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COLLAPSIBLE TABLE AND SLIDE SORTER

Filed June 11, 1962

Fig. 2

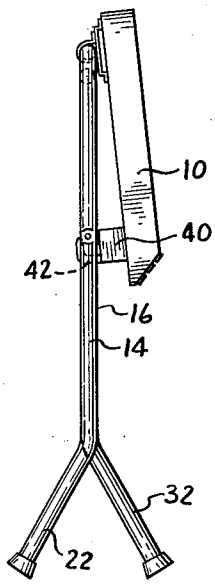
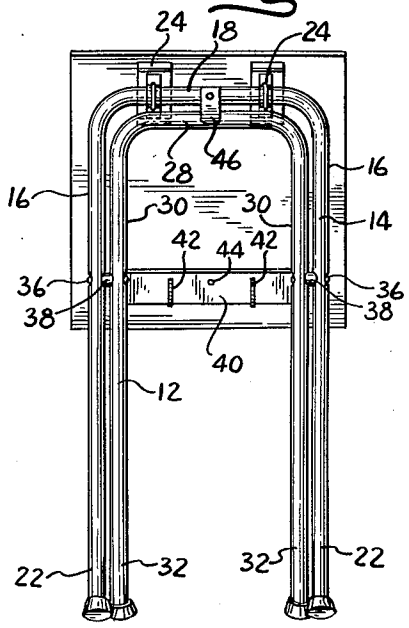


Fig. 1



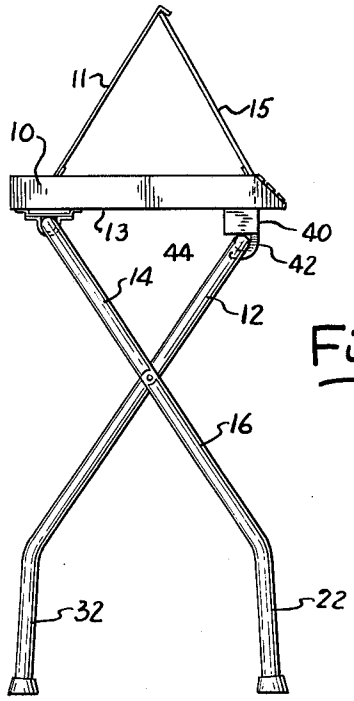


Fig. 3

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COLLAPSIBLE TABLE AND SLIDE SORTER

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This invention relates to a collapsible and portable slide sorter.

It has become increasingly popular to provide various apparatus and equipment with portable stands and supports so that the equipment can be readily transported and set up in a new location and also for easy storage in out-of-the-way places when the apparatus or equipment is not being used.

The general object of this invention is to provide an improved collapsible and portable slide sorter.

Another object of this invention is to provide a collapsible slide sorter that may be readily set up and taken down and when in the collapsed position occupies a minimum of storage space. Another object of the invention is to provide a collapsible slide sorter which when collapsed may be supported in an upright position.

Briefly, the collapsible slide sorter comprises a slide sorter unit having a pair of collapsible legs attached thereto. A first inverted U-shaped leg is pivotably secured to the underside of the slide sorter unit and a second inverted U-shaped leg is pivotably secured to the first leg. The second U-shaped leg is adapted to fit inside the first U-shaped leg when the collapsible slide sorter is in a collapsed position. A pair of hooks are secured to a member secured to the underside of the slide sorter unit and are adapted to engage the upper part of the second inverted U-shaped leg when the collapsible slide sorter is in an open or usable position. A stop means in the form of a tab attached to the upper end of the first U-shaped leg retains the second leg in position adjacent and within the first leg when the slide sorter is in a collapsed position. The collapsible slide sorter folds into a tight unit when collapsed and is capable of standing upright without any additional support.

Other objects, features and advantages will become more apparent when the following is viewed in light of the accompanying drawings of which:

FIG. 1 is a front elevational view of the embodiment of the invention;

FIG. 2 is a side-elevational view of the embodiment of the invention; and

FIG. 3 is a side-elevational view of the embodiment of the invention illustrated in FIG. 1 and is shown in an open supporting position.

The collapsible slide sorter comprises a slide sorter unit generally referred to as 10, and a pair of supporting members generally indicated at 12 and 14. The slide sorter unit 10 is composed of a main body portion 13 having lamps, not shown, positioned therein and is provided with a hinged top cover 11 and a hinged translucent viewing panel 15 as shown in FIG. 3. Electrical power for the lamps is delivered to the slide sorter unit 10 by cabling, not shown. Each of the supporting members 12 and 14 is made preferably of tubular metal stock and is of a generally overall inverted U-shape. Supporting member 14 comprises a pair of spaced parallel legs 16 and a cross member 18 integrally formed therewith. The spaced legs 16 are formed at right angles with respect to the cross member 18 over the major portion of their length and the lower portions 22 thereof are bent outwardly at an angle. A pair of spaced U-shaped brackets 24 best illustrated in FIG. 1 are secured to the underside of the slide sorter unit 10 by a plurality of screws or by any known means and the brackets 24 fit around the cross member

18 of the supporting member 14 to pivotably secure supporting member 14 to the underside of the slide sorter unit 10. The supporting member 14 may then be swung out to its supporting position as illustrated in FIG. 3 or it can be moved to its collapsed position as illustrated in FIGS. 1 and 2.

Supporting member 12 comprises a cross member 28 and downwardly extending parallel legs 30 formed at right angles to the cross member 28 for the major portion of their length. The lower portions 32 of legs 30 are bent outwardly at an angle opposite to that of the lower portions 22 of the legs 16. The width of cross member 28 of supporting member 12 is less than the width of cross member 18 of supporting member 14 and the overall length of the legs 30 of supporting member 12 above the pivotable connection with supporting member 14 are shorter than the corresponding length of the legs 16 of supporting member 14 so that the supporting member 12 can in effect nest within the supporting member 14 when the structure is collapsed as shown in FIGS. 1 and 2. Supporting member 12 is pivotably secured to supporting member 14 by bolts 36 which extend through suitable openings in the legs 16 and 30. Fastening nuts, not shown, are secured to the end of bolts 36 and spacers or washers 38 are interposed between the legs 16 and 30.

A substantially rectangular shaped box 40 is attached to the underside of the slide sorter unit 10 by a plurality of screws, not shown. Switches and auxiliary outlets may be provided on the slide sorter unit 10 as generally indicated in FIGS. 1 and 3, and as stated electrical power can be transmitted to the slide sorter by cabling. The rectangular box 40 extends downwardly and has positioned on the under portion thereof a pair of permanent hook-shaped members 42. The hook shaped members 42 are adapted to receive the cross member 28 of the supporting member 12 therein when the collapsible slide sorter is in its open or usable position as is best shown in FIG. 3. The provision of the rectangular box 40 and the hook members 42 compensate for the shorter length of supporting member 12 above the pivotal connection with supporting member 14. The openings of the hook members 42 are adapted to engage and retain the cross member 28 of the supporting member 12.

To aid in the retention of the cross member 28 within the body of the hook members 42, a small bump 44 is positioned on the bottom of rectangular box 40 and the space between the hook member 42 and the bump 44 is slightly less than the diameter of the cross member 28 of supporting member 12 and a little extra force is required to push the cross member 28 past the bump 44 and the resiliency and the construction of the materials involved will allow the movement of cross member 28 past the bump 44. When the supporting member 28 is secured in the hook member 42, the slide sorter unit 10 is firmly supported on a horizontal plane inasmuch as the length of the legs 16 and 30 from the pivotal point 36 downward is the same for both pairs of legs and the shorter length of the legs 30 above the pivotable connection of the supporting member 14 is compensated by the positioning of the hooks 42 on the underside of the rectangular box 40.

Secured to supporting member 14 is a stop tab 46 as best shown in FIG. 1. The stop tab 46 may be secured to the cross member 18 of the supporting member 14 by any means such as a screw. The purpose of the stop tab 46 is to prevent the supporting member 12 from rotating past the supporting member 14 when the collapsible slide sorter is in its collapsed position as shown in FIGS. 1 and 2.

The collapsible slide sorter is positioned in its open or usable position as illustrated in FIG. 3, by first pulling the supporting members 12 and 14 away from one an-

other so as to enable the lower portions **22** and **32** thereof to swing past one another. The cross member **28** of the supporting member **12** is then guided past the bump **44** in the rectangular box **40** and into the recesses formed by the hook elements **42**. A little extra force is required to push the cross member **28** of the supporting member **12** past the bump **44**. The cross member **28** of the supporting member **12** is then effectively secured to the slide sorter unit **10** through the hook members **42** and rectangular box **40** and is positioned below the lower surface of the said sorter unit **10**. Thereafter, the slide sorter unit **10** will be maintained in a horizontal plane as illustrated in FIG. 3.

The slide sorter unit **10** may then be opened for use by lifting the hinged top cover element **11**, then lifting the hinged viewing panel **15** and then supporting one by the other in their lifted positions as shown in FIG. 3. The slide sorter **10** is preferably arranged so that the lamps, not shown, positioned therein will turn on as soon as the top cover element **11** and the viewing panel **15** are moved to their lifted positions, as shown in FIG. 3. Diffused light will then be transmitted through the translucent viewing panel **15** and the slide sorter **10** is then ready for use and slides can be placed up against or near the viewing panel **15** for identification and subsequent sorting of the slides.

When it is desired to put the collapsible slide sorter in its collapsed position for storage or transportation, the slide sorter **10** is folded into position by folding the top cover element **11** and the viewing panel **15** into the body portion **13**. Next the supporting member **12** is pushed out of hook members **42** by using a little force to push the cross member **28** of the supporting member **12** past bump **44** positioned on the bottom of the rectangular box **40**. The supporting members **12** and **14** are then rotated towards one another until the legs **16** and **30** respectively come into alignment in the same plane. Before this, however, the lower portions **32** and **22** respectively rotate past one another and provide independent supports for the collapsible slide sorter when it is in its collapsed position. As soon as the supporting member **12** rotates into the same plane as supporting member **14** further rotation is prevented by stop tab **46**. The slide sorter unit **10** will naturally rotate clockwise and rest up against the supporting members **12** and **14**, as best shown in FIG. 2.

There has therefore been provided a collapsible slide sorter that is easily constructed out of simple elements and which can be readily collapsed so as to form a small compact unitary structure which is capable of standing on its own support.

What has been described is what is believed to be the preferred embodiment of the invention and it is apparent that modifications and alterations can be made therein without departing from the inventive scope of the invention and it is the intention of the appended claim to cover the entire inventive scope of the invention and to be limited only by the prior art.

I claim:

A collapsible apparatus and support combination comprising,

a rigid apparatus,

a first inverted substantially U-shaped apparatus supporting member pivotally secured to said apparatus,

a second inverted substantially U-shaped apparatus supporting member pivotably secured to said first apparatus supporting member and having a width less than the first apparatus supporting member and a length above the pivotal connection between said first and said second apparatus supporting members less than the corresponding length of said first apparatus supporting member to permit positioning of said second apparatus supporting member within said first apparatus supporting member when said apparatus supporting members are positioned in a collapsed position,

said first apparatus supporting member having positioned thereon a stop tab to insure the coplanar positioning of said second apparatus supporting member within said first apparatus supporting member when said apparatus supporting members are positioned in a collapsed position,

securing means for detachably securing said second apparatus supporting member when said first and said second apparatus supporting members are in an extended supporting position and comprising a rectangular shaped box positioned below the underside of said apparatus, and

a plurality of hook members secured to the underside of said box,

each of said hook members composed of a single element extending downwardly from said box, forwardly toward said supporting members and upwardly to form a hook configuration,

said box extending downwardly a predetermined distance to compensate for the shorter length of said second apparatus supporting member above the pivotal connection between said first and said second apparatus supporting members.

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