

April 25, 1967

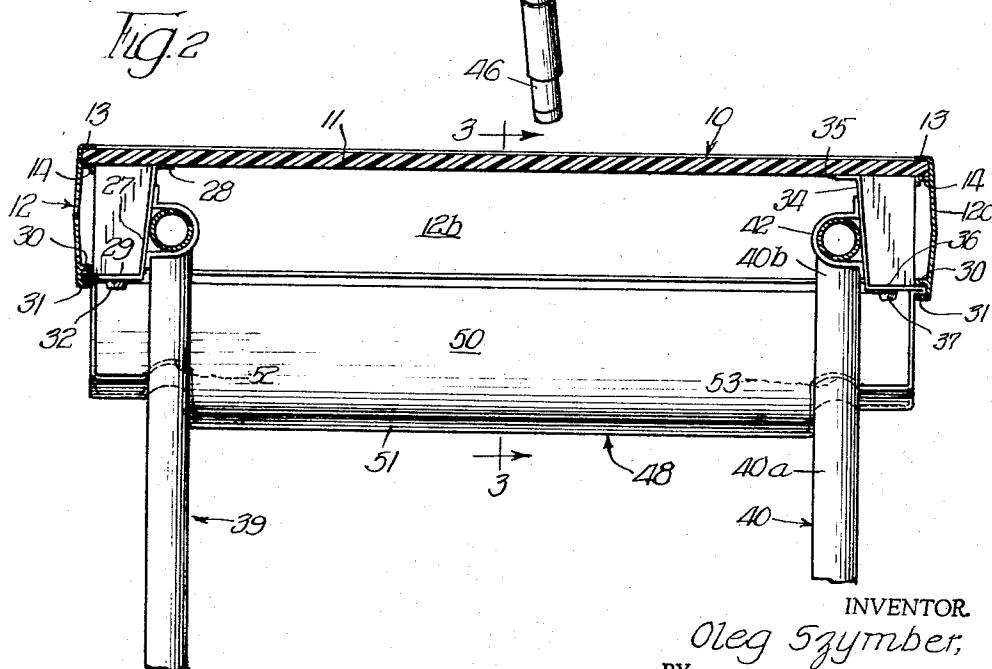
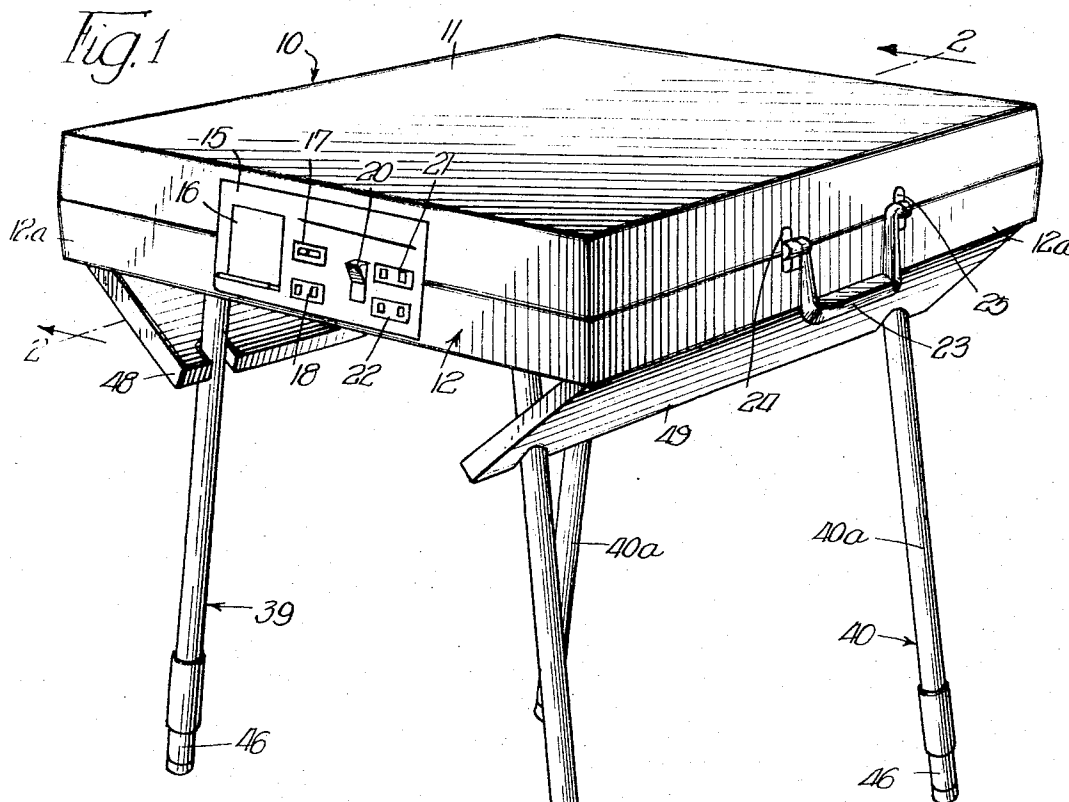
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3,315,621

STAND OR THE LIKE

Filed March 23, 1964

3 Sheets-Sheet 1



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3,315,621

STAND OR THE LIKE

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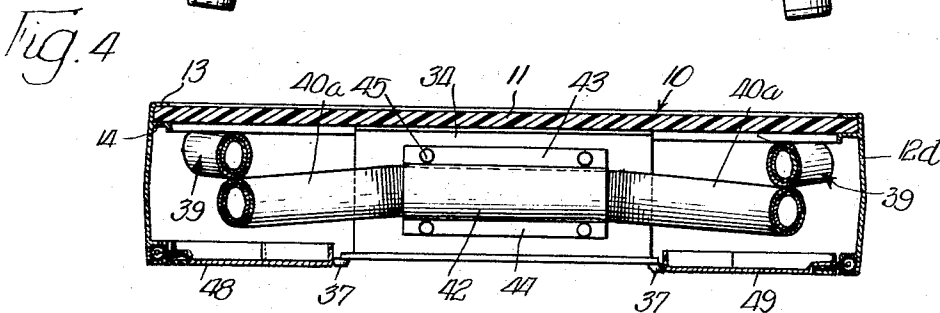
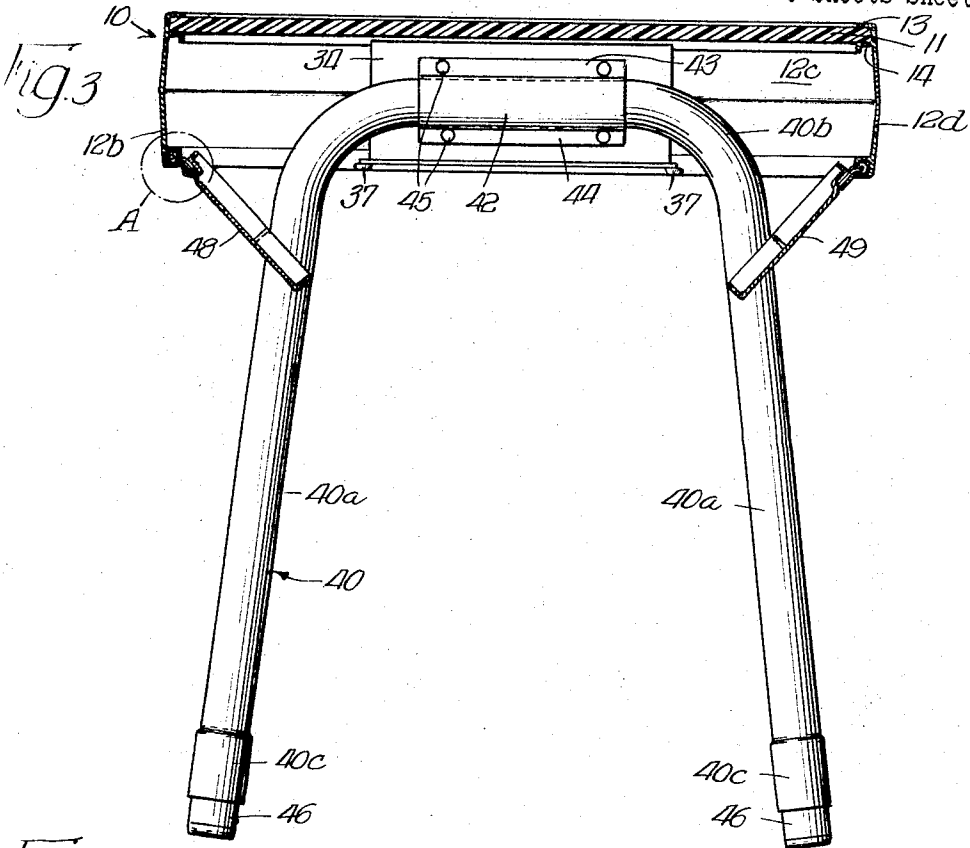
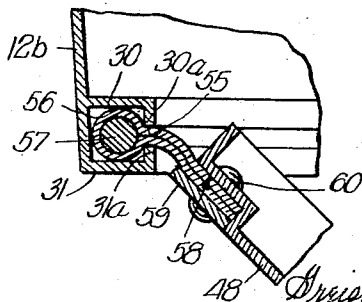


Fig. 5



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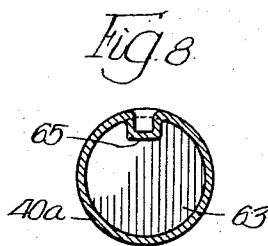
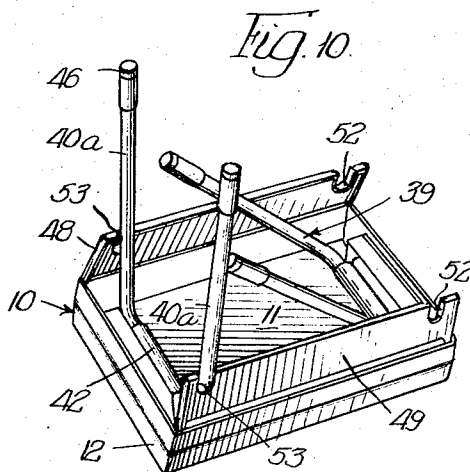
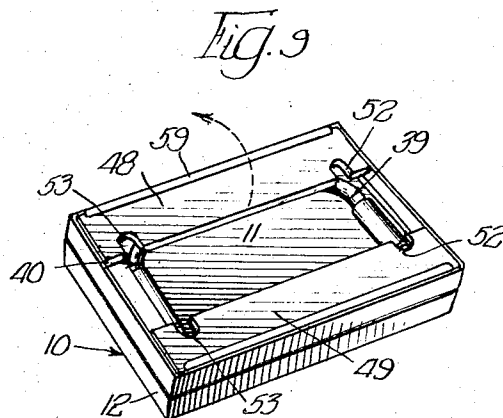
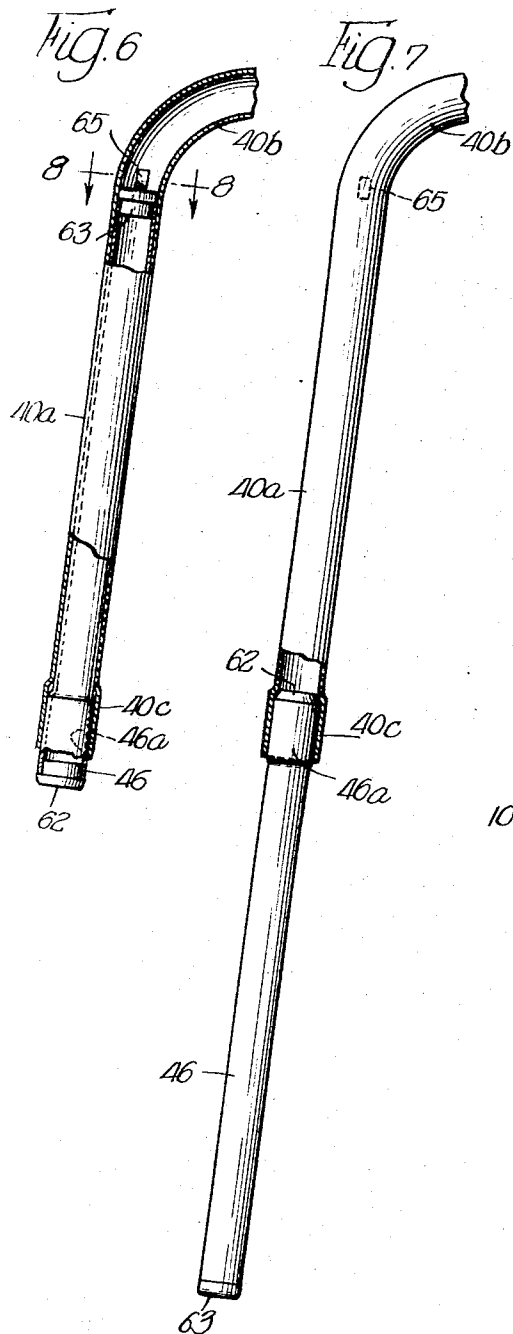
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3,315,621

STAND OR THE LIKE

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3 Sheets-Sheet 3



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3,315,621

STAND OR THE LIKE

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8 Claims. (Cl. 108—34)

This invention generally relates to devices characterized by elevated, horizontally supported, planar surfaces such as stands, tables, platforms, etc., and more particularly to certain novel improvements in such devices.

One object of the present invention is the provision of a stand or the like including a pair of folding U-shaped leg units and novel hinged flaps for bracing the leg units in their extended position and holding the same in their folded position.

Another object of the invention is the provision of a stand or the like including unique extension legs.

Still another object of the present invention is the provision of a stand or the like including new and improved hinge construction for hingedly connecting flaps to walls of the stand body.

These and other objects and advantages of the invention will become apparent from the following specification disclosing a preferred embodiment of the invention which is illustrated in the accompanying drawings.

In the drawings:

FIG. 1 is a perspective view of one embodiment of the stand or the like of this invention;

FIG. 2 is an enlarged vertical section taken along line 2—2 of FIG. 1;

FIG. 3 is a section taken along line 3—3 of FIG. 2;

FIG. 4 is a section similar to FIG. 3 but showing the legs in their folded position and the flaps in their closed position;

FIG. 5 is an enlarged view of the portion of the stand contained within the circle designated A in FIG. 3;

FIG. 6 is an enlarged, partially broken away elevation of a leg portion of one of the U-shaped leg units;

FIG. 7 is a view similar to FIG. 6 but showing the extension leg of the U-shaped leg unit in its extended position;

FIG. 8 is an enlarged section taken along line 8—8 of FIG. 6;

FIG. 9 is a reduced perspective view of the stand of FIG. 1 with the latter turned upside down and having the legs thereof in their folded position and the flaps thereof in their closed position; and

FIG. 10 is a perspective view similar to FIG. 9 showing the flaps in their open position, one U-shaped leg unit in its extended position and the other U-shaped leg unit in a partially unfolded position.

Referring now to the drawings, one embodiment of the stand of this invention will be seen to include a generally box-like body member generally designated 10. The body includes a rectangular, planar top 11, preferably made of "Masonite" material, and a one-piece band 12 bent in rectangular shape and forming side walls 12a through 12d of the body. Band 12 is preferably formed of suitable plastic material. The single band is bent at right angles by heat bending, and the ends of the band are secured together by suitable means. As noted in FIG. 2, band 12 includes integrally molded upper and lower flanges 13 and 14, respectively, defining a continuous groove which receives marginal portions of top 11. The elongated side walls defined by band 12 are slightly peaked at their longitudinal center lines for aesthetic purposes.

The embodiment of the stand shown for purposes of illustration is especially adapted to serve as a portable stand for photographic slide projectors. Side wall 12a supports a panel 15 which includes a slide viewing screen

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16 and an on-off switch 17 therefor. The panel also includes an auxiliary electrical outlet 18. Panel 15 further includes a rocker switch 20 having one "off" and two "on" positions, which switch is associated with a "projector electrical outlet 21 and a room "light" electrical outlet 22. An electrical cord (not shown) extends to panel 15 for supplying current to the viewing screen and the various electrical outlets. When the electrical cord of the stand is plugged into a wall outlet, for example, movement of rocker switch 20 to one on position thereof supplies current to the projector electrical outlet only, and movement of switch 20 to the other on position thereof supplies current to the room light outlet simultaneously with cutting off current to the projector outlet. The projector stand illustrated also includes a handle 23 swingably connected to side wall 12d of body 10 by suitable brackets 24 and 25.

Panel 15 and its associated components and handle 23 are not described in detail herein as these parts of the projector stand form no part of the present invention. It should be realized that although the invention is shown embodied in the form of a stand for a slide projector, the invention is not to be so limited. The features of the present invention, to be hereinafter described and claimed, apply equally to any form of stand, table, platform, or the like as will become apparent from the following specification.

As noted in FIG. 2, an inner wall member 27 has an upper flange 28 secured to the underside of top 11 by suitable fastening means (not shown). Plate 27 has a lower flange 29 which extends toward side wall 12a of the body and is received in a groove formed by upper and lower flanges 30 and 31, respectively, which flanges are molded integrally with band 12 along the entire length of the same. Plate 27, which is in spaced relation with panel 15, has a length approximately the same as the length of the latter. (Plate 15 and its associated switches and outlets are not illustrated in FIG. 2.) Plate 27 has intumed ends (not shown) which define with plate 27, side wall 12a and top 11 a compartment for the switches and outlets of panel 15. Lower flange 29 of plate 27 supports a pair of feet members 32, which feet support the stand under certain conditions as will be explained below.

A plate 34 identical to plate 27 is attached to body 10 adjacent side wall 12c. Plate 34 includes an upper flange 35 secured to the underside of top 11 by suitable fastening means (not shown). Plate 34 also includes a lower flange 36 secured within the groove formed by flanges 30 and 31 of band 12. Flange 36 supports a pair of feet 37.

A pair of generally U-shaped leg units, generally designated 39 and 40, are swingably secured to body plates 27 and 34, respectively. As each leg unit is of identical construction, only one unit, viz. leg unit 40, will be described in detail.

As noted in FIGS. 2 and 3, a generally horizontally disposed, U-shaped clip member 42 has outwardly extending side flanges 43 and 44 secured to wall 34 by suitable fasteners 45. Leg unit 40 includes a one-piece member defined by legs 40a connected together by a bowed bight portion 43. Bight portion 43 is rotatably received within U-shaped clip 42 thereby swingably mounting leg unit 40 to body 10. By reason of this construction, leg unit 40 is adapted to be swung from an extended position illustrated in FIGS. 1—3, to a folded position within the confines of body 10 as illustrated in FIGS. 4 and 9. Legs 40a each include an extension leg 46 to be explained in detail hereinafter.

A pair of flaps 48 and 49 are hingedly connected to respective side walls 12b and 12d. As both flaps are of identical construction, only one flap, namely flap 48, will be described in detail.

As best seen in FIGS. 2 and 3, flap 48, which may be of one piece molded construction, includes a wall 50 having a continuous flange 51 extending along the edges thereof. Flap 48 includes a pair of notches 52, 53 in one side edge thereof, which notches are adjacent respective opposite ends of the flap. Notches 52, 53 are adapted to receive legs 40a of the leg units for bracing the latter in their extended position as will be described below.

The construction for hingedly securing flaps 48 and 49 to respective side walls 12b and 12d of the body form one aspect of the present invention. FIG. 5 shows the construction for hingedly securing flap 48 to side wall 12b; this construction is identical to the hinge construction for securing flap 49 to side wall 12d.

Referring now to FIG. 5, flanges 30, 31 which extend along the length of wall 12b, define an elongated rectilinear groove. Flanges 30, 31 have respective inturned lips 30a, 31a thereby defining a long, narrow slot 55. A strip 56 of flexible material, such as polypropylene, having a length substantially the same as the groove extending along side wall 12b, is doubled upon itself longitudinally thereof and has its bight portion disposed within the groove. A rod 57, which may be made of metal, is disposed within the bight portion of the doubled flexible strip 56. The diameter of rod 57 plus twice the thickness of strip 56 is greater than the width of slot 55 so as to prevent separation of the strip from the groove. Strip 56 and rod 57 are prevented from moving longitudinally of the groove by reason of frictional engagement with the same and by reason of abutting engagement of the ends of rod 57 with side walls 12a and 12c.

As noted in FIG. 5, flap 48 has a recessed portion 58 extending along the side edge thereof opposite the edge having the leg receiving notches therein. Marginal portions of strip 56, which are in coextensive contact, and an overlying strip 59 are disposed in recess 58 and secured therein by a number of fasteners 60.

This hinge construction permits swinging movement of flap 48 between a closed position, illustrated in FIG. 4, and an open inclined position illustrated in FIG. 5. The hinge construction is simple and inexpensive to construct and relatively trouble free. The polypropylene material used to form strip 56 provides for a long life of the hinge. Strip 56 is of course bendable and pliable to permit swinging movement of flap 48. However, the strip has sufficient resiliency so that marginal portions of the same tend to assume their unbent condition thereby to urge and hold flap 48 in its closed position as illustrated in FIGS. 4 and 9.

The extension leg associated with each leg of the leg units of the stand of this invention will now be described. One leg 40a and its associated extension leg 46 are illustrated in FIGS. 6-8; it will be understood that the leg construction illustrated in these three figures is typical of the other legs of the stand.

Now referring to FIG. 6, it will be seen that leg 40a is hollow and has an enlarged portion 40c at its distal end. Extension leg 46 is nested or telescopingly engaged within hollow leg 40a. The outside diameter of extension leg 46 is slightly less than the inside diameter of leg 40a so as to permit easy insertion and removal of the extension leg. Extension leg 46 includes an enlarged portion 46a at one end thereof, which enlarged portion is adapted for snug engagement within enlarged portion 40c of leg 40a. A pad 62, which may be made of hard rubber or like material, is snugly fitted within the end of the extension leg defined by enlarged portion 46a. A similar but slightly smaller in diameter pad 63 is snugly received within the other end of extension leg 46.

As best seen in FIGS. 6 and 8, leg 40a includes an inwardly extending tab or projection 65 at the portion thereof joining with bight portion 40b of the U-shaped leg unit. This projection abuts pad 63 of the extension leg and acts as a stop for limiting insertion of the latter within leg 40a. The length of extension leg 46 is such

that when pad 63 thereof abuts projection 65 the end of the extension leg including pad 62 projects a short distance from the corresponding end of leg 40a as noted in FIGS. 1, 3 and 6. It should be pointed out that frictional engagement between enlarged portion 46a of the extension leg and enlarged portion 40c of leg 40a is such that the extension leg is snugly retained in the hollow leg but may be readily withdrawn from the hollow leg by grasping the exposed end of the extension leg by hand, for example.

When it is desired to extend or employ the extension leg 46, the exposed end of the latter is grasped by hand and the extension leg is completely withdrawn from hollow leg 40a. The extension leg is then reversed and enlarged portion 46a is reengaged snugly within enlarged portion 40c of the hollow leg as illustrated in FIG. 7. The extension leg is easily hidden away when it is not desired to use the same by disengaging enlarged portion 46a from enlarged portion 40c, reversing the extension leg, sliding the same within leg 40a until the respective enlarged portions of the extension leg and hollow leg are in snug engagement with each other. It will be noted that when extension leg 46 is in its extended position pad 63 serves as a supporting surface for the hollow leg, and when the extension leg is in its nested position within the hollow leg pad 62 serves as a supporting surface for the hollow leg.

FIG. 9 shows the stand of this invention with the extension legs in their nested position, the leg units in their folded position, and the flaps in their closed position. As noted in FIG. 4, when the stand is configured as just described, the small feet 32, 37 (feet 37 only are illustrated in FIG. 4) extend slightly below the closed flaps and lower marginal portions of the stand body so as to support the stand on a surface, such as a table for example. As noted in FIGS. 4 and 9, flaps 48, 49 overlie the leg portions of the U-shaped leg units so as to hold the leg units in their folded position within the confines of body 11 of the stand. As will be apparent from FIG. 4, when the U-shaped leg units are folded, one leg unit overlies the other leg unit so as to fit within the confines of the body. The hinge strips hingedly connecting flaps 48, 49 to the body tend to maintain the flaps in their closed position thereby to prevent inadvertent unfolding of the legs when the stand is lifted and moved about.

The stand of this invention is set up for use as follows: First, flaps 48, 49 are opened to their inclined position. The U-shaped leg units 39, 40 are then unfolded one at a time until the legs thereof slip into notches 52, 53 provided in each of flaps 48, 49. This engagement between the notches of the flaps and the legs of the U-shaped leg units is automatic upon unfolding of the legs because of the tendency of the flaps constantly to resume their closed positions. Accordingly, as soon as the legs of the U-shaped leg units are brought into alignment with the notches in the flaps, the flaps, under the influence of the flexible hinge strips, move toward their closed position so as to engage the leg units in the notches of the flaps. This engagement between the notches of the flaps and the legs of the leg units of course braces and supports the U-shaped leg units in their extended position. The stand may now be turned over and used with the extension legs in their nested position if desired. If it is desired to elevate the stand by means of the extension legs, the extension legs may be quickly and easily connected with the legs of the leg units in an extended position as described above.

It will be apparent that the stand or the like of this invention is highly versatile and of simple and inexpensive construction. Also, the stand is very durable and trouble free in operation.

While the invention has been shown in but one form, it will be obvious to those skilled in the art that it is not to be so limited. On the contrary, the invention is susceptible of various forms and modifications without departing from the spirit and scope of the appended claims.

I claim:

1. A stand or the like comprising a generally rectangular planar surface having a side wall depending from each edge thereof, a pair of U-shaped leg units swingably supported from said stand adjacent respective opposite side walls thereof for swinging movement between an extended position and a folded position closely spaced from the underside of said planar surface, the other side walls of the stand each having at its lower edge a hingedly connected flap, which flaps extend for substantially the entire length of the associated side walls, said flaps being provided with generally U-shaped notches in the side edges thereof opposite the edges hinged to said other side walls, and said flaps being movable between a closed position in substantial parallel relation with said planar surface and an inclined open position, the flaps being adapted in their open position to have the notches thereof receive said leg units for bracing the latter in their extended position and the flaps in their closed position being adapted to overlie portions of said leg units for holding the latter in their folded position, said flaps serving as the sole means for bracing said leg units and for holding the same in their folded position.

2. A stand or the like comprising a box-like body having a top, side walls, and open bottom, a pair of generally rectangular flaps hingedly connected at their side edges to a pair of opposite side walls of said body, respectively, which flaps extend for substantially the length of said opposite side walls and are each provided with a pair of generally U-shaped notches in its side edge opposite said side edge thereof, the notches of each flap being located adjacent respective opposite ends of the flap, said flaps being swingable between an open inclined position and a closed position in substantial parallel relation with said top, a pair of U-shaped leg units swingably connected to said body adjacent said other pair of opposite side walls thereof, respectively, said leg units each being movable between a folded position within said body and an extended position, the notches at corresponding ends of said flaps being adapted to receive the leg portions of said leg units when the latter are in their extended position and when the flaps are in their open position, said flaps being adapted in their closed position to overlie portions of said leg units for holding the latter in their folded position, said flaps serving as the sole means for bracing said leg units and for holding the same in their folded position.

3. The stand or the like according to claim 2 wherein said flaps are connected to said opposite side walls by resilient means which urge the flaps to their closed position, whereby upon unfolding of said U-shaped leg units the leg portions of the latter are automatically received in said notches of the flaps.

4. An extension leg unit for a stand or the like comprising, a hollow leg connected at one of its ends to said stand and having an enlarged portion at its other end, an extension leg telescopically disposed in said hollow leg and having a portion at one end thereof shaped for snug engagement in the enlarged portion of the hollow leg, said extension leg being removable from said hollow leg thereby to permit said extension leg to be reversed and have said portion of the latter re-engaged with the enlarged portion of the hollow leg with the extension leg in extended relation with the hollow leg.

5. An extension leg unit for a stand or the like comprising, a hollow leg connected at one of its ends to said stand and having its other end enlarged, an extension leg telescopically disposed in said hollow leg with the end of the extension leg corresponding to said other end of the hollow leg being complementary shaped for snug engagement in said enlarged end, said extension leg being removable from said hollow leg thereby to permit said extension leg to be reversed and have said end of the latter re-engaged in said enlarged end of the hollow leg with the extension leg in extended relation with the hollow leg.

6. The extension leg unit according to claim 5 wherein said end of the extension leg includes a pad and projects beyond said enlarged end of the hollow leg when both legs are in telescoping engagement thereby to form a supporting surface for the hollow leg.

7. The stand or the like according to claim 1 wherein each leg portion of each U-shaped leg unit is hollow and includes, an enlarged portion at the distal end of said leg portion, an extension leg telescopically disposed in said hollow leg with the end of the extension leg corresponding to said enlarged portion of the hollow leg being complementary shaped for snug engagement in said enlarged portion, said extension leg being removable from said hollow leg thereby to permit extension leg to be reversed and have said end of the latter re-engaged in said enlarged portion of the hollow leg with the extension leg in extended relation with the hollow leg.

8. The stand assembly according to claim 1 wherein the hinge construction for connecting each flap to its associated side wall comprises, each of said associated side walls being provided with an elongated, rectilinear groove having a mouth of less width than the width of the groove, which mouth extends for the full length of the groove thereby to form a long, narrow slot, a flexible strip doubled upon itself longitudinally thereof and having a thickness of approximately equal to one half the width of said slot, the bight portion of said strip being disposed in said groove with the longitudinal marginal portions of the strip projecting outwardly through said slot, a rod within said bight portion for preventing separation of the strip from the groove, at least one of said marginal portions being secured to an edge portion of the corresponding flap thereby hinging the latter to the associated wall.

References Cited by the Examiner

UNITED STATES PATENTS

521,211	6/1894	Fisher	108—36
1,437,670	12/1922	Mazoch	108—144
2,503,997	4/1950	BuMiller	248—188.5
2,719,688	10/1955	Seifert	248—188.5
2,743,978	5/1956	Shore	108—36
2,743,979	5/1956	Shore	108—35 X
2,746,822	5/1956	Copenharer	248—188.5
2,861,855	11/1958	Leshner	108—36
3,009,169	11/1961	Bodner	4—240
3,063,087	11/1962	Thomas	16—128
3,087,192	4/1963	Hertzke	16—128
3,092,870	6/1963	Bear	16—128

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