Aug. 30, 1960 E. W. STEPHANY 2,950,552

COLLAPSIBLE IRONING BOARD

Filed May 1, 1958 2 Sheets-Sheet 1

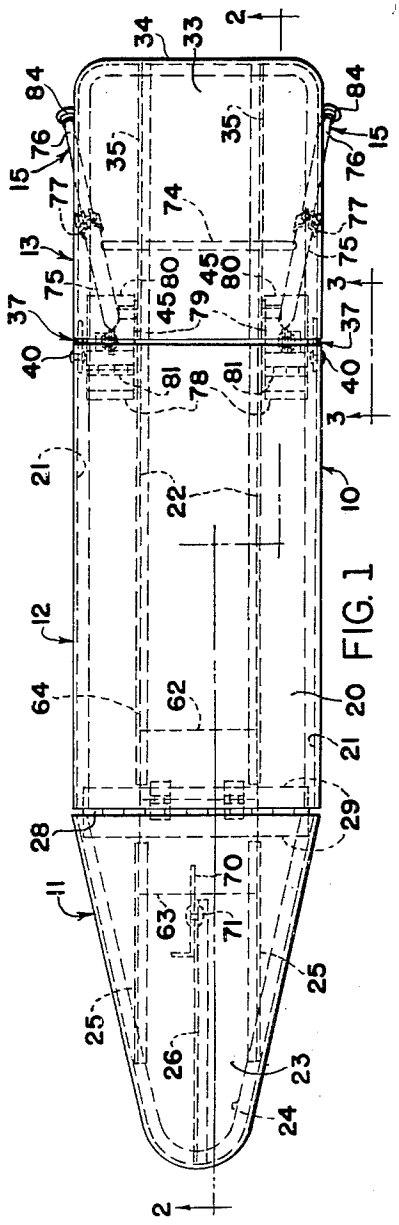


FIG. 1

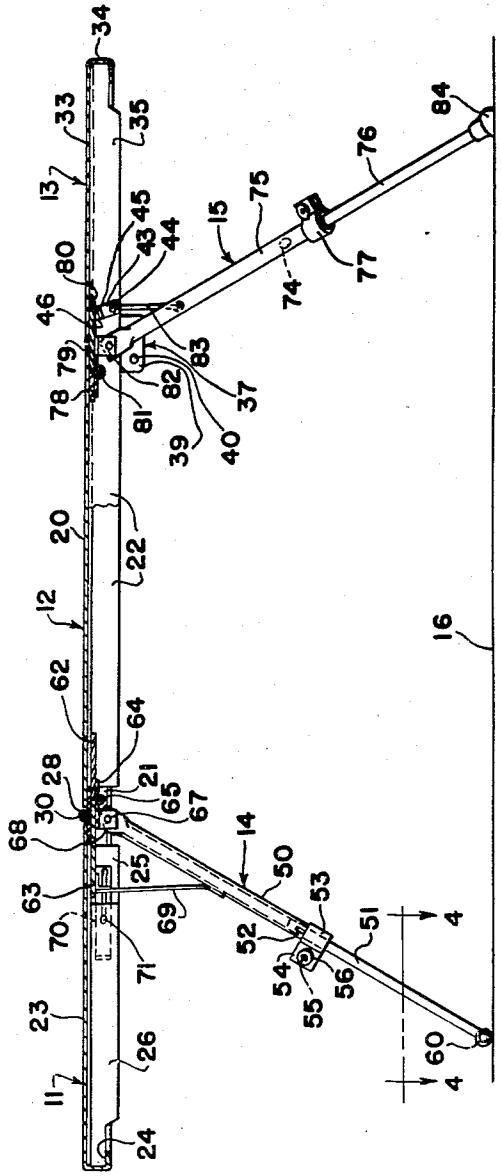


FIG. 2

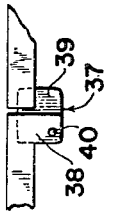


FIG. 3

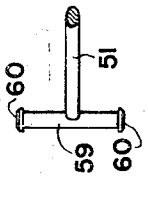


FIG. 4

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Aug. 30, 1960 E. W. STEPHANY 2,950,552

COLLAPSIBLE IRONING BOARD

Filed May 1, 1958 2 Sheets-Sheet 2

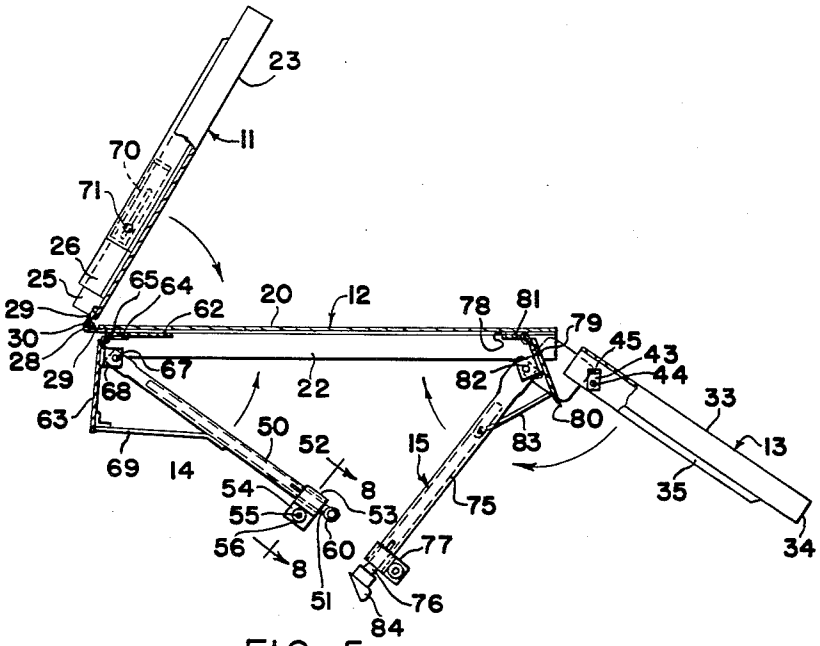


FIG. 5

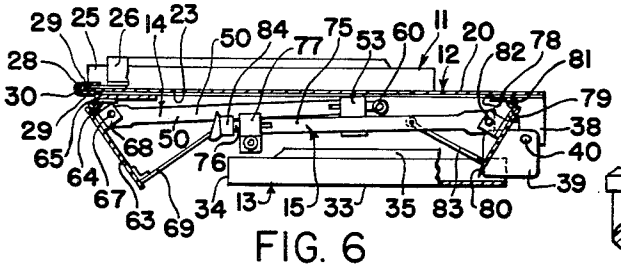


FIG. 6

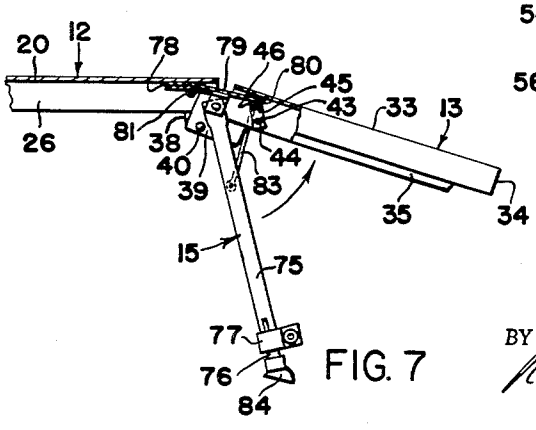


FIG. 7

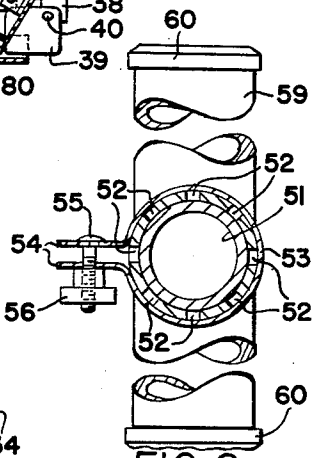


FIG. 8

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United States Patent Office 2,950,552 Patented Aug. 30, 1960

2,950,552

COLLAPSIBLE IRONING BOARD

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Filed May 1, 1958, Ser. No. 732,198

3 Claims. (Cl. 38—139)

This invention relates generally to collapsible ironing boards, and is especially concerned with improved structural features of collapsible ironing boards.

It is one object of the present invention to provide a highly improved collapsible ironing board construction which is adapted to be quickly and easily collapsed and set-up by the average housewife without the exercise of undue exertion or skill, which is capable of being light in weight for convenient handling, and which is highly compact and extremely small in its collapsed condition so as to occupy a minimum of space in storage.

Another object of the present invention is to provide a collapsible ironing board having the advantageous characteristics mentioned in the preceding paragraph which is rugged and durable in use, and extremely simple in construction, so as to be capable of manufacture and sale at a reasonable price.

It is a more particular object of the present invention to provide a collapsible ironing board construction including a plurality of hinged ironing board sections, and collapsible leg assemblies cooperating with the ironing board sections to be enclosed by the latter in the collapsed condition, thereby presenting a neat and attractive appearance when not in use, and being entirely safe and easy to handle.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

In the drawings:

Figure 1 is a top plan view showing an ironing board constructed in accordance with the teachings of the present invention in its erected or set-up condition;

Figure 2 is a longitudinal sectional elevational view taken substantially along the line 2—2 of Figure 1;

Figure 3 is a partial elevational view taken substantially along the line 3—3 of Figure 1;

Figure 4 is a partial horizontal sectional view taken substantially along the line 4—4 of Figure 2;

Figure 5 is a longitudinal sectional view similar to Figure 2, but showing the ironing board in an intermediate stage between its set-up and collapsed conditions;

Figure 6 is an elevational view, partly in section, similar to Figure 5, but showing the ironing board in its fully collapsed condition;

Figure 7 is a partial, sectional elevational view showing the instant ironing board construction in a stage of erection approaching its set-up condition; and

Figure 8 is a sectional view taken substantially along the line 8—8 of Figure 5 showing in greater detail certain structural features of the ironing board legs.

Referring now more particularly to the drawings, and specifically to Figures 1 and 2 thereof, the ironing board

illustrated therein is generally designated **10**, and includes a plurality of board sections **11**, **12** and **13**, illustrated in substantially coplanar horizontal disposition, and a pair of leg assemblies **14** and **15** depending from the board sections for supporting engagement with a floor or other appropriate surface **16**.

The ironing board sections are arranged in end to end relation, with the section **12** located intermediate the outer or end sections **11** and **13**. The intermediate section **12** includes a substantially flat top sheet **20** having a pair of parallel spaced depending side flanges **21**, substantially longitudinally with and extending along opposite side edges of the sheet **20**. A pair of parallel spaced, longitudinally extending stiffener members **22** may be located inward of the side flanges **21** and secured to the underside of the sheet **20**. The upper sheet **20** is preferably perforated to reduce weight, the perforations being omitted in the drawing for purposes of clarity.

The board end section **11** may be of longitudinally outward converging or tapering configuration, including a top sheet **23** arranged in end to end substantially coplanar relation with the top sheet **20** of the intermediate board section **12**, and provided with a depending marginal or edge flange **24**. In addition, a plurality of parallel spaced stiffener members are secured longitudinally on the underside of the sheet **23**. More specifically, a pair of stiffener members **25** are secured extending longitudinally of the board end section **11** in respective alignment with the stiffener members **22**, while a central stiffener member **26** is secured to the underside of the sheet **23** extending longitudinally of and between the stiffener members **25**. Hinge means, such as a piano hinge **28**, connects the adjacent ends of the panels **11** and **12** together for swinging movement about an axis extending transversely of and substantially coplanar with the sheets **20** and **23**. In particular, the hinge **28** includes hinge plates **29** secured to the underside of the adjacent end portions of sheets **20** and **23**, and a hinged pintle **30**, defining the pivotal axis of the hinge, preferably located in the space between the adjacent end edges of the sheets **20** and **23**.

The board end section **13** includes an upper, generally flat sheet **33**, which may be perforate to reduce weight, and which is illustrated in substantially coplanar end to end relationship with the sheet **20** of intermediate section **12**, remote from the board end section **11**. The upper or top sheet **33** of the board end section **13** may be generally rectangular in configuration, and is preferably provided with a depending marginal or edge flange **34** extending about its side and outer end edge margins. Additional longitudinally extending stiffeners **35** may be secured on the underside of the sheet **33**, in alignment with the stiffeners **22** of the intermediate sheet **20**, if desired. Of course, additional stiffeners may be provided on any of the sheets **20**, **23** and **33**, if required.

Hinge means are provided at **37** connecting together the board sections **12** and **13** for swinging movement of the latter section relative to the former section about an axis spaced below the former section. In particular, the hinge means **37** includes a pair of depending plates **38** on opposite sides of the intermediate board section **12**, adjacent to the board end section **13**, and an additional pair of depending plates **39** on opposite sides of the board end section **13** adjacent to the board end section **12** and in overlapping engagement with respective plates **38**. Stated otherwise, the plates **38**, which may be integral with the depending edge flanges **21**, are disposed generally vertically and laterally spaced, facing relation, and the depending plates **39** are also disposed in laterally spaced, facing relation, each extending from beneath the board end section **13** to beneath the board end section **12** and having its extending portion in facing engagement with the adjacent depending plate **38**. A pair of aligned

pivot pins 40 extend respectively through the overlapping portions of the pairs of plates 38 and 39, to thereby pivotally connect each overlapping pair of plates and consequently to pivotally connect the board sections 12 and 13. It will be noted that the aligned pivot pins 40 are located in spaced relation below the board sections 12 and 13, and specifically in spaced relation beneath the intermediate board section 12.

Fixedly secured on the laterally outer side of each stiffener 35 of the board end section 13, adjacent to and spaced from the intermediate board section 12, is an angle member or bracket 43. As best seen in Figure 2, each angle bracket 43 has one arm disposed generally vertically and fixedly secured to the laterally outer side of a respective stiffener 35, as by a rivet 44. The other arm 45 of each angle bracket 43 is located adjacent to and spaced beneath the sheet 33, extending laterally outward from its associated stiffener 35. Each bracket arm 45 is generally flat and inclined at an angle with respect to the board sheet 33 in the longitudinal direction of the latter, and combined with the sheet 33 to define an opening 46 facing generally toward the intermediate board section 12 and converging in the direction away from the latter.

The leg assembly 14 is of telescopically extensile and contractile construction, including an upper and outer tubular part 50, and a lower and inner tubular part 51 having its upper end telescopically slidable through the lower end of the upper part. The lower end portion of upper tubular part 50 may be longitudinally grooved, as at 52, to facilitate radial expansion and contraction thereof; and, a clamping element or band 53 may be circumposed about the grooved lower end of tubular part 50 for releasably contracting the latter to clamp the same firmly against the received portion of lower tubular part 51. As best seen in Figure 8, the clamping member or band 53 consists of a loop circumposed about the lower end of outer part 50 and having radially outwardly projecting legs 54 through which extend an adjustable and releasable fastener, such as a threaded element 55 carrying a nut 56. Thus, the band 53 is releasably clamped about the tubular part 50 to retain the tubular part 51 in a selected position of adjustment with respect to the first named tubular part.

Fixedly secured on the lower end of the lower tubular part 51 is a laterally extending cross member 59, preferably having yieldable bumpers or caps 60 on its opposite ends. The cross member thus defines the foot affording lateral stability to the leg assembly 14, while the caps 60 may be of rubber or other suitable material to prevent slipping and scratching by the leg assembly.

A pair of generally rectangular, substantially flat plates 62 and 63 are arranged in edge to edge, substantially coplanar relation immediately beneath the adjacent portions of section sheets 20 and 23, and are hingedly connected together, as by hinges 64 having aligned pintles 65 contiguous to the adjacent edges of plates 62 and 63. The plate 62 is welded or otherwise fixedly secured in facing engagement with the underside of sheet 20 of intermediate section 12, while the plate 63 extends from beneath the sheet 20 to beneath the sheet 23, being free of the latter for swinging movement about the pivotal axis 65. The upper end of upper leg part 50 is secured to the underside of plate 63, as by being fastened at 67 to a bracket 68 which is fixed to the plate. A brace 69 has its opposite ends fixedly secured to the tubular part 50, intermediate the end of the latter, and to the plate 63 spaced from the brackets 68 and pintle 65. A latch member 70 is mounted on the stiffener 26 of the end board section 11 for sliding movement longitudinally of the board section, as by a pin in slot 71, and is illustrated in Figure 2 in its extreme inward position of sliding movement in retaining engagement beneath the plate 63. Thus the latch member 70 prevents swinging movement of the leg assembly 14 about the pivot axis 65 in the counterclockwise direction, as seen in Figure 2, while the location of plate 63 partially beneath the sheet 20 prevents further swinging movement of the plate about the pivot axis in the clockwise direction. Parts of the leg assembly 14 are omitted in Figure 1 for clarity of illustration, the construction being adequately shown in the remaining figures.

The leg assembly 15 includes a pair of laterally spaced legs, as seen in Figure 1, each leg being of telescopically extensile and retractile construction and including an upper and outer tubular part 75, and a lower and inner tubular part 76 having its upper end slidably extending through the lower end of the upper tubular part. Clamping means 77 are provided on the lower region of each upper leg part 75, which may be of a construction similar to the clamping means 53 described hereinbefore. A lateral brace 74 may be provided extending between the upper leg part 75.

Adjacent to the upper end of each upper leg part 75 are a pair of generally coplanar, horizontal plates 78 and 79 arranged in edge to edge engagement immediately beneath the sheets 20 and 33. More specifically, each plate 78 is fixedly secured in facing engagement with the undersurface of the sheet 20 adjacent to and spaced inward from the end edge of the latter sheet adjacent to the sheet 33, while each plate 79 extends from the adjacent plate 78 beyond the end edge of sheet 20 into position beneath the adjacent portion of sheet 33. Further, in the set up condition illustrated in Figure 2, the outer end or extending portion 80 of plate 79 is engaged in the adjacent opening 46 defined between the sheet 33 and adjacent bracket arm 45. A suitable hinge 81 is secured to and hingedly connects each adjacent pair of plates 78 and 79, with the hinge axis in alignment with each other laterally of the intermediate board section 12. It will be noted that the axis of hinges 81 is located closely adjacent to the underside of, and beneath the sheet 20, appreciably spaced above the axis of pins 40. Further, in the set-up condition, the openings 46 each face inward generally toward the adjacent hinged connection 81.

Each of the plates 79 is fixedly secured to a respective upper leg part 75, as by a bracket 82 and a brace 83, so that the leg parts are rotatable together with the plates 79 about the axis of hinges 81. It is apparent in Figure 2 that the plates 79, and therefore the leg parts 75 and 76 fixedly carried by the plates, are prevented from rotating in the counterclockwise direction by engagement of the plates 79 with the undersurface of sheet 20. Also, with the leg assembly 15 having its feet 84 seated on the supporting surface 16, the plate 79 bears upward against the undersurface of sheet 33, to prevent rotation of the latter in the clockwise direction about its axis 40.

However, when it is desired to collapse the instant ironing board, it is only necessary to first slide the latch member 70 outward or to the left, as seen in Figure 2, out of retaining engagement with the plate 63. The board end section 11 may then be swung upward (clockwise as seen in the drawings) through the position of Figure 5, to the fully collapsed position of Figure 6. The leg assembly 14 may be contracted by loosening of the clamping member 53, and swung counterclockwise through the position of Figure 5 into the position of Figure 6 closely underlying the intermediate board section. The leg assembly 15 may also be contracted; and, upon simultaneous rotation of the latter leg assembly and the board end section 13 in the direction indicated in Figure 5, it is apparent that the openings 46 will move to increase their distance from the pintle axis 81 for automatic withdrawal of the plate extensions 80 from the openings 46. That is, as the openings 46 swing with the board end section 13 downward about the axis of pins 40, which axis is spaced below the axis 81 of plate extension 80, the openings will move downward a greater distance than the plate extensions and the latter will automatically withdraw from the openings.

The leg assembly **15** is then swingable upward to closely underlie the intermediate board section **12**, as in Figure 6, and the board end section **13** is swingable clockwise to underlie and protectively cover the collapsed leg sections **14** and **15**. The fully collapsed condition, and its relatively small size, is illustrated in Figure 6.

Erection or set-up of the ironing board may be accomplished by mere reversal of the above described procedure. One phase of this procedure is illustrated in Figure **7**, wherein the plate extensions **80** are partially engaged in their respective board end section openings **46**. Obviously, continued counterclockwise rotation of either the board end section **13** or the leg assembly **15**, as indicated by the arrow in Figure 7, will achieve and result in the set-up condition of Figures 1 and 2.

From the foregoing, it is seen that the present invention provides a collapsible ironing board construction which fully accomplishes its intended objects and is well adapted to meet practical conditions of manufacture and use.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is undertood that certain changes and modifications may be made within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. A collapsible ironing board comprising an intermediate board section, a pair of end board sections arranged respectively in substantially coplanar end to end relation with opposite end regions of said intermediate board section in the set-up condition, a pair of collapsible leg assemblies pivotally connected to the underside of said intermediate board section adjacent to respective ends thereof and each swingable between its set-up condition depending from said intermediate section and its collapsed condition closely underlying said intermediate section, a first hinge means connecting one of said board end sections to said intermediate board section for swinging movement from its set-up condition to a collapsed condition closely overlying said intermediate board section, second hinge means connecting the other of said board end sections to said intermediate board sections for swinging movement from its set-up condition to a collapsed condition spaced under said intermediate board section and closely underlying said pair of leg assemblies in their collapsed condition, said second hinge means having its pivotal axis located adjacent to and below the pivotal axis of the adjacent one of said leg assemblies, a bracket on the underside of said other board end section and spaced below the underside of said other board end section to define with the undersurface of said other board end section an opening facing generally toward the pivotal axis of the adjacent one of said leg assemblies, and an extension on said adjacent one of said leg assemblies respectively engageable in and withdrawable from said opening upon simultaneous swinging movement of said other end section and the adjacent leg assembly to their set-up and collapsed conditions.

2. A collapsible ironing board according to claim 1, in combination with a second extension on the other of said leg assemblies and swingable therewith into and out of closely underlying supporting relation with respect to said one board end section when the latter is in its set-up condition, and latch means on said one board end section releasably holding said second extension in its closely underlying relation.

3. In an ironing-board construction, a pair of board sections arranged in end-to-end relation, hinge means connecting the adjacent ends of said board sections for swinging movement of said board sections between horizontal coplanar relation and facing relation with their underside facing toward each other, said hinge means having a pivotal axis located on the underside of and spaced from said board sections so that said board sections are spaced from each other in their facing relation, a collapsible leg assembly pivotally connected to the underside of one of said board sections with its pivotal axis located in spaced relation above the pivotal axis of said hinge means, a bracket on the underside of the other board section and spaced beneath the undersurface of said other board section to define an opening between said bracket and the undersurface of said other board section facing generally toward the pivotal axis of said leg assembly, and an extension on said leg assembly and swingable about the pivotal axis of said leg assembly for withdrawable insertion into said opening upon simultaneous swinging movement of said leg assembly and other board section relative to said one board section.

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