(No Model.)

A. ALTENBURG.

APPARATUS FOR REVOLVING EMERY OR OTHER WHEELS.

No. 405,979. Patented June 25, 1889.

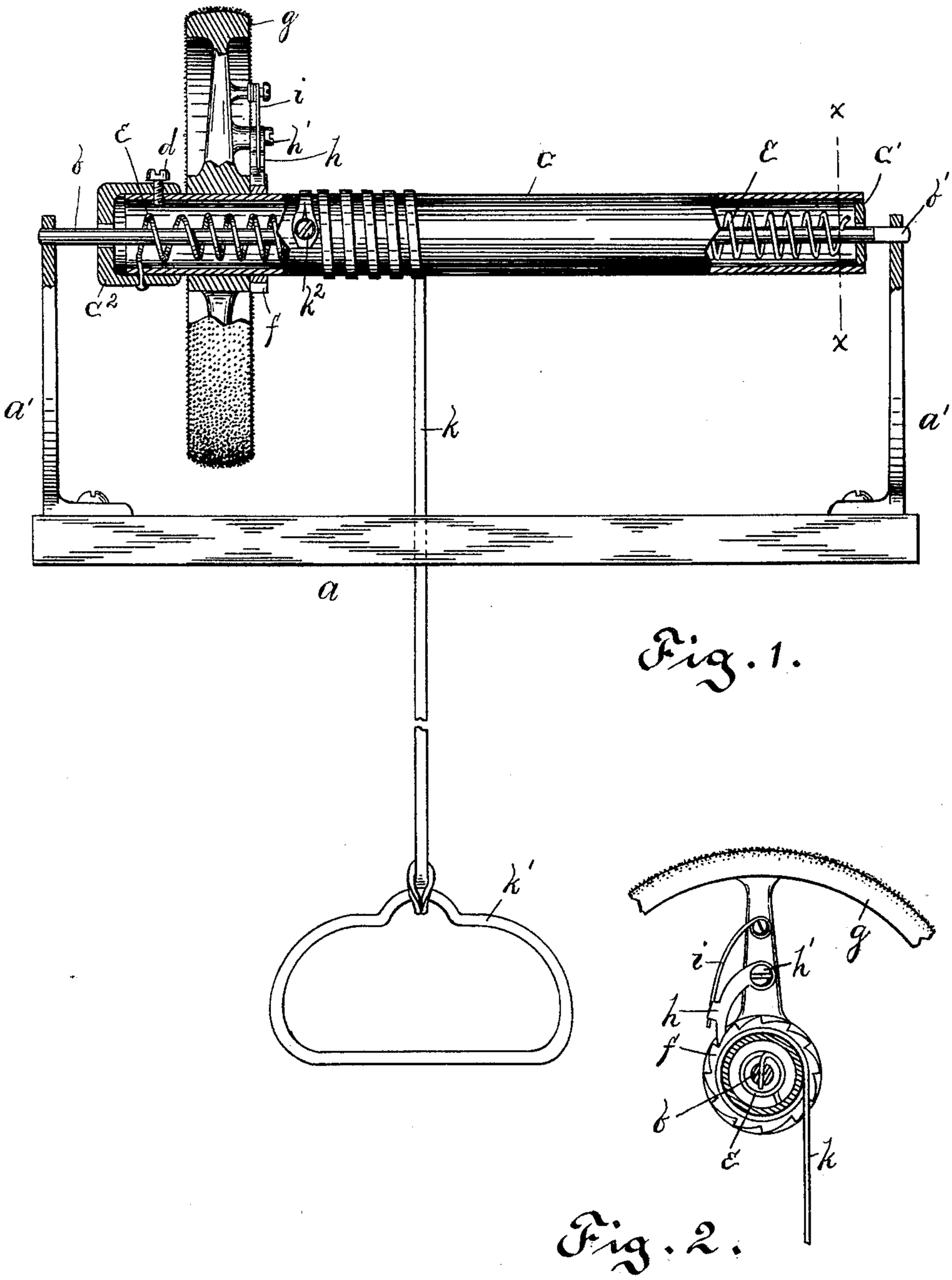

Fig. 1.

Fig. 2.

Witnesses:
Otto Hoddick.
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UNITED STATES PATENT OFFICE.

AUGUSTUS ALTENBURG, OF BUFFALO, NEW YORK, ASSIGNOR OF TWO-THIRDS TO DONALD C. SWEET AND HENRY GANSON, OF SAME PLACE.

APPARATUS FOR REVOLVING EMERY OR OTHER WHEELS.

SPECIFICATION forming part of Letters Patent No. 405,979, dated June 25, 1889.

Application filed March 5, 1889. Serial No. 301,818. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS ALTENBURG, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Apparatus for Revolving Emery or other Wheels, and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention consists of certain improvements in apparatus for revolving an emery or other wheel either by hand or foot power, and has for its object to give an unintermittent rotary motion to a wheel from a reciprocating rectilinear motion to which the power is applied.

I will now proceed to definitely describe the manner in which I have carried out my invention.

In the drawings, Figure 1 is an elevation of my improved device with portions broken away to show interior construction, and Fig. 2 is a segmental view taken in section through the line $x\ x$ of Fig. 1.

Referring to the drawings, a is the bed-plate, to which the standards $a'\ a'$ are secured. The shaft b, which rests in the standards $a'\ a'$, is fitted into a square opening at one end, as at b', to prevent its turning. Around this shaft b is placed the hollow sleeve or cylinder c, which is loosely mounted on the shaft b and held in position by means of the plate c' at one end and the removable cap c^2 at the other end, (see Fig. 1,) the cap c^2 being secured to the hollow sleeve or cylinder c by means of the set-screw d. Within the cylinder c and around the shaft b, I have arranged a spiral spring e, which is secured at one end to the shaft b and at its other end to the cylinder c, as clearly shown in Fig. 1. Rigidly secured to or integral with the cylinder c is the ratchet-wheel f, and loosely mounted upon the cylinder c is the emery-wheel g. On one of the spokes of this wheel g, I have arranged a spring-pressed pawl h, which is loosely pivoted at h' and held in position against the ratchet-wheel f by the spring i. (See Fig. 2.) The strap or band k, having the stirrup k', at one end, is wound around the cylinder c and secured at its other end to the cylinder c by the screw k^2.

In operation it will be seen that by placing the foot in the stirrup k' and drawing the strap k downward it causes the strap or band to unwind, and with it revolves the cylinder c, with its ratchet-wheel f, and at the same time winding up or tensioning the spiral spring e, and the ratchet-wheel f, being connected to the emery-wheel g, which is loosely mounted upon the cylinder c, causes that also to revolve, and when the end of the stroke is reached the emery-wheel g continues on its revolutions by its own inertia, and the spiral spring e, now being drawn to its highest tension, is released, and, as the pressure is taken off the stirrup k', causes the cylinder c to turn back, and with it winds the strap or band k back to its normal position, ready for the next stroke of the operator, which, upon being continued, gives a rapid and unintermittent rotary motion to the emery-wheel g.

I claim—

The combination, with the wheel g, provided with the spring-pressed pawl h, of the hollow sleeve or cylinder c, loosely mounted upon the fixed axle b and having the ratchet-wheel f rigidly secured thereto, the spiral spring e, secured at its ends to the fixed axle b and to the sleeve c, the strap k, and its stirrup k', substantially as and for the purpose stated.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUSTUS ALTENBURG.

Witnesses:
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