Sept. 11, 1934. J. F. PLANTS 1,973,390

TIMING DEVICE FOR BRUSHING OPERATIONS

Filed May 12, 1932

Fig. 1.

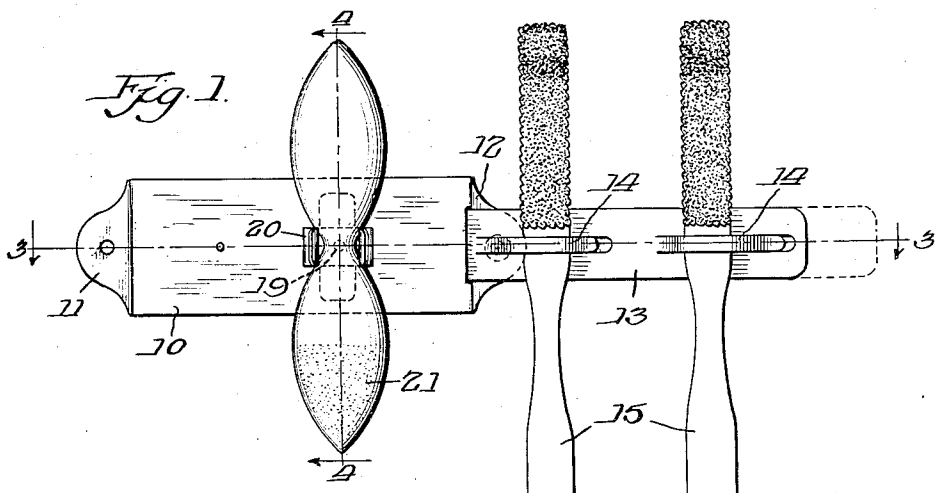


Fig. 2.

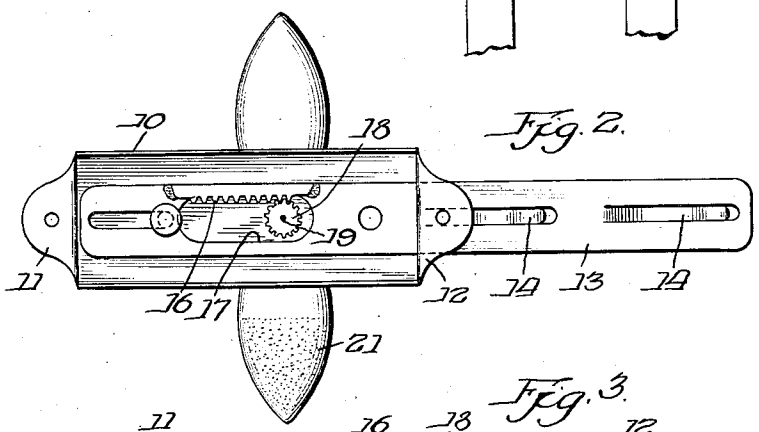


Fig. 3.

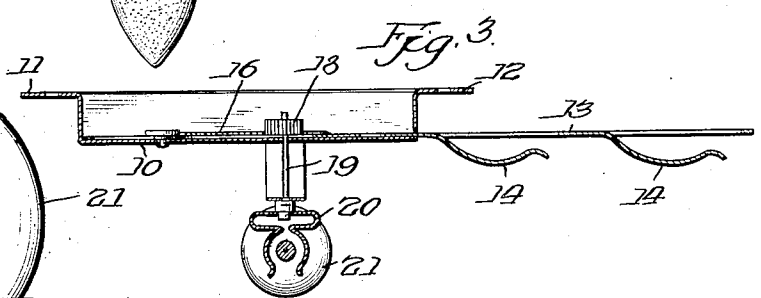
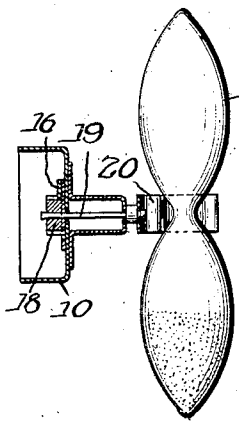


Fig. 4.



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Patented Sept. 11, 1934

1,973,390

UNITED STATES PATENT OFFICE

1,973,390

TIMING DEVICE FOR BRUSHING OPERATIONS

James F. Plants, Evanston, Ill.

Application May 12, 1932, Serial No. 610,894

1 Claim. (Cl. 161—1)

My invention is particularly related to a device adapted to cooperate with a support for one or more tooth brushes for a purpose more fully explained hereafter.

It is a commonly accepted theory, advanced by dentists, that in order to secure the full effect of the brushing operation on the teeth it should be continued for a definitely long period, say three minutes. This is recommended because of the beneficial effect following the massage of the gums and the activity of the tissues superinduced by the artificially created stimulus.

In order to provide means that will act substantially automatically I have developed and disclosed herein a simple contrivance utilizing the hour glass principle and so arranged that the act of removing the brush from its holder serves to position the glass in its timing relation. Likewise with the return of the brush to its former position, the parts are restored to a relation that will result in a repositioning when the brush is again used.

The invention will be more readily understood by reference to the accompanying drawing, in which:

Fig. 1 is a face view of a device constructed in accordance with my invention;

Fig. 2 is a rear view with the brushes removed, and

Figs. 3 and 4 are sectional views on the lines 3—3 and 4—4 of Fig. 1.

In the drawing I have shown a light sheet metal casing 10 in the form of a box having an open back and provided with ears 11, 12 having openings through which a fastening screw or nail may be projected for securing the casing to a wall. Within the casing is mounted a slide 13 having spring clips 14 thereon adapted to engage the shank or handle of tooth brushes 15. I have shown the device as designed to accommodate two brushes although more or less may be provided if desired. The slide is mounted for reciprocation in suitable guides in the casing and carries a rack 16 that projects into an opening 17 in the slide. A pinion 18 is mounted on a pin 19, the pinion engaging the rack and being adapted for rotation as the slide is reciprocated. The pin 19 is fixed to a spring yoke 20 projecting a substantial distance beyond the face of the casing, the yoke being intended to frictionally grasp and hold a sand glass 21. This glass will contain sand in a quantity sufficient to indicate a desired length of time, say three minutes. The sand glass may readily be inserted and removed, due to the character of its mounting, and if broken can be readily replaced.

In operation the casing is secured to a wall at a convenient point in a bathroom and the brush or brushes placed in the position shown in Fig. 1. When the brush is to be used it is removed lengthwise of the slide and due to the frictional engagement the slide will be caused to travel to its limit of movement, as shown in dotted lines in Fig. 1. This motion will be communicated to the glass which will be inverted and the sands will begin to run. The user will continue the brushing operation until the sand has passed into the lower half of the glass, whereupon the brush will be replaced, the replacing operation serving to restore the slide to the full line postion of Fig. 1.

Obviously the construction may take many other forms in which the timing device is automatically set so that the user need perform no operation in order to insure its readiness for a subsequent use. Modifications of this character are contemplated in the appended claim.

I claim:

In a device of the class described, the combination of a support, a slide therein carrying a rack, said slide having means thereon adapted to be resiliently engaged by a tooth brush, a sand glass pivoted on said support and a gear engaging the pivot of said glass and adapted to be actuated by the rack to invert the sand glass when the slide is moved by the act of inserting and removing a tooth brush.

JAMES F. PLANTS.