Jan. 23, 1968 L. S. HILL 3,365,072

PORTABLE COLLAPSIBLE STAND

Filed Oct. 1, 1965

FIG 1.

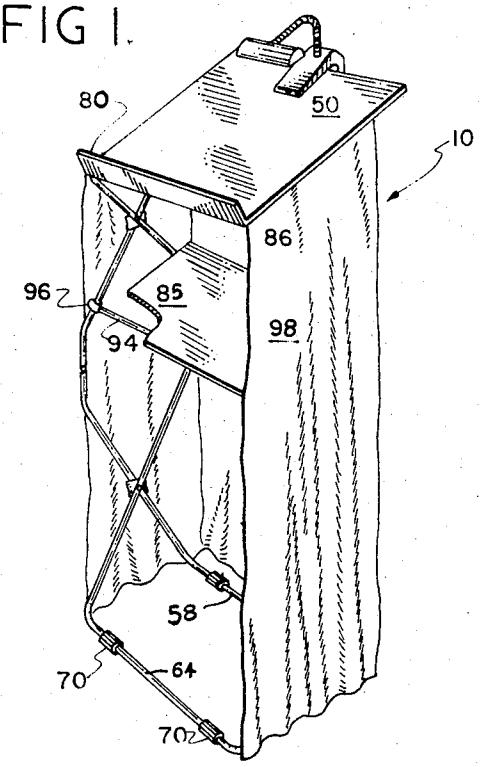


FIG 2

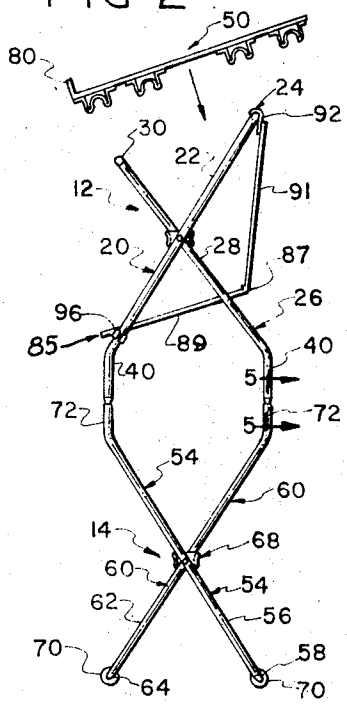


FIG 3

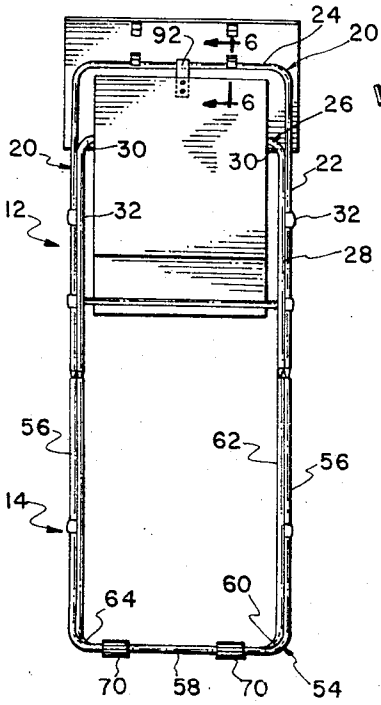


FIG 4

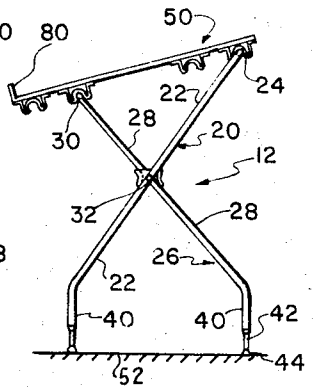


FIG 5

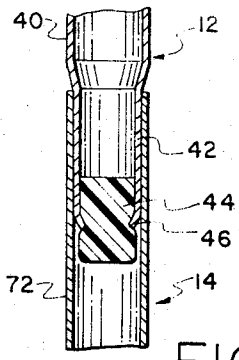


FIG 6

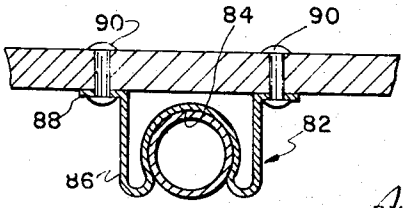
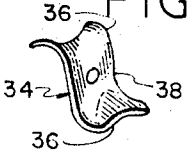


FIG 7



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3,365,072

PORTABLE COLLAPSIBLE STAND

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7 Claims. (Cl. 211—149)

The improved portable collapsible stand comprising the present invention has been designed for use primarily as a personalized and readily set up on floor or table lectern facility for supporting lecture notes and material by lecturers, clergymen, salesmen and other speakers, including papers, writing materials and small models in an orderly fashion for reference purposes when required. The stand can be used also as a table for writing when making notes or as a clip board to secured articles thereon against loss when the stand is used outdoors. The invention is capable of other uses and, if desired, with or without rearrangement as capable of other uses and, if desired, with or without rearrangement as required, may be employed as a display stand, an easel, a rack, or hanger along with other uses too numerous to mention. Irrespective, however, of any particular use to which the invention may be put, the structural features thereof are at all times preserved.

Due to the versatility of the present portable, collapsible stand, the objects of the invention are manifold and principal among them are the provisions of a light stand which is readily erected and dismantled, quite stable in use even when subjected to heavy loads, and is easily moved or shifted from place to place during a lecture merely by gripping the top. These objects are attained by the provision of a two-piece separable frame structure having two foldable frame sections which can be used each as a separate unit, or one upon the other as a composite unit of upper and lower sections. The two sections, when assembled upon each other lend rigidly interrelated support, each for the other, so that collapsing of the stand under expected use is impossible. The two sections are, individually foldable for carrying or storage in a narrow space and the upper section is foldable in only one direction so that when it is in its extended condition the lower section may be dispensed with and the upper section supported upon a table top, for example, where it may serve as a table lectern, the effective height of which, when added to the height of the table, is appropriate for close visibility of lecture material by a standing lecturer.

A further object of the present invention resides in the provision of a lectern or stand in which the effective height of a top panel member or platform associated therewith may readily be adjusted without necessitating adjustment of the composite sections, this being the case whether both frame sections or only one frame section is in use. A similar and related object is to provide a stand in which the top panel member, in any adjusted position thereof, in effect constitutes a mechanical rigidifying element of the composite unit and in combination with the adjacent frame links, defines a triangular relationship which secures the upper and lower sections with a frictional interlock that is easily established and released.

Still another object of the invention is to provide a portable foldable stand of the character described having a novel arrangement of an adjustable open front compartment where articles are readily accessible to the lecturer below the lectern platform.

The invention provides a portable stand or lectern arrangement which can be made of commercially available tube stock, sometimes referred to as thin wall, and veneer or pressed board stock, whereby the article may be manufactured at a low cost; one which contemplates a minimum number of moving parts and is unlikely to get out

of order; one which is readily understandable by those unskilled mechanically, for easy erection and dismantling; one which is of feather weight construction; one which may be folded into a flat thin package for purposes of shipment or storage and which consumes but little space so that it may conveniently be transported by carrying it substantial distances by one hand if need be; one which is attractive in its appearance and pleasing in its design; and, one which is well adapted to perform the services required of it.

Other objects and advantages of the invention, not at this time enumerated, will readily suggest themselves as the following description ensues:

In the accompanying single sheet of drawings forming a part of this specification, one illustrative embodiment of the invention has been shown.

In these drawings:

FIG. 1 is a perspective view of a portable collapsible stand or lectern constructed according to the present invention and showing the same in its erected condition;

FIG. 2 is a partially exploded side elevational view of the stand, the enclosing curtain or apron associated therewith being removed in the interests of clarity;

FIG. 3 is a rear elevational view of the stand;

FIG. 4 is a side elevational view of the upper frame section, showing the same in use as a table-supported lectern;

FIG. 5 is an enlarged sectional view taken substantially on the line 5—5 of FIG. 2;

FIG. 6 is an enlarged sectional view taken substantially on the line 6—6 of FIG. 3; and

FIG. 7 is a perspective view of a stop bracket employed in connection with the present invention.

Referring now to the drawings in detail and in particular to FIGS. 1 and 2, a collapsible portable stand constructed according to the present invention has been shown in its composite erected condition and designated in its entirety at **10**. Briefly, the stand **10** involves in its general organization a two-part sectional supporting framework comprised of an upper articulated section **12**, and a lower articulated section **14**. The two sections **12** and **14** are similar in their construction and each involves a pair of U-shaped frame members formed from lengths of tube stock.

The upper frame section **12** includes an outside U-shaped frame member **20** having parallel frame legs **22** and an interconnecting bight portion **24** (see also FIG. 4). It further includes an inner U-shaped frame member **26** having parallel frame legs **28** and an interconnecting bight portion **30**. The frame legs **22** and **28** of the two sections are pivotally connected together medially of their ends by rivet-like pivot pins **32**. Sheet metal stop brackets **34** (FIG. 7) are interposed between the adjacent legs **22** and **28** at their regions of crossing. The stop brackets are generally of S-shape in cross section and include diagonally disposed cradle portions **36** which receive the legs **22** and **28** sidewise and limit the spreading movements of the frame members **20** and **26** to the approximate angle of 80° which is shown in FIGS. 2 and 4. The pivot pins **32** pass through central openings **38** provided in the stop brackets **34**.

The lower ends of the legs **22** and **28** are turned downwardly as at **40** (see particularly FIG. 4) to provide a series of four foot portions with the extreme lower ends of these foot portions **40** reduced as at **42** (FIG. 5) for a substantial portion of their terminal length. Elastomer foot plugs **44** are received telescopically in the foot portions **40** and are crimped in position as indicated at **46**. As will be more fully described presently, the upper frame section **12** constitutes a support for an inclined lectern platform **50** and it is capable of constituting the sole sup-

port for such platform, in which case it may be itself supported from a suitable elevated supporting structure such as the table top shown in FIG. 4 and designated at **52**, as well as used in conjunction with the articulated lower frame section **14** as shown in FIG. 2 to maintain the lectern platform **50** at a proper elevation for use by a person in a standing position.

The lower frame section **14** includes an outside frame member **54** having parallel legs **56** and an interconnecting bight portion **58**. The frame section **14** further includes an inside frame member **60** having parallel legs **62** and an interconnecting bight portion **64**. The two frame members **54** and **60** are pivotally connected together in the manner previously described with respect to the pivotal connection between the frame members **20** and **26** of the upper frame section **12**. In order to avoid needless repetition of description it is noted that the pivotal connection for the frame members **54** and **60** has been designated in its entirety at **68**, and it includes a similar pair of stop brackets **34**.

The lower frame section **14** is designed as a base support for the upper frame section **12** when the stand or lectern platform **50** is supported from a floor or ground surface rather than from an elevated table surface. Accordingly, the two sections **12** and **14** are capable of being arranged in vertical tandem relationship with the bight portions **58** and **64** being effectively supported on the floor or ground surface through the media of respective pairs of elastomer sleeves **70** (FIGS. 1, 2 and 3) which prevent sliding or skidding of the lectern as a whole and which surround the bight portions **58** and **64**. The upper or distal ends of the legs **52** and **56** are turned upwardly as at **72** for alignment with the downturned portions **40** (see also FIG. 5) and the open circular rims of these upturned portions telescopically receive therein the reduced extensions **42**, together with their contained elastomer foot plugs **44**.

The thus assembled framework of the stand **10** is of a rigid nature, the insertion of the extensions **42** into the upper ends of the upturned portions **72** of the legs **56** and **62** serving to prevent collapse of the two articulated sections **12** and **14**. The stop brackets **34** further serve to rigidify the structure. It is to be noted at this point that the extent of the legs **56** and **62** of the lower section **14** is uniform so that the upper ends of these legs terminate in the same horizontal plane. On the other hand, the extent of the legs **28** is somewhat less than the extent of the legs **22** of the upper section **12** so that the bight portion **30** lies in a horizontal plane below the horizontal plane of the bight portion **24**. The general plane of the lectern platform **50** is thus substantially an inclined plane as supported on the two bight portions **24** and **30**.

As best seen in FIGS. 1, 2 and 4, the lectern platform **50** is in the form of a generally rectangular panel of a suitable sheet material such as pressed wood, plywood, fiberboard or the like. If desired, it may be made of a lightweight metal, such as aluminum. The lower longitudinal edge region of the panel is turned upwardly to provide a retaining flange **80** for preventing sliding or rolling of small articles from the platform. The underneath surface of the platform has suitably secured thereto a series of four pairs of resilient retaining snap clips **82** (FIGS. 1 and 6), each clip being in the form of a length of a narrow strip of spring material providing an arcuate cradle portion **84**, suspension legs **86**, and lateral anchoring flanges **88** which are secured to the platform **50** by rivets **90**, or the like. The clips of each pair are longitudinally aligned and the distance between clips which are once removed from one another in the transverse direction of the platform are spaced apart a distance preferably a little greater than the center-to-center distance between the two parallel bight portions **24** and **30**. The clips **82** are designed for selective application to these bight portions **24** and **30** by the simple expedient of pressing them downwardly so that the cradle portions **84**, which

are in the form of major circle sectors, will snap into position on the bight portions. Since in the exemplary form of lectern platform **50** there are four such pairs of attachment clips **82**, two positions of the lectern platform in the lectern assembly are possible. When the first and third pair of clips **82** (as viewed from left to right in FIGS. 2 and 4) are clipped onto the bight portions **24** and **30**, the lectern platform **50** will assume a raised inclined position wherein the lectern as a whole is at its maximum height. When the second and fourth clips **82** are attached to the bight portions **24** and **30**, the platform **50** will assume a lesser height. In either position of the platform **50**, the inclination thereof will remain the same.

In both instances, however, the wider spacing of the clips spread the bight portions more widely than would be their spacing under resting conditions with the reductions **42** of the upper section disposed in the upper ends **72** of the lower section **14**. This wider spacing of the bight portions **30** and **24** induced by the space of the clips when attached tends to cock the telescoping elements **42** and **72** with respect to each other and places a frictional strain thereon which interlocks them sufficiently for them to be lifted as a unit by gripping the upper section **12**, or the platform **50**, thus effectively unitizing the assembly of portions for handling as though it were integrally formed.

The lectern of the present invention is provided with a removable compartment-forming panel structure **85** which, when in position on the framework of the lectern, also establishes a shelf immediately beneath the platform **50**. The panel structure may be formed of a suitable pressed board material and in its flat condition it is in the form of a rectangular sheet having a crease or hinge line **87** extending thereacross. The hinge line **87** divides the panel structure into a shelf section **89** and a rear wall section **91**. A hook-like suspension bracket **92** is secured to the rear wall section **91** and is adapted to be hooked over the bight portion **24** of the frame section **12**. The forward edge region of the shelf section **89** is adapted to be loosely supported on a transverse strut member **94** (FIGS. 1 and 2) which extends between the legs **22** of the frame member **12**, the strut member being provided with U-shaped attachment clips **96** at its opposite ends by means of which the attachment may be effected at any desired elevation. When the strut member is in position, the suspension bracket **92** may be hooked over the bight portion **24** and the forward edge region of the shelf section **89** caused to rest upon the strut member **94**, whereupon the rear wall section **91** will extend substantially vertically while the shelf section **89** will assume a slightly inclined position, depending upon the particular elevation of the strut member **94**. The strut member may be so positioned that the inclination of the shelf section **89** will be the same as the inclination of the lectern platform **50**. Since the panel structure **85** is associated only with the upper frame member **12** and has no connection to the lower frame member **14** whatsoever, it is useable with the lectern when the upper frame member is supported on a table top as shown in FIG. 4 or when it is supported from the floor or ground as shown in FIGS. 1 and 2. Obviously, the stand or lectern **10** is capable of use either with or without the application thereto of the panel structure **85** and when the latter is not required, it may conveniently be folded and stored in an out-of-the-way position.

As shown in FIG. 1, a further auxiliary adjunct to the stand or lectern **10** in the form of a back and side drape **98** may be provided if desired. This drape is in the form of a rectangular sheet of a suitable fabric, such as velvet, when the lectern is to be employed as a pulpit lectern. Various drapery fabrics are suitable for forming the drape **98**. The drape **98** may be secured to the framework in any suitable manner as for example by the use of conventional drapery pin hooks which may be applied to the bight portion **24** of the upper section **12** and by

the use of single pin hooks at the upper corner regions of the sheet material which may be attached to the bight portion **30**. The drape **98** may extend from the platform **50** downwardly to the extreme lower regions of the framework where its lower edge is substantially coincident with the floor or other supporting surface.

The collapsed condition of the lectern **10** has not been illustrated herein but it is believed that it is obvious that when the platform **50** is removed to release the interlocking strain at the telescoping elements **42** and **72**, the upper frame section **12** is then separated from the lower frame section **14**, both of these sections are then capable of being individually collapsed by the simple expedient of swinging the respective U-shaped frame members about their pivotal axes so as to bring the same into substantial coincidence with the inner frame members being disposed substantially within the confines of their associated frame members. The panel structure **85**, together with the two collapsed frame sections, as well as the strut **94** may then be nested within a relatively small space for purposes of storage.

The invention is not to be limited to the exact arrangement of parts shown in the accompanying drawings or described in this specification as various changes in the details of construction may be resorted to without departing from the spirit of the invention. Therefore, only insofar as the invention has particularly been pointed out in the accompanying claims, is the same to be limited.

What is claimed is:

1. A collapsible portable stand designed for use as a lectern or the like and comprising: a framework including upper and lower frame sections comprised of tubular stock, each section being comprised of similar U-shape frame members having parallel side legs and an interconnecting bight portion, the distance between the side legs of one frame member being slightly less than the distance between the side legs of the other frame member whereby the frame members may fit together in nested relationship, pivot pins connecting the adjacent side legs in the medial regions thereof whereby the pivoted members may be swung relative to each other between a substantially collapsed position and a wide-angle extended position, the distal end regions of all of said side legs being turned laterally out of the planes of the respective side members and extending vertically and in parallelism when the sections are in their extended positions, said distal end regions of all of the side legs of one of said frame sections being provided with reduced extensions which are removably and telescopically received within the distal end regions of the side legs of the other frame section whereby the upper frame section is supported from and overlies the lower frame section, the effective length of all of the side legs of the lower frame section being equal and the length of the side legs of one frame member of the upper frame section being greater than the length of the side legs of the other frame member of said latter frame section whereby the bight portions of the upper frame section assume different heights, and a lectern platform removably secured to said bight portions of the two frame members, bridging the distance therebetween, and overhanging at least one of said bight portions.

2. A collapsible portable stand designed for use as a lectern or the like and comprising: a framework including upper and lower frame sections comprised of tubular stock, each section being comprised of similar U-shape frame members having parallel side legs and an interconnecting bight portion, the distance between the side legs of one frame member being slightly less than the distance between the side legs of the other frame member whereby the frame members may fit together in nested relationship, pivot pins connecting the adjacent side legs in the medial regions thereof whereby the pivoted members may be swung relative to each other between a substantially collapsed position and a wide-angle extended position, limit stop means for restraining the frame members of one of said frame sections in said wide-angle extended position, the distal end regions of all of said side legs being turned laterally out of the planes of the respective side members and extending in parallelism when the sections are in their extended positions, said distal end regions of all of the side legs of one of said frame sections being provided with reduced extensions which are removably and telescopically received within the distal end regions of the side legs of the other frame section in said wide angle extended position whereby the upper frame section is supported from and overlies the lower frame section, the effective length of all of the side legs of the lower frame section being equal and the length of the side legs of one frame member of the upper frame section being greater than the length of the side legs of the other frame member of said latter frame section whereby the bight portions of the upper frame section assume different heights, and are spaced a predetermined distance by said limit stop means, a lectern platform removably secured to said bight portions of the two frame members, bridging the distance therebetween, and engaging them at a distance different from said predetermined distance to cock the telescoping distal end regions and impose an interlocking frictional strain therebetween.

3. A collapsible portable stand designed for use as a lectern or the like and comprising: a framework including a pair of similar U-shaped frame members each having a pair of substantially parallel side legs and an interconnecting bight portion, the distance between the side legs of one frame member being slightly less than the distance between the side legs of the other frame member whereby the side legs of one frame member may fit partially crosswise and interiorly of the other frame member, pivot pins connecting the adjacent side legs of the two frame members in the medial regions thereof whereby the thus pivoted members may be swung relative to each other between a substantially collapsed position with the bight portions together and a wide angle resting position wherein the bight portions are spaced a predetermined distance and the framework is in stable equilibrium when the distal ends of the side legs rest upon a supporting surface, the effective length of the side legs of one of said frame members being appreciably greater than the effective length of the side legs of the other frame member whereby the bight portions of the frame members assume different heights, stop means for supporting said frame members in their wide-angle resting position in weight bearing relation, a lectern platform, and means carried by said lectern platform removably securing the lectern platform to both of said bight portions of the two frame members to bridge the distance therebetween and overhang each of said bight portions and forcing them from their predetermined spacing under strain upon the frame members to a working position of different spacing to rigidify the portable stand as a unit.

4. A collapsible portable stand designed for use as a lectern or the like and comprising: a framework including a pair of similar U-shaped frame members each having a pair of substantially parallel side legs and an interconnecting bight portion, the distance between the side legs of one frame member being slightly less than the distance between the side legs of the other frame member whereby the side legs of one frame member may fit partially crosswise and interiorly of the other frame member, pivot pins connecting the adjacent side legs of the two frame members in the medial regions thereof whereby the thus pivoted members may be swung relative to each other between a substantially collapsed position with the bight portions together and a wide-angle position wherein the bight portions are spaced a predetermined distance and the framework is in stable equilibrium when the distal ends of the side legs rest upon a supporting surface, the effective length of the side legs of one of said frame members being appreciably greater than the effective length of the side legs of the other frame member where-

by the bight portions of the frame members assume different heights, limit stop means for supporting said frame members in their wide-angle position in weight bearing relationship, a lectern platform bridging the distance between the two bight portions and overhanging each of said bight portions, and means carried by said lectern platform securing the lectern platform to both bight portions and holding said bight portions a different spaced distance from that determined by said limit stop means to strain the frame members and rigidify the assembly as a unit for manipulation by handling the platform.

5. A collapsible portable stand as set forth in claim 4, wherein said securing means comprises two pairs of transversely aligned retaining clips mounted on the underneath side of said lectern platform which are selectively engageable with said bight portions of the frame members, said clips in cooperating pairs being spaced differently than the bight portions in their said relative positions and constituting also the means for removably securing the platform to the frame members in selected positions of vertical adjustment.

6. A collapsible portable stand designed for use as a lectern or the like and comprising: a framework including a pair of similar U-shaped frame members each having a pair of substantially parallel side legs and an interconnecting bight portion, the distance between the side legs of one frame member being slightly less than the distance between the side legs of the other frame member whereby the side legs of one frame member may fit partially crosswise and interiorly of the other frame member; pivot pins connecting the adjacent side legs of the two frame members in the medial regions thereof whereby the thus pivoted members may be swung relative to each other between a substantially collapsed position with the bight portions together and a wide-angle position wherein the bight portions are spaced a predetermined distance and the framework is in stable equilibrium when the distal ends of the side legs rest upon a supporting surface, the effective length of the side legs of one of said frame members being appreciably greater than the effective length of the side legs of the other frame member whereby the bight portions of the frame members assume different heights; limit stop means maintaining said frame members in said wide-angle position comprising a second framework detachably connected to the first mentioned framework and having pairs of upstanding members in interconnecting relationship with the lower ends of said frame members of the first framework in said wide-angle positions in weight supported relationship, and means engaging one of said frameworks to hold the pairs of members of one of said frameworks in said wide-angle position in weight supporting relationship; a lectern platform removably bridging the distance between the bight portions of the first two frame members and overhanging each of said bight portions; and means removably securing the lectern platform to said bight portions of the first two frame members at a spaced distance different from that of said relative positions determined by said limit stop means, said lectern platform, securing means and upstanding members interacting to strain said members from said wide-angle position to frictionally strain and rigidify said interconnecting relationship and unitize the assembly for manipulation by handling the platform.

7. A collapsible portable stand designed for use as a lectern or the like and comprising: a framework including a pair of similar U-shaped frame members each having a pair of substantially parallel side legs and an interconnecting bight portion, the distance between the side legs of one frame member being slightly less than the distance between the side legs of the other frame member whereby the side legs of one frame member may fit partially crosswise and interiorly of the other frame member, pivot pins connecting the adjacent side legs of the two frame members in the medial regions thereof whereby the thus pivoted members may be swung relative to each other between a substantially collapsed position and a wide-angle position wherein the frame work is in stable equilibrium when the distal ends of the side legs rest upon a supporting surface, the effective length of the side legs of one of said frame members being appreciably greater than the effective length of the side legs of the other frame member whereby the bight portions of the frame members assume different heights, a lectern platform removably secured to said bight portions of the two frame members, bridging the distance therebetween and overhanging each of said bight portions, a rigid strut member extending between the side legs of one of said frame members, below the level of said pivot pins, and a sectional panel including a shelf section and a back wall panel hingedly connected together along mating edges, the distal end of said back wall panel being removably secured to one of said bight portions and the distal end region of said shelf panel being removably supported on said rigid strut member.

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