do not engage the table top when it is engaged by the wall faces 15 and 16, and the faces 15 and 16 do not engage the table top when it is engaged by the co-planar faces 13 and 14.

In order to secure the tray attachment above described demountably to a table top in either of the above corner or side positions, the present invention contemplates the use of clamping members which coact with the lip 20, and means for moving the clamping members both toward and away from the lip 20, i. e., into and out of

engagement with the under surface of a table top while its upper surface is engaged by the lip.

To this end the cylindrical guideways 18 and 19 do not extend upwardly to the lip 20 but instead terminate short thereof to provide horizontal wall structures 23 and 24 (Figs. 3 and 4) which are of considerable thickness. In each of these thickened portions 23 and 25 there is formed centrally a vertical passage 25 for the rotative reception of an elongated screw 26. With particular reference to Fig. 4, each screw 26 is provided with a head or knob 27 which is located above the lip 20, with a smooth portion 28 which is rotatably received in the passage 25 in each case, and with an integral threaded shank 29 which extends downwardly in the associated guideway 18 or 19 to a point near the bottom thereof. Threadedly mounted on each screw shank 29 and located in the associated guideway 18 or 19 is the rounded forward end of a clamping member 30, the rear end portion of which is indicated at 31 and is elongated and extends rearwardly beyond the associated wall faces 13 and 15, or 14 and 16, and therefore extends beneath the lip 20. Each clamping member 30 is provided rearwardly with a cover 32 of any suitable soft material such as rubber, heavy fabric, or the like, which may frictionally engage the rear portion 31 of each clamping member.

Each screw 26 may be of integral construction, as shown, or the knob 27 may be non-rotatively applied to the portion 28, and the clamping members 30 are mounted on the screw shanks 29 so as to be supported thereby from the guideways 18 and 19 in positions of parallelism with the under surface of the lip 20. By reason of this screw 26 and clamping member 30 construction, there is an operative connection between each knob 27 and the associated clamping member 30, and from this it follows that by turning the knobs 27 in one direction the clamping members 30 may be moved away from the lip 20 to permit fitting the construction as a whole to a table top edge or corner and that upon turning the knobs 27 in the opposite direction the clamping members 30 may be moved toward the lip 20 and thus into engagement with the under surface of the table top to coact with the lip 20 to clamp the table top between them. The shelf construction as a whole may thus be demountably secured to a table top in a firm manner, the covers 32 preventing the clamping members from marring the top by their grip.

The forward ends of the clamping members 30 are rounded in conformity with the cylindrical guideways 18 and 19, and these forward ends comprise elements extending forwardly of the rear faces of the wall 12 and fitting the guideways snugly but with a sliding fit, thereby rendering it unnecessary to provide a support for the lower end of each screw shank 29 to steady it when the knobs 27 are turned to move the clamping members 30. But the forward ends of the clamping members 30 are also rounded for a different reason. In mounting an embodiment of the present invention upon a table top, it is desirable that the clamping members extend rearwardly at substantially 90° to the edge face of the table top to which they are adjacent, and by the same token to the wall 12 rear faces which engage that table top edge face. Thus, when a corner of a table top is engaged by the faces 15 and 16 forming the V-shaped recess 17, there being two table top edge faces in this situation, the clamping members 30 are man-

ually turned laterally so as to be located at substantially 90° to the wall rear faces 15 and 16, respectively, as indicated in Figs. 1 and 2. When, however, the co-planar wall rear faces 13 and 14 engage a side edge face of a table top, the clamping members 30 are manually turned laterally so as to be at substantially 90° to the plane of the wall faces 13 and 14, as indicated in Fig. 5. The cylindrical surfaces of the guideways 18 and 19 and the rounded and conforming forward ends of the clamping members 30 readily permit this lateral position varying movement, and it will be seen that the outermost ends of the guideways 18 and 19, i. e., the mergence loci of these ends with the innermost ends of the co-planar surfaces 13 and 14, function as stops to limit lateral movement of the clamping members 30 to the position shown in Fig. 5, while the innermost ends of the guideways 18 and 19, i. e., the mergence loci of these ends with the rear ends of the wall surfaces 15 and 16, function as stops to limit the lateral movement of the clamping members 30 to the positions shown in Figs. 1 and 2. It will be apparent that upon turning the knobs 27 the clamping members 30 will move toward or away from the lip 20 regardless of the lateral position of the members.

The top surface of the lip 20 and the bottom surface of the area 10 are shown as planiform merely for illustrative purposes and not for purpose of any limitation as to the scope of the present invention. The same remarks apply in kind to the front surface of the wall 12 as a whole, for the general conformance of the front of the wall 12 to the respective rear faces thereof has been illustrated merely as an example of the kind of conformance that would usually be provided if the tray attachment as a whole, apart from the screws and clamping members, were manufactured by a molding operation. It will be apparent that embodiment of the present invention need not be molded, and that the front face of the wall 12 may have any contour desired.

The height of the wall 12 may be any practicable in view of the object of the present invention, but one satisfactory height has been found to be substantially three and one-half inches between the upper surface of the area part 10 and the under face of the lip 20. The low level for the area 10 which this height provides with respect to the upper surface of the table top permits ready accessibility to glasses, ash trays, and the like which are supported by the tray attachment in a location out of the way of the top surface of the table, and at the same time permits a child to sit at the table, as at meal time, for example, with his food supported at a lower level than the upper surface of the table top, thus frequently rendering it unnecessary to place a pillow, large book, or the like on the child's chair seat as is often the case where a child is seated at the same dinner table as his parents.

What is claimed as new is:

1. In combination in a tray attachment for tables: a part having an article-supporting area; a wall upstanding from a portion of said area and provided rearwardly with a pair of spaced

co-planar surfaces engageable with a side of a table top, said wall also being provided rearwardly with a pair of surfaces forming a forwardly converging V-shaped recess located between said co-planar surfaces and engageable with the adjacent outer side portions of a corner of a table top when said co-planar surfaces are out of engagement with the table top, said wall also being provided adjacent each recess side with a rearwardly open and forwardly extending guideway surface located between the rear end of said recess side and the inner end of the adjacent co-planar surface; a lip extending rearwardly from the upper portion of said wall and over the guideways for engagement with the upper surface of a table top when either said co-planar surfaces or said recess are in engagement with the table top; members engageable with the lower surface of a table top for coaction with said lip to clamp the tray attachment as a whole demountably to a table top, said members having portions extending from the guideways rearwardly of said wall and beneath said lip to effect said coaction and also having portions located in said guideways, respectively beneath the lip; and rotatable means for supporting said members from the guideways and moving said members toward and away from the lip.

2. Structure such as set forth in claim 1 characterized by the fact that a portion of the rotatable means for each member is located above the lip and over the associated recess.

3. Structure such as set forth in claim 1 characterized by the fact that said members are freely movable laterally to vary their positions relatively to said co-planar surfaces and to the sides of said recess, respectively, and by the fact that the rear ends of each guideway surface constitute stops limiting the lateral movement of the associated member from a position in which it is at substantially 90° to said co-planar surfaces to and from a position in which it is at substantially 90° to the associated recess side.

ABRAHAM SLOAN.

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