

April 8, 1958

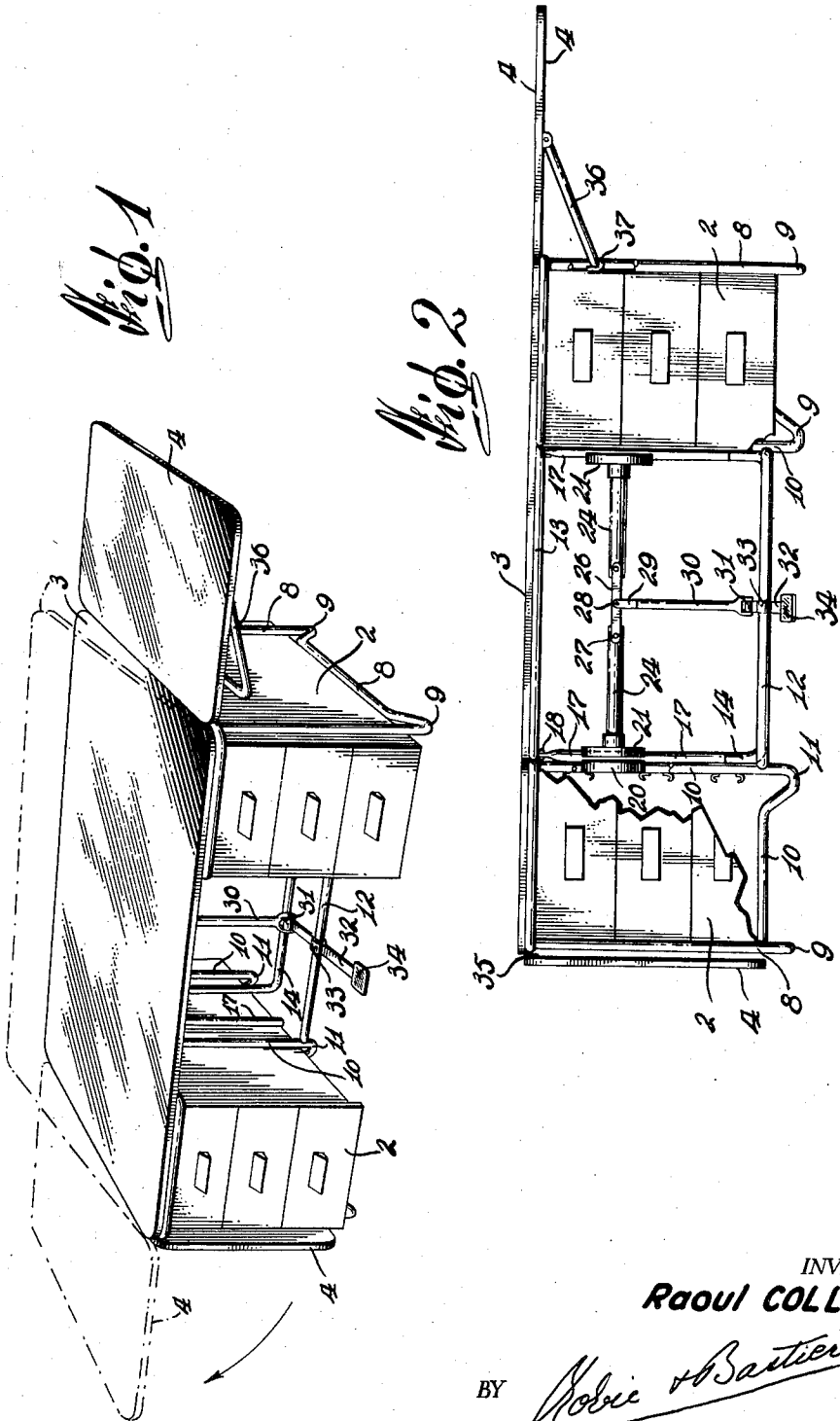
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2,829,935

DESK WITH VERTICALLY AND ANGULARLY ADJUSTABLE TOP

Filed Aug. 23, 1956

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

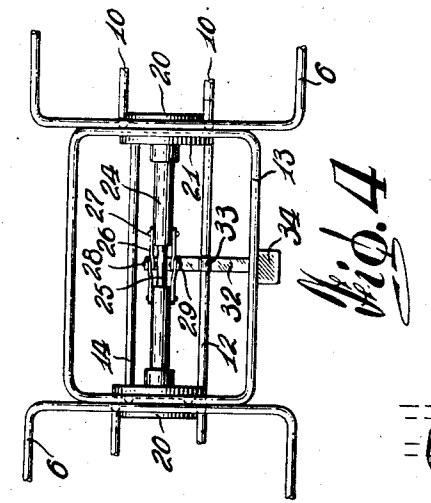


Fig. 4

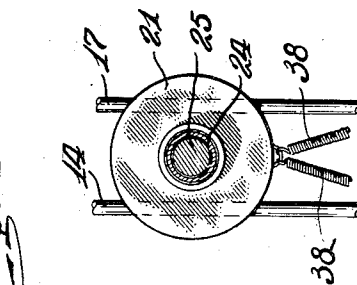


Fig. 7

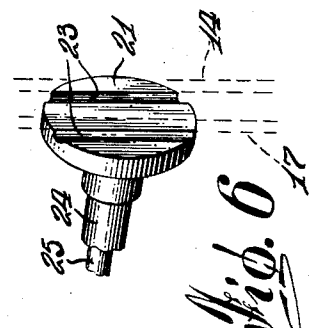


Fig. 6

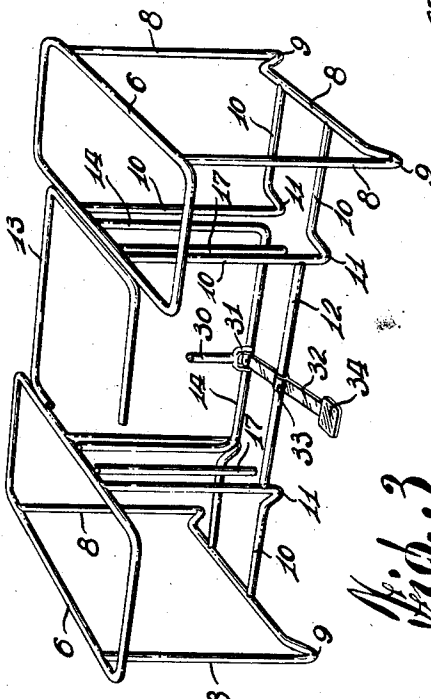


Fig. 3

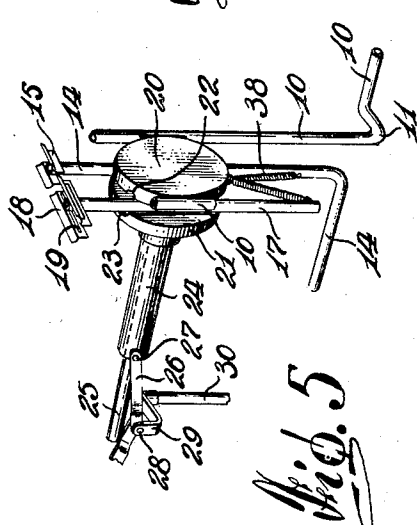


Fig. 5

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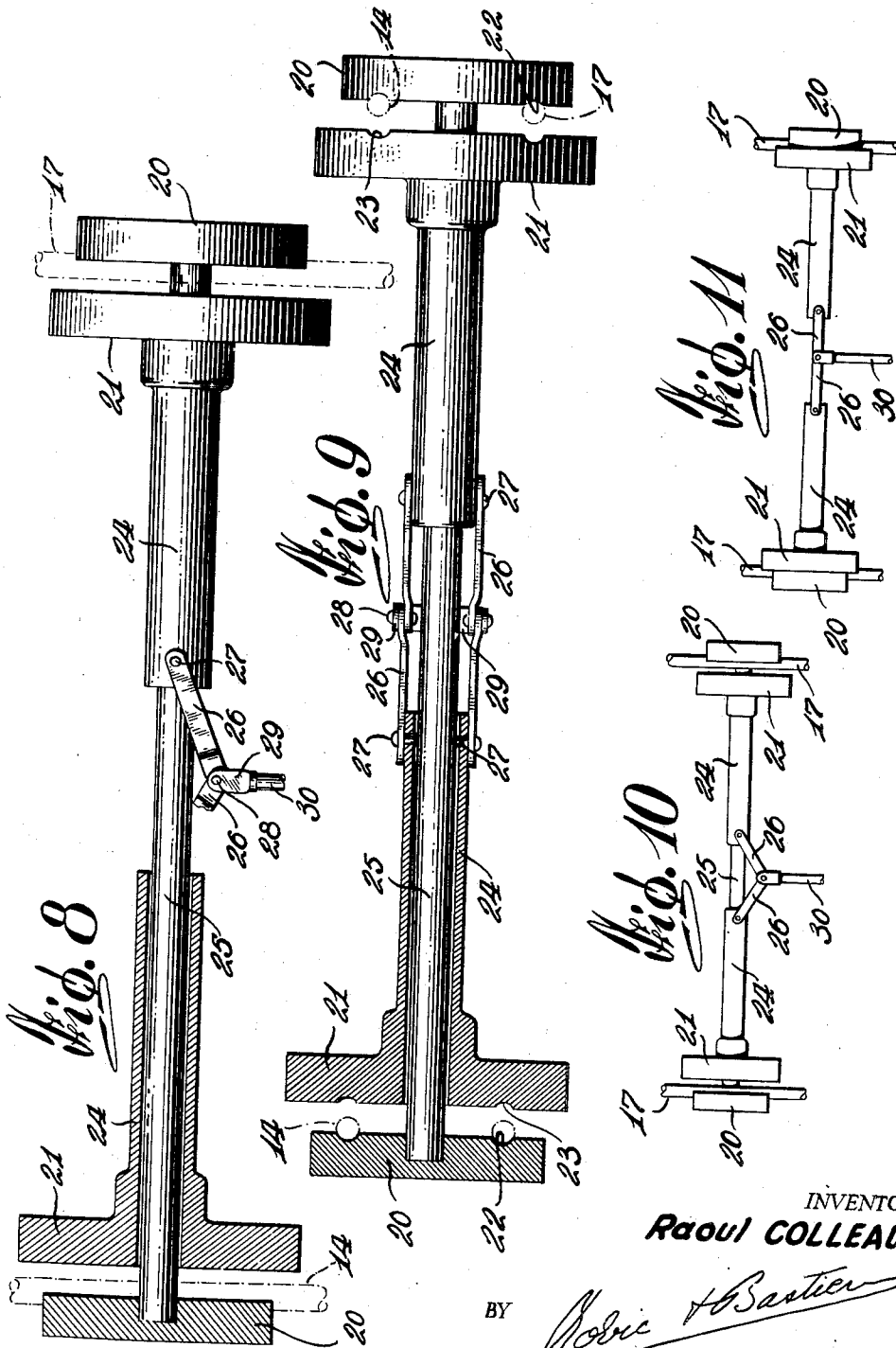
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3 Sheets-Sheet 3



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1

2,829,935

DESK WITH VERTICALLY AND ANGULARLY ADJUSTABLE TOP

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Application August 23, 1956, Serial No. 605,802

5 Claims. (Cl. 311-36)

The present invention relates to a desk such as used in offices and provided with an adjustable top so arranged that the desk may be used as a drafting table.

The general object of the present invention is the provision of a desk of the character described which has a tubular structure of simple and inexpensive but strong and durable construction.

Another important object of the present invention is the provision of a desk of the character described having simple means for the adjustment of the top, said means being conveniently activated by the user's foot.

Yet another important object of the present invention is the provision of a desk of the character described in which the adjustable top will be firmly held in any inclined position.

The foregoing and other important objects of the present invention will become more apparent during the following disclosure and by referring to the drawings in which:

Figure 1 is a perspective view of the desk according to the present invention;

Figure 2 is a front end elevation, partially broken away, of the desk;

Figure 3 is a partial perspective view of the tubular frame structure of the desk;

Figure 4 is a partial top plan view of the said structure;

Figure 5 is a partial perspective view of the means for clamping and releasing the support for the adjustable desk top;

Figure 6 is a partial perspective view of one clamping disk;

Figure 7 is an elevation of the same clamping disk showing, in cross-section, the shaft on which it is mounted;

Figure 8 is an elevation, partly in longitudinal section, of the desk top clamping means;

Figure 9 is a plan view, partly in section, of the same means;

Figures 10 and 11 are diagrammatic elevations of the same means in releasing and clamping positions respectively.

Referring now more particularly to the drawings in which like references indicate like elements throughout, the desk, according to the present invention, consists in a tubular frame structure, generally indicated at 1, which supports two chests of drawers 2 at each side of the desk, and a desk top 3 which is adjustable so as to take any elevated and/or inclined position. The desk is preferably provided with hinged side panels 4 adapted to take an elevated position to form extensions for the desk top 3.

The tubular frame 1 is more particularly shown in Figure 3 and consists of two rectangular end frames 6 which are horizontally disposed and are adapted to support the desk top 3 in horizontal normal position.

The end frames 6 are supported on the floor by standards 7, each consisting of a U-shaped tubular member 8 and two L-shaped tubular members 10. The upper ends of the legs of the U-shaped member 8 are welded to the outer sides of the frame 6 and the lower ends of said

2

legs form ground engaging legs 9. The L-shaped tubular members 10 are disposed in planes extending at right angles to the plane containing the U-shaped member 8 and have their free ends secured to the inner side of the side frame 6 and to the cross leg of the U-shaped member 8 respectively. The L-shaped members 10 are provided with kinks at their corners to form ground engaging members 11. The two end frames 6 are each squarely supported on the floor by means of the four members 9 and 11.

The standards 7 are interconnected by means of a cross bar 12 which is straight and is welded at its two ends to one of the L-shaped members 10 of each end frame 6. Each chest of drawers 2 is inserted within the space defined by the L-shaped members 10, the U-shaped member 8 and the end frame 6, and is secured to said members and rests on the horizontal legs of the L-shaped members 10, as clearly shown in Figure 1.

Between the two end frames 6 is disposed a central rectangular frame 13 having a tubular structure and having its two opposite sides disposed adjacent to the inner sides of the end frames 6 but movable relative thereto. The central frame 13 is directly secured to the desk top 3 and serves to support the latter in all its inclined and elevated adjusted positions.

A tubular shaped stirrup member 14 is pivotally hung from the central frame 13 by having its free ends pivotally mounted in brackets 15 which are themselves welded or otherwise secured to the central frame 13 underneath the same. A straight tube 17 is also pivotally hung from each side of the central frame 13. The upper end of each tube 17 is pivotally and slidably mounted in a bracket 18 which is itself secured underneath the central frame 13 adjacent the bracket 15. More particularly, the upper end of each tube 17 is provided with a pin engaging elongated slots 19 made in the bracket 18.

The vertical legs of the stirrup member 14 and each tube 17 pass between two disk shaped clamping members 20 and 21 respectively, which face each other and are provided at their opposite inner faces with registering grooves 22 and 23, respectively, engageable by the tube 17 and the stirrup member 14. The clamping member 20 is fixed and is rigidly secured, as by welding, to the upright legs of the L-shaped members 10 of the standards 7. The clamping member 21 is movable toward and away from the fixed clamping member 20. The clamping member 21 is provided with a dependent sleeve 24 which freely surrounds and is slidable on a horizontally disposed supporting tube 25, the ends of which are secured to the center of the fixed clamping members 20.

The opposite free ends of the sleeve 24 are interconnected by means of a toggle linkage consisting of levers 26 pivoted at 27 to the free end of the sleeves 24 and pivotally connected at their other ends to each other and also to a yoke member 29 as shown at 28. The yoke member 29 is secured to the upper end of an actuating rod 30, the lower end of which is hinged at 31 to a pedal member 32 which is pivoted intermediate its ends on the cross member 12 of the desk frame 1, as shown at 33.

When the actuating end 34 of the pedal member 32 is in elevated position, the movable clamping members 21 are in releasing position, as shown in Figure 10, with the toggle levers 26 inclined downwardly. Thus the desk top 3 may be elevated and/or inclined because the clamping members 20 and 21 allow slidable movement of the members 14 and 17 within their respective registering grooves 22 and 23.

During adjusting angular movement of the desk top 3, the members 14 and 17 will always remain parallel to each other and at a constant distance because they remain in the grooves 22 and 23 and because the tubes 17,

as previously described, are slidably, as well as pivotally, connected to the desk top 3.

Once the desk top 3 is in its intended adjusted position, the actuating part 34 of the pedal member 32 is depressed whereby the rod 30 is elevated and causes alignment of the toggle levers 26, which in turn, displace the movable clamping members 21 outwardly to clamp the stirrup members 14 and the tubes 17 against slidable movement relative to the clamping members 20 and 21. This clamped position is shown in Figure 11.

It will be noted that the grooves 22 and 23 of the two clamping members of each pair will always remain in registering relationship because the clamping member 20 is fixed and because the movable clamping member 21 is held against rotation by the toggle linkage arrangement consisting of the levers 26, the yoke member 29 and the rod 30.

The extension side panels 4, previously mentioned, are hinged to the frame of the desk, as shown at 35 in Figure 2, and are maintained in horizontal operative position by means of suitable braces 36 which are adapted to engage brackets 37 secured to the standards 7.

In order to facilitate adjusting movements of the desk top 3, the latter may be suitably counterbalanced by a suitable counterweight, or preferably by tension springs 38 shown in Figure 5. These tension springs have one end secured to the lower end of the tube 17 and to the bottom part of the stirrup member 14 respectively, while the upper ends of said springs 38 are secured to the fixed clamping member 20. The springs 38 will help to elevate the desk top from its normal horizontal position in which it lies flat on the end frame members 6.

While a preferred embodiment according to the present invention has been illustrated and described, it is understood that various modifications may be resorted to without departing from the spirit and scope of the appended claims.

I claim:

1. A desk with a vertically and angularly adjustable top comprising a frame structure providing standards, a top panel adapted to rest on said structure, a U-shaped stirrup tubular member pivotally connected at the upper ends of its legs to the underside of said top panel, tube members extending in spaced and parallel relationship with the legs of said stirrup member and pivotally and transversely slidably connected to the underside of said top panel whereby said tube members may pivot relative to said top panel and may be displaced towards and away from said legs of said stirrup member depending on the inclination of said top panel relative to said frame structure, two pairs of clamping members engageable with the legs of said stirrup member and with said tube members for clamping the same against displacement, the clamping members of each pair being oppositely disposed, one of which being secured to said frame structure and the other one of which being movably mounted for movement toward and away from the fixed clamping member to take a clamping position and a releasing position respectively, the clamping members of each pair being pro-

vided at their inner opposite faces with spaced registering grooves adapted to receive one leg of said stirrup member and one tube member, said two pairs of clamping members being disposed in axial alignment, the movable clamping members of each pair being provided with a dependent sleeve, a rod secured at both ends to the fixed clamping members of each pair, said sleeve and said movable clamping member of each pair being slidable on said rod, a toggle linkage extended between the sleeves of said movable clamping members of said two pairs, and foot actuated means connected to said toggle linkage for operation thereof and for movement of said movable clamping members between their clamping position and their releasing position in which latter position the legs of said stirrup member and said tube members are unclamped so as to allow vertical and angular adjustment of said top panel relative to said frame structure.

2. An article of manufacture as claimed in claim 1, further including counterbalancing means connected between said top panel and said frame structure for facilitating the adjusting movement of said top panel.

3. An article of manufacture as claimed in claim 1, wherein said main structure consists of interconnected tubular members providing two horizontally disposed spaced and rectangular shaped end frames on which said top panel rests in its lowered horizontal position, and a central rectangularly shaped tubular frame member disposed between said two end frame members and secured underneath said top panel and movable therewith relative to said frame structure, said elongated members being pivotally connected to said central rectangularly shaped frame member.

4. An article of manufacture as claimed in claim 2, wherein said counterbalancing means include tension springs connected at one end to said elongated members and at the other end to said fixed clamping members.

5. An article of manufacture as claimed in claim 3, further including a transverse rod interconnecting the standards which support said two end frame members, said foot actuated means comprising a pedal lever pivoted intermediate its ends on said transverse rod, a connecting rod hinged to one end of said pedal member, and a yoke member pivotally connected to said toggle linkage and secured to the other end of said connecting rod.

References Cited in the file of this patent

UNITED STATES PATENTS

1,184,594	Von Nagy	May 23, 1916
1,859,456	Nestler	May 24, 1932
1,956,546	Froelich	Apr. 24, 1934
2,223,405	Cain	Dec. 3, 1940
2,244,391	De Lisle	June 3, 1941
2,404,949	De Lisle	July 30, 1946
2,452,216	Yarber	Oct. 26, 1948
2,605,156	Laxo	July 29, 1952

FOREIGN PATENTS

250,868	Switzerland	Sept. 30, 1947
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