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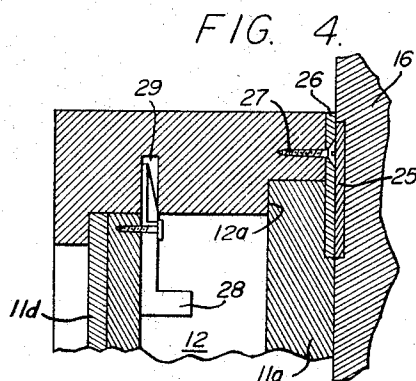
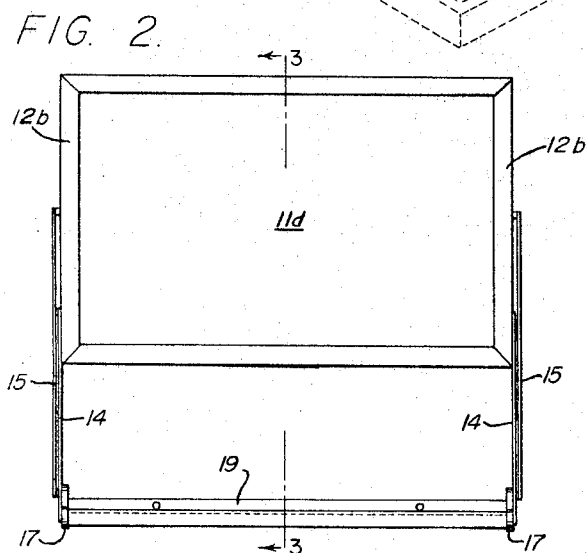
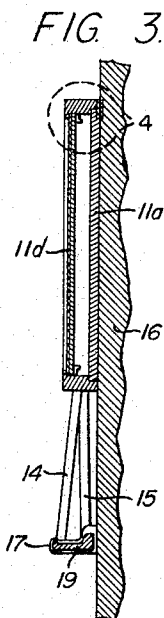
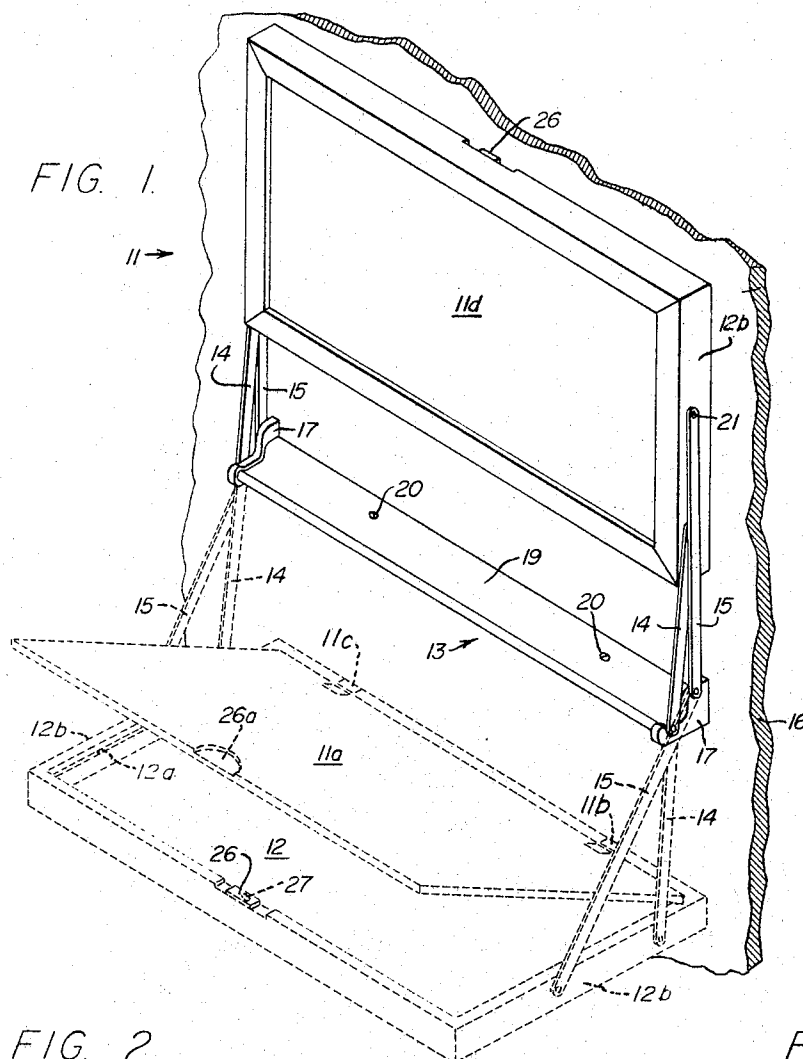
M. D. KUNZ ET AL

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COMBINATION WALL DISPLAY AND DESK UNIT

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2 Sheets-Sheet 1



INVENTORS:
MERLYN D. KUNZ
DEE ORR G. KUNZ

BY *Mallinckrodt and*
Mallinckrodt
ATTORNEYS

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COMBINATION WALL DISPLAY AND DESK UNIT

Merlyn D. Kunz, 825 Uinta, and Dee Orr G. Kunz,
P.O. Box 91, both of Evanston, Wyo. 82930
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This invention relates to convertible desks of the type that are attached to a wall and are foldable to a vertical position against the wall when not in use, with one side exposed as a wall display.

In the interest of space economy, it is often desirable to provide a room with a desk that can be easily folded against a wall to which it is attached. A common desk of this type has a single supporting arm at each side, pivoted to a desk panel at one end and to a wall-hung shallow cabinet at the other end as a freely articulating link between the desk panel and the cabinet. Variations of such a wall-hung desk are shown in early patents, see especially U.S. Patents No. 600,629 issued Mar. 15, 1898, to L. W. Yaggy and No. 1,250,625 issued Dec. 18, 1917, to L. E. Myers.

Since the desk panels of these patented constructions are free to rotate around the pivot points attaching the arms thereto, they are difficult to control and to place in both the horizontal desk position and the vertical wall display position. Being so unstable, they actually create hazards for individuals who are inexperienced in handling them, and are not generally suitable for hotel or motel rooms, where they would otherwise be very useful.

In the making of this invention, it was a principal object to provide a desk construction of this type especially adapted for hotel and motel rooms by reason of inherent stability in both desk and wall positions, ease of handling, and economy of construction and installation.

A feature of the invention is the provision of a pair of arms at each side of a panel structure to serve as articulative links connecting such panel structure to a simple wall fixture in such a manner that there is over-center stability as well as columnar supports in wall display position, and stable suspension in desk position. The arms of each pair have one set of ends pivoted to the panel structure at mutually spaced locations and the other set of ends pivoted to the wall fixture at mutually spaced locations, whereby there is, in effect, toggle action in securing the panel structure in its wall display position.

By using two supporting arms at each side of the panel structure in this manner, such structure is held firmly in the horizontal position as a desk, without requiring further support for its rear margin. Moreover, a simple catch can be effectively used to securely hold the panel structure facing the wall, with its undersurface exposed as a wall display, when in vertical position.

Further objects and features of this invention will appear hereinafter in connection with the detailed description of the presently preferred embodiments illustrated in the accompanying drawings.

In the drawings:

FIG. 1 is a perspective view of one embodiment of a combination wall display and desk of the invention in its wall display position and secured by a simple magnetic catch, the desk position being shown by dotted lines;

FIG. 2, a view in front elevation showing only the wall display position;

FIG. 3, a vertical section taken along the line 3-3 of FIG. 2;

FIG. 4, an enlarged fragmentary view of the portion of FIG. 3 encircled by the broken line 4;

FIG. 5, a perspective view of one of the end bracket members forming part of the wall fixture to which the

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panel structure is attached, the view being directed toward the outer lateral face of the bracket member;

FIG. 6, a view in perspective of one arm of a pair of supporting arms which link the panel desk structure to the wall fixture, the view being directed toward the outer lateral face of the arm and an intermediate portion being broken out for convenience of illustration;

FIG. 7, a similar view of the other arm of the pair;

FIG. 8, a view similar to that of FIG. 4, but showing another embodiment of the invention wherein a simple overhang catch is used to take full advantage of the toggle action of the articulative linkage arms;

FIG. 9, a side elevation of another embodiment of the combination wall display and desk of FIG. 8 in its wall display position, depicting by broken lines various intermediate positions of the panel structure when it is moved from the vertical position to the horizontal desk position and vice versa;

FIG. 10, a perspective view of a hinge-bracket used with the embodiment of the invention shown in FIGS. 8 and 9; and

FIG. 11, a similar view of the overhang catch of FIGS. 8 and 9, per se.

Referring to the drawings:

In the construction illustrated in FIGS. 1-7, a panel structure 11 of a shallow box formation having a cover 11a and hinged at 11b and 11c to a framework making up a storage compartment 12, is articulatively secured to an elongate wall bracket 13 by means of oppositely disposed sets of supporting arms 14 and 15 serving as links which enable such panel structure 11 to be positioned as a wall display, vertically with the cover 11a facing the wall, set the full line position of FIG. 1, or horizontally as a desk, see the broken line position in FIG. 1. The side of the storage compartment 12 opposite cover 11a is closed by a bottom panel 11d.

For preventing free rotation of the panel structure 11 when it is being moved from the vertical wall display position to the horizontal desk position and vice versa, arms 14 and 15 are pivoted at mutually spaced points on such panel structure. It can be seen that any point on the panel structure 11 swings in an arc determined by arms 14 and 15 when the position of such structure is changed from vertical to horizontal and vice versa. Thus, the panel structure 11 can be easily controlled, even when the positioning is being carried out by the use of only one hand. Moreover, as shown in FIGS. 1-4, when it is in a horizontal desk position, it is held firmly in that position with its rear edge face merely abutting against the wall 16.

Firmness of positioning is enhanced by reason of the fact that the weight of the panel structure 11 itself, plus any applied weight during use, exerts a moment on the mounting arms 14 and 15, so that such panel structure 11 is continually pressed or urged against wall 16 to which it is secured by wall bracket 13. Not only is the panel structure 11 pressed firmly against the wall, thereby eliminating the need for supplying special attachment devices for stabilizing it in its horizontal desk position, but an added advantage is had in that it is not necessary to detach the desk structure from any fastening device before raising it to vertical wall display position.

In the desk position of the combination unit, the exposed top surface of cover panel 11a becomes, in effect, a desk top for writing letters, use as a table, etc., with the cover panel resting on an interior ledge 12a formed inside the framework defining the periphery of the storage compartment, so that a flush writing surface is provided. In the wall display position the then exposed outer face of bottom panel 11d becomes whatever the design of the unit has made it.

When the unit is intended for use in a hotel or motel

room, it is desirable to make the display surface of bottom panel 11d a pictorial or artistic scene, a calendar, a mirror, or some ornamental display or the like that will complement the decor of the room, or a bulletin board to which can be attached menus, advertisements, etc. For a school classroom, such surface may be made as a chalkboard or other utilitarian display area.

Wall bracket 13 in the embodiment illustrated in FIGS. 1-4 includes a pair of bracket end plates 17, FIG. 5, of metal, plastic, or the like, connected as by screws 18 to opposite ends of an elongate member 19 of wood, aluminum, plastic, or the like, which is attached to the wall 16 by means of screws 20, FIG. 1, and is advantageously formed as a receptacle for pens, pencils, chalk, erasers, etc. It should be noted that, with the combination unit constructed as it is, this receptacle is handily placed, whether the combination unit be used as a desk or as a chalkboard or the like.

Arms 14 and 15 are attached to side members 12b of the framework defining storage compartment 12 at mutually spaced points for pivot movement. Flathead screws 21 are advantageously used for this purpose, and are received by preferably countersunk holes 22, FIGS. 6 and 7, in one set of ends of the arms 14 and 15. Such end of the outer arm 15 is formed with a laterally-extending bearing member 15a, which serves as a spacer.

The opposite set of ends of the arms 14 and 15 are pivotally attached to pintles 23, FIG. 5, of bracket end plates 17 by means of lock rings (not shown) accommodated by receiving grooves 24 of such pintles. The upper pintle 23 to which the outer arm 15 is attached is spaced outwardly from the bracket plate by a shoulder member 23a of greater diameter that matches bearing member 15a at the opposite end of such arm 15 and provides proper spacing to accommodate the inner arm 14.

As so constructed and attached to wall bracket 13, the panel structure 11 can be satisfactorily held in vertical position flush against the wall by an easily releasable magnetic catch, FIG. 4, here shown as comprising a magnetic plate 25 inset in the wall 16 and attached thereto by any suitable means, such as an adhesive, and a similar magnetic plate 26 of opposite polarity recessed in front frame member 11a and pivoted thereto as by means of a screw 27, for turning movement as a catch with respect to keeper recess 26a in cover panel 11a to fasten such cover panel in closed position.

It is convenient to make the bottom 11d of panel structure 11 removable and replaceable. For this purpose, it is preferably made as a separate panel locked in place by means of several pivoted catches 28, FIG. 4, swingable into latching relationship with keeper slots 29 formed on the inside of the framework defining storage compartment 12.

An embodiment of the invention having some advantages over the foregoing is shown in FIGS. 8-11. The cover panel 30a of panel desk structure 30 rests on and overlaps the framework defining the storage compartment of such structure and is secured in place by snap fasteners 31 of common variety provided at spaced locations along the peripheral frame members 30c and 30d. The male members 31a of such snap fasteners are attached to panel cover 30a by screws 32 and the corresponding female members 31b are located in respective recesses 33, provided in the frame members 30c and 30d, and are attached to such frame members by respective screws 34.

In the wall display position the forward margin 35 of cover panel 30a, see FIG. 9, projects beyond the framework portion of panel structure 30 in this construction and latches under an overhang catch 36, FIG. 11, that is fixed by recessed, flat head screws 36a passed through a wall attachment portion 36b and into wall 16. The panel desk structure is thus held close to the wall. To insure stability in this wall display position, it is advantageous that catch 36 be provided with a hook portion 36c, FIGS. 8, 9 and 11, that will extend over and securely hold the forward

margin 35 against the wall attachment portion 36b of the catch.

In placing panel desk structure 30 in its wall display position, the forward margin 35 of cover panel 30 is inserted into the overhanging hook portion 36c of wall catch 36 and then the entire structure is pushed flat toward the wall, thereby making use of the toggle nature of the sets of arms 14 and 15 to latch such desk structure firmly in its wall display position.

In the embodiment shown in FIGS. 8-11, special hinge-brackets 37, FIG. 10 are used in place of the conventional hinges 11b and 11c of the embodiment illustrated in FIGS. 1-4. These hinge brackets each include a fastening leg 37a that is adapted to be screwed, as by recessed, flat head screws 37b, flush against the framework portion of panel structure 30, and another leg 37c that is cut-away at 37d so that cover panel 30a can be easily slipped thereunder. A relatively narrow tongue member 37e, extending out from each of the legs to serve as an alignment member for the cover panel 30a, is straddled by the sides of matching grooves 37f, FIG. 8, formed in the cover panel as it is positioned on the framework. With this construction once the snap fasteners 31 have been released the top panel can be pivoted open, or removed entirely, at the discretion of the user.

When the paned desk structure 30 of FIGS. 8-11 is folded to its wall display position the legs 37c of the hinge-brackets are flush against the wall to hold the outer face of the cover panel, which is also resting against the wall attachment portion 36b of catch 36, substantially parallel to the wall 16.

Whereas there are here illustrated and described certain preferred constructions which are presently regarded as the best modes of carrying out the invention, it should be understood that various changes can be made and other constructions adopted without departing from the inventive subject matter particularly pointed out and claimed herebelow.

We claim:

1. A combination wall display and desk unit, comprising a panel structure having mutually opposite panel faces, one of said faces being adapted to serve as a desk top and to fit against a wall, so the opposite face will serve as a wall display;
2. A combination wall display and desk unit as recited in claim 1, wherein the wall bracket means comprises an elongate receptacle member, and the arms are pivotally attached at respective opposite ends of said receptacle member.
3. A combination wall display and desk unit as recited in claim 2, wherein the wall bracket means further comprises bracket plate members at opposite ends of the elongate receptacle members, said plate members having pintles projecting outwardly therefrom for receiving and pivotally securing ends of the connecting arms, one of the pintles projecting outwardly farther than the other and being shouldered for spacing one arm relative to the other.
4. A combination wall display and desk unit as recited in claim 1, wherein the wall display is a removable and replaceable bulletin board.
5. A combination wall display and desk unit as recited

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in claim 1, wherein the latch means is magnetic and comprises a wall-mounted magnetic member, and a magnetic member mounted at that face of the panel structure which is adapted to serve as a desk top and which fits against the wall.

6. A combination wall display and desk unit as recited in claim 1, wherein the latch means comprises a wall-mounted catch member of overhanging hook formation, and a forwardly protruding latch member at the forward margin of that face of the panel structure which is adapted to serve as a desk top and which fits against the wall.

7. A combination wall display and desk unit as recited in claim 1, wherein the panel structure is hollow to provide storage space and the face of said structure which is adapted to serve as a desk top is provided by a panel member that is attached to the remainder of said structure by means enabling said panel member to be opened and closed as a cover.

8. A combination wall display and desk unit as recited in claim 7, wherein the means attaching the panel member to the remainder of the panel structure include at least one snap fastener.

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9. A combination wall display and desk unit as recited in claim 7, wherein the panel member is connected to the remainder of the panel structure by hinge means.

10. A combination wall display and desk unit as recited in claim 9, wherein the hinge means comprises at least one hinge-bracket including a leg fixed to the remainder of the panel structure and a leg beneath which an edge of the panel member is adapted to be inserted and a tongue extending from the legs; and wherein the panel member has a groove formed therein, whereby said hinge bracket and said panel member can be securely interfitted.

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CASMIR A. NUNBERG, *Primary Examiner.*