C. A. KENWORTHY.

INTERMITTENT GRIP DEVICE.

APPLICATION FILED AUG. 21, 1911.

1,080,637.

Patented Dec. 9, 1913.

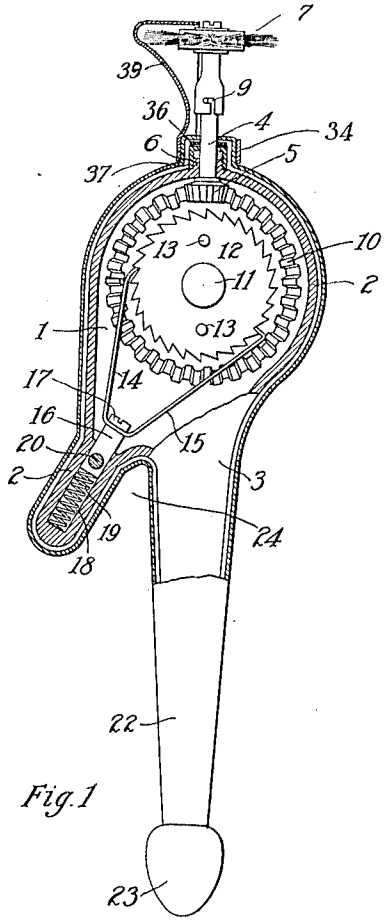

Fig. 1

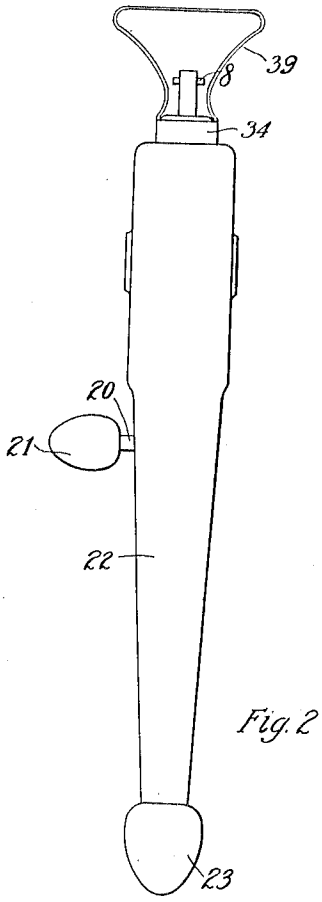

Fig. 2

WITNESSES:

David J. Walsh

Guy W. Hodges.

INVENTOR

Charles A. Kenworthy

BY

G. G. Crampton.

ATTORNEY

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES A. KENWORTHY, OF NEW YORK, N. Y.

INTERMITTENT GRIP DEVICE.

1,080,637. Specification of Letters Patent. Patented Dec. 9, 1913.

Application filed August 21, 1911. Serial No. 645,286.

To all whom it may concern:

Be it known that I, CHARLES A. KENWORTHY, a citizen of the United States, and a resident of the city of New York, N. Y., have invented new and useful Improvements in Intermittent Grip Devices, of which the following is a specification.

My invention relates to toilet devices.

It particularly relates to convenient, sanitary rubbing devices.

It has for its object to produce a manually operated device which will efficiently polish, rub, brush, buff, or rapidly accomplish any similar object.

The invention may be contained in many forms of construction.

For the purpose of showing that the invention is practical and that the constructions containing it are operative, I have shown in the drawings and will describe hereinafter one of the many forms of construction containing or embodying the invention. The particular form shown and described, however, may be greatly varied without departing from the spirit of the invention.

The invention consists in features illustrated and hereinafter set forth or that may be suggested by the drawings and the description.

In the usual practice of manipulating manually operated toilet articles, such as brushes, cleaning devices, polishers and buffers, used in cleaning or brushing the teeth or polishing the nails, a comparatively long and large brush or buffer or other device is given a to-and-fro or back and forth rubbing movement, which, particularly, in cleaning the teeth, because of the necessary length of the brush, can not be turned and twisted as readily as may be desired. Nor can the crevices be easily penetrated for the same reasons.

By my invention I provide a means whereby very small brushes and other toilet articles may be used to rapidly and efficiently clean or polish the teeth and nails.

In the construction shown in the drawings a means is provided for causing the very small cleaning or polishing device to rotate rapidly by the manipulation of the hand.

In the drawings, Figure 1 is a front sectional view of the device. Fig. 2 is a side view of the device.

1, Fig. 1, is a base plate on which parts of the construction are mounted. A side wall 2 extends along and on the outer edge of the plate 1 and is covered by a cover 3. The brush or buffer or other cleaning or rubbing device, is secured to a small shaft 4 which may be made as long as may be desired. The shaft 4 may be rotated by means of a wheel which may be any form of a pinion. I have shown a bevel gear wheel 5 in the particular construction selected. The shaft and wheel are mounted on one end of the wall or frame 2. The shaft 4 extends through the bearing 6. The brush or buffer or other rubbing instrument 7 is secured to the shaft by a bayonet joint. A pin 8 extends through the shaft and coöperates with the bayonet slot 9 to securely fasten the shaft and the instrument together.

A wheel 10 operates on the pinion 5. If the wheel 5 is beveled the gear 10 is also beveled, the two coöperating to communicate motion and cause the instrument 7 to rotate at a very high speed. The wheel 10 is pivoted to the plate 1 and to the cover 3 by means of the shaft 11.

The wheels 5, 10 are rotated by any suitable means. In the device shown a ratchet wheel 12 causes the rotation of the wheel 10 which in turn transmits and multiplies its rotation in and to the wheel 5. The ratchet is secured to the wheel 10 by any desired means. I have showns pins 13 for securing the wheels 10 and 12 together.

The ratchet in the construction shown is rotated by a pair of elastically operated pawls 14 and 15. The pawl 14 is located on one side of the wheel 12 and engages its teeth on that side to push the wheel on that side in one direction while the pawl 15 is located on the other side of the wheel and catches the teeth to pull the wheel in the other direction. The pawls 14 and 15 are moved to-and-fro together and thus operate to engage the wheel alternately when they move in either direction. When one pawl engages the wheel the other slips over the teeth and permits the other pawl to rotate the wheel.

The pawls may have elastically engaging dogs or they may be made of spring metal such as tempered sheet steel and secured together or made of one piece as shown. The pawls are secured to a block 16 by means of a screw 17. The block 16 moves in a socket 18 formed by the plate 1, wall 2 and the cover 3. A compression spring 19 is located in the socket back of the block 18.

