Aug. 14, 1928. 1,680,828

J. S. WALTON

STOOL FOR SERVICE COUNTERS

Filed May 27, 1926

Fig. 1.

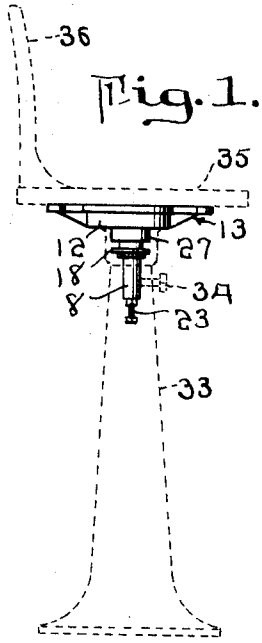


Fig. 2.

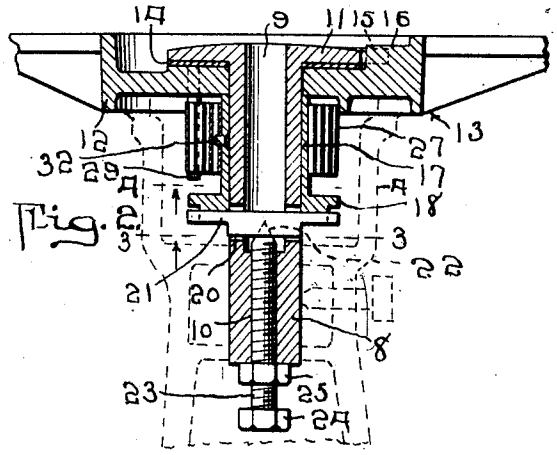


Fig. 3.

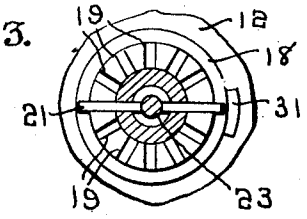


Fig. 4.

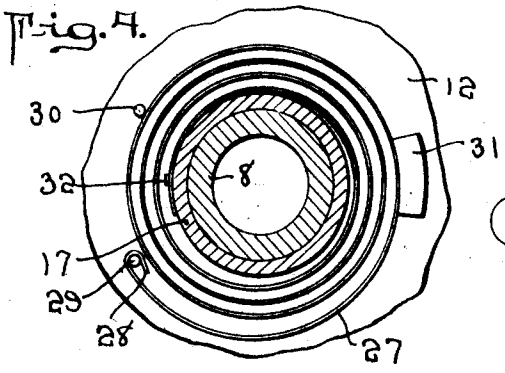


Fig. 6.

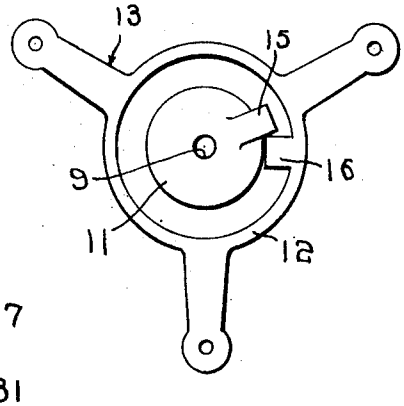
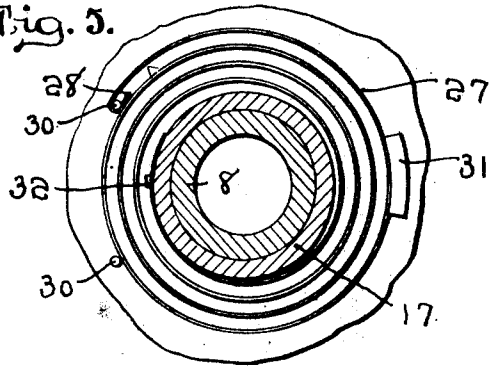


Fig. 5.



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UNITED STATES PATENT OFFICE.

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STOOL FOR SERVICE COUNTERS.

Application filed May 27, 1926. Serial No. 112,160.

This invention relates to improvements in stools of the type provided for patrons of serving counters and its object is to provide a device which will permit of such limited rotary motion of the stool seat and back as will permit the latter to be swung to a position permitting a person to easily and conveniently occupy or leave the stool without hindrance from the counter and which, when the stool is unoccupied will return the seat to and maintain it in a preferred position.

A further object is the provision of a spring device for effecting the return movement of the seat wherein the tension of the spring may be varied and the looseness between the bearing faces due to wear incident to prolonged use may be taken up, the means for compensating for wear and the means for varying the tension of the spring mutually co-acting with each other to maintain both means in the desired adjusted position.

A further object is the provision of a device for use in connection with stools wherein the parts are compactly assembled and capable of convenient readjustment periodically as the extent of use to which the device is subjected may require.

In the accompanying drawing wherein an approved embodiment of the invention is illustrated.

Fig. 1 is a side elevation of the device, the stool pedestal, seat and back being shown in dotted lines.

Fig. 2 is a vertical sectional view through the device on an enlarged scale.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Figs. 4 and 5 are similar sections on the line 4—4 of Fig. 2 showing different arrangements of the spring and,

Fig. 6 is a top plan view of the device.

Referring to the drawing in detail the numeral 8 indicates a hollow cylindrical spindle the bore 9 of which is reduced in diameter at the lower end and threaded as indicated at 10. The upper extremity of the spindle is provided with a flat disc-like head 11 overlying the hub or central portion 12 of a spider 13 through which the spindle 9 extends. A thrust washer 14 is interposed between the spindle head 11 and the adjacent portion of the hub 12 and is preferably formed of fiber or similar material having such yielding qualities that it may be slightly compressed for the purpose of taking up looseness between the parts as will be hereinafter more fully described.

The head 11 is provided with a radial projection 15 engageable with a lug 16 provided internally of the hub 12 for limiting the rotary motion of the spider 13 with respect to the spindle 8.

A sleeve 17 is rotatably fitted on the spindle 8 and, engaging the underside of the hub 12, coacts with the head 11 of the spindle to limit the axial thrust of the spindle in the spider hub. The lower extremity of the sleeve 17 is provided with a flange 18 in the underside of which are formed a series of radial grooves 19. The portion of the hollow spindle 8 adjacent the flange 18 is provided with a diametrical slot 20 receiving a key 21. The length of the slot 20 is such as to permit movement of the key 21 axially of the spindle 8 and the opposite extremities of the key are selectively engageable with the grooves 19 in the sleeve flange 18, according to the angular adjustment of the sleeve and spindle. The medial portion of the key 21 is enlarged and provided centrally with a tapered recess receiving the correspondingly shaped upper extremity of an adjusting screw 23 fitted in the threaded portion 10 of the spindle bore. Adjustment of the screw is facilitated by a head 24 and it is maintained in adjusted position by a lock nut 25. By proper adjustment of the screw 23 the key 21 may be moved axially of the spindle 8 moving therewith the sleeve 17 which, coacting with the spindle head 11 takes up loose movement between the spider hub and spindle.

A reversible coil spring 27 is arranged about the sleeve 17 under the hub 12 and its outer extremity turned inwardly to provide an inturned hook 28 selectively engageable with pins 29 and 30 fixed in the hub 12. At a point on the hub 12 opposite the pins 29 and 30 is provided a confining lug 31 for the spring. The inner extremity of the spring is provided with an aperture receiving a pin 32 struck out from the material of the sleeve 17.

In use the spindle 8 is secured in a position in the upper extremity of the stool pedestal 33 by a clamping screw 34, as indicated by dotted lines in Fig. 1 and the stool seat and back 35 and 36, respectively, are attached in a suitable manner to the arms of the spider 13. By a preliminary adjustment

of the spindle 8 in the pedestal 33 the stool seat and back may be so adjusted as to normally maintain a preferred position with respect to a serving counter, table or the like (not shown). The spring 27 is tensioned to the desired extent by moving the screw 23 downwardly, withdrawing the key 21 from the slot 20 and turning the sleeve 17 relative to the spindle 8 whereupon the key is replaced and engaging in the grooves 19 maintains the adjusted angular position of the sleeve and spindle. The screw 23 is subsequently advanced and entering the recess 22 prevents accidental displacement or loss of the key and, as the axial movement of the screw is continued the key and sleeve are advanced until the head 11 of the spindle and the adjacent extremity of the sleeve exert a degree of pressure on the washer 14 requisite to prevent relative loose movement of the parts.

As shown in Fig. 4 the spring 27 is so arranged with respect to the sleeve 17 as to normally turn the hub 12 in one direction but by removing the key 21 and the sleeve 17, the spring 27 may be removed and replaced in the reverse position as illustrated in Fig. 5 whereby its tension is so exerted as to turn the hub in the opposite direction, the sleeve and key being subsequently replaced and the spring tensioned as above described.

What I claim is:—

1. In combination, a spindle having a head at one end, a sleeve movable axially on said spindle, a hub rotatable on said spindle intermediate the sleeve and head, means for securing the sleeve in various angular positions with respect to the spindle, a spring connected with the sleeve and the hub and subject to tension variations incident to the varying angular adjustments of the sleeve and spindle, and means coacting with the sleeve securing means to displace the sleeve axially of the spindle whereby to compensate for loose movement between the spindle and hub.

2. In combination, a spindle, a spider hub rotatable on said spindle, and a flat reversible convolute spring having one of its ends connected to the spindle and its other end connected to the spider hub, said spring adapted, according to its position, to normally tend to rotate the hub in one direction or the other with respect to the spindle.

3. In a chair, a base, a spider rotatably mounted on the base, a spindle extending through the spider and having a head resting on the latter, a yielding thrust member interposed between the head and spider, said spindle being provided with a transverse slot and a threaded bore, a sleeve rotatable on the spindle, a coiled spring having one of its ends connected to the sleeve and its other end connected to the spider, teeth provided on said sleeve, a key extending through the slot of the spindle and engaging said teeth, and a screw arranged in the threaded bore of the spindle and engaging said key for forcing the latter against the teeth, and for forcing the sleeve toward said head to take up wear on the yielding thrust member.

4. In a chair, a spindle, a spider hub rotatable on said spindle, a sleeve surrounding the spindle, a spring connecting the sleeve and spider, and adapted to turn the spider to a predetermined position, said spindle being provided with a transverse slot, teeth arranged on said sleeve, a key extending through the slot and engaging said teeth, said key being movable in the direction of the axis of the spindle, and means for moving said key toward the head of the spindle, whereby the sleeve is forced toward the spider.

5. In a chair, a base, a spider rotatably mounted on the base, a spindle extending through the spider and having a head resting on the latter, a sleeve rotatably mounted on the spindle, a flat reversible convolute coiled spring surrounding the spindle and having one of its ends detachably connected to the sleeve, and its other end detachably connected to the spider, and means for locking the sleeve in various positions, said spring being adapted, according to its position, to normally tend to rotate the spider in one direction or the other with respect to the spindle.

6. In a chair, a base, a spider rotatably mounted on the base, a spindle extending through the spider and having a head resting on the latter, a yielding thrust member interposed between the head and spider, said spindle being provided with a transverse slot and a threaded bore, a sleeve rotatable on the spindle, a reversible coiled spring having one of its ends detachably connected to the sleeve, and its other end detachably connected to the spider, teeth provided on said sleeve, a key extending through the slot of the spindle and engaging said teeth, and a screw arranged in the threaded bore of the spindle and engaging said key for forcing the latter against the teeth, and for forcing the sleeve toward said head to take up wear on the yielding thrust member.

In testimony whereof I hereunto affix my signature.

JOSEPH S. WALTON.