United States Patent [19]

Garte

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[54] **WORK STATION WITH SELF-STORING DESK**

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[52] **U.S. Cl.** **312/314,** 312/240, 312/317, 108/48

[51] **Int. Cl.** **A47b 77/10**

[58] **Field of Search** 312/282, 314, 313, 312/317, 241, 240; 108/59, 64; 248/264, 256; 242/55.2

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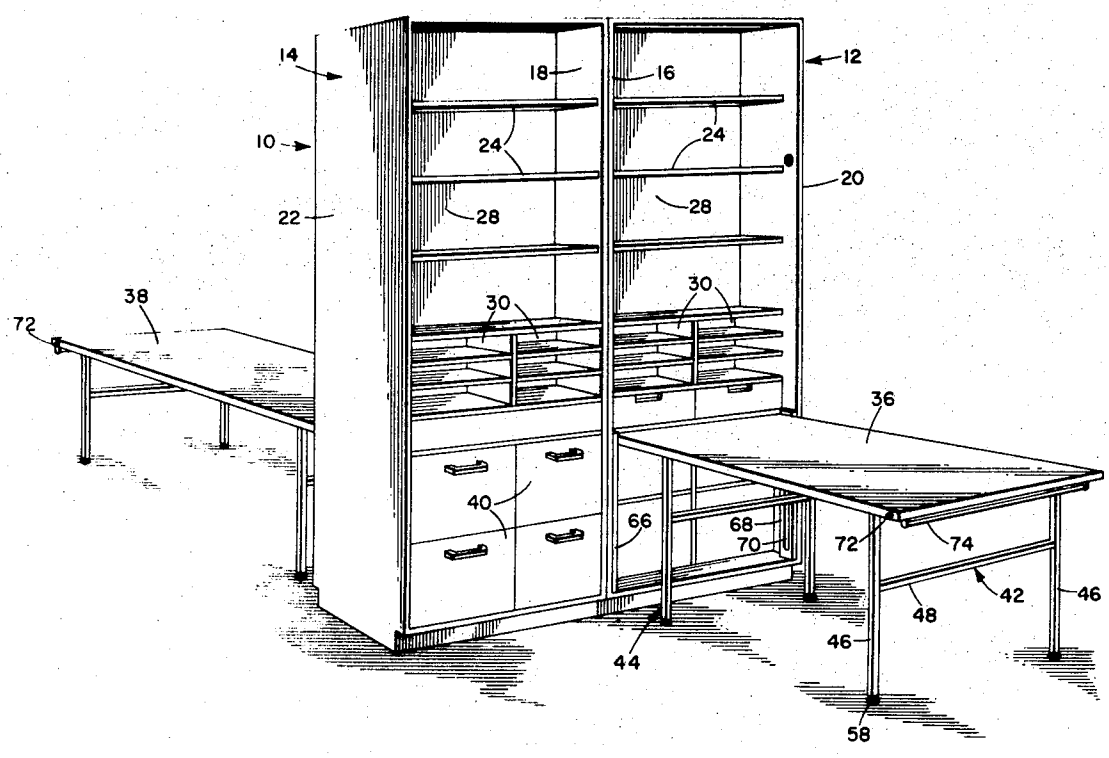
Attorney—Donald D. Jeffery

[57] **ABSTRACT**

A work station with a self-storing desk which can be used to advantage in hospitals and the like to provide much needed space in times of emergency or peak loading. The work station includes at least one section which receives through a slidable mounting a desk which can be supported by legs in a horizontal use condition, or folded to a vertical position for storing generally within the front plane of the section. Each section is provided with shelf and compartment storage accessible at both the front and rear of the section.

3 Claims, 4 Drawing Figures



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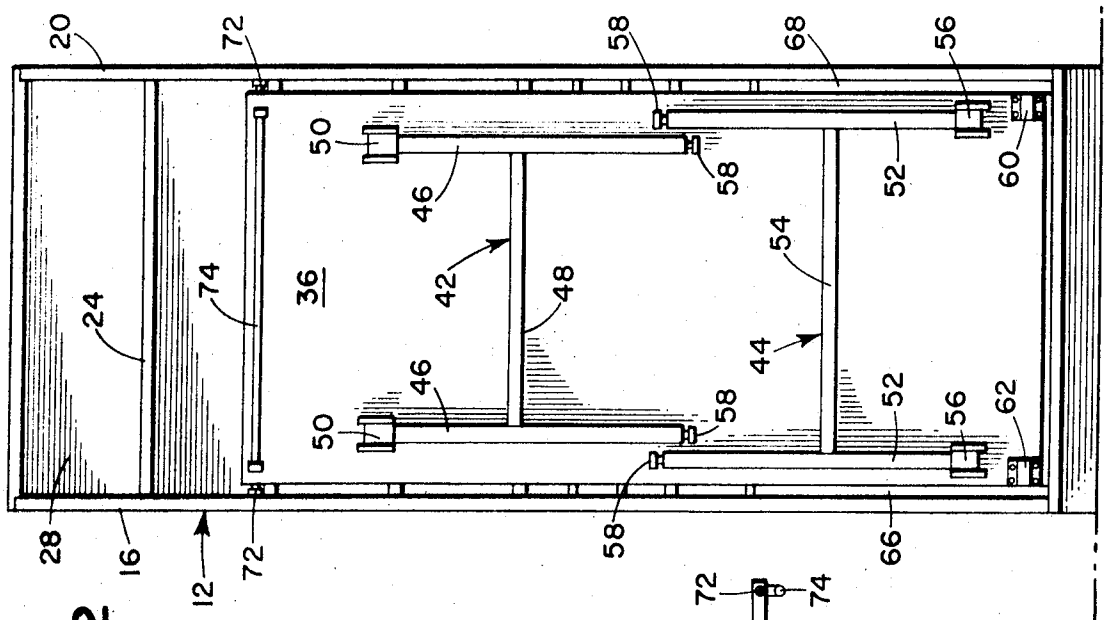

FIG. 2

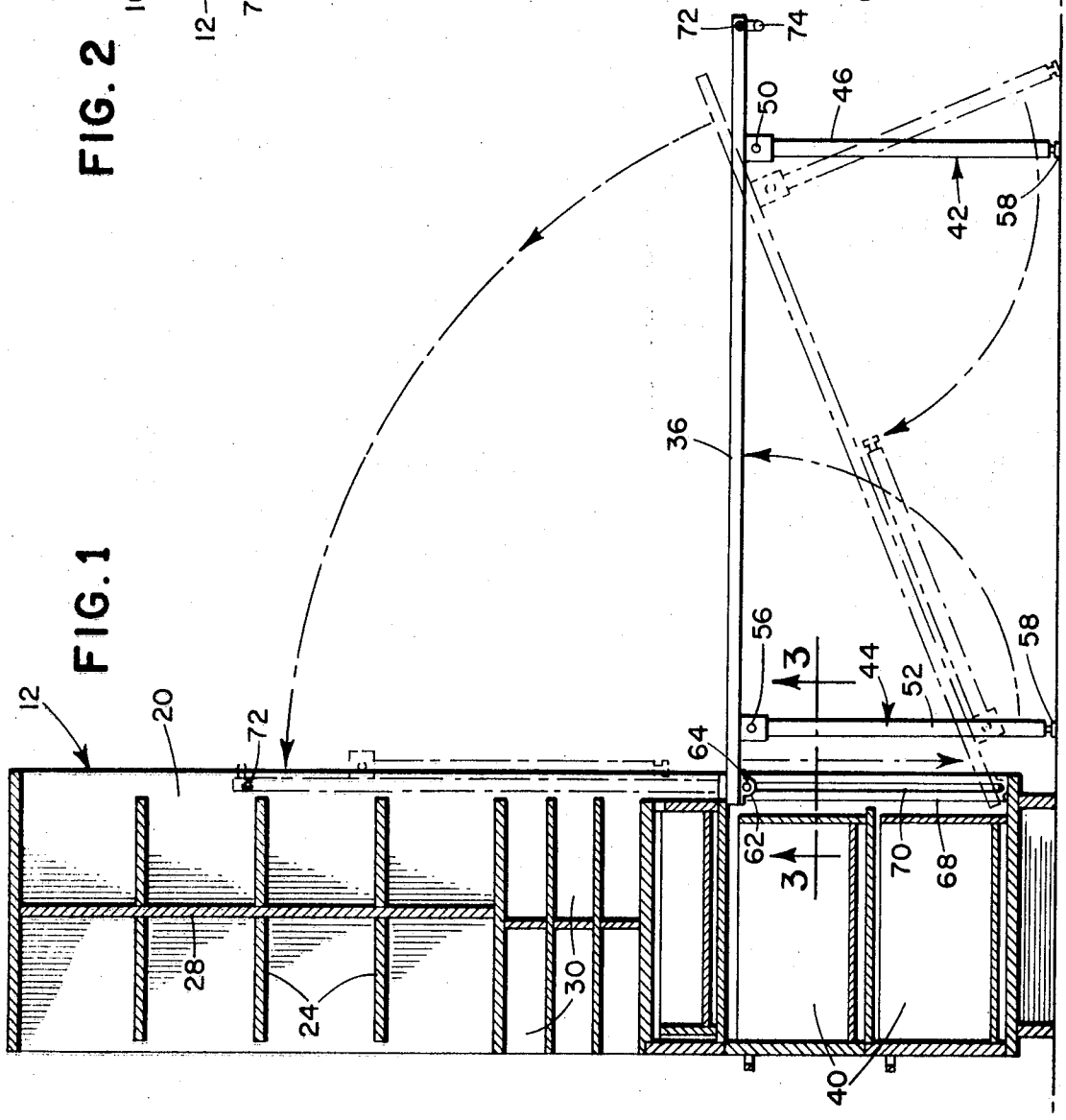

FIG. 1

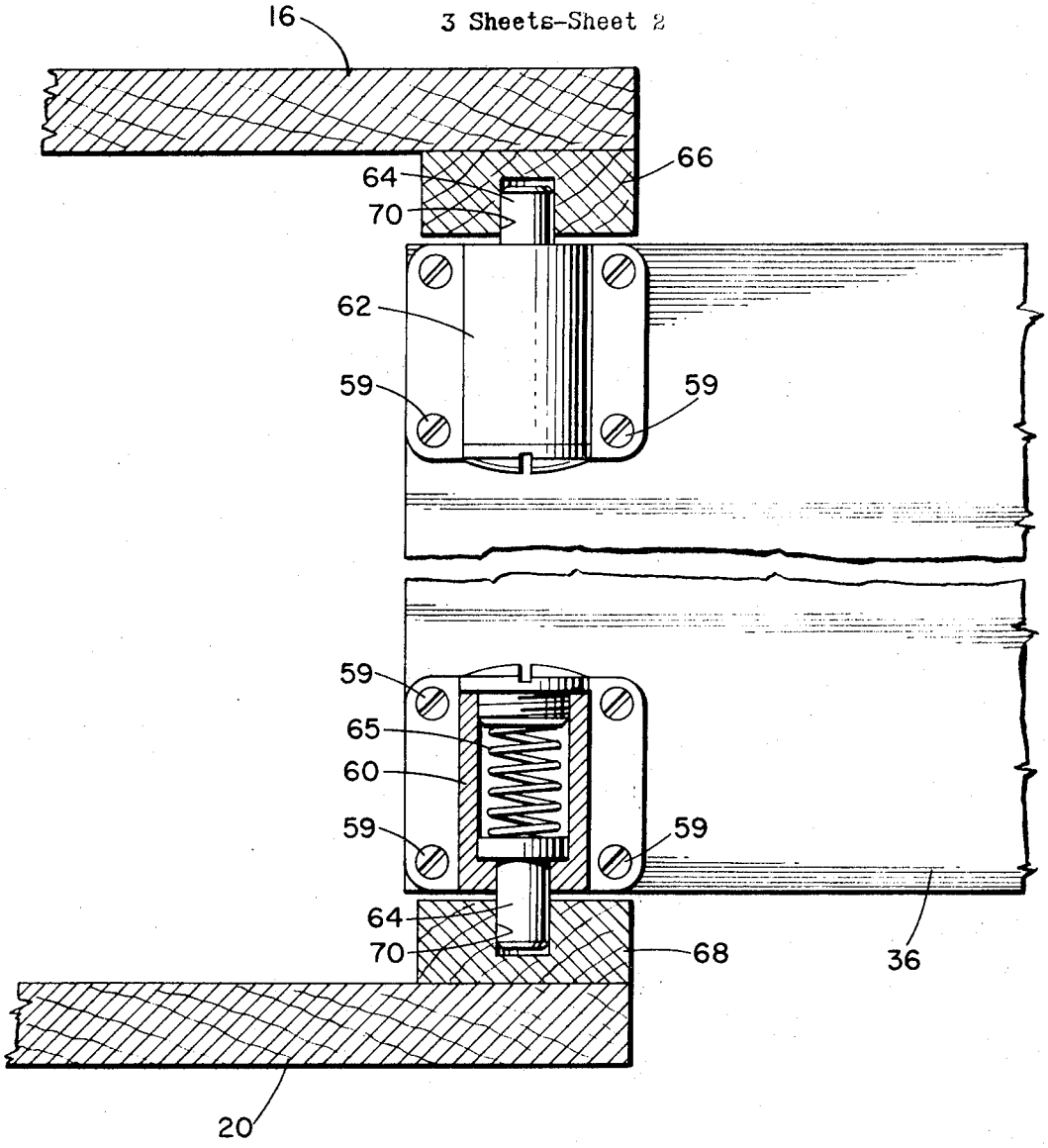

FIG. 3

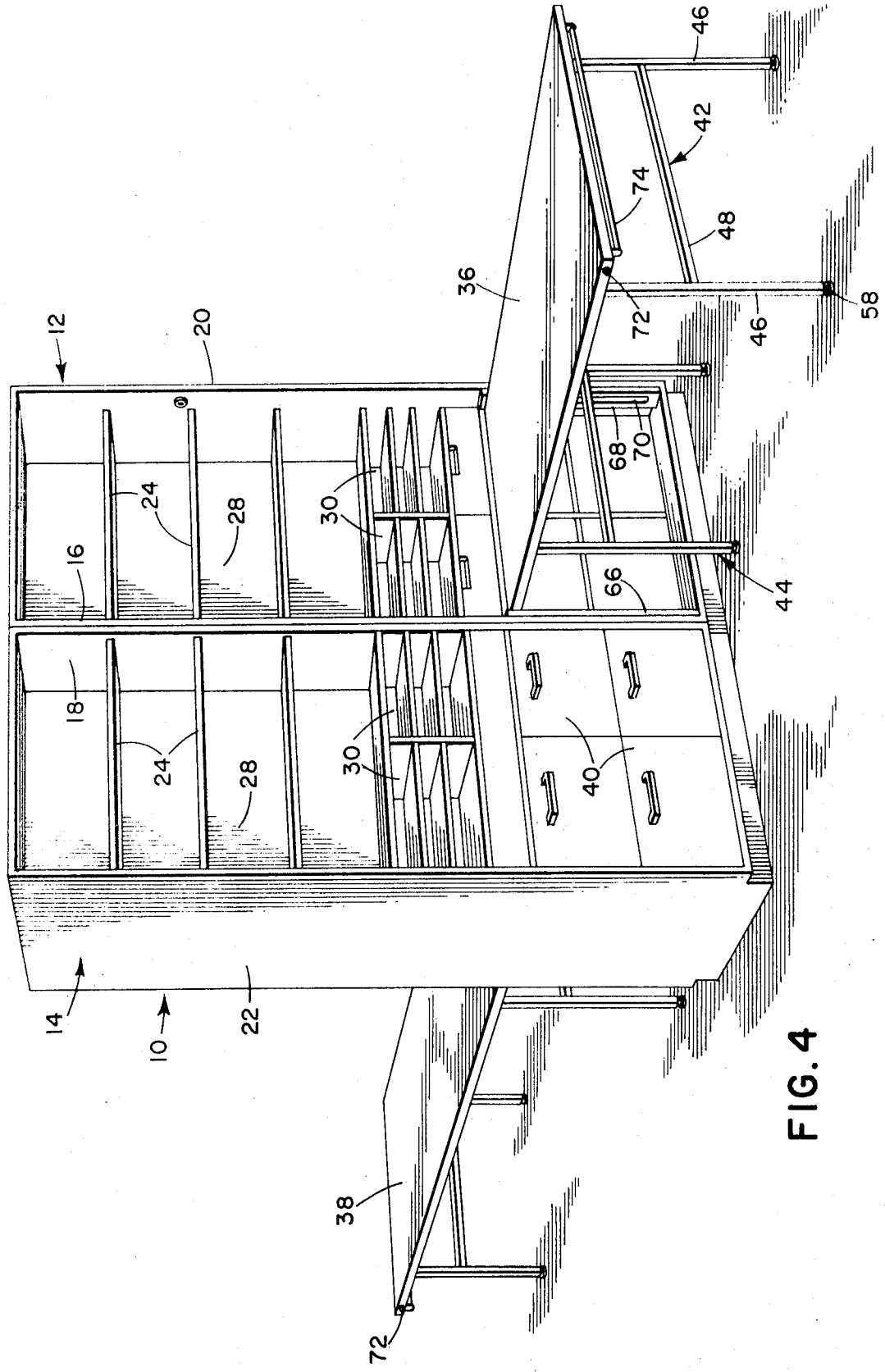
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FIG. 4

WORK STATION WITH SELF-STORING DESK

BACKGROUND OF THE INVENTION

The present invention relates as indicated to a work station provided with a self-storing desk having general utility, but having particularly advantageous use in hospitals and the like.

The availability of adequate hospital space is a problem of national concern. Although expansion of existing hospital facilities and the construction of new hospitals has increased significantly, in many areas the shortage of beds remains, particularly during peak load periods of the year, and especially during periods of local emergency or disaster. These latter periods are of course unforeseen and instantly create excessive demand upon hospital facilities, both with respect to hospital beds and service facilities provided by the hospital.

A major contributing factor to the shortage of hospital beds is believed to be the relatively wasteful use of available hospital space and the inflexibility of existing equipment, which essentially preclude modification or rearrangement during periods of peak loading and emergencies where space requirements are at a maximum. For example, in the average semi-private hospital room only approximately 25 percent of the room area is occupied by beds. Overcrowding of the hospital during peak loading or emergency conditions has been traditionally alleviated through the placement of beds in corridors, lavatories, or any other available space. Due to the shortage of beds, patients are not infrequently placed on cots or even on blankets placed directly on the floor.

As a result of such overcrowding, patient discomfort is commonplace, and hardly conducive to the medical attention which is frequently immediately necessary for patients in need of shock or intravenous treatment. An additional concern is the generally aseptic environment in the emergency areas in which the patients are placed.

In addition to the relatively inefficient use of present hospital room space, the use of executive or clerical space in hospitals during periods of emergency remains virtually untapped. Applicant is unaware of any hospital facility wherein emergency space is obtained through modification or conversion of executive or clerical areas. In addition, although much needed hospital space is continually being provided through new hospital facilities or expansion of existing hospitals, as above noted, the general design of the hospital interior has not significantly changed, and the inefficient use and inflexibility of newly added facilities remains.

SUMMARY OF THE INVENTION

With the above in mind, a principal object of the present invention is to provide a work station including a desk which can be quickly and conveniently folded into the unit to provide much needed space, for example, during periods of emergency, as discussed above. The function of the work station itself is highly flexible and can be used to advantage in regular clerical or executive areas in the hospital, or in anterooms adjacent the hospital bedrooms and corridors.

A more specific object of the present invention is to provide a work station in which the desk or table can be quickly raised and vertically dropped into a storage position within the work station, thereby providing added floor space otherwise occupied by the desk or table.

A further object of the invention is to provide a work station which is designed for useful exposure at both the front and rear of the work station. In the preferred form of the invention, the work station includes a desk or table at both the front and rear of the work station in longitudinally staggered fashion so as to more efficiently utilize the space available for book storage and record keeping at the work station.

These and other objects will become apparent as the specification proceeds in particular reference to the application drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 comprises a side elevational view of the work station, with the desk or table being shown in solid lines in a use position, and in dotted lines in a stored position;

FIG. 2 is a front elevational view of one section of the work station, showing the desk or table in a vertically stored position;

FIG. 3 is a sectional view taken on lines 3—3 of FIG. 1; and,

FIG. 4 comprises a front perspective view of the work station, with the station comprising two sections placed side by side, with the desk or table of both of said sections being shown in a use position.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now in more detail to the application drawings, in which like reference numerals are used to indicate like parts, reference is initially made to FIG. 4 which comprises a perspective view of the work station comprising the invention. The work station is generally indicated at 10 and includes juxtaposed station sections generally indicated at 12 and 14, respectively. These sections are normally installed as a unit and provide useful shelf and drawer storage at both the front and rear of the station, as will be presently described. It will be understood and will become apparent as the description proceeds that the sections could be separately employed, or could be separated after their initial installation as a unit.

In the form shown, the adjoining side walls 16 and 18 of the sections 12 and 14 form a common vertical divider for the work station and receive, with the outer side walls 20 and 22 of the sections 12 and 14, respectively, shelves commonly designated at 24. Each section is provided with a vertical intermediate divider commonly designated at 28, best seen in FIG. 1, which spans the top portion of each section and serves to divide the storage space in each area of each section from front to rear. As shown in FIG. 1, shelves 24 are mounted in each section on either side of the dividers 28 to provide book or other type storage at both the front and rear of the unit.

In the form shown, the sections 12 and 14 are provided with a plurality of compartments commonly designated at 30 for storing records and the like. As seen in FIG. 1, similar compartments are provided in the sections at the opposed sides thereof. In lieu of the compartments 30 this area of each section can be left entirely open.

The sections 12 and 14 further include a desk or table 36 and 38, respectively, adapted to be moved to

a horizontal use position shown in FIG. 4, or a vertically stored position in the section in a manner to be presently described. The section 14 is preferably provided at its front with a series of file drawers commonly designated at 40 for use at the front of the work station by the person normally occupying the same. The section 12 is similarly provided with a series of file drawers 40 exposed at the opposite side of the section for use by the person occupying the work station at such opposite side. As shown in FIG. 1, the drawers 40 terminate when closed in spaced relation to the front and rear of the work station in order to receive the folded desks 36 and 38.

In the invention thus far described, the work station comprises a pair of sections each of which includes a storable desk or table and shelf or drawer facilities for book and record storage. When the sections are placed side by side as shown in FIG. 4, persons can work from either side of the work station with equal facility.

Referring now to FIGS. 1–3, which illustrate the detailed construction and mounting of the desk or table 36 in the section 12, the desk is supported in a horizontal use position by front and rear folding leg assemblies generally indicated at 42 and 44, respectively. The front leg assembly, as can best be seen in FIG. 2, comprises a paid of legs commonly designated at 46 and an interconnecting spacing member 48 for rigidifying the leg assembly. The legs 46 are hinged to pivot members 50 which are mounted on the underside of the desk 36. The rear leg assembly 44 similarly includes a pair of legs 52, an interconnecting spacer 54, and pivot assemblies 56 mounted on the underside of the desk 36, all in longitudinally spaced relation relative to the front leg assembly 42.

It will be noted from FIG. 2 that when the leg assemblies 42 and 44 are folded, the legs 46 of the front leg assembly 42 are nested within the legs 52 of the rear leg assembly 44. This permits the leg assemblies to be folded toward each other about the pivot assemblies 50 and 56, in the manner shown in FIG. 1 of the application drawings. The legs are preferably provided at their ends with supporting feet commonly shown at 58.

Referring now to FIG. 3 which illustrates the manner in which the desk or table 36 is pivoted to the work station, mounted on the underside of the desk by mounting screws 59 or the like are blocks 60 and 62 which carry pins commonly designated at 64. These pins are preferably resiliently loaded by springs 65 located in the pin blocks to facilitate installation and removal of the desk 36 from the work station, should removal be desired.

The side walls 16 and 20 of the section 12 adjacent the front edges thereof carry runners 66 and 68, respectively, which can be secured to the side walls in any suitable manner, such as by adhesive bonding, mechanical fasteners, or the like. Each such runner 66 and 68 is formed with a longitudinally extending groove 70 dimensioned to receive the associated pin 64. As can be seen in FIG. 1, the runners 66 and 68 are vertically dimensioned to accommodate the movement of the pins 64 as the desk is moved from its use position as shown in solid lines in FIG. 1 to its stored position, as shown in dashed lines in FIG. 1.

Although the pins 64 have been shown as being mounted on pin blocks attached to the bottom of the desk, it will be understood that the pins could be mounted at other locations adjacent the side edges of the desk, or could be mounted in openings therefor directly in such side edges.

When the desk 36 is vertically stored, the pins 64 are positioned adjacent the bottoms of the slots 70, with the pins when in such position permitting the desk to be pivoted upwardly about an axis through the pins 64 until the desk is essentially vertical and stored within a vertical plane through the front of the work station. The desk 36 can be maintained in such position by any suitable mechanical latching device, such as by means of bullet catches, the male parts 72 of which are carried at the edges of the desk, as shown in FIG. 1. Openings for the female catch parts are carried by the side walls of the sections 12 and 14.

To fold the desk 36 down for use of the same, the desk is pulled outwardly of the work station by means of a pull bar 74 or the like provided at the front, underside of the desk, to release the same from its latched condition. The desk is thereafter moved to its dashed line, inclined position as shown in FIG. 1, in which position the pins 64 are positioned at the bottoms of the slots 70. The user then reaches beneath the desk 36 and unfolds the front leg assembly 42, moving the same until the legs 46 are generally perpendicular to the inclined desk. With the desk thereby being supported at an angle by the front leg assembly, the user can then unfold the rear leg assembly 44 while at the same time moving the pivoted end of the desk gradually upward toward a horizontal position. During such movement, the pins 64 are moved upwardly in the slots 70. When the desk 36 has reached a generally horizontal position, the legs 52 of the assembly 44 are unfolded and the desk is firmly supported at both its pivoted and free ends.

To store the desk 36 in its vertical position, the reverse procedure is followed. The rear leg assembly 44 is folded beneath the desk 36 thereby permitting the desk to fall by gravity to its inclined position as shown in FIG. 1, with the pins 64 moving down the slots 70. With the desk in such inclined position, the front leg assembly 42 can be folded to underlie the desk 36, and the desk thereafter pivoted upwardly about an axis through the pins 64 until the same assumes its vertical stored position, latched by the bullet catches or similar latching means. It will be noted that in moving the desk 36 either from or to its horizontal use position, the full weight of the desk is never supported by the user, with the pivoting of the desk about the axis through the pins 64 relieving the user from actually lifting the desk, as opposed to simply pivoting the same. The desk 38 is similarly constructed and mounted. When the desks 36 and 38 are both stored, the space otherwise occupied thereby is available to receive beds to alleviate the space problem.

It will therefore be seen that the present invention can be employed to great advantage in environments such as hospitals to provide much needed space during periods of emergency. The work station is normally supplied in pairs of sections, with the desks extending from opposite sides of the work station. The work station itself is constructed and arranged for access at both the front and rear thereof to achieve further economies in storage space. During periods of emergency, the desks can be quickly and easily vertically stored as described to provide much needed space in the areas otherwise occupied by the desks. In this manner, the executive or clerical sections of the hospital can be

used during emergency conditions, an option which is not presently available in hospitals with which applicant is familiar.

I claim:

1. An office work station in combination with a fold down desk comprising:

a. a pair of station sections disposed side by side, with the front of each of said sections being disposed in opposite directions, said sections having a plurality of storage areas exposed at the front of said sections, each of said sections being provided adjacent the front face thereof with a pair of opposed vertically extending guide slots which extend relatively adjacent the bottom of the section;

b. a desk adapted to be stored in each of said sections and movable between a vertical, stored position generally in the plane of the front of each section and a horizontal, use position extending laterally outwardly from said section, said desk being provided at the end thereof adjacent said section with resiliently mounted pins slidable in said elongated slots;

c. a pair of folding legs mounted on the underside of each of said desks relatively adjacent the free outer end thereof, thereby to support said desks in such generally horizontal position when said desks are moved outwardly of said section and said legs unfolded, whereby the folding of said legs permits said pins on each of said desks to ride down and engage the bottoms of said elongated slots therein to provide a pivot point for said desk relatively adjacent the bottom of said section, subsequent pivoting of said desk toward said section serving to position said desk generally vertically at the front thereof, and

d. means for retaining said desks in said vertical, stored position.

2. The combination of claim **1** wherein each of said sections includes a series of shelves and compartments accessible at both sides of said work station, with said shelves and compartments at the side of each of said sections receiving the vertically stored desk being rearwardly offset from the front plane of such section so as to permit storage of said desk generally within the front plane of the associated section.

3. The combination of claim **1** wherein said guide slots are in the form of slotted runners mounted on the side walls of the sections relatively adjacent the front of said sections and extending from a point near the bottom of each such section to at least a height at or above the height of said desk when in a horizontal, use position.

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