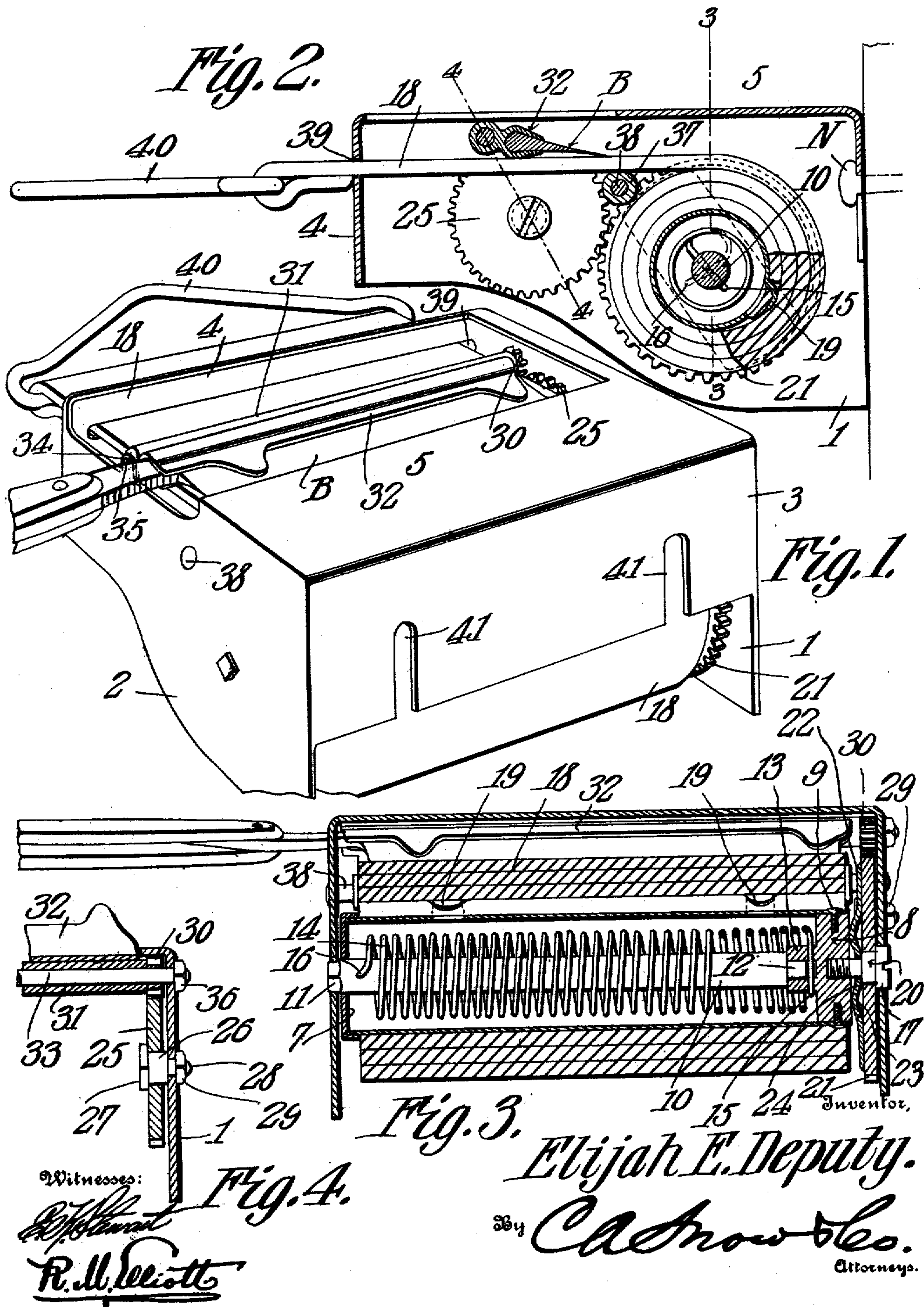


E. E. DEPUTY.
RAZOR STROP.

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910,916.



Witnesses:

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Fig. 3.

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RAZOR-STROP.

No. 910,916.

Specification of Letters Patent.

Patented Jan. 26, 1909.

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To all whom it may concern:

Be it known that I, ELIJAH E. DEPUTY, a citizen of the United States, residing at Parkesburg, in the county of Chester and State of Pennsylvania, have invented a new and useful Razor-Strop, of which the following is a specification.

This invention relates to razor strops.

The object of the invention is to provide a novel form of strop adapted mechanically, and with rapidity and accuracy to strop razor blades of any character. Furthermore, in a novel manner to prevent injury to the strap, as from nicks or cuts.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists, generally stated, in a razor strop comprising a self-winding roller, a strap wound thereon, an oscillatory blade holder embodying a pinion, a gear carried by the roller and rotatable independent thereof, but being at the proper moment caused to rotate with the roller, and a blade holder reversing-gear that meshes with the pinion and with the roller gear, and being operated by the last named gear when the strap is unwound from and wound upon the roller, the reversing of the roller taking place at the instant that the direction of the motion of the strap is changed, thus to prevent nicking or cutting of the strap.

The invention consists further in the various novel details of construction of a razor strop, as will be hereinafter fully described and claimed.

In the accompanying drawings forming a part of this specification, and in which like characters of reference indicate corresponding parts:—Figure 1 is a view in perspective of a strop constructed in accordance with the present invention. Fig. 2 is a vertical longitudinal sectional view through the strop. Fig. 3 is a transverse sectional view taken on the line 3—3, Fig. 2, and looking in the direction of the arrow thereon. Fig. 4 is a fragmentary sectional view taken on the line 4—4 Fig. 3.

The strop comprises a casing, preferably of metal, and which may be ornamented if desired to impart a neat and finished appearance to the article. The casing comprises side walls 1 and 2, end walls 3 and 4, and a top wall 5.

Arranged within the casing is a self-wind-

ing roller embodying a tubular shell or body 6, one end of which is closed by a cap 7, and the other end by a head 8 which is held in position by a plurality of screws 9.

Arranged within the shell 6 is a shaft 10, one end 11 of which is squared and projects through the cap 7 and engages a square opening in the side wall 2, that portion of the shaft that projects through the cap being circular to provide a bearing. The other end of the shaft is reduced to provide a circular journal 12 which works in the bearing 13 that projects through the head 8. Surrounding the shaft is a coiled spring 14, one end 15 of which projects through a transverse opening in the bearing 13, and the other end 16 through a transverse opening in the shaft adjacent to the squared terminal 11. The shell is supported for rotation at the end carrying the head 8 by a screw 17, the head of which is journaled in the side wall 1, and the threaded shank of which engages a threaded opening in the head. From this arrangement it will be seen that the shell will be supported for rotary movement in either direction, and further, that the shaft will be held positively against turning so that when the strap 18 is drawn away from the casing, the spring 14 will be wound up or placed under tension, thus to store up energy to secure the automatic rewinding of the strap. The strap 18 may be secured to the shell 6 in any preferred manner, the connection between the parts, in this instance, being effected by stamping out a plurality of curved tongues 19 from the shell, and passing these through suitable openings provided in the strap for the purpose. The screw 17 adjacent to its end is circumferentially reduced to provide a journal 20 for a gear 21, which latter, as will be obvious, is free to rotate independently of the roller. In order, at certain times in the operation of the strop, to cause the gear and the roller to rotate together, there is a frictionally acting restraining device employed, which consists of a spring 22 somewhat less in length than the diameter of the gear 21, and which is mounted upon the threaded portion of the screw 17 and is clamped against the head by the inner face of the journal 20. The spring, on each side of the screw is inwardly bowed to provide two contact faces 23 that are designed to bear against the head 8, and outwardly bowed at the point where

the screw passes through it, to provide a contact face 24 which bears against the inner face of the journal 20, the terminals of the springs being in engagement with the gear 21 adjacent to its periphery. The spring can be adjusted so as to increase or diminish its frictional contact with the head 8 and with the gear 21 by the screw 17, so that the gear will be held against too free rotation. The gear 21 meshes with a second gear 25 that is mounted upon a stub shaft 26 secured to one of the end walls of the casing, as shown in Fig. 4, the shaft being provided with a head 27 to hold the gear against working off, and with a threaded extension 28 that carries a nut 29 for clamping the shaft in place. The gear 25 meshes with a pinion 30 that is preferably integral with a tubular shaft 31 to which is secured, in any preferred manner, a razor blade carrier 32. The shaft rotates upon a bearing 33 in the nature of a bar or rod, one end of which is passed through an up-standing ear 34 carried by the upper edge of the side wall 2 and is provided with a head 35, and the other end of which projects through an opening in the side wall 1 and is threaded to receive a nut 36, by which the bearing is held in place. On each side of the ear 34, the metal of the side wall 2 is cut away, as clearly shown in Fig. 1, in order to allow the holder to accommodate the blade of an ordinary razor, and to permit the shank thereof to move through the arc of the circle to bring the blade B into contact with the strap. The bearing 33 is so positioned relatively to the upper edge of the side wall 2, as to throw the blade holder a sufficient distance upward beyond the same, to permit the ready insertion of the blade of a razor of any kind, either hand or safety. As will be obvious, there will be a tendency for the strap to sag, owing to the pressure of the razor between the two gears 21 and 25 and to prevent this, there is a roller 37 provided which is mounted upon a rod 38, the terminals of which are secured in any preferred manner in the side walls 1 and 2. This roller will freely rotate as the trap is actuated, and will secure the object sought in a practical manner.

In order to prevent the strap from sagging between the gear 25 and the end wall 4, the latter is provided with a longitudinal slot 39 through which the strap projects, as clearly shown in Fig. 1. The strap is furnished with an ordinary hand grip or loop 40 by which to exert a draft or pull on the strap. In order to support the casing in operative position, the rear wall is provided with two open-ended slots 41 that are designed to engage with nails N (one of which is shown in Fig. 2) driven in a wall or other object. By having the slots 41 open-ended, as described, the casing may readily be placed in position and removed as required.

In the use of the apparatus, when the same is in the position shown in Fig. 2, the razor blade is inserted in the holder 32. The loop 40 is now grasped and the strap drawn outward. The first motion of the strap will cause the gear 21 to rotate the gear 25, and the latter to rotate the shaft 31, thereby reversing the position of the razor blade, so as to cause its cutting edge to be projected in the direction of the movement of the strap, the same procedure taking place when the strap starts on its return movement to be rewound upon the roller. As soon as the blade is reversed to bring the razor blade in contact with the strap, the friction device 23 will permit the gear 21 to remain stationary until the return movement of the belt begins, whereupon the friction device will again become operative to cause the gear 21 to turn and thus actuate the gear 25 and pinion 30 to reverse the blade holder.

All of the parts of the apparatus are so constructed and arranged as to insure accurate work and to be durable in use.

I claim:—

1. A razor-strop comprising a self-winding roller, a strap wound thereon, an oscillatory blade-holder, and means connected to and operated by the roller for reversing the blade-holder as the strap is wound and unwound.
2. A razor-strop comprising a self-winding roller, a strap wound thereon, an oscillatory blade-holder provided with a pinion, a frictionally-restrained gear carried by the roller, and a blade-holder reversing-gear meshing with the pinion and with the gear carried by the roller.
3. A razor-strop comprising a self-winding roller, a strap wound thereon, an oscillatory blade-holder, and frictionally-restrained means carried by the roller to reverse the blade-holder as the strap is wound and unwound.
4. A razor-strop comprising a self-winding roller, a strap wound thereon, an oscillatory blade-holder provided with a pinion, a gear carried by the roller, a blade-holder reversing-gear meshing with the pinion and with the roller-gear, and means for permitting the roller-gear to remain idle at certain periods during the turning of the roller.
5. A razor-strop comprising a self-winding roller, a strap wound thereon, an oscillatory blade-holder provided with a pinion, a frictionally-restrained gear carried by the roller, a blade-holder reversing-gear meshing with the pinion and with the roller-gear, and means for preventing sagging of the strap during the operation of stropping a razor.
6. A razor-strop comprising a casing, provided with means for attachment to a suitable support, a self-winding roller supported by the casing, a bar supported by the casing, an oscillatory blade-holder mounted on the bar and provided with a pinion, a frictionally-

restrained gear carried by the roller, and a blade-holder reversing-gear meshing with the pinion and with the roller-gear.

7. A razor-strop comprising a casing, provided with means for attachment to a suitable support, a self-winding roller supported by the casing, a bar supported by the casing, an oscillatory blade-holder mounted on the bar and provided with a pinion, a frictionally-
10 restrained gear carried by the roller, and

means to prevent the strap from sagging during the operation of stropping a razor.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ELIJAH E. DEPUTY.

Witnesses:

J. W. MOORE,

U. GRANT EMERY.