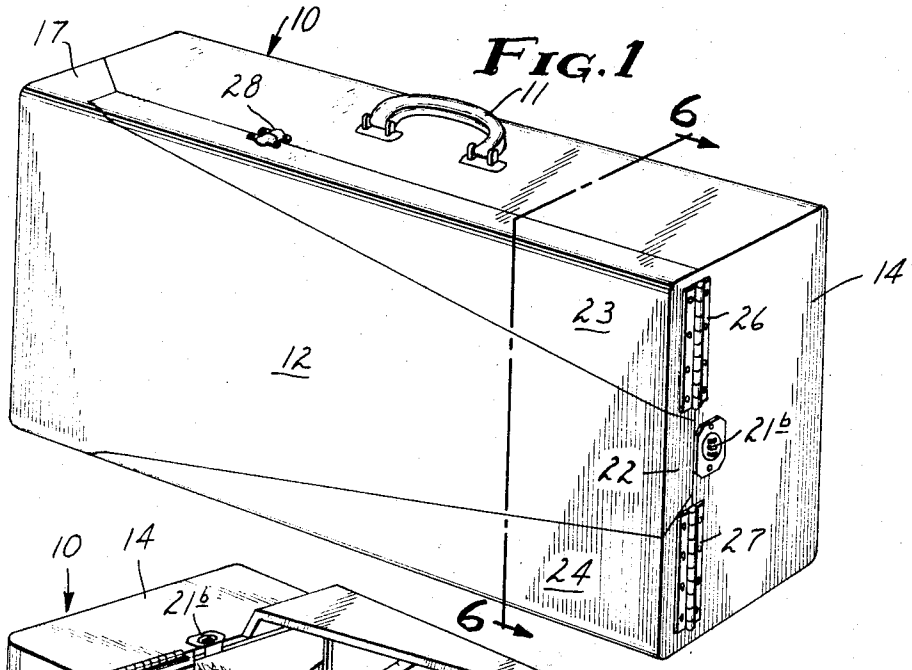
June 20, 1967 H. A. BELL 3,326,337

PORTABLE COMBINATION LUGGAGE CASE, IRONING BOARD AND TABLE

Filed Feb. 21, 1966 2 Sheets-Sheet 1

FIG. 1



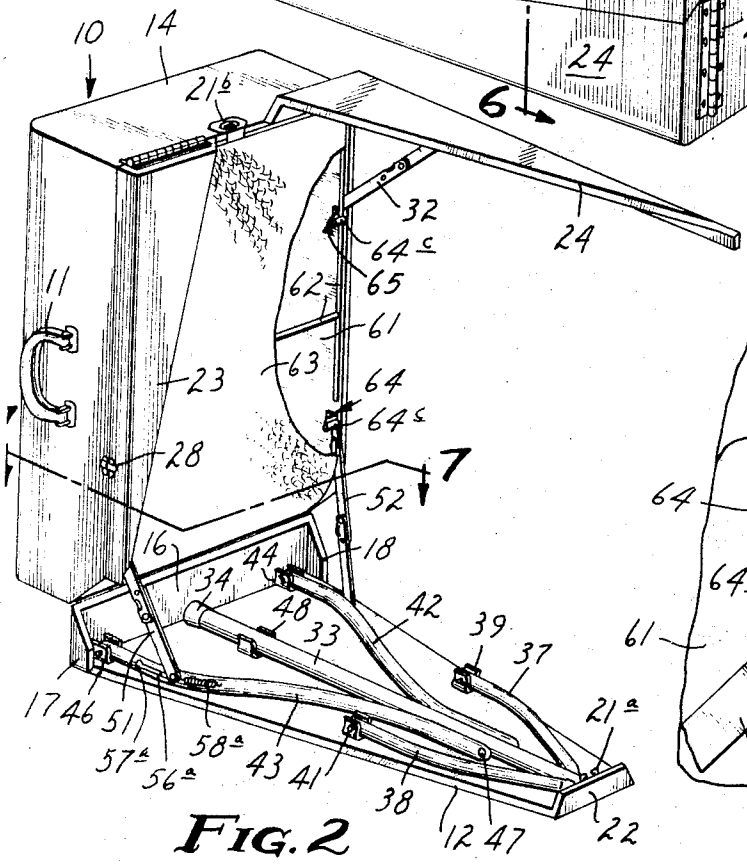


FIG. 2

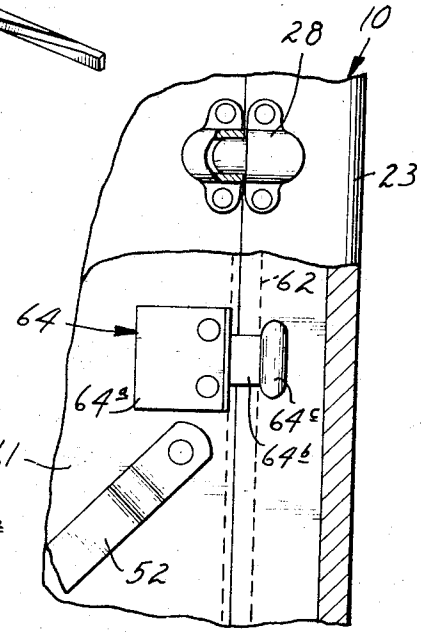


FIG. 3

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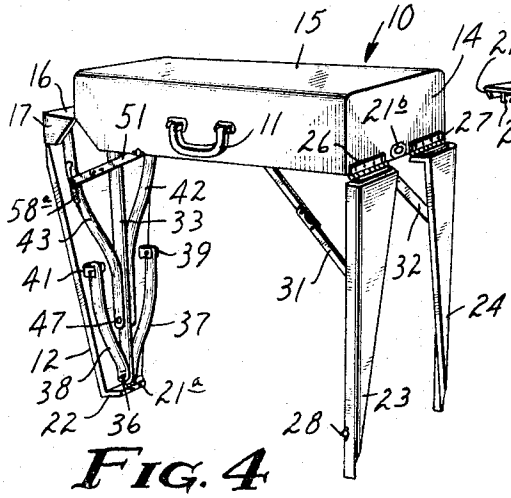


FIG. 4

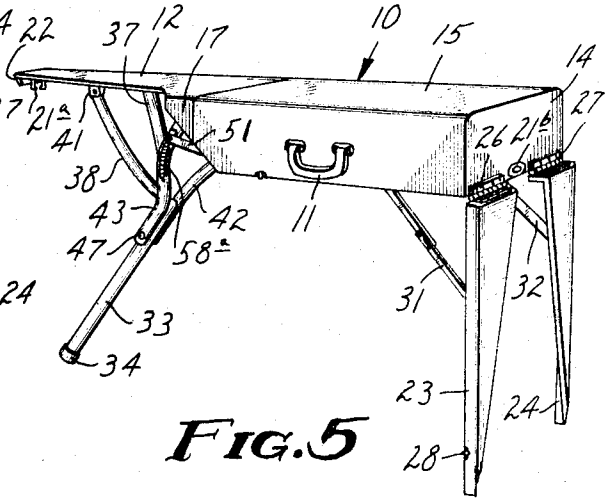


FIG. 5

FIG. 6

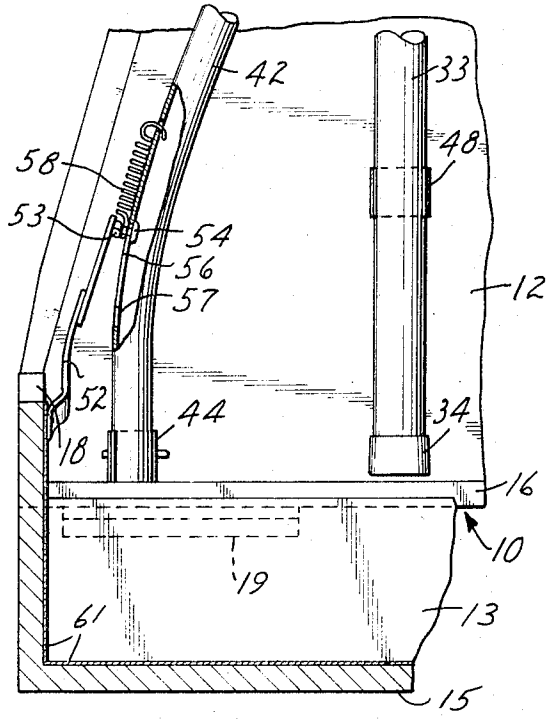
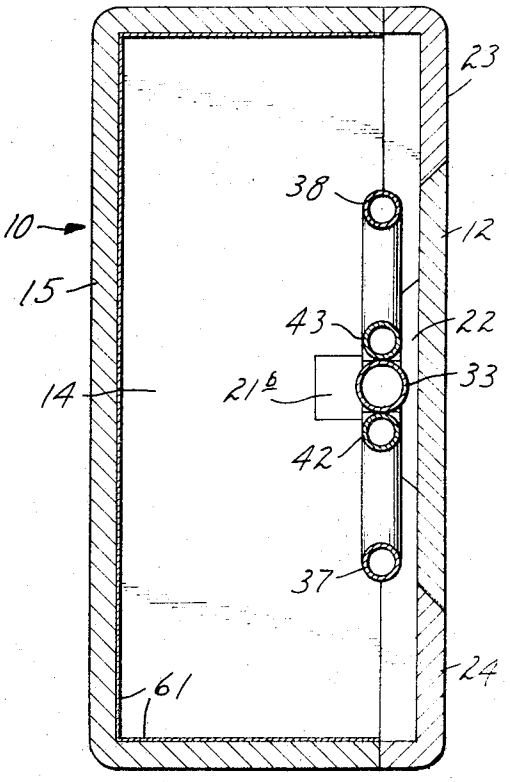


FIG. 7



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3,326,337

PORTABLE COMBINATION LUGGAGE CASE, IRONING BOARD AND TABLE

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Filed Feb. 21, 1966, Ser. No. 528,888
7 Claims. (Cl. 190—11)

This invention relates generally to luggage cases that can be folded out to provide temporarily an article or articles of furniture, and more particularly relates to a rigid luggage case having a cover that is divided into a nose portion of an ironing board that can be folded out to combine with the base panel of the case to form an ironing board, and a pair of partial cover members that fold out to provide support for the ironing board.

A traveler is often faced with the problem of reaching his destination and finding that his clothing is wrinkled. Although it is a simple matter to carry an iron, it is virtually impossible to carry an ironing board. Since places of lodging do not normally furnish an ironing board as part of the furniture, the traveler is forced to use the bed or other article of furniture as an ironing board. It is not only difficult to work with such a substitute, but it is also not possible to properly press many types of clothing without an ironing board.

The same traveler may also find that his room does not contain a table or desk suitable for use as a writing surface or perhaps as a card table. Again, it is difficult to make use of other furniture as a substitute for a table or desk.

One thing that the traveler almost invariably carries with him, however, is a luggage case or suitcase. Most such cases are strong enough to withstand the rigors of travel and are also large enough to serve the purposes of this invention. I therefore do not contemplate adding additional pieces of luggage for the traveler to carry out only to modify the standard type of luggage case so that it will also serve as either an ironing board or table. My invention will increase the weight of a typical luggage case by as little as one pound and will only insignificantly reduce the amount of space available in the case.

I am aware that the prior art has taught the broad desirability of incorporating an ironing board into a luggage case. I am also aware, however that the teachings of the prior art were deficient in many respects. For example, many prior art devices required the traveler to completely disassemble the luggage case and then reassemble it as an ironing board. This operation was time-consuming and often difficult to accomplish. In contrast, my invention provides a collapsible unit that is simply folded out in a manner somewhat akin to the folding out of the legs of a card table. The resulting ironing board or table can simply be folded back in place when it is desired to close the case.

Prior art devices of this type very often required that bolts or rods be inserted into appropriate slots or tubes in order to hold the ironing board in the proper position. This meant that loose articles not having any normal function in the suitcase had to be carried with the suitcase in order to properly assemble the ironing board. If such an article were forgotten or lost, it was not possible to properly assemble the ironing board. My invention, however, is a unitary structure and requires no locking pins or other similar loose articles to properly utilize the device. It is therefore virtually impossible to forget or lose an essential portion of the mechanism of my invention since it is a unitary structure.

The prior art devices of which I am aware completely destroy the storage function of the luggage case in converting it to an ironing board. With such devices, it is necessary to remove all articles stored in the case prior to converting it to an ironing board. This is a very time-consuming and wasteful process, especially when the ironing board is to be used for only a short time. In contrast to this, my invention provides a rigid case, the integrity of which is not destroyed when the device is converted to an ironing board or table. Since the normal cover for my luggage case is used to provide a portion of the ironing board and also to provide part of the supporting structure for the ironing board, I have provided an internal cover that can be locked in place to hold the clothing or other articles in the suitcase, even after the ironing board or table is set up. This means that the luggage case can quickly be converted to an ironing board or table without removing any articles from the case.

Although prior art luggage cases have been convertible into ironing boards, I am not aware of any prior art devices that convert into either an ironing board or a table. Although it might be argued that an ironing board is a type of table or could be used as a table; an ironing board, because of the elongated nose portion, is a poor substitute for a table or desk. If, for example, it is desired to use the device as a card table, it is impossible to seat four people around the ironing board in a normal fashion. My invention is unique in that the nose portion of the ironing board can be dropped to act as a support member for the rigid case portion of the suitcase which then acts as a table or desk. The resulting table occupies less space than does the ironing board and is equally or perhaps more stable. The uses that are normally made of a table or desk are closely approximated by my invention. My invention therefore provides the normal functions of a suitacse, an ironing board and a table or desk. The conversion between these different units is a simple matter and can be accomplished very rapidly.

It is therefore a primary object of my invention to provide a collapsible unitary luggage case, ironing board and table combination having a new and unique structure.

It is a further object of this invention to provide a luggage case having a divided cover that can be opened to form a nose portion of an ironing board that cooperates with the base of the case to form the ironing board, and a pair of support members for the ironing board.

Another object of this invention is to provide a carrying case having a cover portion that can be opened out to form the legs of a table, the base of the case acting as the top of the table.

Further objects of this invention will become apparent when the specification and claims are considered in connection with the accompanying drawings, in which:

FIG. 1 is a perspective view of the luggage case according to my invention, with the cover portion thereof closed and locked;

FIG. 2 is a perspective view of the luggage case according to my invention in which certain portions of the cover are opened to disclose the interior of the case and the support mechanism for the nose panel;

FIG. 3 is an enlarged fragmentary view partly in elevation and partly in section showing the locking means for the outer and inner covers;

FIG. 4 is a perspective view of my invention when used as a table or desk, with the divided portions of the cover being folded out to form the legs of the table;

FIG. 5 is a perspective view of my invention when used as an ironing board;

FIG. 6 is an enlarged sectional view of the closed luggage case taken along line 6—6 of FIG. 1; and

FIG. 7 is an enlarged sectional view of a folding brace mechanism used to hold the nose panel in the table-supporting position, taken generally along line 7—7 of FIG. 2, with parts thereof removed.

Referring now to FIG. 1, there is disclosed the closed

luggage case of my invention generally designated as **10**. For the purpose of explaining the structure of my invention, luggage case **10** can be broken into two broad portions. First, the main storage portion is a non-collapsible box-like case having oppositely disposed side panels, oppositely disposed end panels and a generally rectangular base panel, a handle **11** being connected to one of the side panels. This storage portion of the luggage case is therefore little different from that of an ordinary suitcase.

The second major portion of luggage case **10** is a cover that is divided into three sections. The middle section of the cover is an ironing board nose panel **12** having a generally truncated V-shape. The length of nose panel **12** is equal to that of the base panel which of course is equal to the length of the luggage case itself. The width of nose panel **12** at the wide end is equal to the length of end panels **13** (shown in FIG. 6) and **14**.

In the closed position shown in FIG. 1, nose panel **12** is mounted so that the wide end covers the entire open top of the suitcase at one end but covers only a central portion of the open top adjacent end panel **14**.

As shown in FIG. 2, a mounting panel **16** is attached to the wide end of nose panel **12**. Mounting panel **16** extends the full width of nose panel **12** and is mounted perpendicular thereto. A pair of corner braces **17** and **18** hold mounting panel **16** rigid with respect to nose panel **12**.

Referring again to FIG. 1, with nose panel **12** in the closed position, mounting panel **16** extends toward end panel **13** and lies in the same plane therewith. Mounting panel **16** has the same dimensions as end panel **13**. Since mounting panel **16** and end panel **13** are of the same size, each forms one-half of the total area of that end of luggage case **10**.

Mounting panel **16** is hinged to end panel **13** by a pair of hinges such as **19**, which is shown in phantom in FIG. 7. Although a piano-type hinge is preferred, the type or number of hinges is not critical to the invention. It is necessary, however, that the hinges such as **19** permit nose panel **12** to rotate easily from the closed position shown in FIG. 1 through the perpendicular position shown in FIG. 4 to the fully extended position shown in FIG. 5. It can be seen from FIG. 5 that nose panel **12** must fit tightly against the base panel **15** so that a flat continuous surface suitable for use as an ironing board is provided. Mounting panel **16** must fit tightly against end panel **13** with nose panel **12** in the extended position of FIG. 5. Hinges **19** must therefore be mounted in appropriate wells in the two panels so that the panels will fit tightly together when open.

Referring again to FIG. 1, it can be seen that nose panel **12** covers only the generally central portion of the open top of luggage case **10** when in the closed position. Nose panel **12** is held in this closed position by means of a suitcase-type lock **21***a* and **21***b*. Lock portion **21***a* is mounted on a perpendicular lip **22** attached to the narrow end of nose panel **12**. Lock portion **21***b* is mounted on end panel **14**. Although lip **22** was used in the preferred embodiment, it could be omitted without departing from the invention if nose panel **12** were designed to fit directly against the open top of luggage case **10**. In the embodiment of the invention disclosed in the drawings, the cover was designed to have a lip around the entire periphery thereof. It should be obvious that a lip of this type could be further exaggerated or could be eliminated without departing from the invention.

Since nose panel **12** has a generally truncated V-shape, a pair of symmetrical openings remain on each side thereof. These openings are covered by a pair of partial cover members **23** and **24** that are mounted adjacent opposite longitudinal edges of nose panel **12**. Partial cover members **23** and **24**, in cooperation with nose panel **12**, therefore fully cover the open top of the luggage case as shown in FIG. 1. In the preferred embodiment of this

invention, cover members **23** and **24** have a generally right triangular shape.

Cover members **23** and **24** are hinged at the base thereof to end panel **14** by a pair of hinges **26** and **27**. Hinges **26** and **27** permit cover members **23** and **24** to be rotated to a position perpendicular to base panel **15** as shown in FIG. 4. Cover members **23** and **24** therefore also act as support members or legs for the table of FIG. 4 and for the ironing board of FIG. 5.

As can be seen most clearly in FIGS. 1 and 6, the longitudinal edges of nose panel **12** that adjoin partial cover members **23** and **24**, and the corresponding edges of cover members **23** and **24**, are cut at an angle other than 90° with respect to the outer surface of the cover. When the cover is opened, nose panel **12** must be opened first to release cover members **23** and **24** since the beveled edges of nose panel **12** hold cover members **23** and **24** in the closed position. Cover members **23** and **24** can then be rotated to the open position. It is noted that the locks such as **28** on cover members **23** and **24** do not actually lock. As shown in FIG. 3, lock **28** is designed to prevent cover member **23** from moving outwardly away from nose panel **12**. Nose panel **12** and lock **28** therefore cooperate to hold cover member **23** in the closed position shown in FIG. 1. In FIG. 2, nose panel **12** has been opened first, followed by the opening of cover member **24**. Cover member **23** remains in the closed position.

As previously mentioned, cover members **23** and **24** act as legs when opened. In FIG. 4, it can be seen that the legs are held in the open position by a pair of lockable brace members **31** and **32**. In the preferred embodiment of the invention, brace members **31** and **32** are of the folding type normally used on card tables. One end of each brace member is connected to the case and the other end is connected to the leg. Brace members **31** and **32** lock in the position shown in FIG. 4 to prevent movement of the legs with respect to the case. When it is desired to return cover members **23** and **24** to the closed position, the lock is broken by pushing upwardly on the brace members. It should be obvious to those skilled in the art that other types of lockable brace members could be used for the same purpose.

FIGS. 2 and 5 reveal that a collapsible support means is mounted on the inside of nose panel **12** that is adapted to fold out of the nose panel end of the ironing board. In FIG. 2 the collapsible support means is disclosed in the folded up or storage position. The support means includes a straight tubular leg **33** having a rubber tip **34** on the end thereof. Attached by a pin **36** to the opposite end of leg **33** is a pair of curved short braces **37** and **38**. Braces **37** and **38** have their opposite ends mounted for rotation in brackets **39** and **41** respectively. Brackets **39** and **41** are located near the opposite edges of nose panel **12** at almost half the distance from the narrow end to the wide end. Leg **33** therefore can rotate about pin **36** while braces **37** and **38** can pivot about brackets **39** and **41**.

A second pair of tubular curved braces **42** and **43** is pivotally mounted to a pair of brackets **44** and **46** respectively. Brackets **44** and **46** are mounted adjacent opposing edges of nose panel **12** in close proximity to mounting panel **16**. The opposite ends of braces **42** and **43** are connected by a pin **47** to leg **33** at a point approximately one-fourth of the distance from pin **36** to rubber tip **34**.

In FIG. 2, leg **33** and braces **37**, **38**, **42** and **43** are in the folded up or collapsed position adjacent the inner surface of nose panel **12**, all of said members lying in the same plane and being held in position by a clamp **48** secured to nose panel **12** and designed to hold leg **33** in the position shown.

The collapsible support means is also shown in the storage position in FIG. 4. When the luggage case is used as a table as shown in FIG. 4, nose panel **12** acts as a leg for that end of the table. Again, it is necessary that means be provided to securely lock nose panel **12** in the

position perpendicular to base panel **15**. A pair of lockable brace members **51** and **52** is therefore provided for this purpose. Brace members **51** and **52** are again of the same general type that are normally used on card tables. One end of each of brace members **51** and **52** is attached by means of a pin to the interior of the sides of the luggage case as shown in FIG. 2. The other end of each of brace members **51** and **52** is connected to tubular braces **43** and **42** respectively.

A more detailed view of the apparatus for connecting brace **52** to brace **42** is shown in FIG. 7. The same technique is used for brace **51**. A pin **53** having a knob **54** on the end thereof is connected to the free end of brace **52**. Pin **53** rides in a slot **56** that runs longitudinally in brace **42**. Slot **56** is provided with an enlarged opening **57** at the end thereof adjacent bracket **44** through which knob **54** is inserted or removed. A similar slot **56***a* and enlarged opening **57***a* are to be found in tubular brace **43**. A coiled spring **58** having one end connected to pin **53** and the other end connected to a hole in tubular brace **42** is mounted so as to pull pin **53** to the end of slot **56** that is farthest from bracket **44**. A similar coiled spring **58***a* is connected between brace **51** and tubular brace **43**.

In FIGS. 2 and 4, braces **51** and **52** are shown locked in the position necessary to hold nose panel **12** rigidly perpendicular with respect to base panel **15**. Braces **51** and **52** are locked and springs **58***a* and **58** hold the pins at the bottom of their respective slots. Nose panel **12** is thus locked firmly in position to act as a support member or leg for the table. If it is desired to again close the luggage case from the position shown in FIG. 4, braces **51** and **52** are simply pushed upwardly to break the lock and then nose panel **12** rotated to the closed position. The collapsible support means including leg **33** is not used when the luggage case is employed as a table, therefore it remains in the storage position.

In FIG. 5, my invention is used as an ironing board, in which case the collapsible support means is folded out to support the nose panel end of the ironing table. To fold out the support means, leg **33** is pulled free from clamp **48** and is rotated with respect to pins **36** and **47** until the position shown in FIG. 5 is reached. The support means cannot collapse from the position shown in FIG. 5 since the ends of tubular braces **37** and **38** adjacent pin **36** press downwardly against the portions of tubular braces **42** and **43** that lie adjacent leg **33**. Pressure or weight can thus be applied to the top of nose panel **12** without moving the support means from the position shown in FIG. 5.

At the same time that the support means is being folded to an open position, braces **51** and **52** are moved upwardly in slots **56***a* and **56** against the force of springs **58***a* and **58**. In FIG. 5 it can be seen that with the support means in the open position, brace **51** has been moved upwardly against the force of spring **58***a* until a pin **53***a* is near the top of slot **56***a*.

If deemed desirable by the operator, pins **53** and **53***a* can be removed from their associated slots before nose panel **12** and leg **33** are moved to the position shown in FIG. 5. This is a matter of choice since it is not necessary to remove the pins from the slots. It is noted that braces **51** and **52** are not necessary to support the device in the ironing table position of FIG. 5.

It is also noted that the geometrical relationship between leg **33** and its connecting points with the two sets of tubular braces must be such that the support means does not bind when it is folded out to the position shown in FIG. 5. Since that relationship is a matter of engineering design and not strictly a part of the invention, it need not be described in detail herein. Although this particular support means is used in the preferred embodiment of the invention, it should be evident that other supporting devices could be utilized without departing from the invention.

FIG. 6 discloses a sectional end view of the luggage case in a closed condition. This view shows that the collapsible support means is mounted close to the cover so that a large amount of storage space remains in the luggage case. FIG. 6 also shows that a liner **61** of cloth, cardboard or other suitable fabric or material may be affixed to the interior of the luggage case if desired. Since the storage portion of the luggage case is never disassembled, covering **61** can be permanently placed in the case.

Another important feature of the invention is disclosed in FIG. 2. It was mentioned earlier in this specification that the clothing or other articles need not be removed from the case before it is converted into a table or ironing board. This is accomplished by placing an inner cover on the case so that the outside cover can be opened without disturbing the contents. The inner cover includes a metal frame **62** that corresponds to the inner dimensions of the case. Metal frame **62** is covered by a cloth **63** or other material that will support the weight of the articles in the suitcase when it is turned upside down. If desired, a sheet of solid material such as masonite might be substituted for the fabric-covered metal frame disclosed herein.

The inner cover is held in place by a plurality of rotatable hooks such as **64** and **65** that are mounted on the interior of the case. An enlarged view of hook **64** is shown in FIG. 3. Hook **64** includes a metal angle iron bracket portion **64***a* upon which frame **62** rests. Mounted for rotation in bracket portion **64***a* is a pin **64***b* having a cylindrical hook **64***c* attached to the top thereof. With hook **64***c* rotated to the position shown in FIG. 3, frame **62** can be inserted between it and bracket **64***a*. Pin **64***b* and hook **64***c* are then rotated 90° to the position shown in FIG. 2 to lock frame **62** between hook **64***c* and bracket portion **64***a*. Many variations on the type of inner cover and the method of securing it will occur to those skilled in the art. The important thing is that such an inner cover can be used with my invention to permit using the luggage case as a table or ironing board without removing the contents therefrom.

It is apparent that various modifications in addition to those indicated above may be made in the procedures and apparatus disclosed herein. Such modifications of my invention will be apparent to those skilled in the art. It is therefore to be understood that my invention is not limited to the exact forms of the invention disclosed herein or in any other manner than by the scope of the appended claims.

What is claimed is:

1. A collapsible unitary luggage case, ironing board and table combination, comprising:

(a) a generally rectangular base panel with first and second oppositely disposed side panels and first and second oppositely disposed end panels rigidly mounted thereon and connected so as to form a non-collapsible box-like case having an open top opposite said base panel and being adapted to serve as a storage or carrying case, said first end panel being approximately one-half as wide as said second end panel and said side panels;

(b) an ironing board nose panel having a truncated V-shape with a length equal to that of said base panel, a wide end of said nose panel having a width equal to the length of said first end panel, said wide end of said nose panel having a mounting panel connected perpendicular thereto, said mounting panel being equal in size to said first end panel, said nose panel in a closed position being mounted to act as a partial cover for said open case with said mounting panel lying adjacent to and in the same plane as said first end panel and a narrow end of said nose panel lying adjacent said second end panel;

(c) means including first hinge means connecting said first end panel and said mounting panel so that

said nose panel can be rotated from said closed position to an open position in which said nose panel lies in the same plane as said base panel to define a flat continuous surface suitable for use as an ironing board;

(d) collapsible support means mounted on the inside of said nose panel adapted to fold out and support said nose panel end of the ironing board;

(e) a pair of partial cover members for said open case mounted adjacent opposite longitudinal edges of said nose panel to completely cover said open case in cooperation with said nose panel, said partial cover members having a generally right triangular shape with the bases thereof being hinged to said second end panel so that said partial cover members can be rotated to a position perpendicular to said base panel to act as support members for said ironing board;

(f) a lockable brace member mounted between each of said partial cover members and said case to lock said cover members in said perpendicular position; and

(g) means for locking said nose panel in a position perpendicular to said base panel to act as a support member for said case when used as a table.

2. A combination carrying case and ironing board, comprising:

(a) a rigid box-like case having a closed base panel, an open top opposite thereto, and first and second oppositely disposed ends and sides;

(b) an outer cover for said open top of said case, said cover being divided into three portions including:

(1) a central portion having a generally truncated V-shaped configuration and in a closed position extending from said first to said second end with a wide end thereof adjacent said first end and a narrow end thereof adjacent said second end;

(2) first and second side portions lying on opposite sides of said central portion to completely cover the remainder of said open top, said side portions having a generally triangular configuration;

(c) means mounting the wide end of said central portion of said cover to said first end so that said cover can be rotated from the closed position to a position in which said central portion lies in the same plane as said base panel to thereby define a flat, continuous surface suitable for use as in ironing board;

(d) means for rotatably mounting a wide end of each of said side portions to said second end so that said side portions can be rotated to a position perpendicular to said base panel to act as legs for said ironing board; and

(e) means for supporting said central portion of said cover when extended for use as an ironing board.

3. Apparatus according to claim 2 in which said means for mounting said wide end of said central portion of said cover to said first end comprises a mounting panel connected to said wide end so as to lie in the same plane as said first end and abut said first end with said central portion in said closed position, and hinge means connecting said mounting panel to said first end.

4. Apparatus according to claim 2 in which said first and second side portions are of a right triangular configuration and in which the adjoining edges of said side portions and said central portion are beveled so that said central portion when closed will hold said side portions in the closed position.

5. Apparatus according to claim 2 in which an inner cover is removably mounted across said open top of said case between said case and said outer cover so that said outer cover can be folded out and the carrying case used as an ironing board without removing clothing or articles from said case.

6. Apparatus according to claim 2 in which said means for supporting said central portion comprises a leg member that is mounted to the inside of said central portion by means of first and second pairs of pivotable braces that lie adjacent the inner surface of said central portion in a closed position and that pivot outwardly to support said leg member in an open position.

7. Apparatus according to claim 2 in which a pair of braces is provided to hold said central portion in a position perpendicular to said base panel to act as a support member for said case when used as a table.

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