United States Patent [19]

Scheerhorn et al.

[11] **3,862,785**

[45] **Jan. 28, 1975**

[54] **SECRETARIAL WORK STATION**

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[22] Filed: **June 18, 1973**

[21] Appl. No.: **371,167**

[52] **U.S. Cl.** **312/223,** 312/196, 312/278

[51] **Int. Cl.** **A47b 77/08,** A47b 81/00

[58] **Field of Search** 312/278, 196, 194, 198, 312/223, 297, 322, 321, 313, 302; 108/5, 6; 211/1.3, 94.5, 94, 150; 248/454

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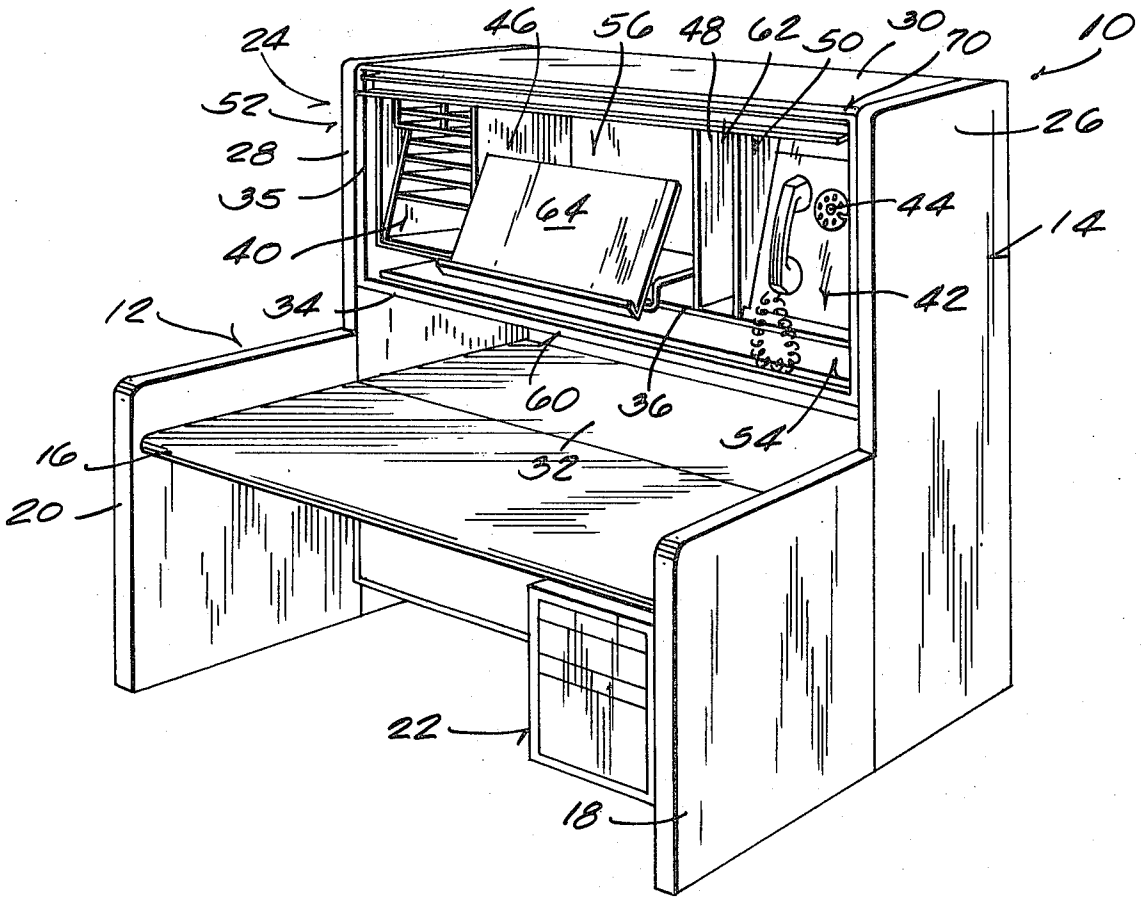
Primary Examiner—Paul R. Gilliam

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[57] **ABSTRACT**

An upstanding work and storage module includes an upper portion having an open front with a manuscript tray slidable into and out of the upper portion and pivotal about a horizontal axis between a horizontal and vertical position. The upper portion is partitioned to interchangeably receive a storage and retrieval unit or the like in one end a telephonic unit in the other end. The cover panel is pivotally and slidably mounted to the upper portion between a removed open position and a closed position enclosing the open front of the upper portion when not used. A desk module is positionable in front of and in abutment with the storage and work module forming a compact work station which can be easily moved as two separate modules through conventional doorways and the like.

21 Claims, 8 Drawing Figures



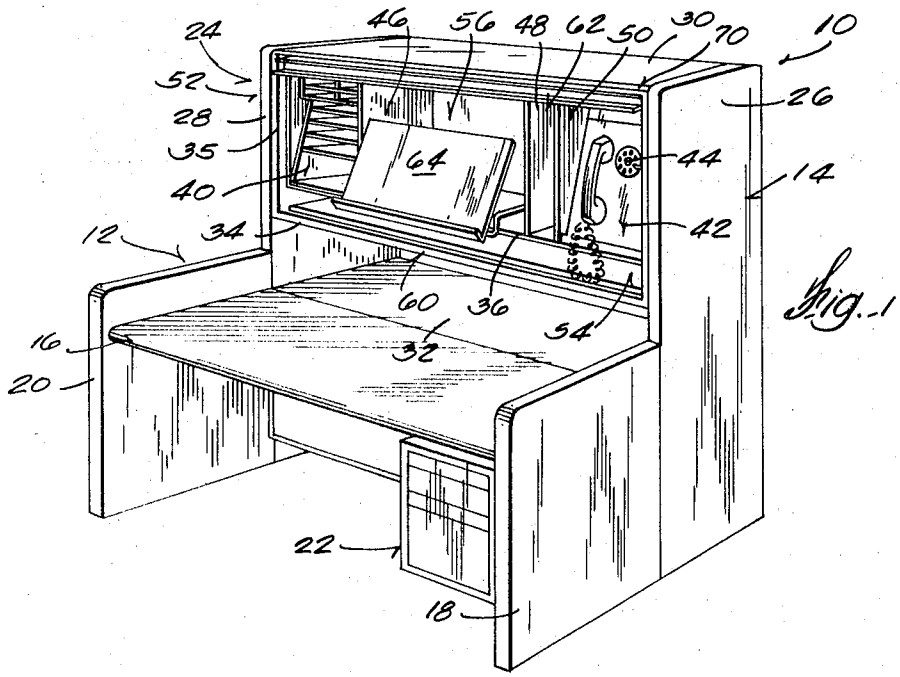


Fig. 1

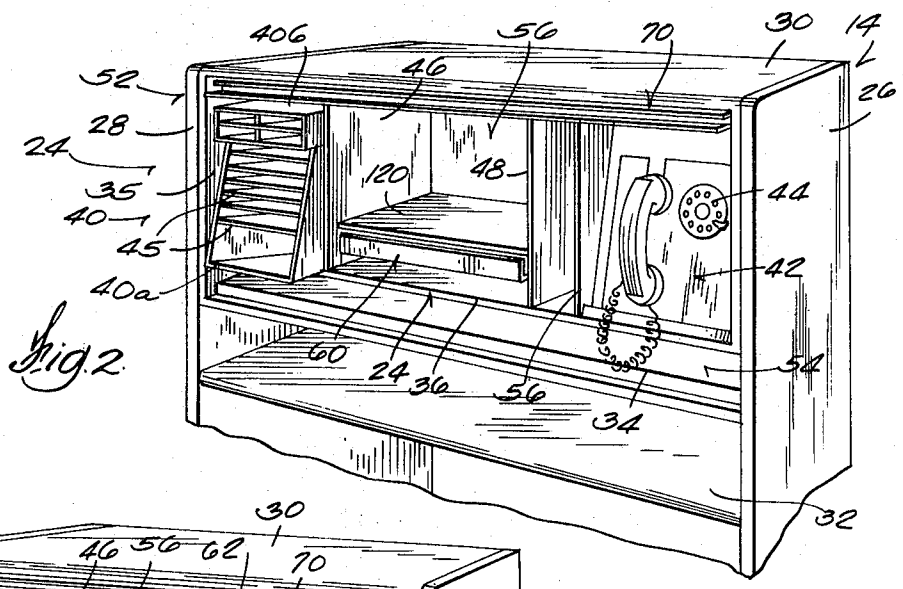


Fig. 2

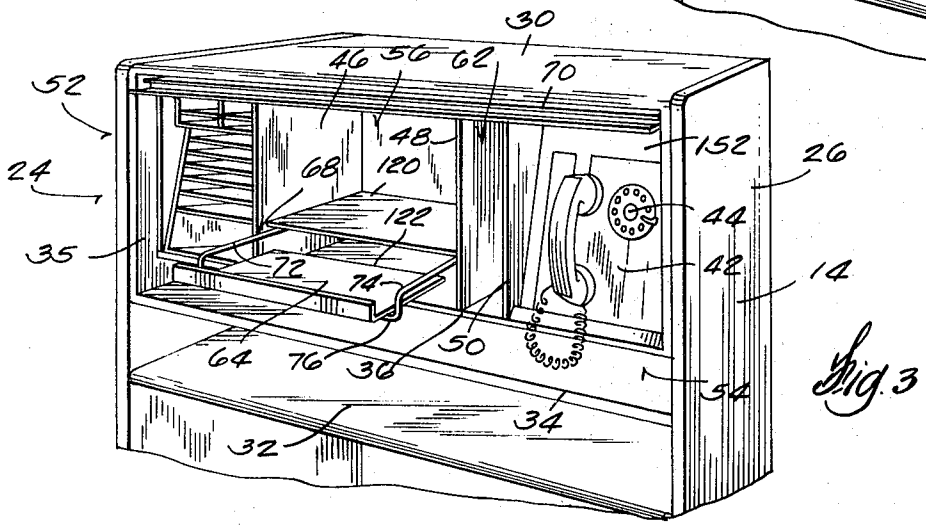


Fig. 3

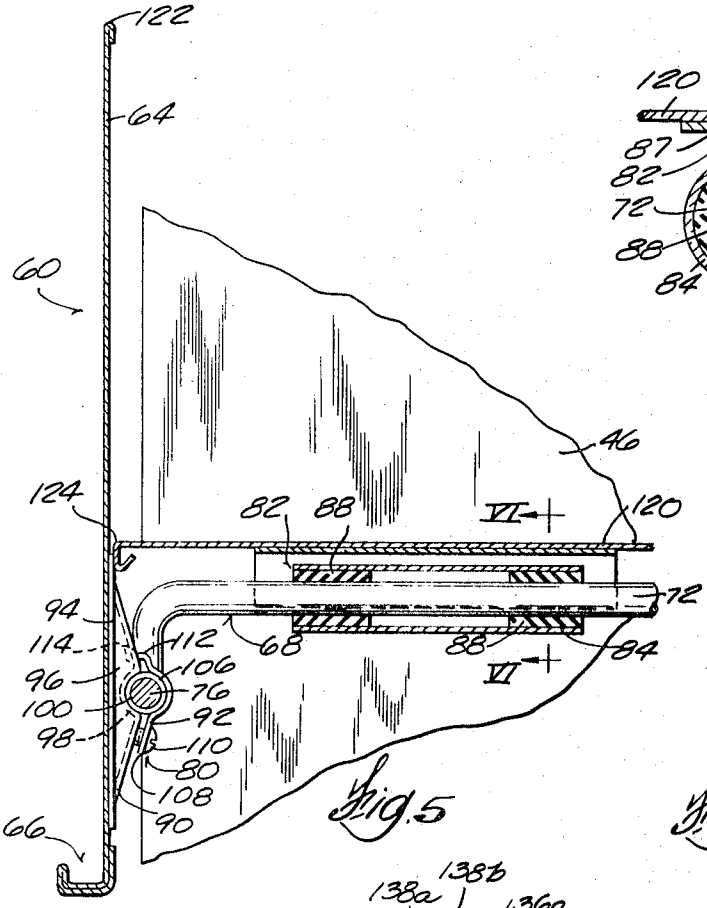


Fig. 5

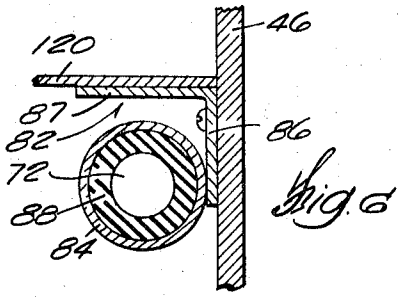


Fig. 6

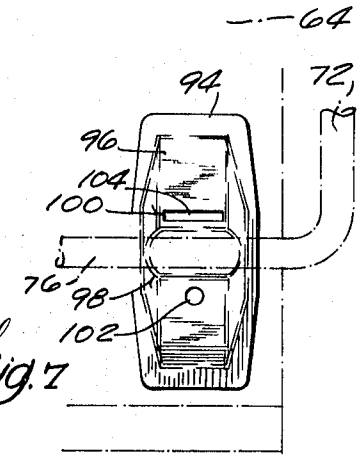


Fig. 7

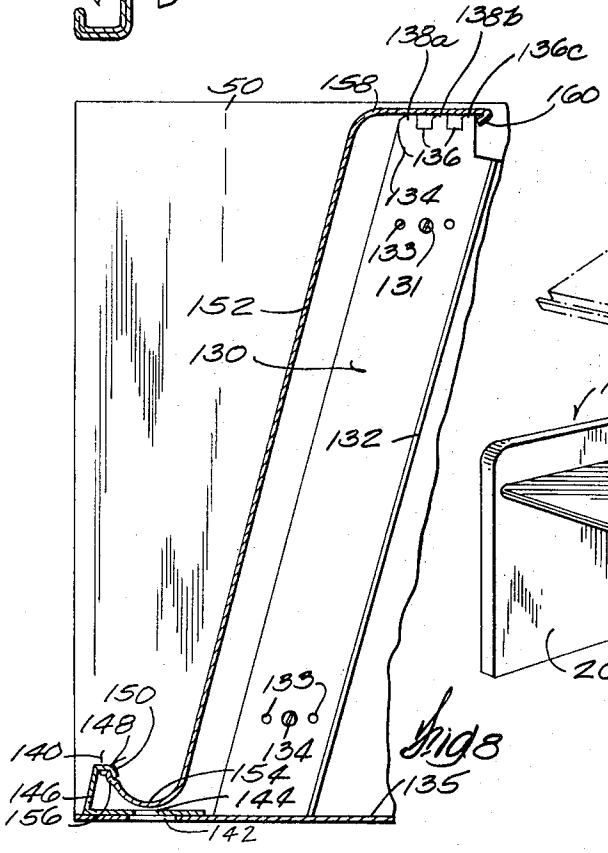


Fig. 8

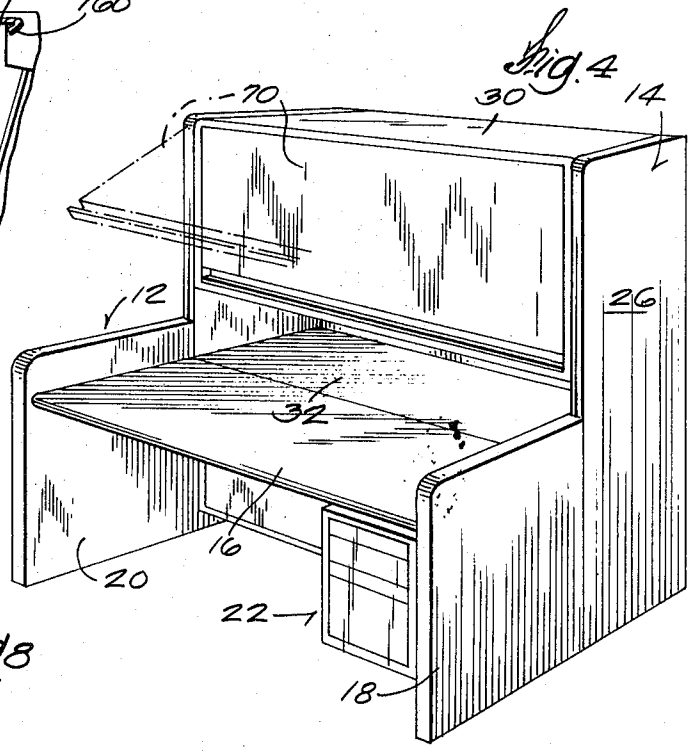


Fig. 4

SECRETARIAL WORK STATION

BACKGROUND OF THE INVENTION

I. Field of Invention

This invention relates to an improved office work station and, more particularly, a secretarial work station.

II. Description of the Prior Art

One of the key considerations in planning office space and office furniture is the selection and arrangement of efficient work stations for secretaries. Typically, such work stations comprise a desk and a projecting side unit. A typewriter sits on the side unit while dictating equipment and a telephone are usually placed on the top of the desk. Usually, some additional storage is provided nearby. When the secretary is typing copy, she generally lays the copy adjacent the typewriter on the side table or she lays it on the desk top.

One problem with such an arrangement is that the desk top and the wing unit frequently become veey highly cluttered. It is not convenient for the secretary to keep things stored in the adjacent storage unit since generally she has to get out of her chair in order to get to it. Frequently, material which she is copying gets lost in the shuffle. Also, it is often difficult for her to arrange the material properly for convenient copying.

Small easles or work holders are available for placing on top of the desk or on top of the side unit to hold the work. However, such items typically hold the work in only one position. Also, they tend to merely further clutter the top of the desk or side unit. Thus, a secretary finds her desk top and side unit top cluttered with such items as telephone, work stands, dictating equipment and typewriters as well as stscks of work.

Many years ago, it was popular to provide desks having not only a horizontal work surface, but also an upper storage unit positioned above the work surface. This at least provided a means for storing papers and work without having to leave the desk. Unfortunately, such units are bulky and clumsy and did not lend themselves to the type of maneuverability and arrangeability which modern office planners desire.

SUMMARY OF THE INVENTION

In accordance with the invention, an office work station is provided by a casing having a top, sides, and open front enclosing a manuscript tray which is slidable into and out of the casing through the open front. The tray is movable between a first position wherein the tray is fully within the casing, a second position wherein the tray is fully removed from the casing, and a third position intermediate the first and second positions. The tray is further pivotal about a horizontal axis to permit arbitrary positioning of the tray in one or more vertical, horizontal, or inclined positions.

In other preferred aspects of the invention, the work station includes a desk module positioned in front of and in abutment with the casing, the latter having an upper portion in which the manuscript tray is centrally housed. The storage and retrieval unit is positioned in one end of the upper portion while a telephonic unit is positioned in the other end, both ends being separated by the manuscript tray. Both units are preferably interchangeable so that the work stations will accommodate right- or left-handed personnel. A pull-out cover panel is pivotal in its pulled-out position to cover the open front of the upper casing portion when the manuscript tray is in the first position so that the entire casing is enclosed. In yet narrower aspects, the manuscript tray is positionable in either a horizontal or vertical position in its first position permitting closure thereof in either a vertical or horizontal position.

There are several advantages provided by the office work station of our invention. First of all, the modular aspect of the casing and desk provides a work station of considerable volume and depth for storing, retrieving, and performing different work functions, yet the station can be easily moved to various locations through conventional doorways since the independent modular aspects of the invention provide independent movement of the casing and desk module.

The unique manuscript tray permits complete adjustment by the user in both the degree of removal of the tray from the casing enclosure and the angle of incidence at which the tray is positioned. By being positionable in a vertical orientation fully within the casing, the work station can be easily closed for example during a lunch break, with the manuscript being utilized at the particular time not having to be removed from the tray in order to close the casing. It is thus immediately available when the station is reopened.

Additional significant aspects of the invention are the provisions of basic end units comprising a storage and retrieval unit for stationery and the like and a telephonic unit on the other end, these basic units being interchangeable if desired to accommodate a right- or left-handed person.

The overall combination of these units with a manuscript tray and desk module presents an extremely attractive, flexible, and efficient work station having great utility not previously available in accordance with the teachings of the prior art.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the work station in accordance with the invention illustrating the manuscript tray in the pulled-out inclined position;

FIG. 2 is a fragmentary view similar to FIG. 1 showing the manuscript tray in a storage position with the storage and retrieval unit in a partially pulled-out position;

FIG. 3 is a fragmentary view similar to FIG. 2 with the manuscript tray in a pulled-out horizontal position;

FIG. 4 is a perspective view similar to FIG. 1 with the cover panel in a closed position;

FIG. 5 is a fragmentary side elevation view in cross section of the manuscript tray and carriage assembly interconnecting the tray to the work station;

FIG. 6 is a fragmentary view in cross section taken along line VI—VI in FIG. 5;

FIG. 7 is a fragmentary plan view of the fastener connecting the manuscript tray to the carriage assembly; and

FIG. 8 is a fragmentary end elevation view in cross section of the telephonic insert unit in accordance with the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings in detail, an office work station **10** is illustrated in FIG. 1 comprised of front and rear modules **12** and **14**. The front module **12** is a desk module having a disk top **16**, upstanding end panels **18, 20** and a file drawer unit **22**. The rear mod-

ule 14 which is in abutment with desk module 12 includes an upper case 24 extending well above desk top 16.

Rear module 14 includes a pair of upstanding end panels 26 and 28 which support the entire module. Top case 24 includes a top wall 30, a bottom wall 34, and end walls 35 and is supported between end panels 26, 28. A work top or shelf panel 32 is supported between end panels 26 and 28 at a level to coincide with the level of desk top 16 providing an extremely enlarged work surface combined of desk top 16 and shelf 32. A pedastal such as drawer unit 22 or other work unit could be mounted below shelf 32, facing rearwardly so that another work station on the opposite side of rear module 14 could have access to it.

Wall 34 defines a second shelf or work platform above shelf 32. Spaced slightly above shelf 34 is a panel 36 which likewise extends between the end walls 35 of the top case of rear module 14. Panel 36 forms the support base for two modular units referred to as a storage and retrieval unit 40 comprised of a plurality of pigeonholed tray compartments for storing stationary, manuscripts and other types of supplies and a telephonic unit 42 housing a communications instrument such as a telephone 44. Upper portion 24 preferably includes a plurality of laterally spaced partitions 46, 48, and 50 which extend from panel 36 up towards top panel 30. Panels 46 and 50 divide upper portion 24 into a pair of end sections 52 and 54 and a central section 56. Central section 56 houses a manuscript tray assembly 60, the details of which will be described hereinafter. Partition 48 along with partition 50 further defines a book or manuscript storage compartment 62. It will be appreciated that the spacings of the various partitions are adjustable as desired in accordance with conventional skills in this art. Various latching or fastener means are known to accommodate this and hence not shown or described in detail.

The manuscript tray assembly 60 is adapted for positioning in several different positions wherein the manuscript tray 64 can be pulled out of central section 56 over desk top 16 at any angle of inclination between a horizontal position such as that illustrated in FIG. 3 to a position at an angle of incline such as that illustrated in FIG. 1. In either of these or other adjusted positions, the degree of removement from section 56 can be varied as desired.

The storage and retrieval unit 40 shown in end section 52 and telephonic unit 42 shown in end section 54 are removable and interchangeable so that work station 10 can be adapted for right or left-handed personnel. The details of this will be described hereinafter although reference is made to FIG. 2 wherein the storage and retrieval unit 40 is shown partially removed which position would not be maintained during normal use of the work station.

With the manuscript tray 64 positioned in the horizontal position illustrated in FIG. 2 and completely pushed within central section 56, the upper case 24 of rear module 14 can be enclosed by a cover panel 70 which is normally stored in a horizontal recessed position immediately beneath top panel 30. Cover panel 70 is anchored to rear module 14 on a conventional trackway which permits the cover to be pulled completely out of upper case 24 and pivoted about a horizontal axis into a vertical position as illustrated in FIG. 4 completely enclosing the work and storage units housed within upper case 24.

Referring now in detail to FIG. 5, manuscript tray assembly 60 is illustrated in more detail having a tray 64 with a lip portion 66 formed by reverse bending along its lower periphery defining a support for a manuscript or the like. Tray 64 is supported by a generally U-shaped rod-like support bracket 68 comprising a pair of arms 72 and 74 (FIG. 3) interconnected by a base portion 76. Tray 64 is pivotally connected to base 76 by a pair of hinge elements 80 to be described hereinafter. Arms 72 and 74 are slideably connected respectively to the underside of shelf 120. The attachment of arm 72 to shelf 120 is illustrated in FIG. 5 and since the attachment of arm 74 to shelf 120 is similar thereto, it will not be described in detail.

An L-shaped bracket 82 (FIG. 6) is welded or otherwise secured to shelf 120 and an elongated cylindrical tube 84 is in turn welded or otherwise secured to the vertical arm 86 of bracket 82. The inner diameter of tube 84 exceeds the diameter of arm 72, the latter being slideably supported within tube 84 by a pair of plastic bushings 88 snugly fitted within tube 84. Bushings 88 have an inner diameter corresponding essentially to the diameter of the rod-like arm 72 but frictionally engaging same so that arm 72 is slideable relative bushings 88 but frictionally kept in the desired position to prevent unintentional sliding movement. The longitudinal extension of arms 72, 74 in the direction of arrow A (FIG. 5) is thus easily adjusted between the inwardmost position illustrated in FIG. 5 for storing the manuscript tray within upper case 24 to a fully extended position illustrated in FIG. 3 wherein tray 64 can be pivoted into any desired position of incline, one of which is illustrated in FIG. 1.

Referring back to FIG. 5 in detail, the pivotal rotation of tray 64 about base 76 is provided by a pair of spaced hinge assemblies 80 which pivotally attach tray 64 to base rod 76. Each hinge assembly 80 is formed of a pair of mating hinge elements 90 and 92 interconnected to each other for frictionally encapsulating a portion of base rod 76 to permit rotation thereabout, the friction engagement keeping the tray at the desired position. The hinge element 90 includes a flat backing plate 94 (FIGS. 5 and 7) and a sloped protruding portion 96 which terminates to an apex 98. A groove 100 is formed at the apex, groove 100 having a radius approximating the radius of base rod portion 76 and a surrounding bearing member 76*a*, the latter seating in groove 100. A threaded opening 102 (FIG. 7) is also formed in protruding portion 96 as is a relatively narrow rectangular slot 104. Bearing 76*a* is a plastic sleeve.

Hinge element 92 is a steel clip formed into a shape forming a groove portion 106 matching groove 100 with a generally radial arm portion 108 having an opening for receipt of a threaded fastener 110 which fits through wing 108 and into threaded opening 102 on the hinge element 90 to secure clip 92 to element 90. A second radial wing 112 extends generally opposite wing 108 and has a L-shaped finger portion 114 at the outer end which through rotation is inserted into rectangular slot 104. The insertion of finger 114 into slot 104 proceeds the fastening of threaded fastener 110. The degree of friction engagement can be adjusted by tightening threaded fastener 110 so that unintentional rotation of tray 64 will not occur.

Referring briefly back to FIG. 2, shelf 120 is illustrated within central section 56 of upper case 24. This shelf is extremely useful when the manuscript tray 60 is in the horizontal fully inserted stored position as illustrated in FIG. 2. Shelf 120 is likewise illustrated in FIGS. 3, 5, and 6 and it will be appreciated that when the manuscript tray is in the stored position, it must be completely pulled out before the inner margin 122 will clear the outer margin 124 of shelf 120 so that tray 64 can be pivoted to a selected angle of incline. After the angle of incline is selected, however, the tray can be repositioned inwardly if desired depending on the angle of incline. There is an inwardmost position wherein the underside of tray 64 will come into abutment with the outer margin 124 (FIG. 5) of shelf 120 depending on the angle of incline. At the innermost position, however, tray 64 can be positioned in a vertical orientation as illustrated in FIG. 5. In this position, the tray is positioned within central section 56 to permit closing of cover panel 70 into the position illustrated in FIG. 4. This added feature allows a user to be working at the work station utilizing the manuscript tray and if desired to close the work station for a period of time without collapsing the tray into the horizontal storage position illustrated in FIG. 2. Instead, the tray can simply be pushed into central section 56 with the tray moving into the vertical orientation illustrated in FIG. 5 so that the entire manuscript tray is immediately available for reference when the office work station is reopened.

Shelf 120 is preferably welded to and supported by the horizontal leg 87 (FIG. 6) of L-shaped bracket 82 and the similar bracket secured to partition 48 (not shown). The vertical leg 86 is fastened by screws to partition 46 (or 48). A plurality of screw holes are provided inpartitions 46 and 48, same at each of several different levels so that shelf 120 can be raised higher or lower, thereby changing the height of manuscript tray 60.

Referring now to FIG. 2, the storage and retrieval unit 40 is illustrated partially removed from end section 52 of upper case 24. The particular unit 40 illustrated is comprised of a lower unit 40a and an upper unit 40b both of which are modular and can be independently inserted and removed from end section 52. The particular configuration with regard to the number of tray elements 45, etc., can vary according to need. The removability, however, adds extra flexibility to the overall work station permitting replacement by modified units or interchangeability with telephonic unit 42 which can be removed from end section 54 to make the telephonic aspect of the work station right or left-handed.

Referring now in detail to FIG. 8, the configuration of telephonic unit 42 is illustrated. A support bracket 130 is removably attached to partition 50 by a pair of threaded fasteners 131. A plurality of openings 133 are provided for receipt of fasteners 131 so that the position of bracket 130 depthwise within end section 50 can be adjusted. The reason for such an adjustment is that telephonic units vary slightly dimensionally one from the other depending on the particular make and manufacturer.

Support bracket 130 includes an inwardly projecting flange 132 which along with support bracket 130 is positioned on an angle of incline. The angle of incline depends on the corresponding desired angle of inclination of the telephone itself. Support bracket 130 extends to the floor of the unit which is defined by shelf 36 when the telephonic unit is in position. The upper margin 134 includes a plurality of notches 136 forming spaced keeper teeth 138*a*, 138*b*, and 138*c*. It will be appreciated that a bracket identical to support bracket 130 is affixed to the wall portion opposite partition 50 of the particular end section utilized with a matching inwardly facing flange with keeper notches. The two support brackets along with their respective flanges provide a seat against which a conventional telephonic unit of given origin (not shown) is positioned and indexed.

After the particular telephonic unit is inserted and appropriately attached to the flanges 132 of support brackets 130, a bezel bracket 140 is anchored to bottom shelf 36. Bottom shelf 36 includes an opening 142 while bezel bracket 140 includes an opening 144, at least one of the openings being slot like to provide longitudinal adjustment of bracket 140 relative bottom shelf 36 depending on the depth of the telephonic unit. Bracket 140 includes a generally upstanding portion 146 and a keeper portion 148 which includes a downwardly depending finger 150. The front of the telephonic unit is enclosed by a bezel plate 152 which forms a frame over the telephonic unit having appropriate openings to permit projection of the dialing apparatus and telephone ear and mouthpiece. Bezel plate 152 includes an upwardly turned lower margin 154 terminating in an outer lip 156 which is pivoted behind keeper 148 of bracket 140. The configuration of lower margin 154 is that of a trough whereby secretarial utensils such as pencils, pens or erasures, etc., can be conveniently stored in the trough portion formed by bezel plate 152. The upper margin 158 is formed inwardly and includes an inturned lip 160 forming a catch which can be inserted over the top of support bracket 130 to catch one of the teeth 138, 138*b* and 138*c*. The desired keeper for locking depends again on the longitudinal depth of the particular telephonic unit. Thus, a completely removable telephonic unit is provided which is flexible to house one of several conventional telephonic units which vary dimensionally by manufacturer. The removability permits positioning of the telephonic unit in either end section 50 or 52 to accommodate a right- or left-handed user.

Although but one embodiment has been shown and described in detail, it will be obvious to those having ordinary skill in this art that the details of construction of this particular embodiment may be modified in a great many ways without departing from the unique concepts presented. It is therefore intended that the invention is limited only by the scope of the appended claims rather than by particular details of construction shown, except as specifically stated in the claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. In an office work station comprising in combination a work surface and an elevated storage and work reference area, the improvement comprising: a casing defining said elevated storage and work reference area and having an open front; carriage means moveably mounted in said casing; a manuscript tray pivotally mounted on said carriage, said carriage means being moveable between a first position wherein said tray is positioned fully within said casing, a second position wherein said tray is fully removed from said casing through said open front, and a third position intermedi-

ate said first and second positions; said pivotal mounting permitting arbittary positioning of said tray in one of a vertical, horizontal, or various inclined positions.

2. The office work station according to claim 1 wherein said carriage means is adjustable vertically in said casing in one or more increments whereby the height of said tray is likewise adjustable.

3. An office work station according to claim 1 wherein said carriage means includes a generally U-shaped support having a pair of spaced arms interconnected by a base; said tray being pivotally connected to said base, said arms being slidably connected to said casing for movement in and out of said open front.

4. The office work station according to claim 3 wherein said carriage means further includes a pair of tubular elements anchored to said casing within said casing; said spaced arms being positioned within and through said tubular elements in telescope fachion whereby said tray is positioned in one of said positions by moving said tray and arms longitudinally relative to said tubular elements.

5. The office work station according to claim 4 wherein said tubular elements include means frictionally gripping said spaced arms, which means inhibits unintertional movement of said arms relative said tubular elements.

6. The office work station according to claim 5 wherein said means frictionally gripping said spaced arms includes one or more plastic bushings having a tubular configuration, said bushing being mounted within said tubular element and having an internal cross section corresponding to the cross-sectional dimension of said spaced arms to frictionally grip said arms.

7. The office work station according to claim 3 wherein said tray is pivotally connected to said base by a pair of spaced gripping means which frictionally encapsulate said base whereby said tray and gripping means are pivotal about said base.

8. The office work station according to claim 7 wherein said base is rod like and each of said gripping means includes a first portion attached to the underside of said tray and a second portion secured to said first portion and fitting snugly around said base to form a gripping pocket.

9. The office work station according to claim 8 wherein said second portion includes a finger-like portion, said first portion including a keeper portion whereby said second portion is releasably attached to said first portion by inserting or removing said finger-like portion from said keeper portion.

10. The office work station according to claim 3 wherein said casing includes a generally horizontal shelf, said shelf being positionable vertically in one or more increments relative said casing whereby the height of said shelf in said casing is adjustable, said carriage means being anchored to the underside of said shelf such that the vertical position of said tray is likewise adjustable.

11. The office work station according to claim 10 wherein said casing includes a cover panel pivotally secured to said casing between a storage position wherein said cover panel is horizontally stored within said casing and a closed position wherein said cover panel is removed in a horizontal direction from said casing and pivoted about a horizontal axis closing the open front of said casing; said tray being positioned in said first position when said cover panel is in said closed position, said tray in said first position being positionable in a horizontal or generally vertical position.

12. The office work station according to claim 1 wherein said casing includes a shelf, said tray being positioned in said first position immediately beneath said shelf for storage in generally parallel juxtaposition.

13. The office work station according to claim 1 wherein said work station further includes a desk module defining said work surface, said desk module being removably positioned in front of said casing housing said manuscript tray being above said desk surface.

14. In an office work station comprising in combination a work surface and an elevated storage and work reference area, the improvement comprising: a work-storage module defining said elevated storage and work reference area having a top, sides and open front, first and second vertical partitions dividing said module into two end sections separated by a central section; first means defining a storage and retrieval unit removably positioned in one of said end sections and second means defining a telephonic unit removably positioned in the other of said end sections, said means being interchangeable with each other to accomodate a right- or left-handed station attendant; and tray means slidably mounted within said central section and pivotal about an axis between a vertical, horizontal or inclined position; said telephonic unit includes a pair of spaced, support brackets, one attached to one of said partitions and the other to one of said sides, and having an inwardly extending flange from each side forming an index for receipt of a telephonic insert, each telephonic unit further including a bezel plate adjustably connectable to said sides to hold said telephonic insert in position against said support brackets.

15. The office work station according to claim 14 wherein said telephonic unit support brackets include a plurality of spaced keeper teeth along their upper periphery, said bezel plate including a lip releasably engageable with said keeper teeth whereby said bezel plate is interconnectable with said sides at different spaced relationships from said brackets to accommodate different sized telephonic inserts.

16. The office work station according to claim 15 wherein said bezel plate includes a trough portion formed along its lower margin for holding various secretarial indicia.

17. The office work station according to claim 14 wherein said telephonic unit further includes a bezel bracket for holding said bezel plate in position, said plate and bracket including keeper means for releasably interconnecting said plate and bracket together.

18. In an office work station comprising in combination a work surface and an elevated storage and work reference area, the improvement comprising: an upstanding work-storage module defining said elevated storage and work reference area and a seperate, unconnected desk module defining said work surface; said desk module being positioned in front of and in abutment with said work-storage module, said workstorage module extending generally uprignt and having a protion extending above said desk work surface, said portion including a top, sides, and open front; first and second partitions dividing said portion into two end sections separated by a central section; a manuscript tray; means for removably mounting said tray in cooperative association with said central section, said tray being movable between a first position wherein said tray is

fully within said central section, a second position wherein said tray is fully without said central section and a third position intermediate said first and second positions; said tray further being pivotally mounted by said means to permit arbitrary positioning of said tray in a vertical, horizontal, or inclined position; first means defining a storage and retrieval unit removably positioned in one of said end sections and second means defining a telephonic unit removably positioned in the other of said end sections, said means being interchangeable with each other to accomodate a right- or left-handed user.

19. The office work station according to claim **18** wherein said means for movably mounting said tray comprising a generally U-shaped support having a pair of longitudinally extending arms interconnected by a base, said tray being pivotally interconnected to said base by hinge means, said arms being secured to said central section by a pair of tubular supports, said arms extending through said tubular supports in telescope fashion.

20. The office work station according to claim **19** wherein said tubular supports include plastic bushing means frictionally engaging said arms slidably anchoring said arms against unintentional movement relative said tubular supports.

21. The office work station according to claim **19** wherein said base has a circular cross section, said hinge means including a pair of elements, one of said elements being affixed to said tray, the other being releasably affixed to said one element, said elements frictionally encapsulating said base permitting free rotation of said tray and hinge elements about said base, said friction engagement inhibiting unintentional rotational movement of said tray about said base.

* * * * *