

June 26, 1956

J. J. SHEA, SR

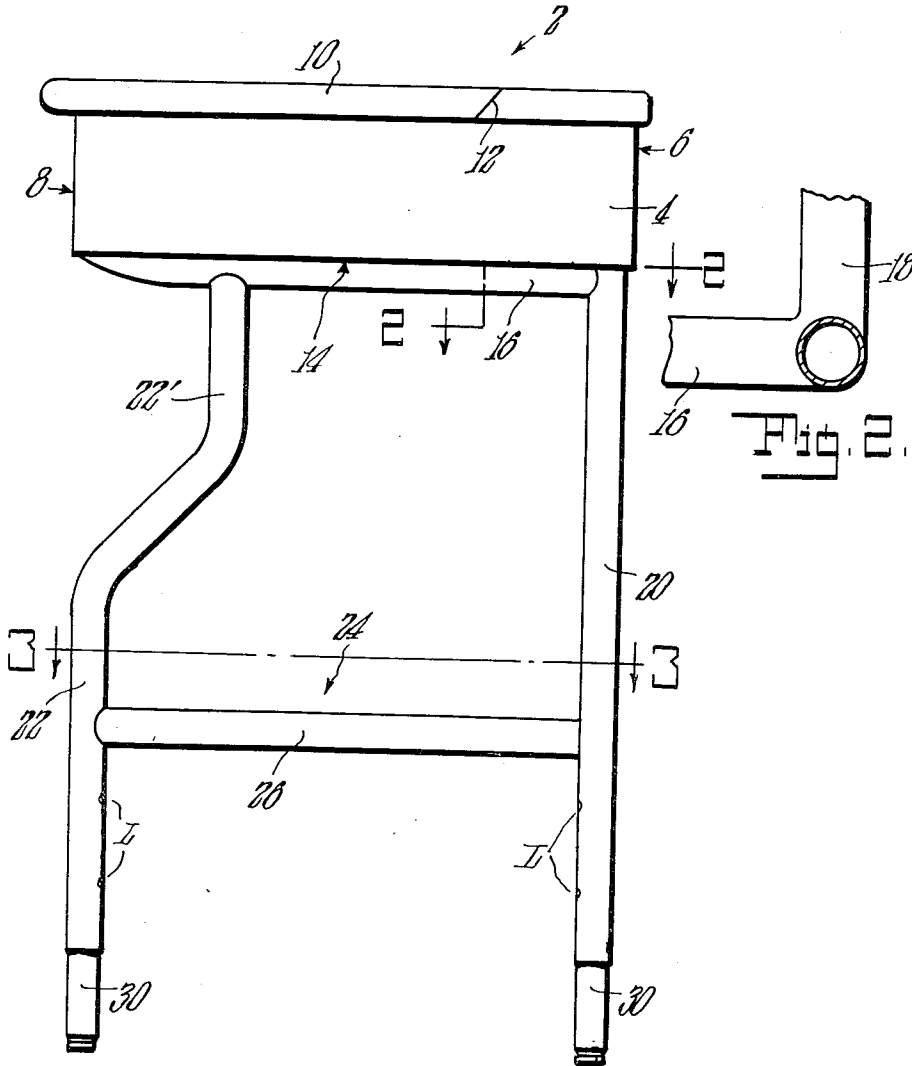
2,752,218

DESK

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2 Sheets-Sheet 1

Fig. 1.



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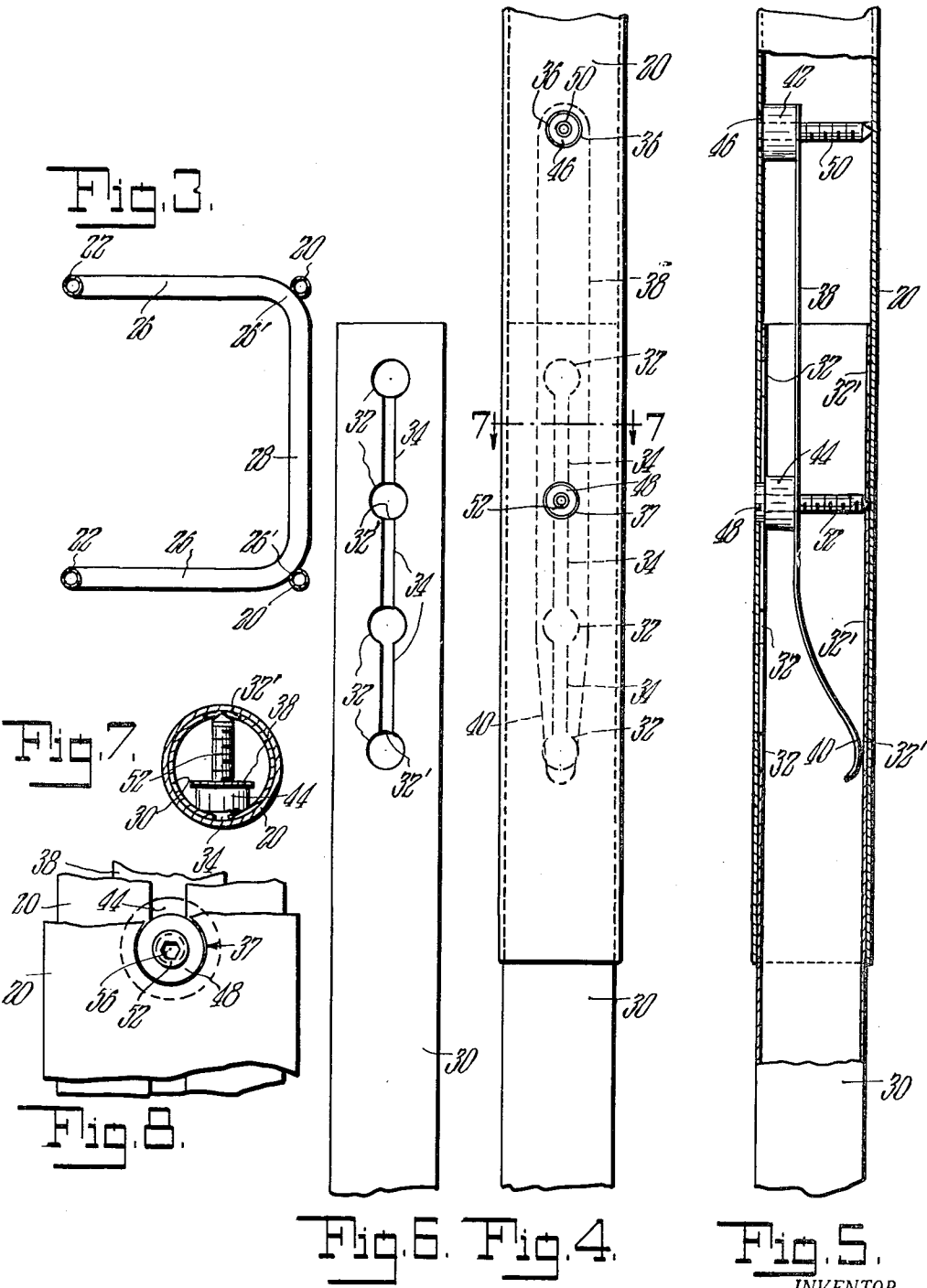
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2 Sheets-Sheet 2



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2,752,218

DESK

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1 Claim. (Cl. 312—255)

This invention relates to new and useful improvements in furniture and is directed more particularly to improvements in furniture particularly adapted for use in schools and the like.

A principal object of the invention is directed to the provision of furniture which is so constructed and arranged that one sitting at a desk may easily and readily move the limbs from therebeneath.

In rising from a seat at the ordinary desk, there is ordinarily considerable interference of the person's limbs with the desk support. More particularly, the knees bring up against the side supports of the desk. According to a novel feature of this invention, a supporting means of the desk is so formed that one sitting before the same may swing sideways and pass the knees sideways and outwardly without any undue interference with the desk supporting means.

According to another novel feature of the invention, the height of furniture such as a desk is adjustable so as to accommodate occupants of various heights and while this invention has been shown in connection with a desk, it is also adapted for use with chairs and the like.

The adjustable mechanism is readily and easily manipulated yet it is constructed and arranged so as to be inconspicuous thereby discouraging tampering thereof by unauthorized persons.

One of the primary purposes of my invention is to provide structural and operational improvements in devices of the class to which reference has been made, which improvements not only simplify the structure as such, but also provide distinct advantages in strength, durability, efficiency and the like.

With the above primary objects in view, it is another object of my invention to provide a construction of the above described character in which the number of operating parts is greatly reduced and which is compact with the demands and desires of manufacturers and purchasers alike and which is not only distinctive in its appearance and practical in its value but also reliable in its operation and efficient in its use.

All of the above objects I accomplish by means of such structure and relative arrangements of parts thereof, as will fully appear by a perusal of the description below and by various specific features which will be hereinafter set forth.

To the above cited and other ends and with the foregoing and various other novel features and advantages and other objects of my invention as will become more readily apparent as the description proceeds, my invention consists in certain novel features of construction and in the combination and arrangement of parts as will be hereinafter more particularly pointed out in the claims hereunto annexed and more fully described and referred to in connection with the accompanying drawings wherein:

Fig. 1 is a side elevational view of a desk embodying the novel features of the invention;

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Fig. 2 is a sectional plan view at a forward corner of the desk on the line 2—2 of Fig. 1;

Fig. 3 is a small scale sectional plan view on the line 3—3 of Fig. 1;

Fig. 4 is a partial elevational view of a lower portion of one of the legs of the desk to illustrate the novel features of the adjusting mechanism of the invention;

Fig. 5 is a longitudinal sectional elevational view through the portion of the leg shown in Fig. 4;

Fig. 6 is an elevational view of the foot of one of the legs of the structure;

Fig. 7 is a sectional plan view on the line 7—7 of Fig. 4; and

Fig. 8 is an enlarged partial elevational view of one of the legs of the structure.

In the accompanying drawings, I have illustrated a complete example of a physical embodiment of the invention in which the parts are combined and arranged in accordance with one mode which I have devised for the practical application of the principles of the invention.

It will, however, be understood that changes and alterations are contemplated and may be made in these exemplifying drawings and mechanical structures, within the scope of the claim, without departing from the principles of the invention.

In the following description and claim, various details will be identified by specific names for convenience. These names, however, are intended to be as generic in their application as the art will permit.

In the above-mentioned drawings annexed hereto and forming a part of this specification, I have shown but one embodiment of the invention which is deemed preferable, but it is to be understood that changes and modifications may be made in various respects and within the scope of the appended claim without departing from the broad aspects and spirit of the invention.

Referring now to the drawing more in detail, in which similar characters of reference indicate corresponding parts in the several figures and referring more particularly to the preferred form of my invention selected for illustrative purposes, I have shown in Fig. 1 a desk generally indicated by the numeral 2 which includes an upper receptacle having side walls 4, a front wall 6 and a rear wall 8.

A top 10 is swingable upwardly at 12 by means of suitable hinge connections (not shown).

Instead of the top being swingable, the top may be immovable and the wall 8 may be omitted so as to provide access into the receptacle.

In any case, the receptacle will be formed with a bottom or lower wall 14.

All of the various members may be formed from metal or wood as may be desired.

Upper side frame members 16 are secured to the bottom wall 14 by any suitable means such as screws, bolts or the like. A forward frame member 18 may be likewise secured to the receptacle along the forward side of the bottom wall member 14 also as by screws, bolts or the like.

Forward legs 20 extend downwardly from the forward end portions of the upper side frame members 16 and rear legs 22 extend downwardly from the rear end portions of the upper side frame members 16.

The frame members and legs are preferably formed from metal tubing, same being relatively light in weight as well as strong and rigid. The legs may be fixed to the frame members in any suitable manner such as by brazing, welding or the like so as to provide a smooth secure jointure and rigid construction.

A lower frame member generally indicated by numeral 24 is in the form of a U having side portions 26 which

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curve at forward ends into a forward transverse run 28 as in Fig. 3. The member 24 will also be formed from tubing and the rear ends of the side portions 26 thereof will be secured to the rear legs 22 as by brazing, welding or the like. Curved portions 26' of the frame 24 will be similarly secured to the forward legs 20, as shown in Fig. 3.

Upper portions 22' of the rear legs 22 are offset forwardly of the lower portions thereof, such as shown in Fig. 1. Such an arrangement provides a space below the rear portion of the receptacle so that one sitting at the desk may swing the knees therethrough when arising from the desk. In this way, movement of the knees outwardly from the desk is not interfered with as is the case with known prior art desks.

Feet 30 are slidably adjustable up and down in lower ends of the legs 20 and 22 and are adapted for adjustment of the desk at various heights from the floor.

Means are provided for releasably holding the feet 30 in various positions longitudinally of the legs 20 and/or 22. Same will be described in connection with one leg 20 as the identical construction is employed in connection with each of the legs.

The foot 30 as in Fig. 4 is formed from tubing and is reciprocable in the leg 20. Said foot 30 is provided on one side thereof with a plurality of longitudinally spaced openings or sockets 32 which are connected by elongated slots 34. The leg 20 is provided with upper and lower longitudinally spaced holes 36 and 37.

The foot 30 is also provided with openings 32' in a side opposite to the said one side and in alignment with the sockets 32.

An elongated leaf spring 38 is provided within the leg 20 and foot 30 and has a lower end 40 for bearing against the inner side of the foot 30, as in Fig. 5.

Upper and lower retainers 42 and 44 respectively are spaced longitudinally of the spring 38 and are fixed thereto. Said retainers have outer hubs 46 and 48 respectively which are receivable in the holes 36 and 37 of the leg 20.

The lower hub 48 is also receivable in any one of the sockets 32 of the foot member 30, all as shown in Figs. 4 and 5.

The retainers 42 and 44 as in Figs. 4 and 5 are internally threaded axially thereof and set screws 50 and 52 are in threaded engagement therewith. The set screws are preferably of the hollow head type such as Allen screws.

Such set screws have a depression in the outer head ends thereof which are non-round and are, for illustrative purposes, hexagonal, as at 56 in Fig. 8. A wrench may be inserted in the depressions 56 for turning the set screws and the screws and slots 34 of the foot 30 are of sufficient width to allow longitudinal movements of the foot 30 relative to the wrench in the outer end of the screw 52.

The upper screw 50 is adjusted so that its inner end impinges the inner side of leg 20 which holds the hub 46 of the upper retainer 42 in the opening 36 of the leg 20 so that the spring 38 depends therefrom as is exemplified in Fig. 5.

In Figs. 4 and 5, the hub 48 of the lower retainer 44 is disposed in the socket 32 of the foot. That is, the second from the upper end thereof. The screw 52 extends through a hole 32' and bears against leg 20 to hold the hub 48 in the opening 37 of the leg whereby the foot and leg are releasably held in the position of adjustment as shown.

When it is desired to move the foot up or down to adjust the height of the desk, a wrench is inserted in the depression 56 of the lower screw 52. The screw is turned so as to back it off from the member 20. When same is backed off sufficiently, the screw is pressed in-

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wardly by the wrench so that the hub 48 of the retainer 44 is moved inwardly from the opening 37 of the leg 20 and the socket 32 of the foot 30. The foot 30 may then be moved up or down relative to the leg 20 and, when the screw is released, the spring 38 urges the retainer 44 outwardly so that the hub 48 may enter a socket 32 of the foot in register with the opening 37 of the leg. The wrench holds the hub 48 inwardly while the slots 34 of the foot permit longitudinal movement of said foot relative to the leg.

In the adjusted position, the screw 52 is tightened to bind on the leg and to hold the hub 48 in the opening 37 of the leg.

There may be as many sockets 32 in the foot 30 as may be desired in order to obtain the desired and necessary adjustment of the leg and foot.

The parts will be so located that the hubs of the retainers will be located on inner sides of the legs as indicated by L in Fig. 1.

The parts will be arranged to be as inconspicuous as possible so as to avoid the possibility of unauthorized tampering.

My invention may be embodied in other specific forms without departing from the essential characteristics thereof. Hence, the present embodiments are therefore to be considered in all respects merely as illustrative and not as restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description. All modifications and variations as fall within the meaning and purview and range of equivalency of the appended claims are therefore intended to be embraced therein.

What is desired to claim and secure by Letters Patent of the United States is:

35 Leg construction adjustable in length for supporting a desk or the like comprising, an elongated tubular upper leg section and a tubular foot slidable therein, said upper leg section provided on a forward wall thereof with longitudinally spaced upper and lower hub receiving holes, said foot provided on a forward wall thereof with hub receiving longitudinally spaced sockets and with connecting slots and with openings aligned with the sockets in the rear wall thereof, an upper retainer secured in the upper hole of said upper leg section, a resilient leaf spring secured thereto and depending therefrom within said upper leg section and into said foot and having a lower end engaging the rear wall of said foot, a lower retainer intermediate the ends of said spring and fixed thereto having a forward hub receivable in a socket of said foot and the lower hole of said upper leg section, a control screw threaded in the lower retainer for inner and outer positions thereof having an inner end adapted in inner position of said screw to engage the rear wall of said upper leg section through one of said openings in the rear wall of said foot to urge the hub of said retainer into the lower hole of said upper leg section and a socket of said foot aligned with the opening to thereby lock said upper leg section and foot against relative axial movement and arranged in outer position to permit the hub of the lower retainer to be depressed inwardly out of said hole and against the action of said spring whereby said upper leg section and foot are free for relative axial movement.

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