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ROTATABLE TABLE

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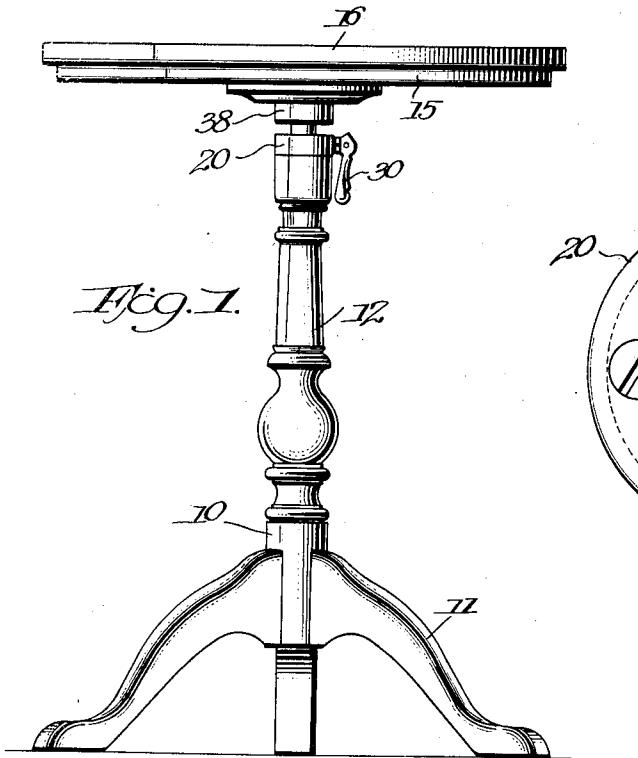


Fig. 1.

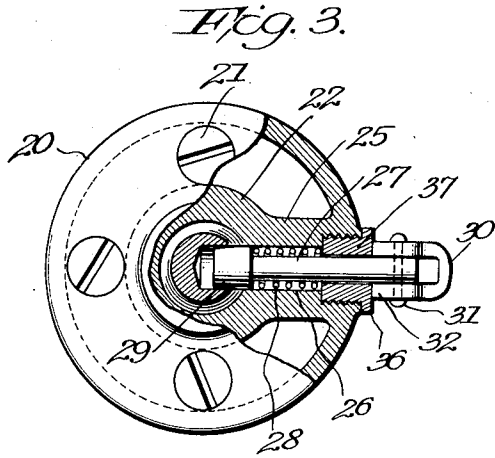


Fig. 3.

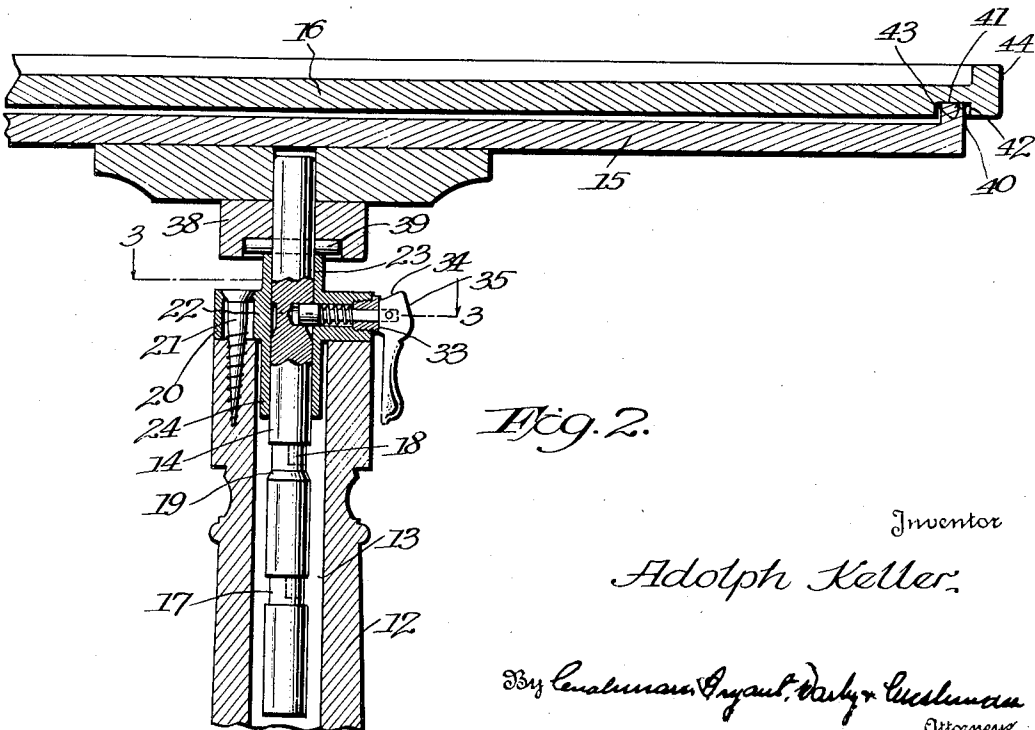


Fig. 2.

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UNITED STATES PATENT OFFICE

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ROTATABLE TABLE

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7 Claims. (Cl. 45—111)

This invention relates to tables and refers particularly to that type which are rotatable and vertically adjustable.

An object of the invention is the provision of novel and simplified means for locking the table in adjusted position. Previously, in tables of this general type it has been the practice to provide separate and distinct latching means for retaining the table in adjusted position, one means effecting the locking of the table against rotary movement, and the other means acting to prevent vertical movement. In the present invention, I utilize a single latching means for retaining the table in adjusted position against both vertical and rotary movement, thus providing a simple and compact construction which eliminates many objectionable features of the usual adjustable table.

Another object is to provide a combination table top and removable tray arrangement, whereby the tray, after its use in such capacity, may be quickly applied to the table top and thereafter constitute this portion of the table, the co-relation between the two being such that marring or scratching of the top during the transfer of the tray to or from the same, is greatly minimized.

With these and other objects and advantages in mind, attention is directed to the drawing, in which:

Figure 1 is an elevation of my invention with the removable tray supported in position upon the table top.

Figure 2 is an enlarged sectional view of the upper portion of the table, and

Figure 3 is a section taken on line 3—3 of Figure 2.

Referring specifically to the drawing, the numeral 10 designates a table having legs 11, which support a vertically extending pedestal 12. This pedestal is preferably hollow so as to provide a central longitudinal passage 13 adapted to receive a table top supporting post 14. The top is designated at 15 and as shown in Figures 1 and 2 suitably supports a removable tray 16 which will be described in more detail hereinafter.

The table is of the type which may be both rotated and vertically adjusted, that is, the top supporting post 14 is capable of longitudinal and rotary movement in the pedestal. One of the important features of the present invention is the provision of a single means for locking the post against rotary and longitudinal movement. One embodiment of this feature is disclosed in

the accompanying drawing, wherein the post 14 is provided with a plurality of spaced annular grooves 17, each of which is in turn provided with a recessed portion 18. Each groove with the exception of the lowermost one, has its lower wall 19 tapered or inclined as shown in Figure 2. The lower wall of the lowermost groove is perpendicular to the base of the groove similar to the upper wall of this and the other grooves.

Upon the upper end of the pedestal 12 is secured a block 20 by means of screws 21, and while this block is preferably of cast metal, it may be formed of any other suitable material. This block is provided with a hub 22 having a central opening registering with the passage in the pedestal, the hub being formed with upper and lower sleeves 23 and 24 constituting guides for the post 14 and the upper sleeve 23 also functions as a stop to limit the downward movement of the table top with respect to the block 20.

Referring to Figure 3, the hub is shown connected to the outer wall of the block by a solid portion 25 and this portion is provided with an opening 26 extending entirely therethrough. A spring pressed plunger 27 is slidably mounted in the opening 26, the spring 28 normally pressing the head 29 into the opening in the hub. The outer end of the plunger projects beyond the block 20 and is retained in this position by means of a handle 30 pivotally secured to the plunger by a pin 31. The portion of the handle adjacent its connection to the plunger constitutes a head having spaced walls 32 receiving the outer end of the plunger. Each wall is so formed as to provide cam faces 33, 34 and 35, respectively, adapted to successively engage the outer wall of the block or, as specifically disclosed in the drawing, the flange 36 of a screw plug 37. By moving the handle so that its cam faces engage the flange 36, the plunger is moved in the opening 26 into and out of engagement with the post 14.

In Figures 2 and 3, the cam face or faces 33 are shown engaging the flange 36 with the plunger in its extreme inner position projecting not only into one of the grooves 17 of the post, but also into the recess 18 of said groove. In this position the post 14 and table top 15 are locked against both rotary and longitudinal movement. If, however, it is desired to rotate the top in this adjusted position, the handle is moved about its pivot to bring the cam face 34 into engagement with the flange 36. This movement retracts the plunger from the recess 18 to an intermediate position where it still engages in the groove 17, thus per-

mitting rotary movement of the post and top but preventing vertical movement of the same. If it is desired to adjust the top, the handle is actuated to bring the cam surface 35 into engagement with the flange 36, thus entirely retracting the plunger from the groove and out of contact with the post, whereby the latter may be moved with respect to the pedestal into any desired position of adjustment. That is to say, the post is raised or lowered to permit the plunger to register with another of the grooves whereby reverse movement of the handle will permit the plunger to enter the groove and lock the post against vertical movement. This position is the intermediate position with the cam face 34 engaging the flange 36. To again lock the post and top against rotary movement, the handle is moved to present the cam face 33 to the flange 36, whereby the plunger is permitted to enter the recess 18 of the respective groove. If by any chance the recess and plunger are out of register, it is only necessary to rotate the table top until the recess comes into alignment with the plunger.

This construction provides a simple and compact arrangement whereby the table may be easily and quickly adjusted. By reason of the inclined walls 19 of the grooves the top may be raised, when the plunger is in its intermediate position, without the necessity of moving the handle to retract the plunger to its extreme outer position. The lower wall of the lowest groove is not inclined in this manner, as hereto described, so as to prevent accidental removal of the post from the pedestal.

The table top may be attached to the post 14 in any desired manner. In the drawing, I have disclosed the upper end of the post as having a tight fit in a central recess formed in the block 38 secured to the undersurface of the top 15. To prevent the top from turning relative to the post, the latter is provided with a transverse opening in which is secured a pin 39. The block 38 is provided with opposed recesses on opposite sides of the central opening for receiving the ends of the pin.

Referring to Figure 2, the table top is provided with a peripheral ridge 40 having a flat upper surface 41. The removable tray 16 is provided with an annular groove 42 in its undersurface conforming to the ridge 40 and provided with a flat base 43 adapted to contact and rest upon the surface 41 when the tray is placed upon the table. The height of the ridge is greater than the depth of the groove 42 so that when the tray is placed upon the table the only point of contact between the two will be where the base 43 rests upon the surface 41. This construction prevents the table top from being scarred by the repeated use of the tray and at the same time provides sufficient rigidity between the two so that after the tray has been utilized as such, it may subsequently function safely as the table top. This combination tray and table construction has many advantages and permits, for instance, the serving of food without the objectionable feature of removing the food from the tray to the table and vice-versa.

It will be observed that the tray is also provided with a peripheral rim 44 extending above and below the adjacent upper and lower surfaces of the tray and constituting a grip or handle for the same. The lower extension of the rim is, in part, formed by one of the walls of the groove 42 and in the drawing the undersurface of the rim terminates in substantially the same plane as the

undersurface of the body portion of the tray. I do not, however, wish to limit myself to this specific arrangement as it is readily apparent that the lower portion of the rim could be extended somewhat below the undersurface of the tray without departing from the spirit of the invention.

While the table top and tray are preferably of circular formation, they could readily be constructed in other designs, the only requisite being that the ridge and groove coincide throughout.

It has heretofore been stated that the hub 22 is provided with upper and lower sleeves 23 and 24 constituting guides for the post 14. The upper sleeve 23 also functions as a stop to limit the downward movement of the table top with respect to the top of the block 20. That is, even in the lowermost position of adjustment of the top there will be a space between the blocks 20 and 38. Thus, in adjusting the top, if the post should accidentally slip to its lowermost position, there is no possibility of the operator pinching one or more of his fingers between the pedestal and table top.

While in the preferred form of my invention I provide the block 20 in conjunction with the plunger 27, it should be understood that the plunger could readily be housed directly in the top portion of the pedestal. Furthermore, the sleeve 24 could be extended to the bottom of the passage 13, or, if no block is used, a separate tube or sleeve could be inserted in the passage as a guide for the post.

It is also to be understood that there are various other modifications of my invention which are within the spirit and scope of the appended claims.

I claim:

1. In an adjustable table, a hollow pedestal, a post rotatably mounted in said pedestal and slidable vertically therein to adjust it to different elevations, and a single latching member carried by said pedestal and engageable with the post for rotatably supporting the same in its different vertical adjustments, said latching member being also engageable with the post in each of said vertical adjustments to hold the post rigid with the pedestal.

2. In an adjustable table, a hollow pedestal, a table top supporting post rotatably mounted in said pedestal and slidable vertically therein to adjust it to different elevations, said post being provided with spaced annular grooves having recesses, and a single latching member engageable with the grooves for rotatably supporting the post in its vertical adjustments and further engageable with the recesses for locking the post rigid with the pedestal.

3. In an adjustable table, a hollow pedestal, a table top supporting post rotatably mounted in said pedestal and slidable vertically therein to adjust it to different elevations, said post being provided with spaced annular grooves defining horizontal supporting shoulders with recesses lying beyond said shoulders, and a single latching member engageable with the shoulders for rotatably supporting the post in its vertical adjustments and further engageable with the recesses for locking the post rigid with the pedestal.

4. In an adjustable table, a hollow pedestal, a table top supporting post rotatably mounted in said pedestal and slidable vertically therein to adjust it to different elevations, said post being provided with spaced annular grooves having recesses, and a spring pressed plunger engageable with the grooves for rotatably supporting the post

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in its vertical adjustments and further engageable with the recesses for locking the post rigid with the pedestal.

5 In an adjustable table, a hollow pedestal, a table top supporting post rotatably mounted in said pedestal and slidable vertically therein to adjust it to different elevations, said post being provided with spaced annular grooves having recesses, a spring pressed plunger engageable with
10 the grooves for rotatably supporting the post in its vertical adjustments and further engageable with the recesses for locking the post rigid with the pedestal, and a handle secured to the outer end of said plunger and provided with means for retaining said plunger in different retracted positions relative to said post.
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6. In an adjustable table, a hollow pedestal, a table top supporting post rotatably mounted in said pedestal and slidable vertically therein to adjust it to different elevations, said post being provided with spaced annular grooves having recesses, a spring pressed plunger engageable with
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the grooves for rotatably supporting the post in its vertical adjustments and further engageable with the recesses for locking the post rigid with the pedestal, and a handle pivotally secured to the outer end of said plunger and provided with cam faces engageable with the outer wall of said pedestal for retaining said plunger in different retracted positions relative to said post.

7. In an adjustable table, a hollow pedestal, a table top supporting post rotatably mounted in said pedestal and slidable vertically therein to adjust it to different elevations, said post being provided with spaced annular grooves having recesses, a block mounted upon the top of said pedestal and provided with a central opening registering with the opening in the pedestal, and a spring pressed plunger slidably mounted in said block and engageable with the grooves for rotatably supporting the post in its vertical adjustments and further engageable with the recesses for locking the post rigid with the pedestal.
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