Nov. 17, 1964 W. B. MOODY 3,157,136

FOLDABLE SUPPORTING STAND

Filed May 29, 1963

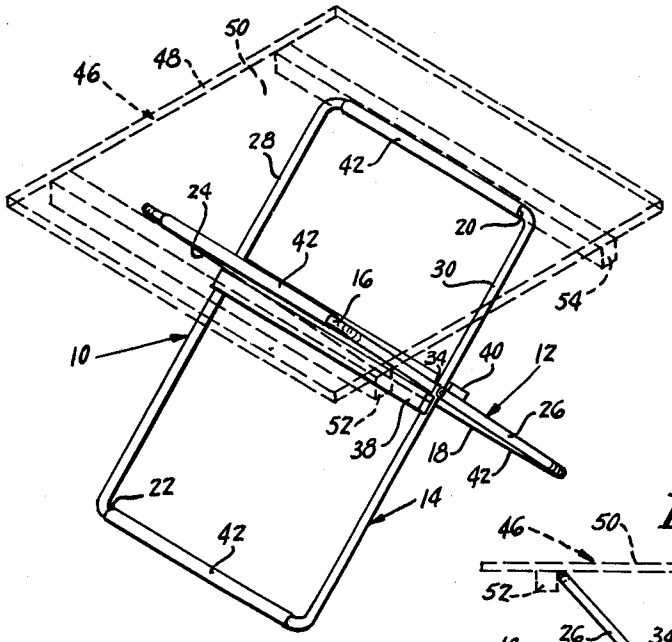


FIG. 1

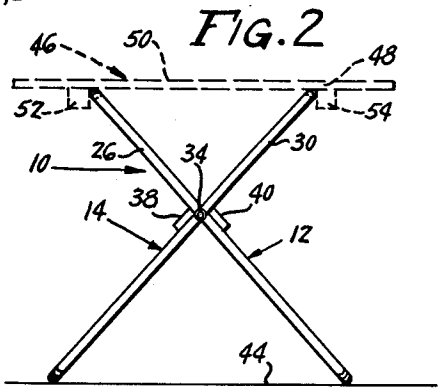


FIG. 2

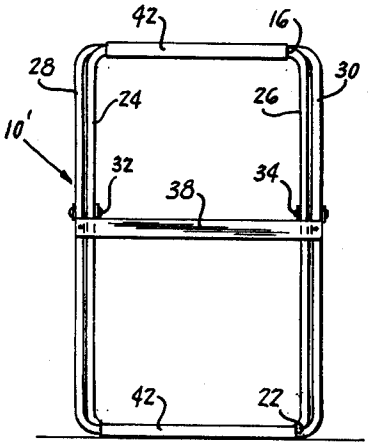


FIG. 4

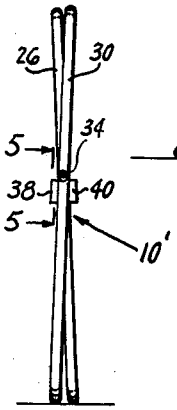


FIG. 3

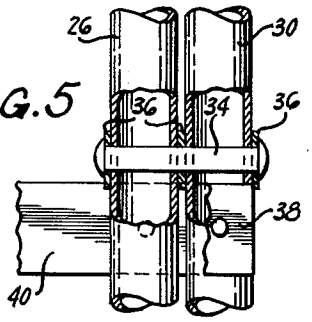


FIG. 5

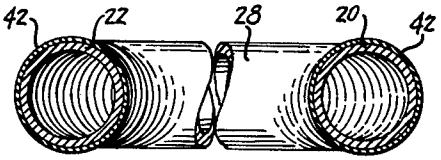


FIG. 6

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FOLDABLE SUPPORTING STAND

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This invention relates to a foldable supporting stand and more particularly to a stand adapted for supporting a mortar board or a scaffolding in a convenient position for use by brick masons, plasterers, carpenters, cement workers, or the like.

A primary object of this invention is the provision of a foldable supporting stand which is sturdy and durable in construction, reliable and efficient in operation, and relatively simple and inexpensive to manufacture, assemble, and utilize.

Another object of this invention is to provide a supporting stand which may be readily folded almost flat and stored in a minimum of space.

Still another object of the instant invention is the provision of a supporting stand which may be utilized with either a mortar board or an auxiliary scaffolding member.

A still further object of this invention is to provide a foldable supporting stand having means for securing the same in stable supporting position so that it will not accidentally collapse.

A further object of the instant invention is the provision of a supporting stand of the type described including horizontally disposed top and bottom elements having frictional coverings to prevent slipping of the same when in use and when supporting a heavy weight as, for example, when used with scaffolding, or the like.

Other objects of the invention reside in the combination of elements, arrangements of parts, and features of construction.

Other and further objects will in part be obvious, and in part be pointed out as the description of the invention proceeds, and as shown in the accompanying drawing wherein:

FIGURE 1 is an isometric view of the supporting stand of the instant invention in supporting position, a mortar board being shown supported thereby in dotted lines;

FIGURE 2 is a side elevational view of the stand showing the mortar board supported thereon in dotted lines;

FIGURE 3 is a side elevational view of the supporting stand in collapsed position;

FIGURE 4 is a front elevational view of the collapsed stand;

FIGURE 5 is an enlarged fragmentary view of the pivotal interconnection between side elements of the pair of frame members taken substantially on line 5—5 of FIGURE 3, partly in section and partly broken away for illustrative convenience and clarity; and

FIGURE 6 is an enlarged sectional view through one of the frame members, with parts broken away for illustrative convenience.

Similar referense characters refer to similar parts throughout the several views of the drawing.

Referring now to the drawing in detail, the supporting stand of the instant invention is designated generally by the reference numeral **10** and comprises basically a pair of equal height substantially rectangular continuous frame members **12** and **14** each including horizontally extending top and bottom elements **16**, **18**, and **20**, **22**, respectively, and oppositely disposed, spaced apart, side elements **24**, **26**, and **28**, **30**, respectively, connecting the top and bottom elements. Each of the frame members **12** and **14** may be formed of any desired material, aluminum tubing or the like being found preferable. The side elements **24** and **26** of the frame member **12** are closer together than the side elements **28** and **30** of the frame

member **14** in order that the frame member **12** fits interiorly and partially crosswise of the frame member **14**. Horizontal pivot means interconnect the side elements of the frame members **12** and **14** in crossed relationship intermediate the top and bottom elements, but above the midheight of the side elements, whereby the frame members may be moved between an almost coplanar collapsed position as shown at **10'** in FIGURES 3 and 4, and a wide base supporting position as shown at **10** in FIGURES 1 and 2. This location of pivots provides greater horizontal spread between the frame tops than the frame bottom to thus insure ample stability against tipping. The pivot means preferably comprise headed pivot pins **32** and **34** interconnecting each of the side elements of the frame member **12** with the corresponding side elements of the frame member **14**, suitable washers **36** being interposed between the heads of the pivot pins and also between the adjacent surfaces of the side elements. Note particularly FIGURE 5.

Stop means including transversely extending bar members **38** and **40** are secured to each of the side elements equally below and close to the pivot pins **32** and **34** and possess upper faces which abut against the upper portions of the side elements of the opposite frame means when the supporting stand is moved to its supporting position in order to limit the pivotal movement of the frame members **12** and **14** in relation to each other.

Each of the top and bottom elements **16**, **18**, **20**, and **22** may be covered with a frictional sleeve or coating **42** formed of any conventional material, such as rubber, plastic, or the like, to prevent slippage of the bottom elements when contacting a supporting surface, such as a floor or the like **44** and to prevent slippage of the top elements when contacting a mortar board, scaffolding, or the like, to be more fully explained hereinafter.

A preferred embodiment of mortar board for use in combination with a supporting stand **10** is shown in dotted lines in FIGURES 1 and 2 at **46** and comprises basically a substantially rectangular sheet element **48** formed of any desired material, sheet aluminum being particularly suitable, and of any desired dimensions, approximately 28 inches square being found most advantageous for general utility. The sheet element **48** has a substantially planar upper surface **50** and a pair of transversely extending stringer or cleat elements **52** and **54**, preferably of simple rectangular cross section, secured in spaced apart relationship to its bottom.

From the foregoing the operation of the supporting stand, particularly as utilized with the mortar board will be readily understood. The frame members **12** and **14** are pivoted to their supporting position as shown in FIGURES 1 and 2 until the stop bar elements **38** and **40** abut against opposed side elements. The mortar board is then positioned thereon with the top elements **16** and **20** of the frame members **12** and **14** seating against the inside surface of each of the stringer elements **52** and **54**, respectively. The top planar surface **50** of the mortar board may now be used for any desired purpose, such as mixing or holding cement, plaster, mortar, or the like, at a convenient height immediately adjacent the hands of the operator. As set forth previously, the supporting stand **10** may also be utilized for holding a scaffolding element, not shown, and a plurality of stands may be used cooperatively to support opposite ends of an elongated scaffolding element in an obvious manner.

It will now be seen that there is herein provided an improved supporting stand which accomplishes all the objectives of the instant invention, and others, including many advantages of great practical utility and commercial importance.

Since many embodiments may be made of the instant inventive concept, and since many modifications may be

made of the embodiments hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative, and not in a limiting sense.

I claim:

1. A simplified foldable supporting stand comprising a pair of substantially equal height rectangular frame members,

each having horizontally extending top and bottom elements and oppositely disposed, spaced apart, side elements connecting said top and bottom elements to form continuous frames,

the maximum width between said side elements of one of said frame members being slightly less than the minimum width between said side elements of the other of said frame members, whereby the side elements of said one frame member may fit partially crosswise and interiorly of the side elements of said other frame member when said tops and bottoms of the frames overlap each other,

a pair of horizontal pivot pin means interconnecting adjacent side elements of said frame members in crossed relationship at points above the midheight of said side elements, whereby said interconnected frame members may be moved between an almost flat collapsed position and a wide base supporting position,

and two similar stop bar means with upper faces located equally longitudinally below and close to said pin means, one stop bar means secured to and horizontally extending between two side elements of the frame member, and the other stop bar means secured to and horizonally extending between two side elements of the other member, each bar in use abutting by its upper face a portion of the side elements of the opposite frame member,

to thereby limit the maximum pivotal opening movement of said frame members in relation to each other when said frame members are moved from said almost collapsed position to said supporting position,

and whereby the horizontal distance between the center lines of each bottom element is at all times greater than the horizontal distance between the center lines of each top element thus providing improved table stability with simple stand structure.

2. A structure in accordance with claim 1 further comprising, in combination, a horizontal mortar board including a sheet element having a substantially planar upper and lower surface, a pair of transversely extending rectangular in cross-section stringer elements secured in spaced apart parallel relationship beneath said sheet element, one of said top elements abuttingly engaging against an inside flat surface of each of said stringer elements when said frame members are moved to said supporting position.

3. A structure in accordance with claim 2 wherein each top and bottom is straight, and a frictional covering is provided on and completely across each of said top and bottom elements.

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