

[54] MULTI-FUNCTIONAL TABLE ARRANGEMENT

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[51] Int. Cl. A47b 5/06

[58] Field of Search 108/12, 40, 48, 63, 108/65, 79, 102, 112, 143; 248/188

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[57] ABSTRACT

In a multi-functional table arrangement for use in combination with some form of wall enclosure or other housing, a table formed having a substructure which includes means for supporting a leg assembly in the forward portion of the table, and a pair of longitudinal slides connecting at their forward ends with the table substructure and within the wall enclosure at their rearward ends to provide for the extension or contraction of the table with respect to said wall enclosure or housing. The top or surface member of the table arrangement may be utilized as a night stand, refreshment bar, or desk when said table is contracted into the wall enclosure, or may be employed as a table for dining, a conference, or the like, when the table arrangement is extended from the wall enclosure; and the table top or surface member may also be adapted for unfolding into a larger size planar surface so as to provide greater area when utilized as said table. Lateral slides interconnect within the table substructure and to the underside of the table top so as to provide for the centralizing of said top when maintained in this unfolded relationship.

6 Claims, 11 Drawing Figures

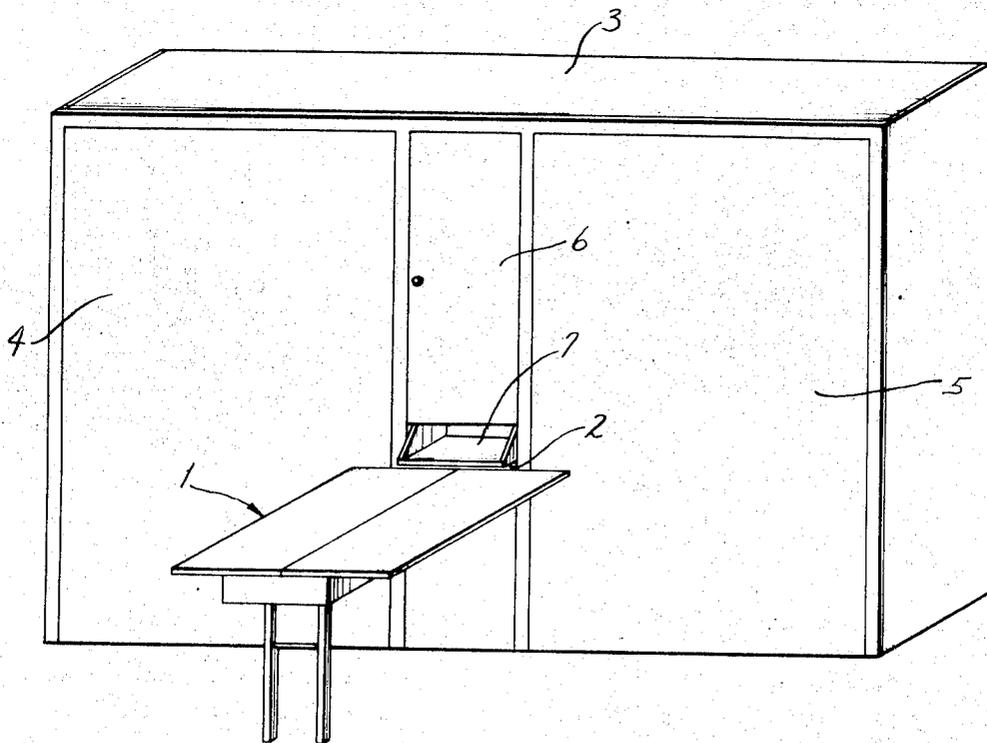


FIG. 1

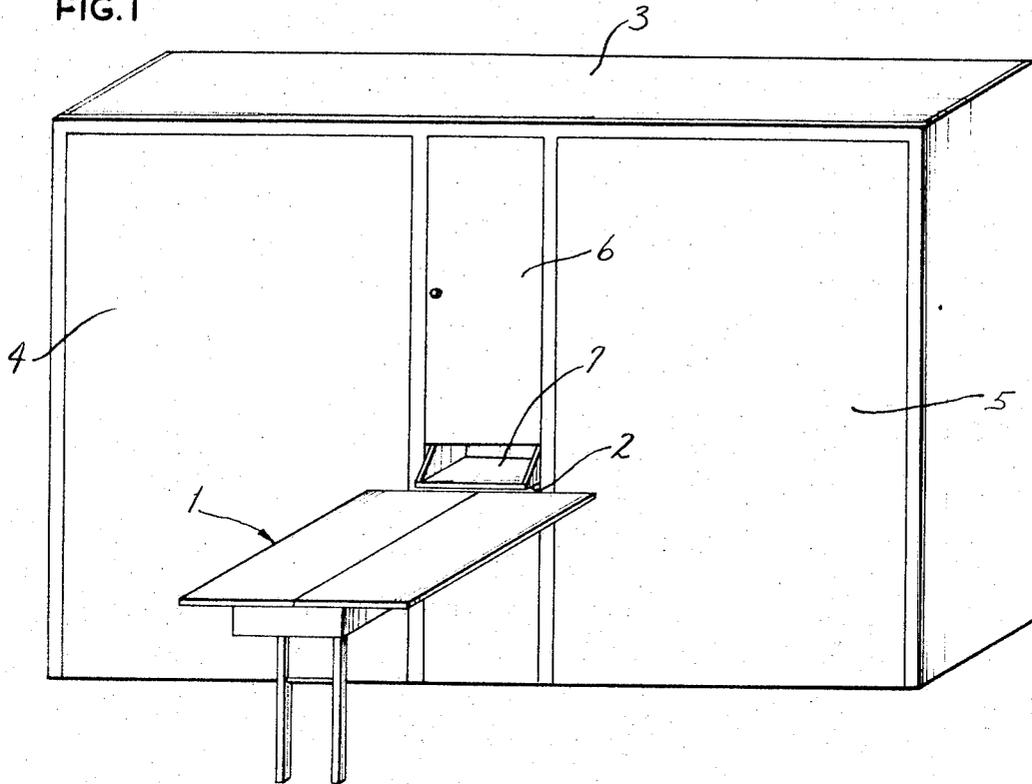


FIG. 2

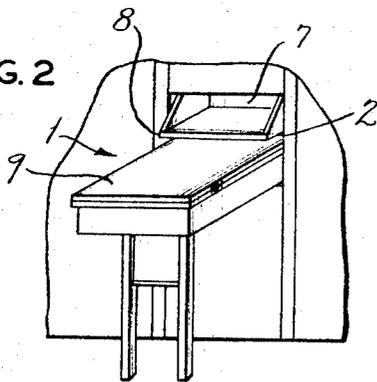


FIG. 3

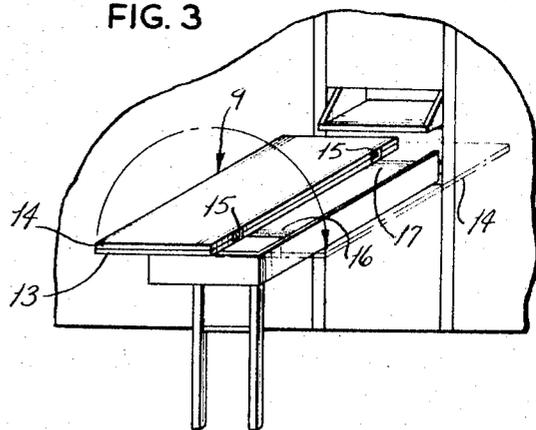
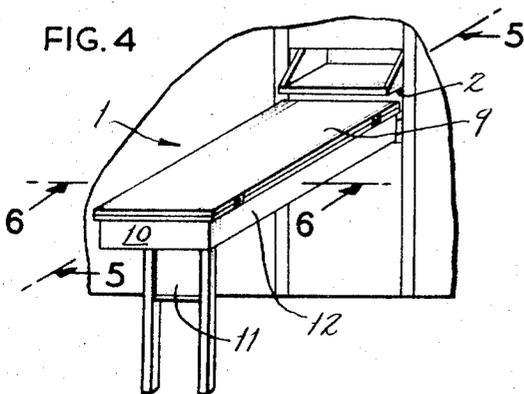


FIG. 4



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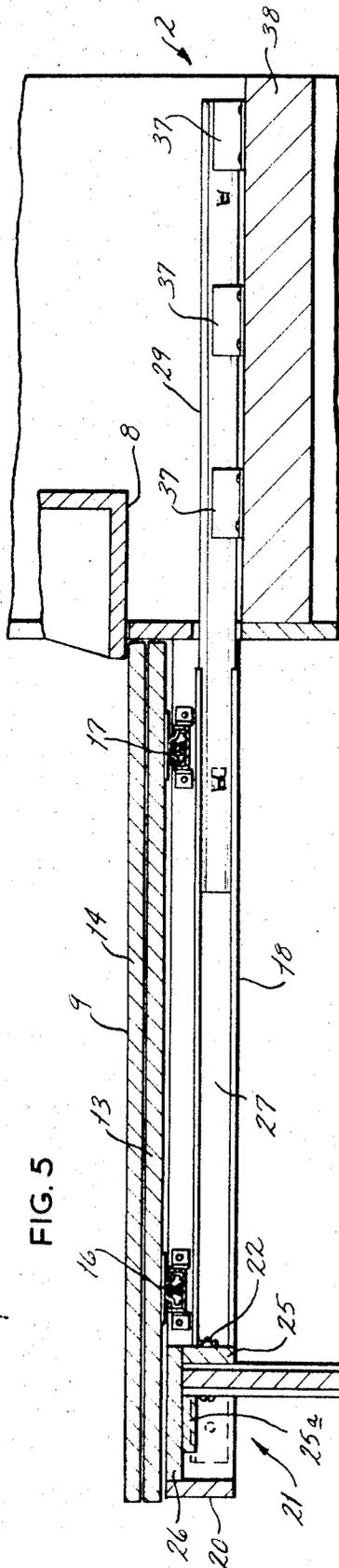


FIG. 5

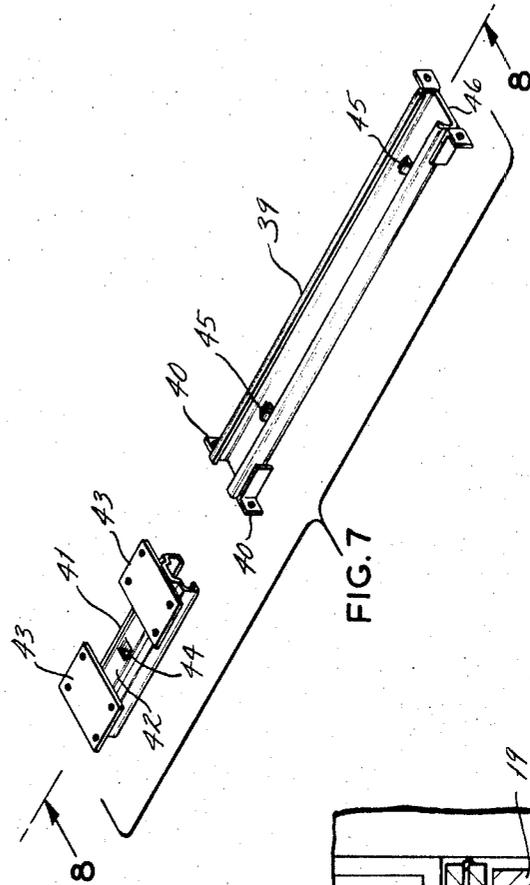


FIG. 7

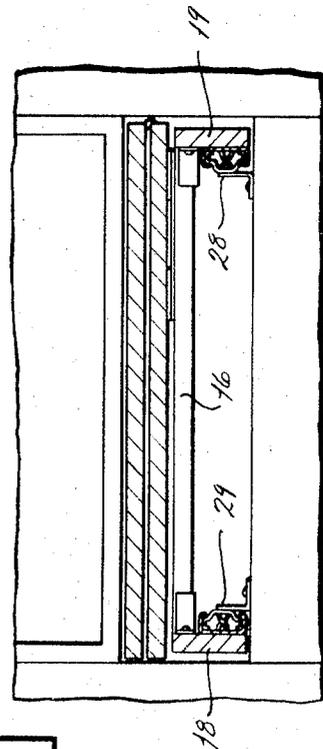


FIG. 6

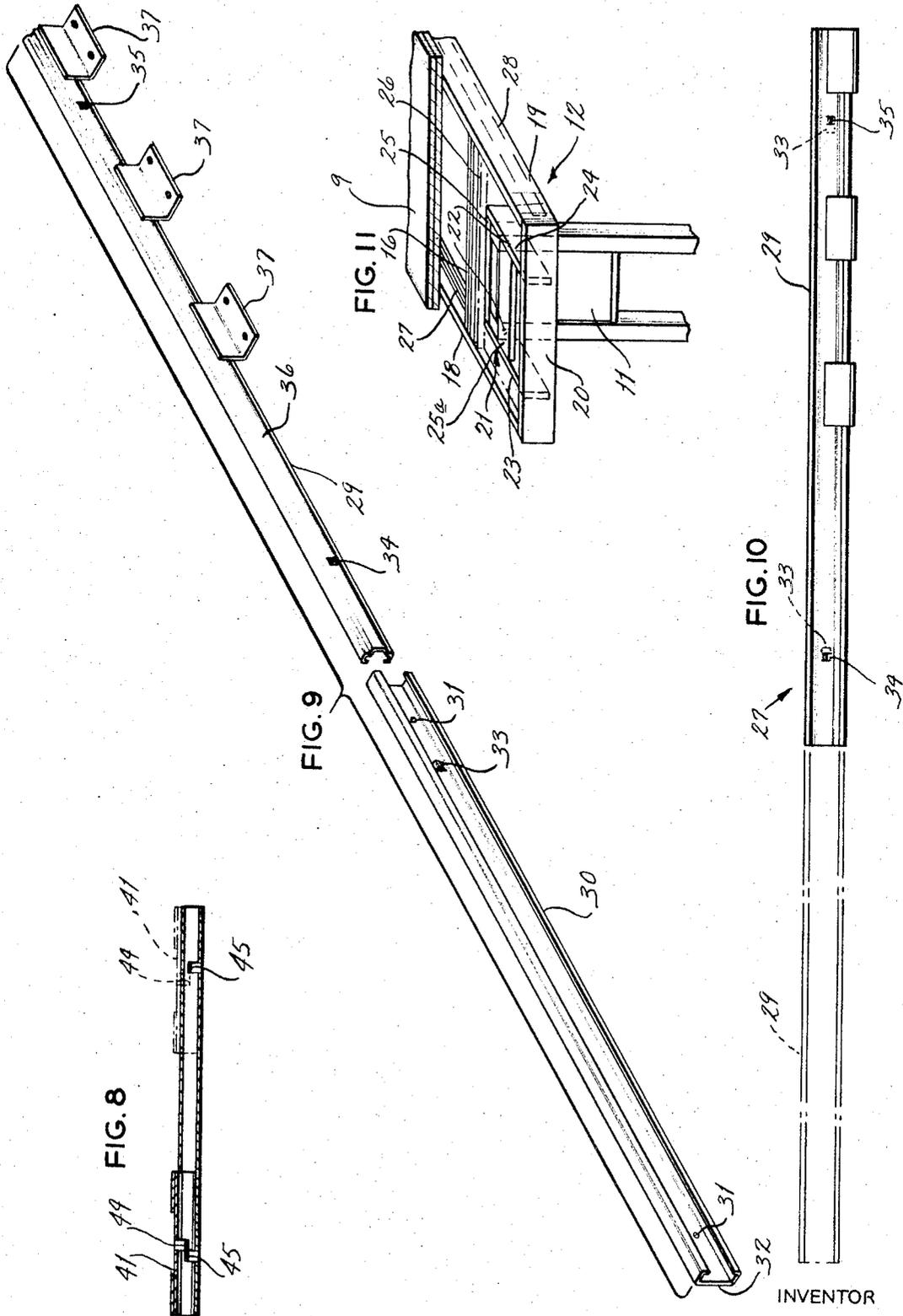
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MULTI-FUNCTIONAL TABLE ARRANGEMENT CROSS-REFERENCE TO RELATED APPLICATION

The subject matter of this application is partially related to the subject matter of a United States patent issued to the same inventor entitled Wall Bed Structure, U.S. Pat. No. 3,550,167.

BACKGROUND OF THE INVENTION

This invention relates generally to a multi-functional table arrangement wherein a table-like embodiment may be extended from a wall enclosure, and expanded to form a table top surface area of rather enlarged dimensions, or the table arrangement may be contracted back into the wall enclosure and utilized in the manner of a night stand or desk; the invention has particular application in commercial establishments where space is usually acquired at a premium value.

The prior art devices having any relationship to the type of table arrangement disclosed and described herein have thus far revealed a table unit that could be slid through an aperture in a wall so that it can be used separately in two different adjacent rooms at separate times. This particular embodiment in a prior art table simply employed a standard four-legged table that conveniently fit into a cut out portion in a wall having dimensions similar to the end profile of the legs and top of the table. Its passage back and forth between rooms was achieved simply through the exertion of a manual pushing force. Another prior art patent discloses a standard table whose top may be unfolded to double its surface area. Other prior art devices disclose table top like arrangements that have pivotally connected proximate one edge a leg means, with the opposite edge of the table top being hinged to wall or the like. All of these prior art devices appear to be constructed more for their portability, and generally achieve the particular results for which they have been constructed.

The present invention contemplates some of the features disclosed in the prior art, but includes within its construction many more operative components that render the co-operation between its basic table-like features more efficient in operation, easier to assemble, and more compact even though useful for a plurality of purposes.

It is, therefore, the principal object of this invention to provide a functional table assembly which may be partially inserted into a wall enclosure and therein function in the capacity of a conveniently sized night stand or desk, or be withdrawn from said enclosure, expanded, and utilized in the manner of a common table for dining, or the like.

It is another object of this invention to provide a table arrangement which may be used in co-operation with wall type bed structures and therein function in the capacity as a night stand adjacent one or more of said beds.

It is a further object of this invention to provide a multi-functional table arrangement wherein the leg assembly mounting the table at one end may be removed as when its table top has been moved into an associated wall enclosure and therein conveniently function as a compact night stand or desk.

It is an additional object of this invention to provide a table arrangement which is sufficiently compact and integrally constructed to provide for its ease of longitudinal movement into or out of a wall enclosure, and

which also incorporates features which provide for its convenient lateral expansion into a table having ample surface area.

It is another object of this invention to provide a table arrangement incorporating longitudinal and lateral slides that permits and facilitates the maneuverability of the table into various positions for divers usage.

It is yet another object of this invention to provide a table arrangement wherein its table top or surface area when fully expanded is sufficiently stabilized to provide a rigid table that can be used for any purpose.

It is an additional object of this invention to provide a multi-functional table arrangement which is simple to manufacture, compact in structure, capable of being used in conjunction with other items of domestic furniture, and yet is easy to handle so that it may be utilized in commercial establishments such as guest occupants at a motel.

These and other objects of this invention will become more apparent to those skilled in the art through a review of the following summary and the description of its preferred embodiment and accompanying drawings.

SUMMARY OF THE INVENTION

In accordance with this invention, generally stated, multi-functional table arrangement, which may be incorporated into any type of establishment, including commercial establishments, and used in conjunction with other items of furniture to provide a compact table which may be fully extended into a wide surfaced area table, or contracted into the form of a night stand or desk as where greater open area in a room must be acquired, and the ready availability of more floor space is essential. This table arrangement includes a table substructure which is supported at its extendible end by means of a leg assembly, and at its other end by means of longitudinal slides which mount directly within a wall enclosure wherein the table may be withdrawn as when not in use and allows for more open space to be made available within the accompanying room. While the rear slide members of these longitudinally extending slides are connected within the wall enclosure, the front slide members of said longitudinal slides connect directly to the table substructure, or more particularly, to its braces. Lateral slides also interconnect between the braces of the table substructure, said lateral slides being formed including a bottom slide member which, as previously stated, interconnects between the table braces, with each bottom slide member having a corresponding top lateral slide member that may be slid within the same. This top lateral slide member connects to the underside of the table top or surface area, and is convenient in providing for shifting of the table top to one side as when said top is formed having a pair of table leaves which may be unfolded to expand the width of the table top. Such is necessary to provide for the centralizing and stabilizing of the table top as when it is of the multiple leaf type unfolding table top.

This table arrangement may be employed in various establishments such a motels, hotels, or the like, where it is desirable to increase the room area by reducing the size of furniture contained therein, and it further may be used in conjunction with wall bed structures such as the type I have disclosed in my U.S. Pat. No. 3,550,167, and relating to an invention upon Wall Bed Structure. When the invention of this present application is used in conjunction with the type of wall bed structures as

described in the foregoing application, it can easily be seen how ample room can be readily acquired in rather confined areas, such as a motel room, rendering said rooms readily convertible for use for conferences or similar functions. Furthermore, and when the room is utilized, for example, conference purposes, the table arrangement of this invention may be extended although not unfolded, as previously described, to provide a narrow table that may be used during the conference, either in the capacity of a desk, or even as a bar for social purposes.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings,

FIG. 1 is a perspective view of the multi-functional table arrangement of this invention being fully extended from its wall enclosure and expanded to provide a complete table top area;

FIG. 2 provides a perspective of the table arrangement of this invention being fully withdrawn into its wall enclosure, as fragmentarily shown herein;

FIG. 3 is a perspective view of the table arrangement being fully extended from its wall enclosure and with its table top in the process of being unfolded and expanded;

FIG. 4 is a perspective view of the table arrangement being fully extended from its wall enclosure, and with its top being maintained folded, or perhaps permanently affixed to the table substructure.

FIG. 5 is a longitudinal sectional view taken along the line 5—5 of FIG. 4, and primarily showing a longitudinal slide as used in conjunction with the table substructure and wall enclosure;

FIG. 6 is a transverse sectional view taken along the line 6—6 of FIG. 4, and showing one embodiment of the lateral slide as used in conjunction with the table substructure;

FIG. 7 provides a perspective view of disjoined top and bottom slide members of one of the lateral slides;

FIG. 8 is a sectional view taken along the line 8—8 of FIG. 7, showing the top slide member being maintained at a left side of the bottom slide member, with a phantom line view of said top slide member as disposed at the right side of said bottom slide member;

FIG. 9 provides a perspective view of disjoined front and rear slide members of one of the longitudinal slides of this invention;

FIG. 10 provides an inner side view of a longitudinal slide showing the front slide member being fully withdrawn within its rear slide member, and in phantom line showing the front slide member being fully extended forwardmost of its rear slide member; and

FIG. 11 provides a perspective partial view of the table substructure primarily showing the means for connection of the leg assembly to the table.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings for an illustrative embodiment of the table arrangement of this invention, in FIG. 1, reference numeral 1 generally depicts the table arrangement as fully extended from its wall enclosure, generally at 2, and being unfolded to dispose a full surface table top. This table arrangement may be incorporated to act in conjunction with an enclosure formed wherein any type of wall of a room, or it may be used in conjunction with an enclosure, such as the enclosure

3, which may include a pair of wall beds 4 and 5 that may be maintained and pivoted upright as herein shown as when not in use. Intermediate the two wall bed structures there may be formed a cabinet behind a door 6, and a recess 7 may be conveniently provided for retention of papers, letters, or the like.

The table 1, as revealed in FIG. 2, is herein withdrawn within its wall enclosure 2, and in this retracted state may be used in the form of a night stand or desk, or as any other table type arrangement wherein only a limited surface area is required. It can be seen that the recess 7 may be formed as a compartmentalized unit constructed of wood, metal, or the like, as at 8, and is so situated to provide a slight clearance above the table top or surface member 9 so that the table 1 may be slid inwardly of the wall enclosure without interference or obstruction from this unit 8, or likewise the table may be unobstructively extended from the wall enclosure as when it is desired to make more complete usage of the table. In referring to FIG. 4, the table 1 is shown fully withdrawn from the wall enclosure 2, and in this position its full table top surface may be used for purposes of a table, a bar, or the like. To achieve the extension of the table arrangement from its wall enclosure, one need only slightly raise the frontal portion 10 of the table so as to clear the bottom of the leg assembly 11 from resting upon the floor, or rug thereon, and then withdraw the table from the enclosure until its longitudinal slides are fully extended. The table arrangement as herein shown may incorporate the table top 9 which may permanently mount upon the table substructure 12, and utilized in that manner, or as revealed in FIG. 3, the table top may be constructed from a pair of leaves 13 and 14 which may be hinged to each other, as at 15, along their edges thereof, so that the leaf 14 may be unfolded into adjacency with the leaf 13 to fully expand the surface area of the table top. To furnish proper stabilization of the table top 9, when the two leaves have been unfolded and expanded into adjacency, the bottom leaf 13 may connect with a pair of front and rear lateral slides 16 and 17, so as to allow for its shifting to the side to allow for a centralizing of the two leaves upon the table substructure when maintained adjacent to each other. This positioning of the two unfolded leaves of the table is more aptly disclosed in the phantom line outline of this FIG. 3. When the leaves are unfolded from each other and shifted in this manner, they will essentially be stabilized and rest upon the substructure 12 of the table.

The structural arrangement of the table, and more particularly, its substructure 12, is more fully disclosed in FIG. 11, and comprises a pair of longitudinal braces 18 and 19 which are interconnected at their forward portion by means of a lateral brace 20. Structure means 21 is built into the forward portion of the table substructure, and is arranged for holding the table leg assembly 11, as by use of the pair of wing nuts 22. This structure means includes a pair of inner braces 23 and 24 that are arranged parallel with the longitudinal braces 18 and 19, and an end support 25 interconnected between the back ends of these inner braces, with said end support being disposed for reception and mounting of the leg assembly 11 and its attaching wing nuts 22. To provide for proper positioning of the leg assembly, a cross member 25a connects between the inner braces and is sufficiently forward of the end support to allow a snug fit insertion of the upper edge of

the leg assembly. These inner braces, the end support and cross member are maintained slightly lower than the top level of the longitudinal braces 18 and 19, and the lateral brace 20, so that a panel member 26, herein shown in hidden line outline, may mount upon the upper edges of said inner braces and end support, and be maintained flush with the upper level of said longitudinal braces and lateral brace. Furthermore, this panel member may be finished upon its upper surface with the same veneer as the table top, so that when the table is unfolded this portion will enhance the appearance of the entire table arrangement. As seen in this figure of the drawings, the lateral slides, such as the forward lateral slide 16, as herein shown, are disposed rearwardly of the structure means mounting the leg assembly, and said lateral slides connect between the longitudinal braces 18 and 19. Furthermore, the longitudinal slides 27 and 28 connect to the inner surface of said longitudinal braces 18 and 19, and provide for the regulated shifting of the table arrangement from within its wall enclosure to its fully extended position.

By viewing FIGS. 5 and 6, the disposition of the forward and rear lateral slides 16 and 17 with respect to their mounting to the underside of the table top 9, and more particularly to its bottom leaf 13, is more accurately disclosed. Furthermore, the assembly of the structure means 21 useful for removably mounting the leg assembly 11 is also shown. The connection of the longitudinal slides, and more specifically, slide 27, is herein disclosed. See also FIG. 9. Slide 27, as well as its counterpart longitudinal slide 28, includes a rear slide member 29 which is formed for complementary fitting and telescopically coupling for sliding movement within a front slide member 30. Each front slide member is formed having apertures 31 disposed through its web portion 32, and are arranged for reception of any common fastener, such as a screw, which may attach this portion of the longitudinal slide directly to the inner surface of the braces 18 or 19. Projecting inwardly from the web portion 32 of each forward slide member is a stop means 33 which is measureably located for disposition intermediate each stop means 34 and 35 formed in the web portion 36 of each rear slide member 29, the relationship between these stop means restricting the limits of sliding movement of the front slide member with respect to its complementary rear slide member. See additionally FIG. 10. Connecting to the inner side of each web portion 36 of a rear slide member are a series of angle plates 37, which angle plates also mount directly upon a structural support 38 formed integrally of the wall enclosure 2. Thus, it can be seen that the rear slide member of each longitudinal slide is firmly secured within the wall enclosure, and that the front slide members of said longitudinal slides provide for a shifting, either externally or internally of said wall enclosure, of the table 1. The amount of surface area of the table that one wants exposed may be governed by how far the table may be withdrawn from the enclosure. It can be seen from this FIG. 5 that there is just enough clearance provided intermediate the compartment 8 and the upper level of structural support 38 so as to provide for unencumbered but compact sliding movement of the table arrangement into or out of the wall enclosure 2.

In FIG. 6, the lateral slides, the forward lateral slide 16 being herein shown, interconnect between the longitudinal braces 18 and 19 of the table substructure.

More specifically, in referring also to FIG. 7, the bottom slide member 39 is connected by means of a series of angled clips 40 and accompanying fasteners to the inner sides of said longitudinal braces, and any common fastener, such as a screw or the like, may be used for securing said lateral slides to said braces. Disposed for sliding movement within the bottom slide member is a top slide member 41, which is formed having complementary parts that provide for its snug but sliding engagement within the same. Connecting to the upper web 42 of this top slide member are a pair of plates 43 formed having a series of apertures therethrough which provide for their mounting by means of fasteners to the underside of the table top 9, and more specifically to the underside of its leaf 13. Projecting downwardly from the web portion 42 of the top slide member is a stop means 44 which is normally disposed intermediate the projections 45 formed extending upwardly from the web portion 46 of the bottom slide member. This stop means 44, being normally disposed intermediate the two stops 45, is limited in its lateral sliding since as it slides from one side to the other said stop means 44 will eventually encounter either one of the stop means 45, thereby precluding further lateral shifting. See FIG. 8. Thus, when the top slide member is shifted to the left side of the bottom slide member until the stop means 44 encounters the left stop 45, the leaf 13 of the table top will be disposed approximately centrally over the longitudinal brace 18, and when the leaf 14 is unfolded into adjacency with said leaf 13, the line of pivoting of the two leaves will be substantially centrally disposed over the table substructure. Also, when it is desired to condense the size of the table, the two table leaves may be refolded back into their overlying relationship, and a shift of the same to the right provides for an encountering of the stop means 44 with the right side stop 45 of the bottom slide member, and when such occurs, the overlying leaves will then be centrally disposed upon the table substructure 12, and will be in position to be withdrawn back into the wall enclosure 2.

Numerous variations in the construction of the table arrangement of this invention, within the scope of the appended claims, will occur to those skilled in the art in light of the foregoing disclosure. The foregoing description is mainly of the preferred embodiment.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. A multi-functional table arrangement for use in a contractive or extensive relationship with a wall enclosure or the like, said table arrangement comprising a substructure having lateral and longitudinal interconnecting braces, a leg assembly providing for supporting the table at its forward portion, structure means secured to said braces and having attached thereto the leg assembly, a pair of longitudinal slides interconnecting between the longitudinal braces and the wall enclosure to allow for extension of the table from the wall or its contraction therein, said wall enclosure supporting the table at its back portion, a surface member provided upon the braces functioning as a table top, said structure means supporting the leg assembly includes a pair of longitudinally extending inner braces, said inner braces arranged parallel with the longitudinal braces, an end support interconnecting between the back ends of the inner braces and disposed for receiving means for retaining the leg assembly, said inner braces and end support being disposed below the upper level of the

substructure, a panel member connecting with said inner braces and end support, said panel member attaching flush with the upper level of the frontal portion of said substructure.

2. The invention of claim 1 wherein the means for holding the leg assembly to the end support comprises at least a screw and wing nut combination, and said leg assembly being disconnectible from said structure means upon removal of said combination.

3. The invention of claim 1 including a pair of forward and rear lateral slides interconnecting between the longitudinal braces, said lateral slides being disposed rearwardly of the structure means supporting the leg assembly, said surface member formed having a pair of equal size longitudinal leaves, said leaves being hinged to each other along a longitudinal edge thereof so that the leaves may be disposed in overlying relationship, or the upper leaf may be unfolded into adjacency and a planar relationship with the normally lower leaf to form a fully opened area of surface member, the normally lower leaf of the surface member connecting to the pair of lateral slides, and said pair of leaves capable of being slid towards a side through the co-operation of said pair of lateral slides in order to centrally orient and stabilize the unfolded and adjacent leaves upon the table substructure.

4. A multi-functional table arrangement for use in a contractive or extensive relationship with a wall enclosure or the like, said table arrangement comprising a substructure having lateral and longitudinal interconnecting braces, a leg assembly provided for supporting

the table at its forward portion, said wall enclosure supporting the table at its back portion, structure means secured to said braces and having attached thereto the leg assembly, a pair of longitudinal slides interconnecting between the longitudinal braces and the wall enclosure to allow for extension of the table from within the interior of the wall enclosure or its contraction therein, each longitudinal slide comprising a longitudinally extending rear slide member and a longitudinally extending front slide member, each front slide member being connected to a longitudinal brace of the table substructure, said rear slide members being mounted in spaced relation within the wall enclosure, each rear slide member being telescopically coupled for snug sliding movement within a front slide member whereby said table assembly can be slid partially into and out of said wall enclosure, and a surface member provided upon the braces functioning as a table top.

5. The invention of claim 4 wherein said longitudinally extending front and rear slide members are complementary in shape, each rear slide member disposed for snug sliding movement partially within a front slide member, and angle plates interconnecting between each rear slide member and within the wall enclosure to secure the table arrangement to the same.

6. The invention of claim 5 including stop means operatively associated between each front and rear slide member combination to limit the range of extension and withdrawal of the table assembly with respect to the wall enclosure.

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