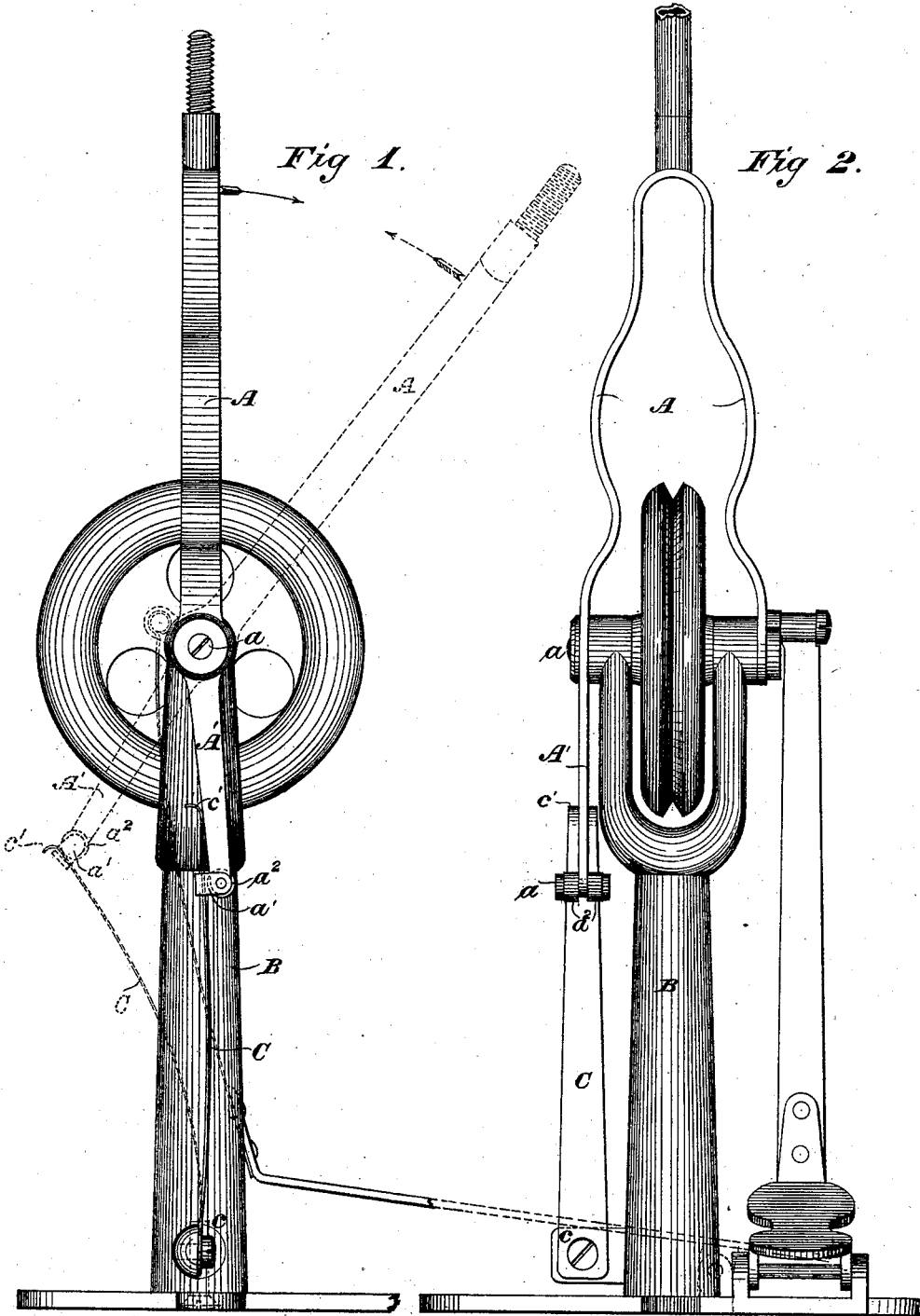


E. T. STARR.
 Rocking-Standard for Dental-Engines.

No. 199,477.

Patented Jan. 22, 1878.



WITNESSES

Wm A Skinkle
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INVENTOR

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UNITED STATES PATENT OFFICE.

ELI T. STARR, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO SAMUEL S. WHITE, OF SAME PLACE.

IMPROVEMENT IN ROCKING STANDARDS FOR DENTAL ENGINES.

Specification forming part of Letters Patent No. **199,477**, dated January 22, 1878; application filed December 21, 1877.

To all whom it may concern:

Be it known that I, ELI T. STARR, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Rocking Standards for Dental Engines, of which the following is a specification:

My invention constitutes an improvement upon the rocking standard of the well-known S. S. White dental engine, in which the driving-shaft is mounted on a standard rocking on its supporting-base. The lower end of this standard extends below the pivot on which it rocks, and is provided with a spiral spring to maintain the standard normally in an upright position, while permitting it to yield to enable the operator to vary the position of the handle-piece. Owing to the construction of this spring, its resistance increases rapidly as the standard is deflected from a vertical position, and this constantly-increasing strain tends to annoy and embarrass the operator while working.

The object of my invention is to obviate this difficulty, which end I attain by substituting for the spiral spring above mentioned a plate-spring, rigidly secured at one end to the base of the engine, while the other end bears against the rocking standard, and tends to maintain it in its upright position.

In the accompanying drawings, Figure 1 shows a side view, and Fig. 2 an end view, of a dental-engine standard, with my improvements applied thereto.

The frame A rocks on a fulcrum, *a*, on the base B, in the usual way. A plate-spring, C, rigidly secured to the standard or base at *c*, extends upward a sufficient distance to overlap the extension A' of the rocking arm, passing through a loop, *a*¹, on said extension, in which is mounted a friction-roller, *a*². This spring, it will be observed, is so arranged that the arm can only rock in one direction—that is, toward the operator—as it forms a lock against the movement of the rocking arm beyond its normal position in the other direction.

When the operator draws the arm toward him, the parts assume the position shown in dotted lines in Fig. 1, by which it will be perceived that, as the rocking arm is deflected so that the spring and arm assume a position nearly at right angles to each other, the resistance of the arm gradually diminishes, and the operation of the devices is such that if the movement be continued to a certain point the arm would remain locked, while, if carried beyond that point, the tendency of the arm would be to slip off from the end of the spring. To prevent this, I form a hook, *c*', on the outer end of the spring, which limits the range of movement of the rocking arm.

The advantages of my improvements will be obvious to those skilled in the art without further explanation.

I claim as my invention—

1. The combination, substantially as hereinbefore set forth, of a base or supporting-standard, a rocking arm pivoted thereon, and a plate-spring fixed upon the base and acting upon the rocking-arm, whereby the tension of the spring diminishes as the arm is deflected.

2. The combination, substantially as hereinbefore set forth, of the base, the rocking arm pivoted thereon, and the spring secured to the base overlapping the extension of the arm and moving endwise through a loop thereon, whereby the spring acts as a lock to prevent the movement of the rocking arm in one direction.

3. The plate-spring, secured at one end to the base, provided with a hook at the other, and movable endwise through a loop on an extension of the rocking arm to limit the range of movement of the latter.

In testimony whereof I have hereunto subscribed my name.

ELI T. STARR.

Witnesses:

WM. D. BALDWIN,
WM. J. PEYTON.