

C. M. HEDMAN.

DENTAL STOOL.

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1,044,523.

Patented Nov. 19, 1912.

Fig. 1

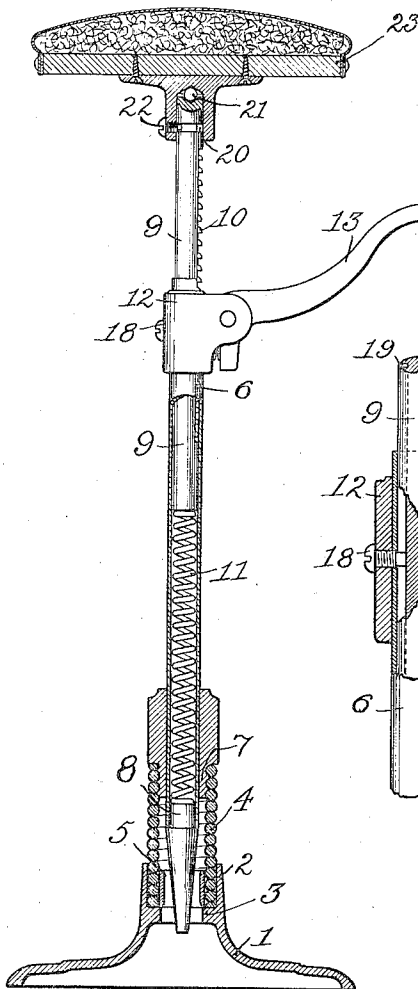
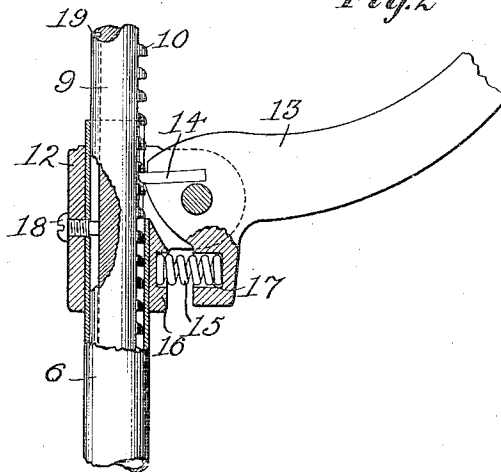


Fig. 2



WITNESSES:

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SHIP.

DENTAL STOOL.

1,044,523.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed July 31, 1911. Serial No. 641,617.

To all whom it may concern:

Be it known that I, CARL M. HEDMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dental Stools, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to vertically adjustable dental stools or the like, and has for its object the provision in an article of this class of a simple and highly efficient method of raising the seat rod or post in the supporting standard, to effectually lock the same in any desired position of vertical adjustment; also to provide means whereby the supporting standard may be moved slightly back and forth while the operator is at work, without moving the base.

The operation, construction and arrangement of the parts of my invention are fully described in the following specification, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved stool shown partly in cross-section, and Fig. 2 is a detail view of the clutch mechanism for retaining the seat post at the desired height in the standard.

Referring to the drawings, 1 designates a stool base of any suitable material carrying a hollow head 2. Within the hollow head is an inwardly extending shoulder 3. This shoulder is located a small distance beneath the upper end of the hollow head 2. Fitting tightly within the hollow head 2 and resting on the shoulder 3 is a helical spring 4. This spring, which is forced into the hollow head, should preferably be wound under initial tension. A ring 5 rests on the shoulder 3 inside of and fitting tightly against the helical spring. This ring is driven into this position and there spread, forcing the helical spring tightly against the wall of the hollow head 2. The hollow head 2 may be provided with internal threads to hold the spring 4 more rigidly in the hollow head. I have found in practice, however, that the method shown in the drawings is very efficient and that these threads are not absolutely necessary.

6 designates a hollow standard enlarged at its lower end and provided with a

shoulder 7 to which is secured by threads or otherwise the helical spring 4. Driven or screwed into the standard 6 is a conical plug 8 which passes down through the spring 4 and the ring 5. This plug prevents the standard 6 from taking a position too far from the vertical by abutting against the ring 5 and the shoulder 3.

Telescoping with the standard 6 is the seat post which is provided with teeth 10. These teeth, as shown in the drawings, are square on their under surface and rounded on their upper surface. Resting upon the upper end of the plug 8 is the spiral spring 11. Upon this spring the seat post 9 rests. When the seat post 9 is forced down into the standard 6 the spring 11 is compressed.

Mounted on the upper end of the standard 6 is the lever support 12. This support may either be cast on the standard or secured thereto in any one of the many ways known to those skilled in the art. A lever 13 is pivoted to the lever support 12 by means of a pin or bolt in such a manner that the pin 14 will engage the teeth 10 of the seat post and so prevent the post from being moved while the lever is in its normal position. The pin 14 is preferably made of tool steel and is cast in the lever 13. A compression spring 15 fits into the cylindrical cavity of the lever support and also into the cylindrical cavity 17 of the lever holding the pin 14 in engagement with the teeth 10 of the seat post 9. The spring 15 is strong enough to overcome any tendency of the spring 11 to force the seat post 9 up in the standard when the lever is in its normal position.

Passing through the lever support 12 is the threaded pin 18. This pin projects into the longitudinal slot 19 of the seat post 9 and so prevents the rotation of the seat post in the standard and keeps the teeth 10 in engagement with the pin 14.

Near the top of the seat post 9 is a groove encircling the same. On the top of the seat post is a small depression in which rests the anti-friction ball 21. Mounted upon the seat post 9 is a cap which is secured to the seat post by means of the pin 22 which projects into the groove 20. Secured to the cap is the seat 23 which may be of any desired shape or style. The ball bearing 21 facilitates the seat being rotated on the seat post or rod 9 with very little friction.

Should the operator while sitting on the stool desire to raise the same, he merely takes his weight off of the seat and depresses the lever 13, disengaging the pin 14 with the teeth 10 of the seat post. The seat post is thereupon lifted in the standard 6 by the spring 11. When the seat has been raised to the desired height the operator releases the lever 13, whereupon the pin 14 engages the teeth 10 of the seat post. When the operator desires to lower the seat he depresses the lever 13, whereupon the seat post 9 is forced down in the standard by his weight, compressing the spring 11. When the seat has fallen to the desired height, the lever is released.

All of the parts of my dental stool are of very simple but durable construction. The seat may be raised or lowered by the operator seated on the stool and he may move back and forth while seated thereon by reason of the flexible spring 4.

I do not wish to be limited to the precise constructions and arrangements as illustrated, as changes can readily be made without departing from the scope of my invention.

I claim as new and desire to secure by Letters Patent:

1. In combination, a base, a helical spring rigidly secured to said base, a standard secured to said spring, a seat carried by said standard, said standard having a conical extension conformed to allow lateral movement of the standard up to a certain limit in any direction, said conical extension being normally out of engagement with the base but adapted to engage the base to prevent lateral movement of the standard beyond a certain limit.

2. In combination a base, a helical spring

rigidly secured to said base, a hollow standard secured to said spring, and a seat carried by said standard, said hollow standard having its lower end provided with a plug extending down through the spring, said plug being normally out of engagement with the base but being adapted to engage the base to prevent lateral movement of the standard beyond a certain limit.

3. In combination a standard, a seat carried by the standard, a helical spring secured to said standard, a base having a hollow head, an inwardly extending shoulder within said hollow head, said spring extending into said hollow head and resting on said inwardly extending shoulder, and an expansion ring resting on said shoulder and holding said helical spring rigidly against the inside of said hollow head.

4. A stool or the like having a base, a hollow head carried by the base, an inwardly extending shoulder within said head, a helical spring fitting tightly within said hollow head and resting upon the inwardly extending shoulder, a ring forced down within said spring and forcing said spring against the walls of the hollow head, the upper end of the spring being secured to a hollow standard which has its lower end provided with a conical plug extending down through the spring and adapted to engage with the ring and the inwardly extending shoulder when the hollow standard is moved to its extreme position substantially as described.

In witness whereof, I hereunto subscribe my name this 27th day of July, A. D. 1911.

CARL M. HEDMAN.

Witnesses:

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ALBERT G. McCALEB.