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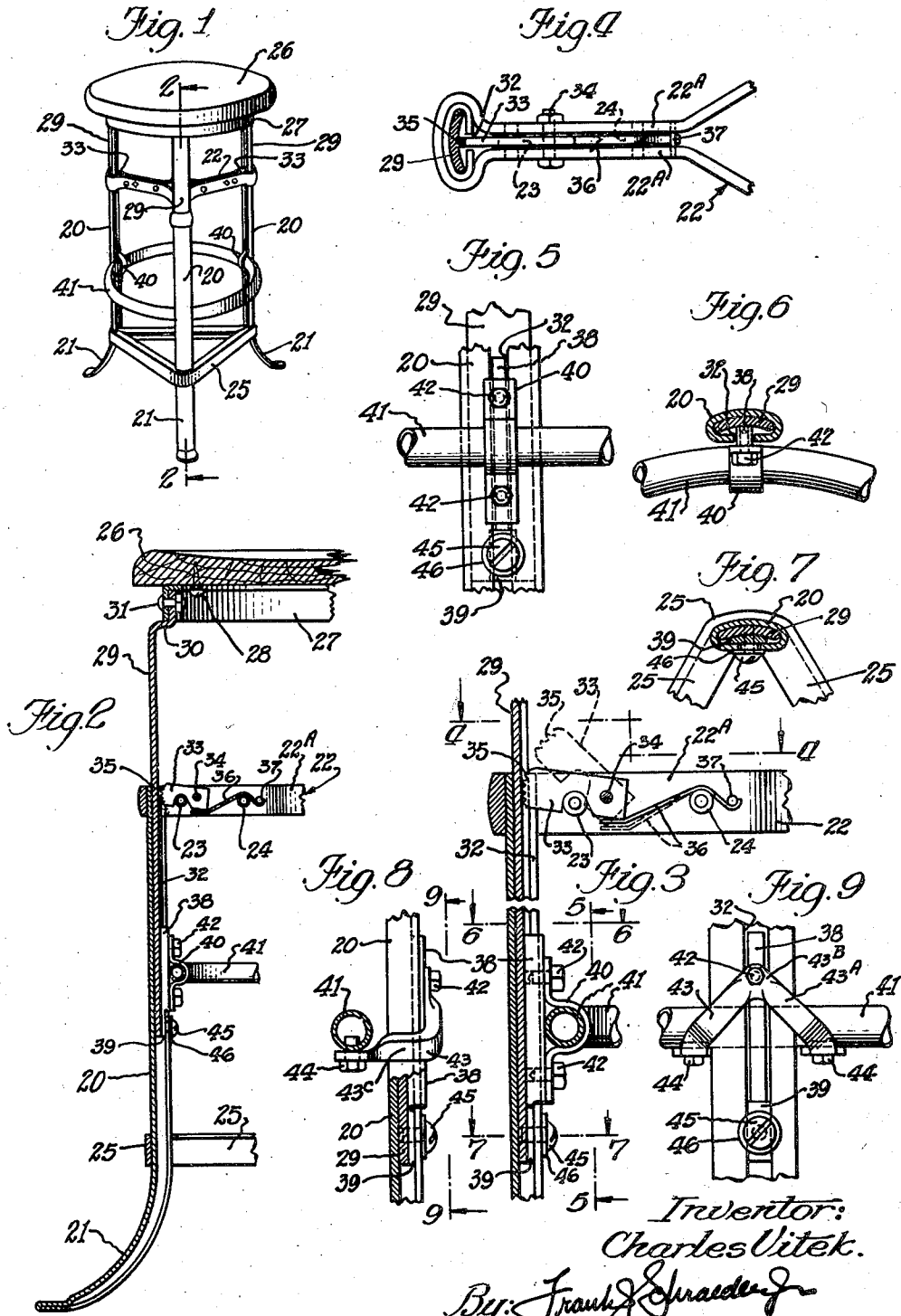
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2,415,663

ADJUSTABLE STOOL AND THE LIKE

Filed Jan. 8, 1941

2 Sheets-Sheet 1



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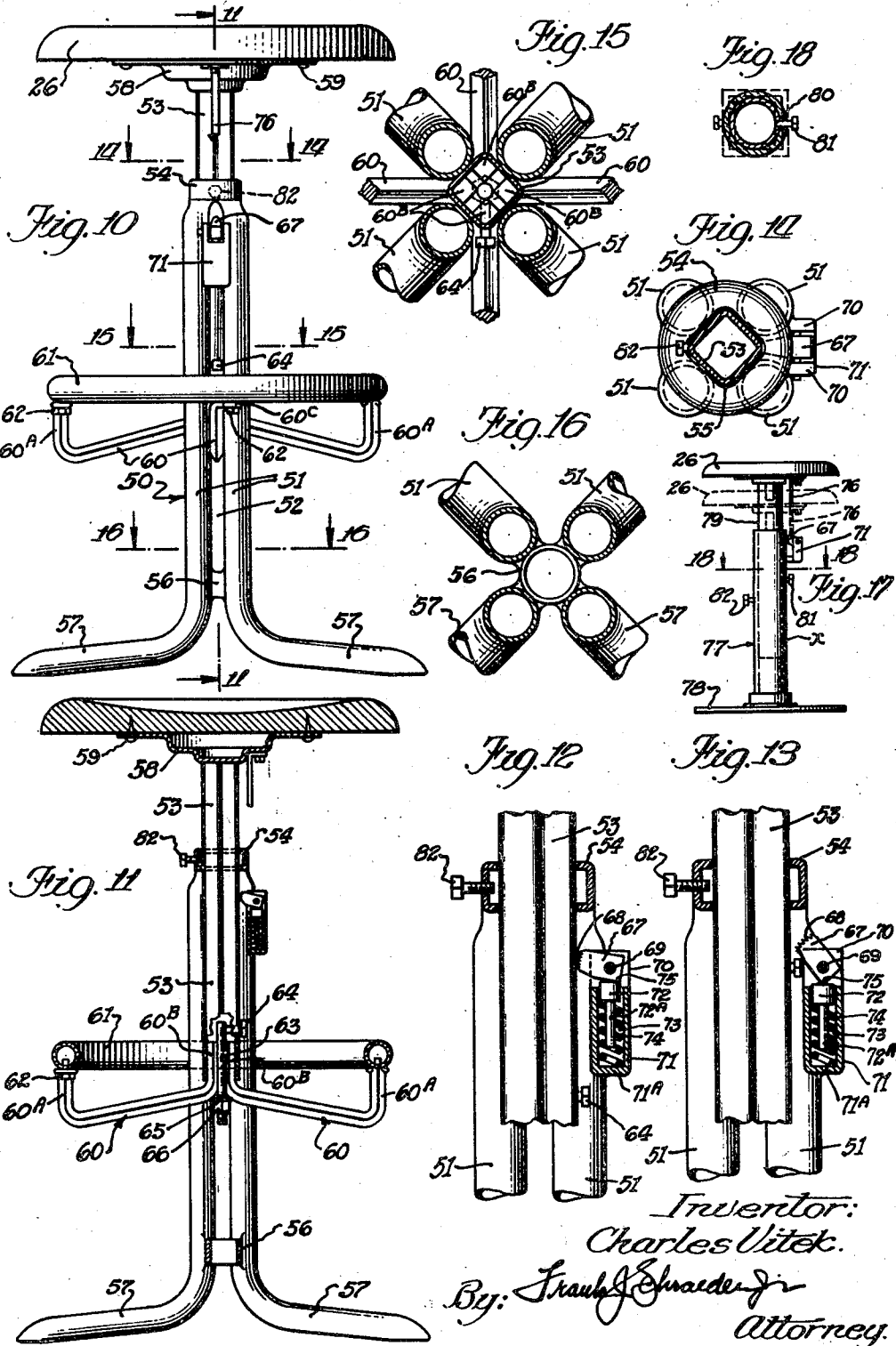
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2 Sheets-Sheet 2



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# UNITED STATES PATENT OFFICE

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## ADJUSTABLE STOOL AND THE LIKE

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12 Claims. (Cl. 155—88)

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This invention relates generally to improvements in adjustable stools, tables, chairs and the like. The invention has particular reference to extensible or adjustable supports for stools, chairs, and tables wherein the supporting members are vertically extensible and adjustable to desired heights within fixed limits. The invention is applicable to stools, chairs and tables to provide therefor novel extensible supporting members such as legs or an extensible or adjustable pedestal.

An important object of the invention resides in the provision of novel and automatically operative means for locking or retaining the extensible supporting members or member in adjusted position including means operative to automatically simultaneously unlock or release all of the supporting members when the seat of the stool or chair is lifted to its uppermost position to permit lowering of the seat to its lowermost position so that it can thereafter be raised to another position and automatically locked.

Another object of my invention is found in the provision of an adjustable stool having a seat mounted on extensible legs, or on an extensible pedestal, and which seat can readily be raised to a desired elevation and automatically locked in such adjusted position including means responsive to raising the seat to its uppermost position for automatically releasing the seat-supporting members from locked position to then permit lowering of the seat to another position and thereafter manually releasably locking the seat-supporting members in such other position.

Another object of my invention is found in the provision of a stool having a novel foot-rest which is mounted on the extensible seat-supporting members, or member, in proper spaced position below the seat, and which foot-rest is maintained in a fixed position relatively to the seat in all adjusted positions of the seat.

Still another object of the invention resides in the novel mounting of the foot-rest on the extensible seat-supporting members whereby such foot-rest may be disposed adjacent the inner or outer faces of the supporting legs or members.

It is also an object of the invention to provide novel frictional locking or retaining means for securely retaining the seat and its extensible supporting members in adjusted position, including separate manually operable locking means for retaining the seat and its extensible supporting members in adjusted position and for preventing the accidental raising of the seat from such fixed position.

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Other features and objects of the invention will become readily apparent from the perusal of the following specifications and attached drawings wherein like reference characters indicate like or corresponding parts or members.

In the drawings:

Fig. 1 is a perspective view of a three-legged stool embodying a preferred adaptation of my invention;

Fig. 2 is a vertical section taken on line 2—2 of Fig. 1 through one of the three legs of the stool all of which are preferably of like construction;

Fig. 3 is an enlarged portion of the lock or retainer and foot-rest shown in Fig. 2;

Fig. 4 is an enlarged cross-section taken on line 4—4 of Fig. 3 showing the retainer in plan view;

Fig. 5 is an elevation taken on line 5—5 of Fig. 3 showing the retainer release member and foot-rest support;

Fig. 6 is a cross-section taken on line 6—6 of Fig. 3;

Fig. 7 is a cross-section taken on line 7—7 of Fig. 3;

Fig. 8 shows a foot-rest in cross-section supported adjacent the outer face of the stool leg;

Fig. 9 is an elevational view, taken on line 9—9 of Fig. 8, showing the outside foot-rest supporting bracket;

Fig. 10 shows a side elevation of a pedestal type of stool embodying my invention;

Fig. 11 is a vertical section taken on line 11—11 of Fig. 10;

Fig. 12 is an enlarged vertical section showing the retainer in locked position;

Fig. 13 is an enlarged vertical section, similar to that shown in Fig. 12 but showing the retainer in unlocked position;

Figs. 14, 15 and 16 are cross-sections taken on lines respectively 14—14, 15—15, and 16—16 of Fig. 10;

Fig. 17 shows an elevation of a pedestal type of stool embodying my invention wherein the supporting pedestal and extensible member are of round cross-section, and

Fig. 18 is a cross-section taken on line 18—18 of Fig. 17. The broken lines indicate that the pedestal and extensible member of the stool illustrated in Fig. 17 could readily be made of square cross-section or other suitable cross-section.

The embodiment of my invention shown in Figs. 1 to 9 inclusive, illustrates my invention adapted to a three-legged stool. Obviously, the disclosure of my invention in the attached drawings showing Figs. 1 to 9 inclusive clearly shows and teaches that the invention could readily be

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applied to a table, or a four-legged stool or table.

As illustrated in Figs. 1 to 9 inclusive, the stool comprises a rigid base composed of three upright casings or tubular supporting members 20, preferably of arcuate cross-section terminating at their lower ends in outwardly curved feet 21. The upper ends of the supporting members 20 are embraced in and welded to a transverse stiffener frame 22 composed of three spaced side portions 22<sup>A</sup> having pin and tubular washer spacers 23 and 24 retaining same in spaced relation. A horizontal stiffener or strut 25 of angular cross-section is welded to and near the lower ends of the supporting members 20, as shown in Figs. 1, 2 and 7.

The seat 26 has an angle iron ring 27 secured to its lower face by screws 28.

The extensible seat-supporting members 29 are formed from a bar, as preferably here shown of arcuate cross-section.

Each vertically adjustable supporting member 29 is slidably mounted in one of the relatively stationary tubular supports 20 and at or near its upper end is offset or bent inwardly to extend toward the vertical axis of the stool to provide a ledge or abutment 30, and the upper end is bent upwardly for securement by a bolt 31 to the circular seat ring 27.

Each tubular support 20 is formed with an elongated opening or longitudinal slot 32 extending from its upper end downwardly into its foot portion 21.

The seat 26 with its attached extensible members 29 is vertically adjustable relatively to the tubular supports 20 and frictional means are provided for retaining the seat 26 in the desired adjusted position.

As shown on the drawings in Figs. 1, 2, 3 and 4, the frictional retaining means consists of one or more arms or dogs 33 pivotally mounted on pins 34. I have preferred to show three of such frictional retainers 33 each mounted between the spaced side bar portions 22<sup>A</sup> of the transverse stiffener frame 22. Each of the retainers 33 has an arcuate toothed contact face 35 at one end adapted to frictionally engage the inner face of one of the extensible members 29 to thereby retain same in vertically adjusted position against downward movement. The length of the arc from the center of the pivot pin 34 to the outside face of toothed end 35 is very slightly longer than the horizontal distance from the center of the pivot pin 34 to the inner face of the vertically extensible member 29 and therefore when the toothed faces 35 of the pivoted retainers 33 are brought into engagement with the inner faces of the extensible members 29, a slight downward movement of the members 29 will cause a wedge-like frictional engagement of the extensible members 29 by the retainers 33 to arrest their further downward movement and thus frictionally retain the seat in adjusted position.

Each pivoted dog or retainer 33 is recessed to embrace or extend over and clear the separator 23 without interference with its operation, and each retainer 33 is, when in normal operative position, urged into operative retaining position by a leaf spring 36 which has one end hooked under the retaining pin 37, a medial portion fulcrumed over the separator 24 and its outer or free end in engagement with the rear end of the lower edge of the retainer 33.

It will now be readily understood that the retainers 33 permit free successive raising movements of the seat 26 since the retainers 33 are

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free for upward pivotal movement about the pivot pins 34.

Assuming the seat 26 is in the position as shown in Fig. 2, a lowering movement of the seat is resisted by the engagement of the retainers 33 with the extensible members 29, but the seat 26, with its attached extensible members 29, may be raised to a higher elevation and then frictionally automatically locked in such raised position by just a slight downwardly or lowering movement to cause the retainers 33 to wedge-lock the extensible members 29. In other words, the retainers 33 freely permit the seat to be successively raised into different or progressively elevated positions and automatically locked thereat.

In order to permit and facilitate the lowering of the seat 26 from a retained elevated position, I provide means for simultaneously releasing each of the retainers 33 in the form of release members or bars 38 which are secured to the inner face of the lower ends of each of the three extensible members 29.

Each release member 38 consists of a steel bar of preferably rectangular cross-section welded to the inner face of the extensible member 29, disposed within the slot 32 of the supporting member 20, and having its outer or exposed face disposed slightly beyond the inner face of the supporting member.

The release members 38 have another and very important function. They constitute supports for the foot-rest 41 which is preferably made in the form of a circular tubular member and secured by generally U-shaped clamps 40 and screws 42 to the release members 38.

Since the seat 26 is secured to the upper ends of the extensible members 29 and the foot-rest 41 to the release members 38 which are fixed to the lower ends of the extensible members 29, it is readily apparent that the foot-rest 41 is maintained in a definitely spaced and fixed position relatively to the seat 26 and that such relative position of the foot-rest with respect to the seat is maintained in all adjusted or elevated positions of the seat 26. This is an important feature of my invention because it is very desirable to have the foot-rest properly spaced, for comfort, relatively to the seat and to maintain such relative spacing in all adjusted positions of the seat 26.

To permit the lowering of the seat 26, the seat is first raised to its uppermost position and in such raising operation the upper ends of the release members 38 will pass between the spaced side bar portions 22<sup>A</sup> and will engage the undersides of the retainers 33 and lift them into inoperative position, indicated by the broken lines in Fig. 3. The uppermost position of the seat 26 is reached when the upper ends of the clamps 40 are in abutment with the transverse stiffener frame 22 and in such uppermost position of the seat, the upper ends of the release members 38 will swing the retainers 33 into the position shown in broken lines in Fig. 3.

The raised retainers 33 will maintain their raised or inoperative positions through or by the frictional engagement of their rear corners with, and by the pressure of, the springs 36 as indicated in Fig. 3.

When the retainers 33 are in raised position the stool seat 26 may be freely lowered to any other desired elevation within its range of adjustment since the extensible members 29 are free to slide within their tubular supports 20.

My invention contemplates and affords two different ways of securing the seat 26 in adjusted

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position by the retainers 33, namely, manually or automatically.

In the manual method of adjustment of the elevation of the seat 26 after the retainers 33 have been moved to released position, the seat 26 is simply lowered from its uppermost position to the desired lower elevation and the retainers 33 are pressed down by the finger of the user so as to release same from their spring-retained positions whereupon the springs 36 will snap the retainers 33 into operative contact with the extensible members 29 and a very slight downward movement of the seat and extensible members will cause the retainers 33 to frictionally wedge-lock the extensible members 29 in such seat-adjusted position.

In the event it is desired to make use of the automatic feature of adjustment, the seat 26 and its supporting extensible members 29 are first moved downwardly to their lowermost position until the upper abutment ledges 30 of the extensible members 29 come into engagement with the raised released retainers 33 and move same from their spring-retained positions whereupon the springs 36 will snap the retainers 33 into operative contact with the extensible members 29. The seat 26 may then be raised into the desired elevated position since the retainers 33, as above pointed out, permit upward movement of the extensible members 29 and, when the seat 26 has so been raised to its desired elevation, a slight movement then of the seat in a downward direction will cause the retainers 33 to frictionally wedge-lock the extensible members 29 in such seat-adjusted position.

The foot-rest 41 shown in Figs. 1, 2, 3, 5 and 6 may be described as an inside foot-rest since it is disposed on the inner faces of the seat-supporting members, however, the foot-rest 41 may be mounted as an outer foot-rest as shown in Figs. 8 and 9.

The outer foot-rest 41 is, as shown in Figs. 8 and 9, supported on brackets 43 each of which consists of an L-shaped flat bar having a vertical leg formed from an upwardly disposed medial portion 43<sup>A</sup> thereof of an inverted V-shape having an apex portion 43<sup>B</sup> flattened for connection by screw 42 to the release member 38. The spaced laterally disposed end portions 43<sup>C</sup> which constitute the horizontal legs of the bracket are flattened at their ends to support the circular foot-rest 41 which is secured to these spaced lateral legs by the screws 44.

I provide means for securely locking or retaining the seat 26 in adjusted position and preventing its accidental displacement by an upward or lifting movement of the seat, such locking means consisting in providing the release members 38 with lower flattened end portions 39 which carry the securing members or screws 45 and washers 46. The screws 45 extend through the slots 32 into screw-engagement with the flattened ends 39 and the washers extend onto the inner faces of the supports 20 and support the screw heads when the screws 45 are tightened to frictionally retain the extensible members 29 against either up or down movement in the supporting members 20.

Figs. 10 to 18 inclusive show the adaptation of my invention to a modified or pedestal type of stool wherein the main stationary support consists of substantially a single column disposed on the vertical center line or vertical axis of the seat 26.

As shown in Figs. 10 to 16 inclusive, the ped-

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estal-stool adaptation of my invention shown comprises the central supporting column 50 which, in the preferred embodiment shown, is formed from a plurality of, or preferably four, tubular supports 51 disposed at their upper vertical portions in spaced cross-sectional cluster-like arrangement to provide a vertically disposed central passage 52, defined by the parallel sides of such supports 51, for the extensible seat-supporting post member 53 slidably mounted therein.

At their upper ends, the vertical tubular members 51 are shaped into an integral cap 54 having a square opening 55 for the square tubular post 53. The lower portions of the tubular members 51 are secured in rigid spaced alignment by the central ring 56 to which all four members 51 are rigidly secured as by welding.

The lower ends of the tubular supports 51 are bent outwardly radially, as at 57, to form feet or a spread supporting base.

The tubular seat-supporting vertically adjustable member 53 is welded at its upper end to a suitable flange 58 to which the seat 26 is secured by the screws 59.

The bottom end of the tubular seat-supporting vertically adjustable slidably mounted member 53 is open for the reception therein of the inner vertically disposed ends 60<sup>B</sup> of the brackets 60 which support the circular, preferably tubular, foot-rest 61 on their outer ends 60<sup>A</sup>.

The four brackets 60 are, as here shown, of square cross-section but the outer ends are flattened into right-angular supports 60<sup>C</sup> (see Fig. 10) and secured with cap screws 62 to the foot-rest 61.

The inner vertical ends 60<sup>B</sup> extend into the corners of the open end of the tubular seat-supporting member 53 and are frictionally secured to the lower end of the member 53 by means of a pin 63 of round or square cross-section frictionally interposed in a central space between the corners of the vertical ends 60<sup>B</sup>.

The bracket-securing pin 63 extends upwardly slightly beyond the bracket ends 60<sup>B</sup> for engagement by a retaining capscrew 64 which is threaded into the post member 53 and securely holds the pin 63 against axial displacement. The lower end of the pin 63 is threaded to receive thereon the washer 65 and securing nut 66 whereby curved adjacent corners of all brackets are engaged and retained in fixed position.

Since the foot-rest-supporting brackets 60 are disposed within the spaces between the vertical supporting members 51 and are secured to the vertically adjustable seat-supporting member 53, the foot-rest 61 is always maintained in proper spaced relation to the seat 26 in all adjusted positions of the seat 26.

The seat 26 with its attached member 53 is adjustable vertically relatively to the support 50. A frictional retainer 67 is provided for retaining the seat in the desired adjusted position.

As shown in Figs. 10 to 14 inclusive, the frictional retainer 67 consists of a dog made from a flat steel bar having an arcuate toothed contact face 68 at one end adapted to frictionally engage with the vertically adjustable member 53 and preferably with one of the rounded corner portions of the member 53, as shown clearly in Figs. 12, 13 and 14.

The retainer 67 is pivotally mounted on a pin 69 supported in a pair of upstanding spaced ears 70 formed integrally with the housing 71 which is secured to and between a pair of tubular supporting members 51, as by welding.

The housing 71 is, as shown in Figs. 11, 12 and 13, disposed a spaced distance from one of the corners of the member 53.

The retainer 67 is normally urged into operative or retaining position by spring pressure and is also adapted to be retained in inoperative position by the same spring pressure. The preferred resilient means for maintaining the retainer 67 in operative or inoperative positions comprises a plunger 72 of preferably cylindrical form mounted for vertical movement within cylindrical open top well 73 formed within the housing 71. The plunger 72 is urged upwardly into engagement with the retainer 67 by a coil spring 74 having one end in abutment with the plunger 72 and its opposite end in abutment with the bottom wall 71<sup>A</sup> of the housing 71. To facilitate the up and down movement of the plunger 72, I prefer to provide it with an integral depending cylindrical stem portion 72<sup>A</sup> of a decreased diameter fitted within the inner side of the coil 74.

The construction and pivotal mounting of the retainer 67 is such that when the retainer is in the operative position, as shown in Fig. 12, the pressure of the spring-pressed plunger 72 against the outer end of the retainer urges it and maintains it in engagement with the vertically adjustable member 53, however, the seat-supporting member 53 is obviously readily movable upwardly to permit the raising of the seat 26 into other higher elevations. A lowering movement of the seat 26 and its supporting member 53 will be automatically resisted by the frictional engagement of the retainer toothed face 68 with the seat-supporting member 53.

To release the retainer 67 to permit the lowering of the seat 26, the seat 26 is raised until the head of the cap screw 64 contacts with and raises the retainer 67 into inoperative position as shown in Fig. 13. The retainer 67 is maintained in such raised inoperative position by the spring-pressed pressure of the plunger 72 against the corner 75 of the retainer bar 67 which in such inoperative or raised position is substantially positioned on a vertical center-line passing through the center of pin 69 and the center of the cylindrical plunger 72.

When the retainer 67 is in raised or inoperative position, as shown in Fig. 13, the seat 26 may be freely lowered to the desired elevation and then frictionally wedge-locked in such desired elevation either by manually pushing the retainer 67 into operative position into engagement with the seat-supporting member 53, or by automatic operation.

To cause an automatic operation of the retainer 67, the seat 26 is lowered to its lowermost position and in such lowering movement the retainer 67 will be engaged and pushed downwardly into operative position by a re-set member or extension 76 which is movable with the vertically adjustable member 53 and which consists of an L-shaped bar depending from and secured to the underside of the seat-supporting flange 58 on the upper end of the vertically adjustable member 53.

The lowermost position of the seat 26 is attained when the brackets 60 engage the stop 56, and in such position of the seat, the retainer has been dislodged by the re-set 76 from its inoperative position and snapped by the spring-pressed plunger into operative position.

In the modification shown in Figs. 17 and 18, the stool embodiment of my invention is illustrated as comprising a single tubular support or pedestal 77 provided with a preferably circular

base 78 and the seat 26 secured to the upper end of the vertically adjustable extensible member 79 slidably mounted within the support 77.

The tubular support 77 may be round or square cross-section and the extensible seat-supporting member 79 of like cross-section, as indicated in Fig. 18.

The stool shown in Figs. 17 and 18 is provided with a retainer 67 and spring-pressed plunger thereof of the design above-described and shown in Figs. 10 to 14 inclusive. The tubular support 77 is provided with a vertical slot 80 which extends from the open top thereof down to a point near the lower end thereof indicated by X.

The retainer release cap screw 81 secured in the seat-supporting member 79 extends through and moves within the slot 80 and is adapted to engage and move the retainer 67 into inoperative position.

The above-described re-set member 76 is provided to release the retainer 67 from its inoperative position.

In the modification illustrated in Figs. 10 to 16 inclusive, the cap screw 64 functions to securely hold the bracket-retaining member 63 from displacement and also as the release member for moving the retainer 67 into released or inoperative position. The stationary supporting members 51 are retained in fixed spaced relation providing elongated openings between them for movement therein of the brackets 60 and the retainer release member 64 which is positioned for movement in one of such openings and operatively aligned with the retainer 67.

The release member 81 extends through and moves in the vertically disposed opening or slot 80 of the stationary casing or tubular support 77.

It is readily apparent that various obvious changes and modifications may be made in the details of the constructions shown in the appended drawings by those skilled in the art to which this invention appertains without departing from the spirit of the invention embodied and defined in the appended claims.

I claim:

1. In an adjustable stool having a seat, an extensible support for said seat comprising a plurality of lower tubular members and a plurality of upper members connected to said seat and telescoped in said lower members, a laterally disposed stiffener structure for rigidly retaining said lower members in relatively spaced positions, a retainer bar for each of said upper members pivotally mounted on said stiffener structure adapted to frictionally engage and restrain said upper members from downward movement but permitting upward movement of said upper members, said lower members each having a longitudinal slot, release members fixed to the lower ends of said upper members adapted to simultaneously engage and move all of said retainer bars into inoperative position disengaged from said upper members when the stool seat is raised to substantially its uppermost position, means near the upper end of each of said upper members adapted to simultaneously move all of said retainer bars into operable positions ready to engage the upper members when the stool seat is lowered to substantially its lowermost position to thereupon restrain downward movement of said upper members from successive permissive raised positions, resilient means sustaining said retainer bars in either operative or inoperative positions, and a foot-rest supported on and movable with said upper members, said release members having por-

tions extending through and movable in said slots in said lower members for support of said foot-rest thereon.

2. In an adjustable stool as defined in claim 1 said foot-rest being disposed exteriorly of said 5 extensible support and a plurality of brackets for supporting said foot-rest secured to said release member portions.

3. In an adjustable stool having a seat, an extensible support for said seat comprising a plurality of lower members and a plurality of upper 10 members vertically slidable upon said lower members, a stiffener structure secured to and retaining said lower members in rigid, relatively spaced positions, retaining means pivotally secured to 15 said stiffening structure and adapted to wedge-lock said upper members in vertically adjusted positions, restraining said upper members from downward movement but permitting upward movement thereof, an abutment on at least one 20 of said upper members near its lower end positioned to directly engage and move said retaining means into inoperative position when the support is fully extended, means automatically holding the retaining means at inoperative position, 25 and a second abutment near the upper end of at least one of said upper members positioned to directly engage said retaining means when the upper members reached the lower limit of their range of sliding adjustment, said second abutment acting to move the retaining means back into their operable position, ready to restrain 30 downward movement of said upper members.

4. In an adjustable stool as defined in claim 3, a foot-rest connected directly to and movable 35 with said upper members to remain at a constant fixed distance from the seat in any vertically adjusted position of the seat.

5. In an adjustable stool having a seat, an extensible support for said seat comprising a plurality of lower, tubular members and a plurality 40 of upper members telescoped within said lower members, a stiffener structure rigidly retaining said lower members in relatively spaced positions, a movable retainer arm for each of said upper 45 members pivotally mounted on said stiffener structure and adapted to frictionally engage said upper members and restrain them from downward movement but permitting upward movement thereof, each of said upper members having 50 a contact, said contacts being positioned to simultaneously engage and move all of said pivoted retainers into inoperative position upon the arrival of said upper members at substantially their uppermost positions, resilient means on said stiffener structure automatically sustaining said 55 retainer arms at inoperative position, said upper members having inward extensions near their upper ends engageable simultaneously with all the pivoted retainers upon the arrival of said upper members at substantially their lowermost positions, such engagement rendering all of said 60 retainers operable and ready thereafter to restrain downward movement of said upper members from successive permissive raised positions.

6. In the combination defined in claim 5, the same said resilient means serving also to hold the retainer arms yieldingly in operable position 65 ready for restraining engagement with the said upper members.

7. An extensible support comprising a base structure and an upper portion including a member 70 slidably engaged with the base structure for vertical movement relative thereto, a retainer movably mounted on the base structure and en-

gageable with said slidable member, operative to 75 restrain downward movement thereof while permitting upward movement of said member, together with abutment means on said slidable member operative at the upper limit of the range of said slidable member to shift the retainer to inoperative position, and means automatically holding said retainer at such inoperative position while the slidable member is moved downwardly on the base structure, said holding means including 80 spring means normally urging said retainer into position for operative engagement with said slidable member but acting to hold said retainer yieldingly at inoperative position when it has been shifted thereto, thereby permitting the slidable member to be moved downwardly on the base structure.

8. An extensible support comprising a base structure and an upper portion including a member 85 slidably engaged with the base structure for vertical movement relative thereto, a retainer pivotally mounted on the base structure and engageable with said slidable member, operative to restrain downward movement thereof while permitting upward movement of said member, together 90 with abutment means on said slidable member operative at the upper limit of the range of said slidable member to shift the retainer to inoperative position, spring means automatically holding said retainer at such inoperative position 95 while the slidable member is moved downwardly on the base structure, and abutment means on the slidable member operative at its lower limit of sliding movement to return the retainer to position for operative engagement with said slidable 100 member.

9. An extensible support comprising a base structure and an upper portion including a member 105 slidably engaged with the base structure for vertical movement relative thereto, a retainer pivoted on the base structure laterally adjacent said slidable member and frictionally engageable therewith in wedge-locking relation to restrain 110 downward movement of said member while permitting upward movement thereof, together with abutment means on said slidable member operative at the upper limit of its range of sliding 115 movement to rock the retainer to inoperative position, spring means automatically holding said retainer at such inoperative position while the 120 slidable member is moved downwardly on the base structure, and means carried by the slidable member and operative at its lower limit of sliding movement to rock the retainer back to position 125 for frictional wedge-locking engagement with said slidable member.

10. In an extensible support as set forth in claim 8, said base structure comprising a plurality of legs having laterally extending lower portions 130 constituting the base for said structure and vertically disposed upper portions arranged in closely spaced cluster form providing a vertical passage between said upper portions, said clustered 135 leg portions constituting guide rails adapted for direct contact by substantially the full length of said member for vertically guiding the movement therein of said member.

11. In an extensible support as set forth in claim 8, said base structure comprising a plurality of legs having laterally extending lower portions 140 constituting the base for said structure and vertically disposed upper portions arranged in cluster form providing a vertical passage between said upper portions for vertical sliding movement 145 therein of said member, and including a lateral-

ly extending foot-rest encompassing the vertically disposed upper leg portions of said base structure, and a plurality of laterally spaced supporting brackets therefor each having one end connected to said foot-rest and the other end supported on said slidable member, said vertically disposed upper leg portions being slightly laterally spaced one from the other to provide vertical passages through which said brackets extend outwardly from said vertically slidable member to said foot-rest.

12. An extensible support comprising a base structure and an upper seat-supporting portion including a member slidably engaged with the base structure for vertical movement relative thereto, a retainer pivoted on the base structure exteriorly of and adjacent to said slidable member and frictionally engageable therewith in wedge-locking relation to restrain downward movement of said member while permitting upward movement thereof, together with abutment means on said slidable member operative at the upper limit of its range of sliding movement to rock the retainer to inoperative position, means disposed exteriorly of said slidable member for automatically holding said retainer in operative position and also automatically holding said retainer in inoperative position subsequent to said retainer having been rocked by said abutment means into inoperative position, and means carried by said slidable member and operative at the

lower limit of its range of sliding movement to rock said retainer back to operative position for frictional wedge-locking engagement with said slidable member.

CHARLES VITEK.

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