United States Patent [19]

Killinger

[11] **3,767,152**

[45] **Oct. 23, 1973**

[54] **TABLETOP CLAMP**

[76] Inventor: **William J. Killinger,** 4262 Lamont Dr., Kettering, Ohio 45429

[22] Filed: **June 28, 1972**

[21] Appl. No.: **267,011**

[52] **U.S. Cl.** ..... **248/226 E,** 24/84 B

[51] **Int. Cl.** **A47f 5/00**

[58] **Field of Search** ..... 248/226 R, 226 E, 248/205 R, 304, 308; 24/255, 81 B, 81 C, 84 B, 84 C, 84 R, 261 A, 261 B, 3 F, 243 AB, 243 R

[56] **References Cited**

UNITED STATES PATENTS

1,953,627	4/1934	Overholtz	24/81 B UX
3,304,042	2/1967	Ivandick	248/226 E X
1,856,847	5/1932	Gates	248/226 E
2,172,787	9/1939	Brownell	24/81 C X
2,461,071	2/1949	Mettenleiter	24/84 B X
3,266,111	8/1966	Abel	24/81 C
3,279,727	10/1966	Buttriss	24/81 B X
871,072	11/1907	Seidenopinner	24/81 C
1,955,476	4/1934	Torgersen	248/226 R X
1,751,198	3/1930	Franck	248/308

FOREIGN PATENTS OR APPLICATIONS

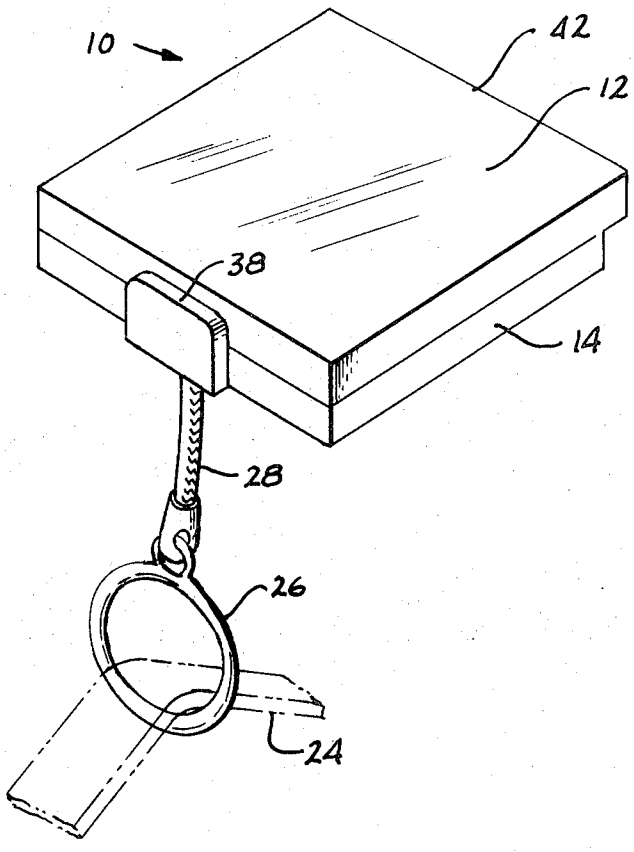
1,104,776	2/1968	Great Britain	248/308

Primary Examiner—J. Franklin Foss
Attorney—Roger S. Dybvig

[57] **ABSTRACT**

A one-piece clamp for suspending articles such as handbags from a tabletop or for clipping tablecloths on the tabletop. The clamp has plate-like legs relatively positioned to form an L-shaped bracket, the legs of which may be folded to a flat configuration. Clamping pressure is supplied by a tongue connected to one of the legs and pressing against the underside of the tabletop.

3 Claims, 4 Drawing Figures



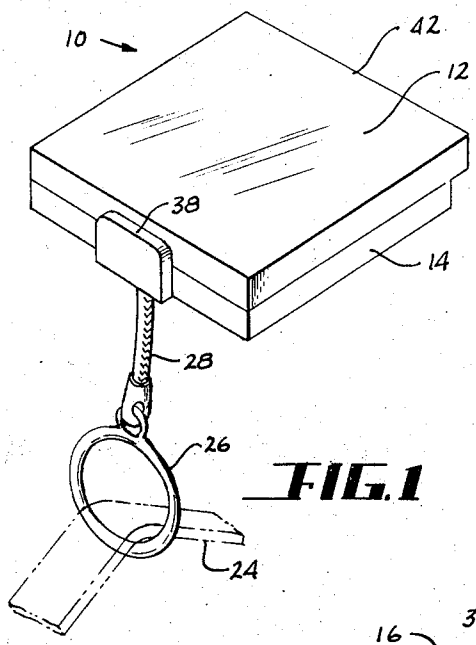


FIG. 1

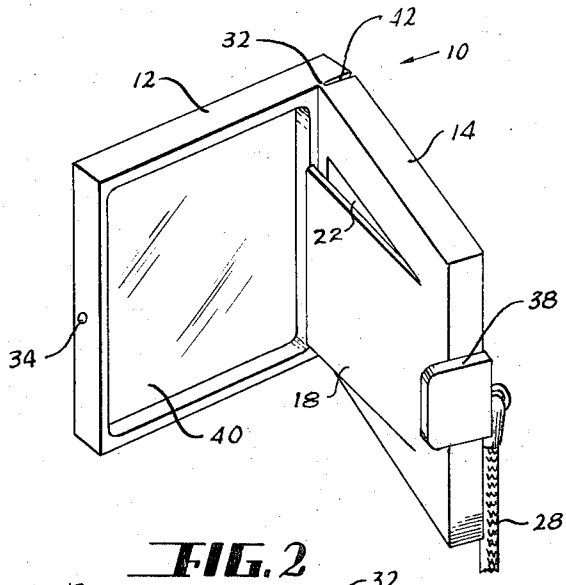


FIG. 2

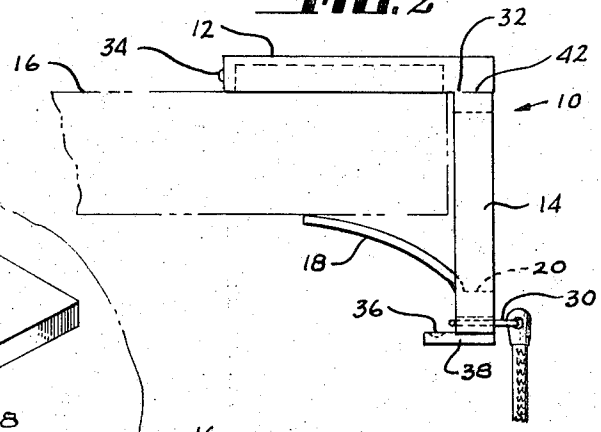


FIG. 4

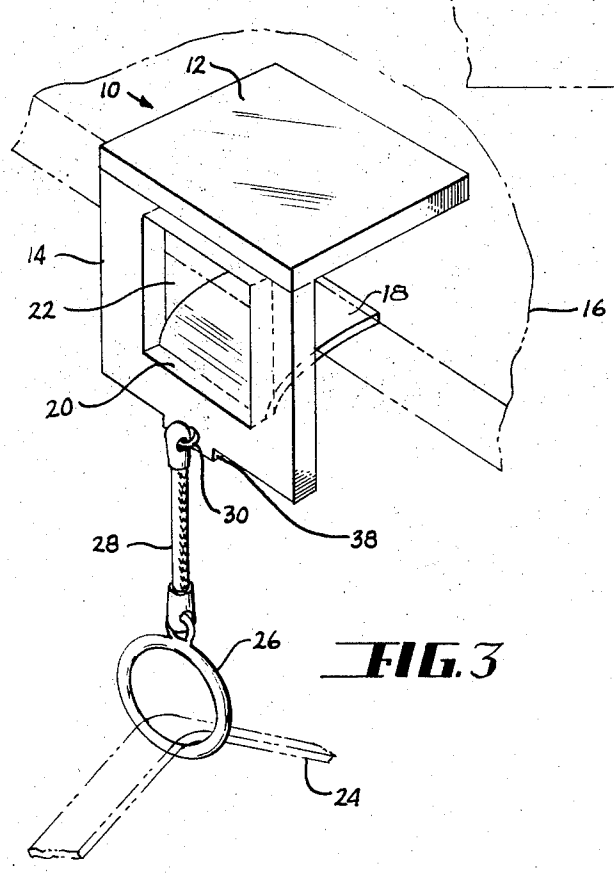


FIG. 3

TABLETOP CLAMP

BACKGROUND OF THE INVENTION

This invention relates to a novel clamp construction which may be used as a suspension clamp for suspending articles from a table or for temporarily securing tablecloths to a tabletop.

Clamp devices for attaching articles to tabletops or the like are known and one-piece devices are known. Examples of such are disclosed in the following U.S. Pat. Nos. 783,906, 1,530,180, 2,124,483, 2,920,369, 3,089,211 and 3,248,765. The known devices are either unduly expensive for the purpose or have an awkward shape which makes them inconvenient to carry about when not in use.

SUMMARY OF THE INVENTION

An object of this invention is to provide an inexpensive, simple clamp which may be used either for suspending articles from or clipping articles to a tabletop, which may be made in one-piece from polypropylene or the like plastic material, which is easily clamped to a tabletop and removable therefrom, and which may be folded flat for convenience in carrying or storing.

A clamp in accordance with this invention is generally L-shaped, the legs of the L-shape being plate-like members, one of which is adapted to engage horizontally along the upper surface of a tabletop, the other of which extends vertically along a marginal edge of the tabletop. A pressure applying tongue confronting the horizontal leg is connected to the vertical leg along the lower edge of an aperture therein. The clamp may be mounted on the table with one hand by gripping the side edges of the vertical leg by the thumb and middle finger, respectively, while engaging the tongue by the index finger extended through the aperture to bias it into engagement with the underside of the tabletop.

In the illustrated preferred embodiment, the entire clamp is molded in one piece from a plastic material such as polypropylene and the tongue is molded so as initially to have a relaxed condition substantially in the plane of the leg to which it is connected whereupon, when bent out of its relaxed condition, it is self-biasing to apply pressure to the underside of the tabletop. Also the plate-like legs are pivotally connected together to permit the legs to be folded one against the other when the clamp is not in use, the legs being provided with cooperating snap fastener means whereupon the clamp may be carried or stored with the legs folded flat.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of a tabletop clamp in accordance with this invention shown with a pendant for the strap of a lady's handbag, the clamp being illustrated in a folded condition as it would be when stored or carried.

FIG. 2 is a perspective view of the clamp of FIG. 1 unfolded or opened in preparation for clipping it to a tabletop.

FIG. 3 is a perspective view of the clamp and pendant with the clamp clipped to a tabletop.

FIG. 4 is a side elevational view of the clamp illustrated clipped to a tabletop as in FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The following description of this invention is in terms of the presently contemplated best use thereof, that is a clamp for a tabletop. It will be appreciated, however, that the clamp of this invention may be used for temporarily securing articles together or securing articles to members other than tabletops. To avoid a prolixity of terms, the terminology "tabletop" is used in the following description and claims although it is to be understood that this term is to be construed to apply to other members or articles to which the clamp of this invention may be advantageously applied. Furthermore, terms such as "upper", "lower", "horizontal" and the like are used for convenience, it being understood that such terms are merely relative.

With reference to the drawing, a clamp in accordance with this invention is generally designated **10** and comprises a first leg **12** and a second leg **14.** When engaged with a tabletop **16,** the legs **12** and **14** are oriented in an L-shaped configuration, the confronting faces of the legs **12** and **14** being relatively located at an included angle of substantially 90°, the first leg **12** engaging horizonally along the top of the tabletop **16** and the second leg **14** extending vertically along the side edge of the tabletop **16.** Clamping pressure is provided by a generally rectangular tongue **18** connected to a lower margin **20** of a centrally located aperture **22** in the vertical leg **14.** The particular usage of the clamp **10** illustrated in the drawing is for temporarily suspending a lady's handbag from the tabletop **16,** the strap, designated **24,** of the handbag extending through a ring **26** of a pendant **28** connected as by a wire ring **30** to the lower end of the vertical leg **14.**

The first leg **12** and the second leg **14** are preferably formed by molding them in one piece from a suitable plastic material, such as polypropylene, and are joined together by a web **32** of the same material. The web **32** is sufficiently thin that it permits the legs **12** and **14** to be pivoted or folded toward one another whereupon the confronting faces thereof may be brought into substantial engagement as illustrated in FIG. **1.** At such time the legs **12** and **14** can be temporarily secured together at the sides opposite the web **32** by cooperating interfitting means. As illustrated the interfitting means may consist of a ball **34** integrally formed on the end of the first leg **12** adapted to be snapped into a socket **36** in a flange plate **38** integrally formed on the corresponding end of the second leg **14.**

The first leg **12** is a relatively stiff plate which, as known to those familiar with polypropylene plastics, can be made adequately stiff if on the order of a quarter of an inch thick. Optionally the leg **12** may have a uniform thickness or, for purposes of utility or design, one or both faces of the leg **12** could be recessed. In the drawing the plate **12** is shown to have a rectangular recess **40** in its lower face. The recess **40** could, for example, house a mirror (not shown) or it could receive a suitable rubber or the like sheet (not shown) for providing a better frictional grip to the tabletop. The leg **14** is also a relatively stiff plate and the tongue **18** is substantially thinner than the body of the plate **14** so that the tongue **18** is relatively resilient. During the molding of the clamp **10,** the tongue **18** is preferably located inside the aperture **22,** with its outer face substantially coplanar with the inside face of the vertical leg **14.** Such molding technique will cause the tongue **18** to be self-biasing thereby to apply pressure to the underside of the tabletop when the clamp **10** is mounted thereon.

In practice the plates **12** and **14** are preferably positioned relative to one another at an included angle of precisely 90° when in clamping position although a slightly smaller included angle might be satisfactory. If the included angle exceeds 90° the clamp **10** would usually not be satisfactory because it would then have a tendency to slide off the tabletop **16.** To obtain the proper included angle, the web **32** extends along a horizontal pivot axis spaced from the outer edge of the horizontal plate **12,** whereupon an abutment surface **42** overhanging the tabletop is provided between the web **32** and the outer edge of the plate **12.** The web **32** is also connected to the inner edge of the top surface of the plate **14.** The top surface of the plate **14** thus acts as a stop surface against which the abutment surface **42** engages when the parts are in clamping position. These two surfaces can be formed to any desired mating configuration which prevents the plate **12** from being pivoted relative to the plate **14** beyond an included angle of 90°. For ease of manufacture, the mating surfaces are preferably planar, the surface **42** being coplanar with the lower surface of the plate **12.**

If the clamp **10** is to be used for suspending a lady's handbag from a tabletop, it may be carried around in folded flat condition as illustrated in FIG. **1.** The clamp **10** is preferably decorated to form an attractive accessory for the handbag. If the clamp is simply to be stored it would again most conveniently be folded flat. When it is to be used as a clamp or clip, the flange **38** may be bent to release the ball **34** from the socket **36.** Then, by gripping the side edges of the plate **14** between the thumb and the middle finger, the free end of the leg **12** is first placed on the tabletop and the tongue **18** bent so that its free end is substantially parallel to the plate **12** by extending the index finger through the finger access aperture **22.** The pressure exerted by the tongue **18** against the table need be just sufficient to maintain the L-shaped configuration of the legs **12** and **14.** Accordingly, the clamp **10** may be removed from the tabletop merely by gripping it with one hand and pulling it laterally away.

Although the unitary one-piece construction illustrated in the drawing is preferred, it will be apparent that the web **32** could be replaced by a piano hinge or hinges (not shown) and that the tongue **18** could be made from a relatively stiff material connected by a spring-biased hinge (not shown) of conventional construction to the face of the leg **14.** It is important, however, that the vertical leg be shaped to provide finger access to the tongue through the leg **14.**

Although the presently preferred embodiment of this invention has been described, it will be understood that within the purview of this invention various changes may be made within the scope of the appended claims.

Having thus described my invention, I claim:

1. A clamp for a tabletop comprising a horizontal leg adapted to overlie a tabletop and extend beyond an edge of the tabletop, a vertical leg connected to said horizontal leg and having an upper surface abutted against a lower surface of said horizontal leg projecting beyond the edge of the tabletop, said horizontal and vertical legs being pivotally connected together about a horizontal axis whereby said legs may be folded together with their inside faces in substantial engagement, interfitting means on said legs for releasably maintaining said legs folded together, and bias means for applying pressure pivotally connected to said vertical leg and extending from said vertical leg to the underside of said tabletop in confronting relation to the horizontal leg, said vertical leg being shaped to provide finger access to said bias means.

2. A clamp for a tabletop comprising an L-shaped bracket having two legs abutting one another at an included angle of substantially 90°, one of said legs being apertured, a resilient tongue connected to a margin of the aperture in said one leg, said tongue being bendable into a position whereat its free end is substantially parallel to the other of said legs, whereupon said other of said legs may be positioned on one surface of a tabletop with said one of said legs extending along the edge of said tabletop and with said tongue engaging the opposite surface of said tabletop and applying pressure thereto for retaining said clamp in gripping relation to said tabletop, said legs and said tongue being molded in one piece from plastic, said legs being joined by a web permitting said legs to be pivoted relative to one another from said L-shaped bracket configuration to a flat configuration.

3. A clamp for a tabletop comprising a horizontal leg adapted to overlie a tabletop and extend beyond an edge of the tabletop, a vertical leg connected to said horizontal leg and having an upper surface abutted against a lower surface of said horizontal leg projecting beyond the edge of the tabletop, and bias means for applying pressure pivotally connected to said vertical leg and extending from said vertical leg to the underside of said tabletop in confronting relation to the horizontal leg, said vertical leg being apertured to permit finger access to said bias means, said bias means comprising a resilient tongue, the lower edge of which is connected to said vertical leg along the lower edge of the aperture therein, said horizontal leg, said vertical leg, and said tongue being formed in one piece, said horizontal leg and said vertical leg being pivotally connected together by a web extending along the lower face of said horizontal leg and the upper inside edge of said vertical leg.

* * * * *