Jan. 6, 1959 T. F. SCHMIDT 2,867,485

FOLDING STAND

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FIG. 1

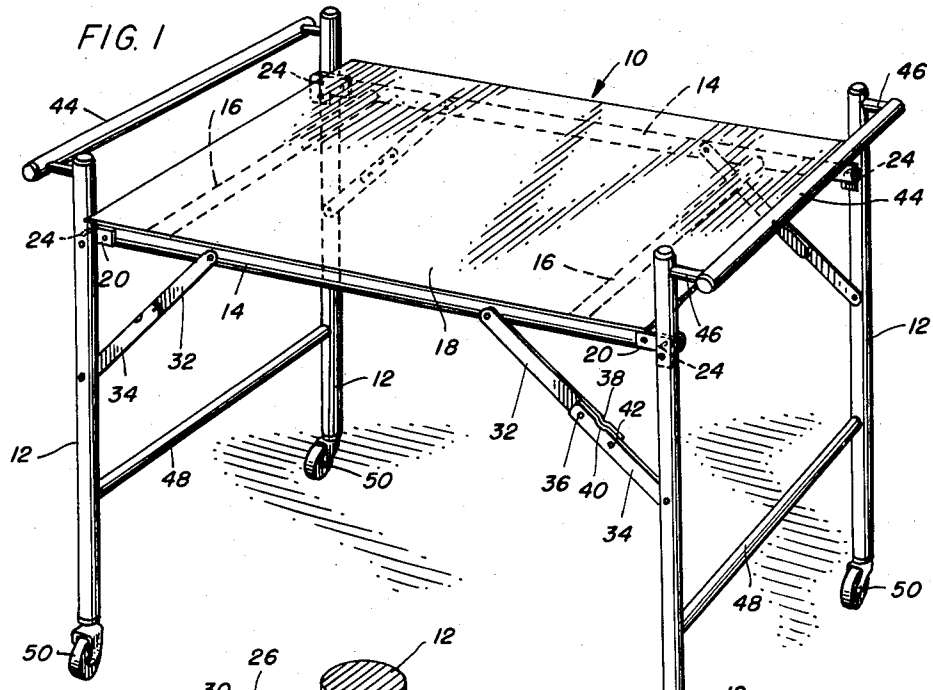


FIG. 3

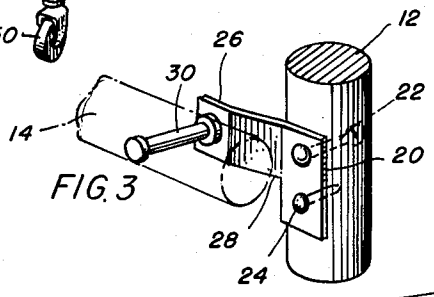
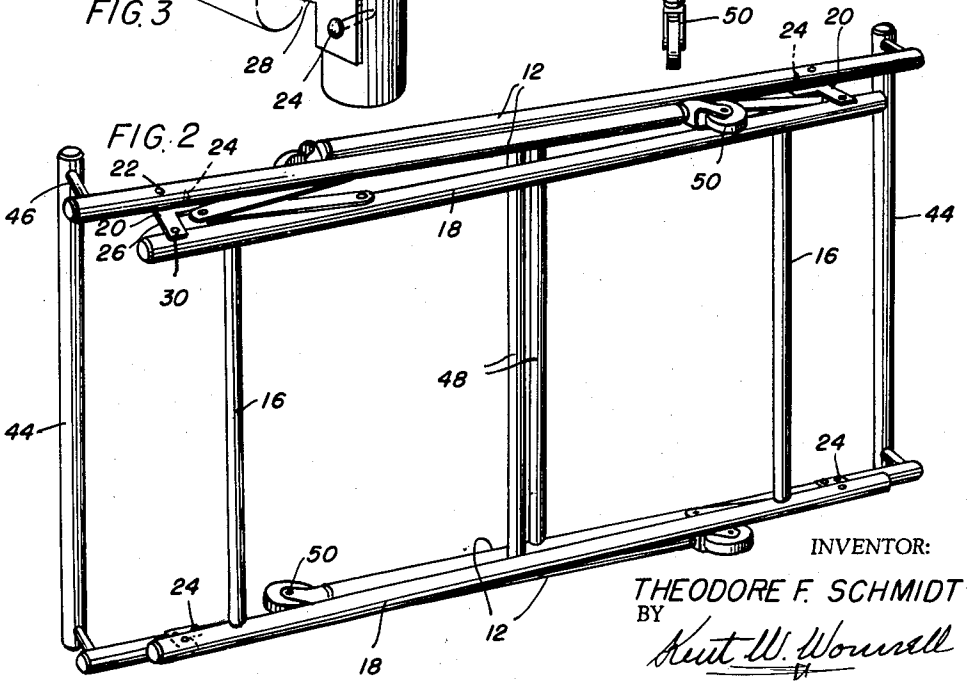


FIG. 2



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FOLDING STAND

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5 Claims. (Cl. 311—84)

This invention relates in general to folding stands usually made of light-weight materials such as to provide a support for a basket, a bassinette, an auto bed, a portable bath and the like although it may also be made of stronger materials and of larger sizes as a support and a display holder for other articles. In foldable stands as heretofore used, the parts are hinged or otherwise connected together so that the legs in folding do not fold compactly against the top or against the other legs, but rather engage each other and extend at an upward and space consuming angle from the top itself and from each other, such that the folded stand cannot be compactly collapsed for compact storage or shipment.

The present invention overcomes these difficulties and objections by providing an improved offsetting hinge for each of the legs and foldable collapsing leg stays so that the legs are firmly held in extended position at right angles to the top and also are foldable compactly in overlapping relation at the under side of the top and substantially parallel thereto. Although connected for joint movement by cross pieces, the upper ends of the legs are connected at the tops by offset end bars for providing additional space at the ends of the top for receiving a bassinette or other articles longer than the top itself.

An important object of the invention is to provide a folding stand in which the legs are pivoted to the top by an offsetting hinge construction which permits the legs to fold more compactly at the under side of the top and in engagement with each other.

A further object of the invention is to provide improved means for guiding the folding and extending movements of the end pairs of legs in unison and in holding them locked in extended position so that the stand will not collapse.

Still a further object of the invention is to provide a compactly folding stand which has means extending above the top for extending the effective area thereof so that a basket or other article larger than the top may be supported thereby.

Still a further object of the invention is to provide a lower support for a shelf or tray as a part of the folding stand.

Other objects of the invention will appear in the specification and will be apparent from the accompanying drawings in which,

Fig. 1 is a perspective view of a folding stand in accordance with this invention in extended position,

Fif. 2 is a perspective view of the stand of Fig. 1 in folded position; and

Fig. 3 is a detail perspective view of one of the offsetting leg hinges.

In a folding support for articles which are used periodically, such as baby baskets and baths, wash baskets and other containers for clothing, display containers and the like, it is desirable that they be compactly folded so that when not in use, they may be stored where they will occupy a small space from which they do not protrude objectionably when they are folded as awkward sprawling and extension is often caused by improper connection of the hinged legs and other parts, but the present invention overcomes these objections by providing the leg structure mounted on offsetting hinge plates which causes the legs at opposite ends to fold compactly against the top and supported by and against the legs from the other end.

Referring now more particularly to the drawings, this invention is illustrated in connection with an article supporting top **10** and four legs **12** disposed near the corners of the top. The top may comprise side bars **14** connected near the ends by cross bars **16** firmly joining the side bars near the ends thereof. If desired, a top panel or cover plate **18** may be attached to the upper or lower side of the frame formed by the bars and cross pieces of the top. This plate may be heavy cardboard, thin sheet metal, laminated wood, fiber or other material which is both light and strong.

The legs are attached to the top near the ends of the side boards by means of offsetting hinge plates **20**, each angular or L-shaped. Each plate is attached at the relatively inner side of a leg **12** by a rivet **22** which extends through the plate at the angular portion thereof and into or through the post. One end of the L extends parallel to the post and in the L-shaped portion, a screw or stud **24** is inserted into the post, the rivet **22** and the stud holding the hinge plate tightly in connection with the post. An extension **26** of the hinge plate is at right angles to the portion secured to the leg **12** and has an offset **28** in this extending portion through which a pivot **30** extends through the plate and into or through the side bar **14** of the top adjacent the end thereof, the offset **28** freeing the leg and the side bar from engagement with each other and providing a space for the ends of the rivet **22** and the pivot **30** to pass without contact with each other. The extension **26** forms a spacing offset between the leg and the side bar **18** when the legs are folded with respect to the top and with respect to each other.

Also connecting each leg and its corresponding side bar **14** is a leg stay having a part **32** pivoted at one end to the side bar **14** at a short distance from the end and another leg stay part **34** pivoted at one end to the leg and at a distance below its pivoted connection with the end of the side bar **14** when the stand is in supporting position. These two parts **32** and **34** are connected together by a pivot **36** in the end of one part as **34** so that the other part **32** overlaps the part **34** near the pivot and these parts are provided in the overlapping portion with indented and engaging edges **38** and **40** respectively which in interengage when the stay parts are in alignment with each other to limit their movement in one direction.

A projection and depression **42** is also formed in the end of one part **32** and near the end of the other part **34** which interengage and hold the stay parts in parallel position until they are manually disengaged by a folding movement at the pivot **36** in a well known manner. The upper ends of the post **12** preferably extend a short distance above the top **10** and its cover plate **18**, if it has one, and to the sides outwardly from the ends of each pair of legs, a cross bar **44** is secured in outwardly offset relation by short connectors **46** extending between the inner side of the bar **44** at the ends thereof and the relatively outer side of the legs at the upper ends thereof. By connecting these bars **44** in an offset relation, a basket or other receptacle which is longer than the actual length of the top may be supported thereon and between the bars **46**, thus providing more space in this dimension of the stand.

The lower portions of each end pair of legs **12** may also be cross connected and the stand strengthened by bars **48** intermediate the top **10** and the lower ends of the legs which provide means for upholding and supporting a

shelf for a basket which fits in the stand thereby affording more supporting surface.

The lower ends of the legs are relatively large swivel rollers 50 which support the stand and for free movement upon the floor or any other surface when it is in use and which also turn freely for compact arrangement in folding the stand as shown in Fig. 2.

This stand has a general use particularly in households and may be used either as a temporary or a permanent folding stand with the added features that it is firmly held in its extended position against collapsing and is easily foldable into compact relation for storage and shipment since the legs are of a suitable length to overlap below the top and fold tightly together against the under side of the top and against the first folded pair of legs so that the stand can be stored in a minimum space when desired.

While a preferred construction has been described in some detail, it should be regarded by way of illustration and example rather than as a restriction or limitation thereof, as many changes in the construction, combination and arrangement of the parts may be made without departing from the spirit and scope of the invention.

I claim:

1. In a folding stand, a supporting rectangular top, legs connected at the outer sides of the top near the upper ends of the legs, the connection comprising a hinging plate between each leg and substantially parallel to the side of the top pivoted at one side of the plate to the top and secured to the inside of the leg, the pivot of each plate being angularly offset with respect to the leg and the legs being of a length such that the legs of one end fold against the underside of the top and the legs of the other end fold over and against the first folded legs, the folded legs being substantially parallel to the top and to each other, and locking link means pivoted to each leg at a distance below the hinging plate and to the adjacent outer side of the top at a distance from the end with intermediate pivoted and engaging portions limiting the plate hinging movement of the leg to a supporting extended position at right angles to the top in one direction and to engagement substantially parallel with the under side of the top in the folded direction.

2. In a folding stand, a supporting rectangular top, legs connected at the outer sides of the top near the upper ends of the legs, the connection between each of the legs and the top comprising an offsetting hinge substantially parallel with the outer side of the top, a folded leg stay connected to the inner side of each leg near the top thereof below its connection with the top and to the adjacent side of the top near the end thereof to limit the hinging movement of each leg to a position at right angles to the top, and to fold compactly with the other legs at the under side of the top, each of the legs extending at the top beyond the hinging plate and above the top in its supported position, and a bar connecting the upper extending ends of each pair of legs in an offset relation beyond each end of the top and comprising connectors between the inner side of each bar at the end and the outer side of each leg at the upper end thereof above the said connections near the tops, the offset bars providing spaces at the ends of the top as open extensions thereof.

3. In a folding stand in accordance with claim 2, the pairs of legs of each end having a connecting cross piece near the lower ends of the legs for jointly folding and unfolding them, in addition to the spacing offset bars which also cause the legs to be jointly folded and unfolded, the cross pieces together forming a horizontal support below the top.

4. In a folding stand, a supporting rectangular top, legs connected at the outer sides of the top near the upper ends of the legs, the connection comprising an offsetting hinge between each leg and the top pivoted at one side of the plate to the top and fixed at the other side of the plate to the inner side of the leg, the pivot for each plate being rectangularly offsetting with respect to the leg for substantially the thickness thereof and the legs being of a length to overlap at the free ends when folded so the legs of one end fold compactly against the under side of the top and the legs of the other end fold compactly against the first legs the legs folding substantially parallel to each other and to the top, a leg stay pivoted to each leg and to the adjacent side of the top at a position below the top and foldable to permit the legs to fold against the top and extensible to position the legs at right angles to the top, and means connecting the legs of each end for movement together comprising a cross piece between the lower ends of the legs and the hinges theerof and a bar at the top having means connecting it in an outwardly offset direction to the upper ends of the legs for adding a free space at each end of the top between said bars which is longer than the extent of the top.

5. In a folding stand, a supporting rectangular top, legs connected at the outer sides of the top but below the ends of the legs, the connection comprising a hinging plate between each leg and the top parallel to the outer side of the top and pivoted at one side of the plate to the top and secured to the inside of the leg, the pivot and connection for each plate being spaced apart with respect to each other so that the legs of one end fold substantially parallel with and at the outer sides of the top and compactly against the folded legs of the other end which abut the under side of the top, the hinging plate for each leg being of an angular L-shaped form with one portion of the L fixedly connected to the inner side of the leg and the other side of the L extending from the leg at right angles thereto and the pivot connecting the plate to the top being near the outer end of this extension at a distance substantially equal to the leg thickness so that the extension is at right angles to the top when the leg is folded and is parallel to the top when the leg is in its extended position.

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