

Dec. 7, 1926.

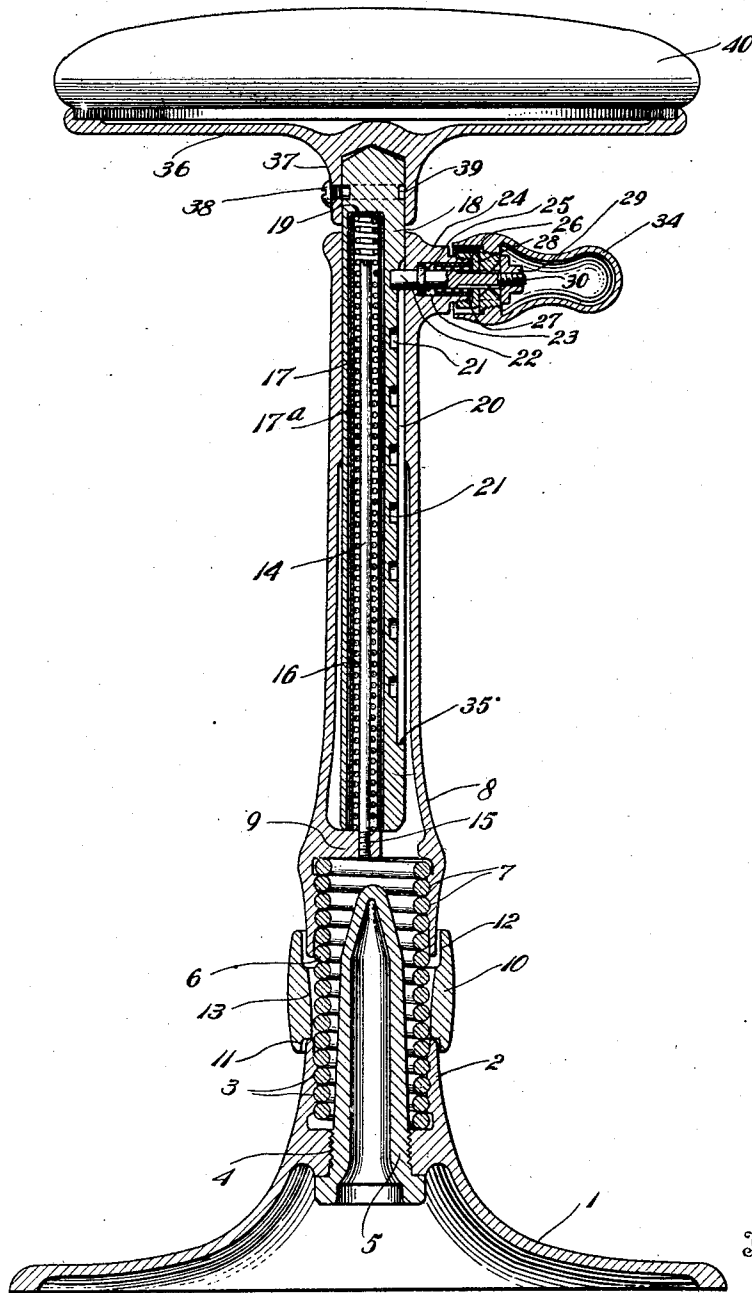
H. E. WEBER

1,610,069

STOOL

Filed Feb. 1, 1923

2 Sheets-Sheet 1



Inventor

H.E. Weber

Fig. 1
Grease and Bolt

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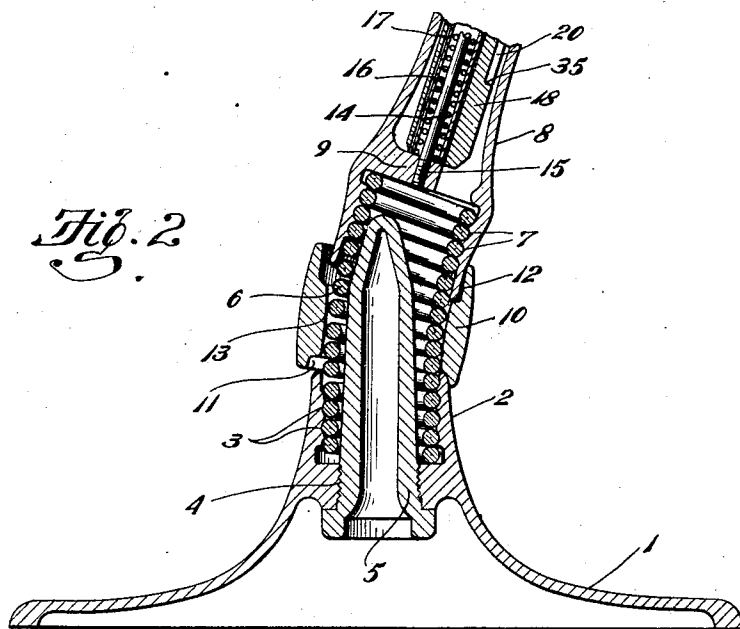
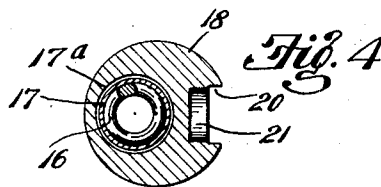
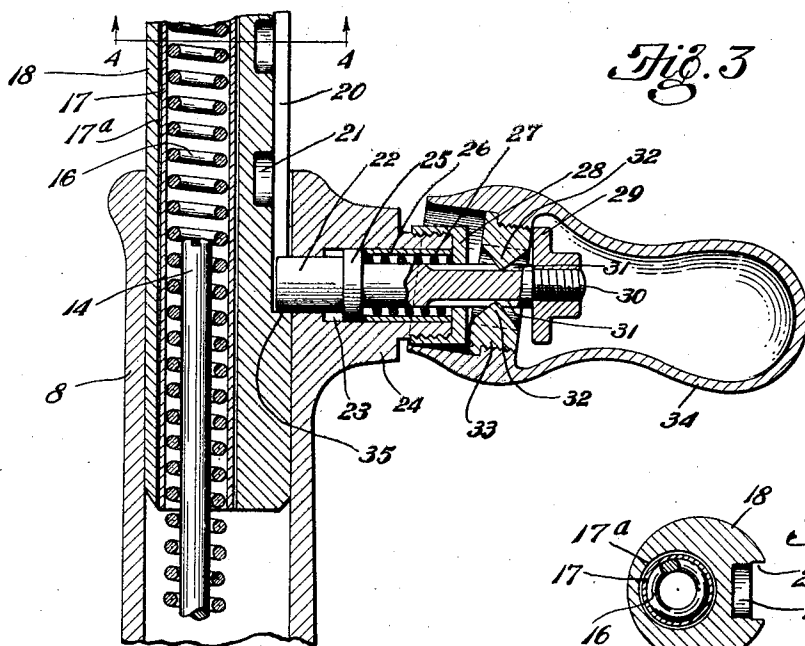
H. E. WEBER

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

HENRY E. WEBER, OF CANTON, OHIO.

STOOL.

Application filed February 1, 1923. Serial No. 616,295.

This invention relates to stools and more particularly to a stool adapted for the use of dentists and the like, and has for its objects to provide a stool mounted upon a resilient standard, permitting the dentist or other person occupying the stool free movement in any direction, means being provided for limiting the movement of the resilient standard and for normally holding the same upright; means being also provided for quickly adjusting the height of the stool and holding the seat thereof in any desired adjustment.

The above and other objects may be attained by constructing the stool in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a vertical, sectional view of a stool constructed in accordance with the invention, showing the same in the normal position;

Fig. 2, a sectional view of the lower end portion of the standard showing the flexible connection thereof in the flexed position;

Fig. 3, an enlarged section of the upper portion of the standard, showing the seat shank in the raised position; and

Fig. 4, a section on the line 4—4, Fig. 3.

Similar numerals of reference indicate corresponding parts throughout the drawings.

The device comprises the base 1 preferably formed of cast aluminum of sufficient weight to normally hold the stool upright, and provided with the tubular neck portion 2, having the spiral grooves 3 therein, an internally threaded shouldered portion 4 being provided beneath and in alignment with the neck to receive the threaded portion of the stem 5 which projects upward through the center of the spring coil 6, the lower end portion of which is threaded into the spiral grooves 3 of the neck, while the upper end portion thereof is threaded into similar grooves 7 in the lower end of the tubular standard 8, the lower extremity of the spiral resting upon the shouldered portion 4 of the base and the upper extremity thereof engaging the shoulder 9 of the standard.

A loose sleeve 10 surrounds the central portion of the spiral 6 and is provided with the annular recess 11 in its lower end to receive the upper end of the tubular neck 2 of the base, an annular recess 12 being provided in the upper end of the sleeve to receive the lower end portion of the tubular stem 8,

while the central portion of the sleeve is internally flared upward as shown at 13.

A rod 14 is connected at its lower end to the shoulder 9 of the standard as by the threads 15, and is surrounded by the coil spring 16, located in the tubular guide 17, which is inserted in the longitudinal passage 17^a of the shank 18.

The lower end of the coil spring 16 engages the shoulder 9 in the tubular standard and the upper end thereof engages the closed upper end 19 of the tubular guide 17. The shank 18 is provided along one side with the vertical groove 20, the sockets 21 being located at intervals in said groove and arranged to be engaged by the spring pressed plunger 22, slidably mounted in the transverse bore 23 formed in the boss 24 at the upper end of the tubular standard, a shoulder 25 being formed upon said plunger and arranged to engage the inner end of the bore 23 and the bushing 26 to limit the movement of the plunger in opposite directions.

A coil spring 27 surrounds the plunger 22 within the bushing 26 and is engaged at opposite ends with the shoulder 25 upon the plunger and with the screw cap 28 upon the outer end of the boss 24.

A nut 29 is mounted upon the outer screw threaded end 30 of the plunger and the outer portion of the plunger is provided with the upper and lower longitudinal grooves 31, which receive the lugs 32 upon the nut 33, which is carried in the tubular handle 34.

By tilting the handle 34 as shown in Fig. 3, opposite sides of the nut 33 will engage the screw cap 28 and the nut 29, pulling the plunger longitudinally forward as shown in said figure, releasing the plunger from the sockets 21 and permitting the coil spring 16 to raise the shank 18 until the shoulder 35 at the lower end of the groove 20 engages the plunger 22.

The seat of the stool comprises the metallic frame or disk portion 36 provided with the depending socket 37 which receives the upper end of the shank 18, a set screw 38 or the like being located in the socket and extending into the annular groove 39 in the shank to retain the frame thereon. A suitably upholstered seat 40 is fixed upon the frame 36.

In adjusting the seat to the desired height, one hand should be placed upon the seat 40 and the handle 34 should be tilted with the

other hand, as shown in Fig. 3, releasing the plunger 22 from the notches 21.

If it is desired to raise the seat, the pressure upon the same should be lessened, permitting the coil spring 16 to raise the seat to the desired height, at which time the handle 34 is released, permitting the plunger to engage the nearest socket 21.

If it is desired to lower the seat, the plunger 22 is released in the same manner and the seat depressed by hand to the desired position, when the plunger 22 is again engaged with the nearest socket 21, holding the seat in this adjustment.

With the construction shown, the user of the stool may easily move in any direction by leaning his weight in the direction desired, tilting the standard 8 upon the coil 6, the sleeve 10, as shown in Fig. 2, engaging the adjacent sides of the tubular neck 2 of the base and the lower end of the tubular standard 8, while the opposite side of the coil 6, engaging the stem 5, limits the movement of the standard.

I claim:—

1. A device of the character described including a base having a tubular neck portion, a stem extending upward through the neck portion, a coil seated in the neck portion surrounding the stem, a seat standard mounted upon the upper end of the coil, and a loose sleeve resting upon the neck and surrounding the coil and arranged to be engaged by the seat standard when the coil is flexed.

2. A device of the character described including a base having a tubular neck portion, a stem extending upward through the neck portion, a coil seated in the neck portion surrounding the stem, a seat standard mounted upon the upper end of the coil, and a loose sleeve resting upon the neck and surrounding the coil and arranged to be engaged by the seat standard when the coil is flexed, said sleeve being internally upwardly flared.

3. A device of the character described including a base having a tubular neck portion, a stem extending upward through the neck portion, a coil seated in the neck portion surrounding the stem, a seat standard mounted

upon the upper end of the coil, and a loose sleeve resting upon the neck and surrounding the coil, the upper and lower ends of the sleeve being annularly recessed to receive the adjacent end portions of the neck and standard.

4. A device of the character described including a base having a tubular neck portion, a coil seated in the neck portion, a seat standard mounted upon the upper end of the coil, and a loose sleeve resting upon the neck and surrounding the coil and arranged to be engaged by the seat standard when the coil is flexed.

5. A device of the character described including a base having a tubular neck portion, a coil seated in the neck portion, a seat standard mounted upon the upper end of the coil, and a loose sleeve resting upon the neck and surrounding the coil and arranged to be engaged by the seat standard when the coil is flexed, said sleeve being internally upwardly flared.

6. A device of the character described including a base having a tubular neck portion, a coil seated in the neck portion, a seat standard mounted upon the upper end of the coil, and a loose sleeve resting upon the neck and surrounding the coil, the upper and lower ends of the sleeve being annularly recessed to receive the adjacent end portions of the neck and standard.

7. A stool including a tubular standard, a shank slidably mounted therein and having a seat mounted at its upper end, said shank having a longitudinal groove and spaced notches communicating therewith, a spring pressed plunger extended into the groove and arranged to be normally seated in one of the sockets, a shoulder at the outer end of the plunger, and a hollow handle surrounding the plunger and provided with a portion located between the shoulder upon the plunger and the standard, longitudinal grooves in the plunger and lugs upon the hollow handle engaging said grooves whereby a tilting of the handle will move the plunger out of engagement with the sockets.

HENRY E. WEBER.