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R. P. SCHOLFIELD ET AL

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*Fig. 1.*

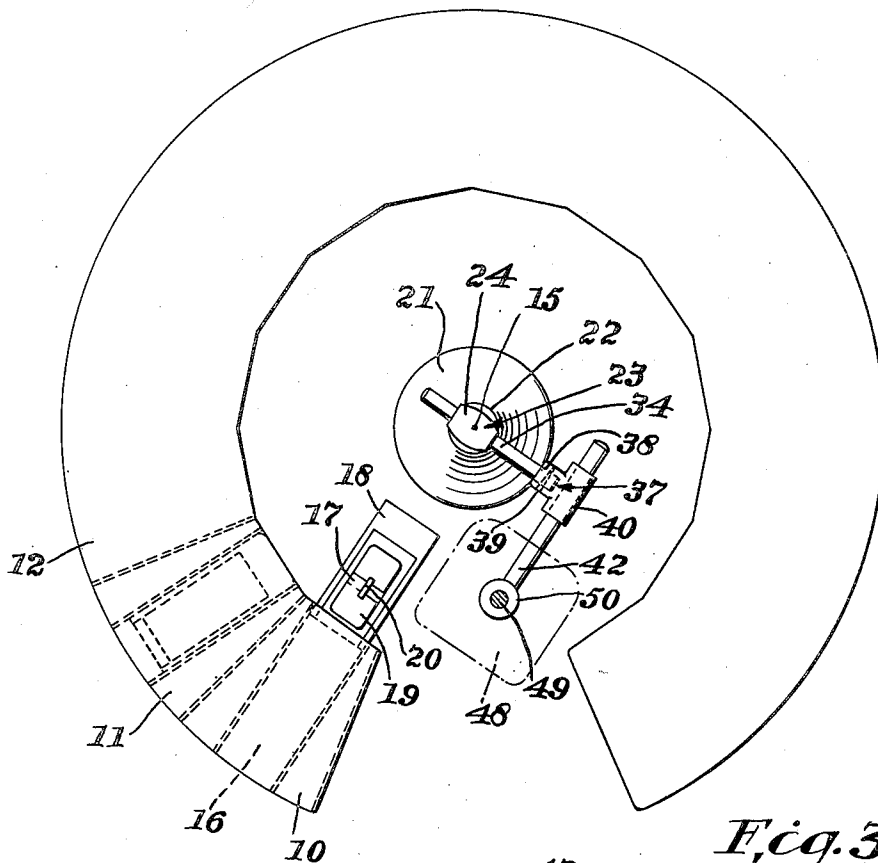


*Fig. 2.*

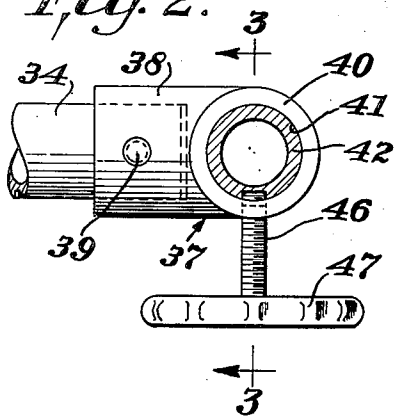
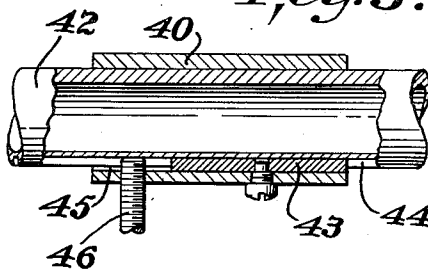


*Fig. 3.*



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*Fig. 4.*

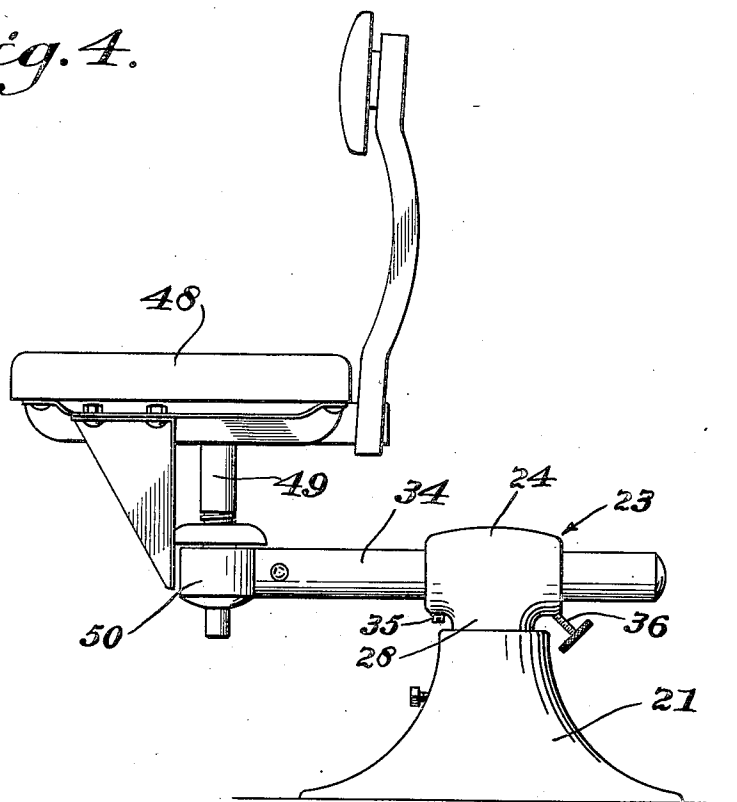
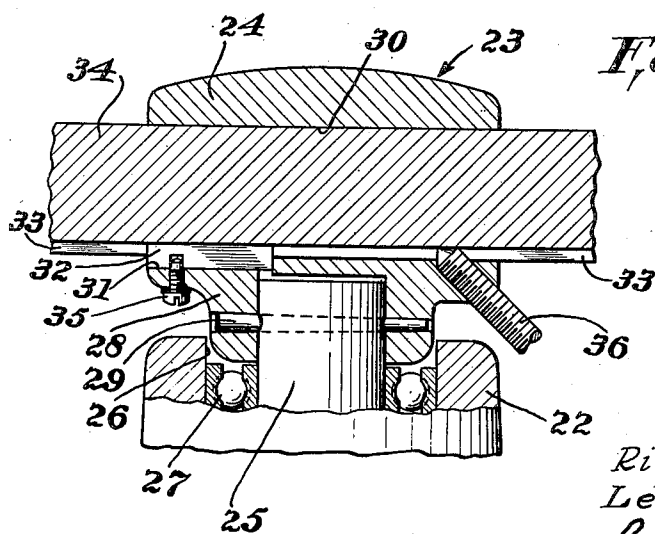


*Fig. 5.*



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Fig. 6.

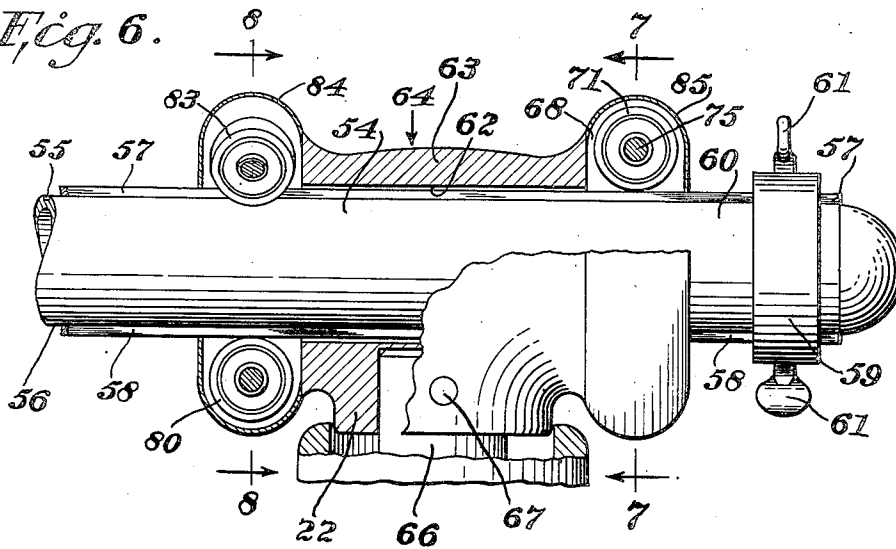


Fig. 7.

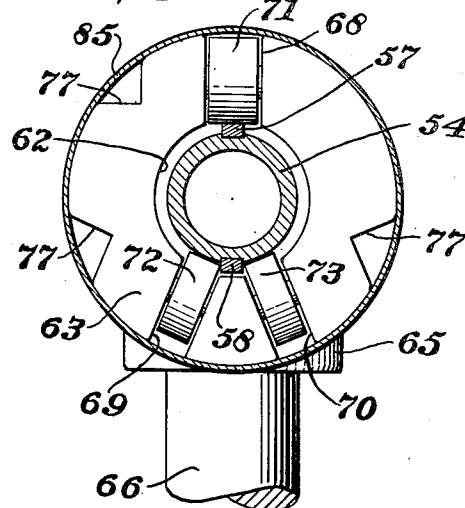
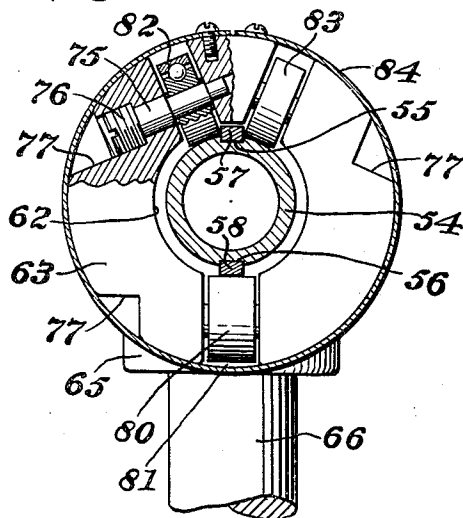


Fig. 8.



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## UNITED STATES PATENT OFFICE

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## FILING CHAIR

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Application September 10, 1948, Serial No. 48,702

10 Claims. (Cl. 155—81)

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The present invention relates to office equipment and, more particularly, to new and improved combinations of filing devices and chairs for operators, mutually cooperating with improved results.

A primary object of the invention is to provide a compact arrangement of filing devices and a chair for an operator adapted to give most efficient and convenient access to the devices.

Another object is to increase the number of filing devices which may be under the immediate control of a single operator, comfortably seated for convenient access thereto.

A further object is to improve office chairs generally, so that they may be readily and quickly shifted to a plurality of positions, for access to various items of office equipment, such as typewriters, adding machines, filing devices and the like, without the necessity of the operator moving from one chair to another or sliding the same over the office floor.

Another object is to provide a chair which may be shifted from one position to a plurality of other positions for access to automatic typewriters or similar office machines, or for collating and assembly work. Such a chair may be used by executives who like to work between a table and a desk or between two desks.

Another object is to provide a chair which may be used by an employee in the center of a circular information desk or the like, or at any location where it is desirable for a person to be able to cover a large area without "hiking" a chair across the floor and without being tied down to tracks. The invention has wide use in industrial establishments, where a single operator desires to work at different places at different times, and is not confined to use with filing devices or items of office equipment.

Another object of the invention is to provide a chair which is mounted for translational movement in all directions in a horizontal plane relative to a fixed point of support.

Another object of the invention is to provide a chair which is radially slidable and horizontally swingable relative to a fixed vertical axis.

Another object is to provide a chair mounted on a line parallel to, but offset from a radial line about which it is swingable, so that the chair may be brought to positions of most efficient access to a plurality of machines, filing devices and the like, mounted on radii emanating from the center of swinging movement of the chair support.

Other and further objects and advantages of the invention will be apparent from a consid-

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eration of the following description of the specific embodiments, shown for purposes of illustration, in the accompanying drawings, in which:

Figure 1 is a diagrammatic plan view of a preferred arrangement of filing devices and a preferred type of chair and chair support;

Figure 2 is an enlarged section and elevation through the connection between the two angularly disposed horizontal supporting arms of Figure 1;

Figure 3 is a section on lines 3—3 of Figure 2;

Figure 4 is a side elevation of a somewhat modified form of chair support;

Figure 5 is a fragmentary longitudinal section through the connection between the horizontally projecting arm and the supporting swiveled sleeve of Figures 1 and 4;

Figure 6 is a view similar to Figure 5, showing a modification;

Figure 7 is a transverse section on line 7—7 of Figure 6, and

Figure 8 is a section on line 8—8 of Figure 6.

As shown in Figure 1, a plurality of filing cabinets 10, 11, 12, etc. are arranged along an arcuate line in plan, about a center 15. The cabinets may be integrally united or may comprise separate, wedge-shaped units assembled in side by side relation. The invention is not limited to units of this shape, as conventional, rectangular cabinets, desks or tables may be arranged on an arcuate or other plan. Each cabinet preferably has an inner compartment 16, in which a filing device is slidably mounted, so that it may be pulled outwardly to a position for convenient access by an operator. The filing devices may be of any of the well-known kinds, such as drawers, trays, or rotary wheel files. As shown diagrammatically in Figure 1, a rotary wheel-type file 17 is mounted upon a slidable support 18 for movement out of the compartment 16, so that an operator may have access to the cards 19, secured upon the circumferential surface of the wheel by a retaining rail 20.

The chair and chair support comprise a pedestal 21 which may be secured to the floor by screws, or the like fixed to a large steel plate to facilitate its movement from place to place. The pedestal has an upwardly projecting portion 22, in which a T-fitting 23 is swiveled upon a vertical axis. As shown in Figure 5, the T-fitting 23 may include a horizontally bored sleeve element 24 and a vertical post 25 mounted in a socket 26 in the pedestal 22 by means of one or more ball bearing assemblies 27. The sleeve element has

a lower vertically bored portion 28 receiving the post 25 and secured thereby by a pin 29.

The horizontal bore 30 of the sleeve element 24 is longitudinally slotted as at 31 to receive a key 32 cooperating with a keyway 33 in a horizontally adjustable arm 34, the key being retained in position by a set screw 35 and the longitudinally adjusted position of the arm being maintained by a screw 36 entering the keyway 33.

Referring again to Figure 1, the arm 34, projecting horizontally on a radius of the vertical axis 15, carries at one end a T-fitting 37, having a socket portion 38 embracing the end of the rod 34 and secured thereto by a pin 39. The head 40 of the T-fitting 37, constituting a sleeve element, is horizontally bored as at 41 on an axis at right angles to arm 34 and receives a second arm 42 in longitudinally adjustable relation. Rotation of the second arm is prevented by a key 43, disposed in cooperating keyways 44 and 45 cut in the arm and sleeve respectively. The longitudinal adjustment of the arm 42 relative to the T-fitting 37 and the first arm 34 may be determined by a set screw 46 having its end disposed in the keyway and provided with a hand wheel 47 on its free end.

A chair seat 48 may be supported upon the upper end of a vertical post 49, swiveled in a socket member 50 carried by the free end of the arm 42, the post being vertically adjustable as is well understood in the art.

As a result of the construction just described, the seat 48 is mounted for translational adjustment in all directions in a horizontal plane, by shifting the arm 42 relative to the T-fitting 37 and by shifting the latter, with the arm 34, relative to the sleeve 24 of T-fitting 23.

The arm 42 is parallel to, but offset from, radii emanating from the center 15 and upon which radii the filing devices 18 are adapted to be withdrawn from their compartments 16. Hence, the chair 48 is always located at the position of most convenient access to each of the filing devices, when withdrawn. In the operation of the combination in accordance with the invention, when the operator wants to work on any particular filing device, she simply swings the chair 48 about the axis 15, to the appropriate position and pulls the particular filing device out of the cabinet on a radial line toward the center 15. As a result of the offset mounting of the chair, the filing device will be locked on her right hand side, for ready manipulation of the cards and for the convenient posting of entries.

The arrangement shown in Figure 4 is similar, except that the chair 48, the vertically swiveled supporting post 49 and the socket members 50 therefor are carried by the forward end of the radially projecting arm 34, and the T-fitting 37 and the second arm 42 have been dispensed with. This arrangement is preferred in many cases where the devices upon which the operator is working should be positioned directly in front of her, instead of on one side or the other. For instance, when an operator is working periodically with a typewriter, an adding machine, a desk or the like, it is desirable that these devices be positioned directly in front of her. With the arrangement shown in Figure 4, the chair 48 may be swung in an arc about the vertical axis of the pedestal 21 to positions of access to such devices, successively.

If desired, the post 25 may be extended upwardly a substantial distance, so that the T-fitting 23 is spaced a substantial distance above the upper end of the portion 22 of the pedestal 21

and a second arm may project laterally from a vertical sleeve or collar, journaled upon the extended portion of the post, for independent swinging movement about the vertical axis thereof with a second chair supported on the end of the last mentioned arm.

The modification shown in Figures 6, 7, and 8 provides, in addition to the swinging movement of the chair supporting arm about a vertical axis, axial sliding movement thereof in a horizontal plane. A preferred slidable mount is shown in the drawings and will now be described.

An arm 54 is provided with upper and lower keyways 55, 56, in which upper and lower keys or rails 57 and 58 are held by a clamping collar 59 on the rear end 60 of the arms by thumb screws 61. The arm 54 extends through the horizontal bore 62 of the sleeve portion 63 of a T-fitting 64 having a downwardly projecting socket portion 65, in which a vertical post 66 is secured by a pin 67, the post being journaled for rotation in the upper portion 22 of a floor supported pedestal as previously described.

The sleeve 63 at its rear end is shaped to provide an upper vertically disposed, radial slot 68 of substantial width, and a pair of lower, angularly disposed radial slots 69 and 70. A relatively wide ball bearing roller 71 is mounted in the upper slot 68, in rolling engagement with the upper rail 57 while a pair of narrower ball bearing rollers 72 and 73 are mounted in the lower slots 69 and 70, in engagement with the surface of the arm 54 and with the side faces of the lower rail 58. Each of the three rollers may be mounted on a pin 75, in substantially the manner shown in Figure 8. The pins have threaded ends 76 disposed within tapped counterbores, opening outwardly into recesses 77 cut in the outer surface of sleeve 63.

The arrangement at the opposite or forward end of the sleeve is the reverse of that just described. A lower, vertically disposed roller 80, disposed in a vertical slot 81 is positioned below and engages the lower rail 58, while a pair of angularly disposed upper rollers 82 and 83 engage the surface of the arm 54 and the side faces of the upper rail 57.

Sheet metal casing shells 84, 85 enclose the rollers, their supporting pins, and the recesses 77.

As a result of the construction just described, the weight of the operator seated upon the chair carried by the forward end of the arm 54 is borne by the vertical rollers 80 and 71, since the arm at the forward end of the sleeve tends to move downwardly and at the rear end of the sleeve tends to move upwardly. The angularly disposed rollers, engaging the side faces of the rails, act as guide rollers and maintain the rails in vertical alignment and prevent rotation of the arm relative to the sleeve.

In the operation of this form of the invention, an operator may shift her position throughout a relatively large area, since the chair is mounted for translational movement in all directions in a horizontal plane. For instance, a plurality of business machines, filing devices or other items of office equipment may be mounted in U-shaped plan or other arrangement, a different distance from the floor-supported pedestal, in which case the operator may slide and swing the seat from place to place, for access to all of them, without shifting or rolling the pedestal over the floor.

The invention is not limited to the details of construction shown in the accompanying drawings or described above, but includes all modifica-

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tions coming within the scope of the appended claims and their equivalents.

We claim:

1. A chair for use with filing equipment, comprising a floor-supported pedestal having a vertical socket therein, a T-fitting having a vertical stem axially journaled in the socket and a horizontal sleeve, an arm slidable in said sleeve for horizontal adjustment, and a seat carried by one end of said arm in horizontally spaced relation to said T-fitting.

2. A chair adapted for use with filing equipment comprising a floor-supported pedestal having a vertical socket therein, a T-fitting having a vertical stem axially journaled in the socket, an arm splined in said sleeve for horizontal adjustment, means for locking the arm in adjusted position, and a seat carried by one end of the arm in spaced relation to said T-fitting.

3. A chair adapted for use with filing equipment comprising a floor-supported pedestal having a vertical socket therein, a T-fitting having a vertical stem axially journaled in the socket, an arm splined in said sleeve for horizontal adjustment, means for locking the arm in adjusted position, and a seat carried by one end of the arm in spaced relation to said T-fitting, said seat being swiveled for rotation about a vertical axis.

4. A chair adapted for use with a plurality of filing devices covering a substantial floor area, comprising a floor-supported pedestal, a horizontally bored sleeve element supported by said pedestal for rotation about a vertical axis, an arm freely slidable but restrained against rotation in said bore and a seat carried by one end of the arm, whereby the seat may have translational movement in all directions in a horizontal plane by sliding and swinging movement of its supporting arm, for access to said filing devices.

5. A chair adapted for use with a plurality of filing devices occupying a substantial area of floor space, comprising a floor-supported pedestal having a vertical socket therein, a T-fitting having a vertical stem axially journaled in the socket, a horizontal sleeve, anti-friction means therein, an arm splined in said sleeve for relatively free axial sliding movement on said anti-friction means, and a seat carried by one end of said arm for translational movement in all directions in a horizontal plane for access to all of said devices.

6. A chair in accordance with claim 1 in which said anti-friction means comprise a plurality of rollers carried by the sleeve lying in spaced radial planes embracing said arm.

7. A chair in accordance with claim 1, characterized in that said sleeve is slotted at opposite ends above and below a horizontal axial plane, and in that radially disposed rollers are journaled for rotation in the slots, in contact with the arm.

8. A chair for use with a plurality of filing devices occupying a substantial floor space area,

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comprising a floor-supported pedestal, a sleeve having a horizontal bore supported for rotation upon a vertical axis by the pedestal, a forwardly projecting, horizontal arm, means for supporting the arm in the sleeve for rotation therewith and for free longitudinal sliding movement with respect thereto, but restrained against rotation on its own axis, and a seat carried by the forward end of the arm and swiveled for rotation about a vertical axis, for translational movement in all directions in a horizontal plane for access to all of said devices, said arm supporting means comprising upper and lower elongated rails carried by the arm, a pair of angularly disposed, radial rollers at each end of the sleeve engaging the arm on opposite sides of one of said rails and a radially disposed roller at each end of the sleeve engaging the outer face of the opposite rail.

9. A device in accordance with claim 8 characterized in that the angularly disposed rollers at opposite ends engage the sides of the upper and lower keys respectively.

10. A chair for use with a plurality of filing devices occupying a substantial floor space area, comprising a floor-supported pedestal, a sleeve having a horizontal bore supported for rotation upon a vertical axis by the pedestal, a forwardly projecting, horizontal arm, means for supporting the arm in the sleeve for rotation therewith and for free longitudinal sliding movement with respect thereto, but restrained against rotation on its own axis, and a seat carried by the forward end of the arm and swiveled for rotation about a vertical axis, for translational movement in all directions in a horizontal plane for access to all of said devices, said arm supporting means comprising upper and lower rails rigidly carried by the arm, a lower, load supporting roller carried by the forward end of the sleeve below the lower rail, a pair of angularly disposed guide rollers carried by said end of the sleeve engaging opposite sides of the upper rail, an upper load-supporting roller carried by the rear end of the sleeve above and engaging the upper rail, and a pair of angularly disposed guide rollers at the rear end of the sleeve engaging opposite sides of the lower rail.

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