Oct. 14, 1930. H. J. GAISMAN 1,778,009

MEANS FOR STROPPING BLADES

Filed Nov. 14, 1925

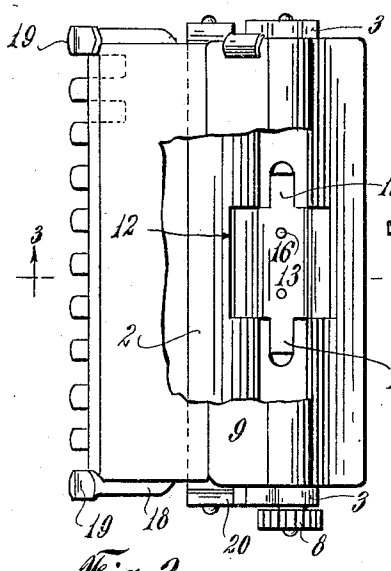


Fig. 2.

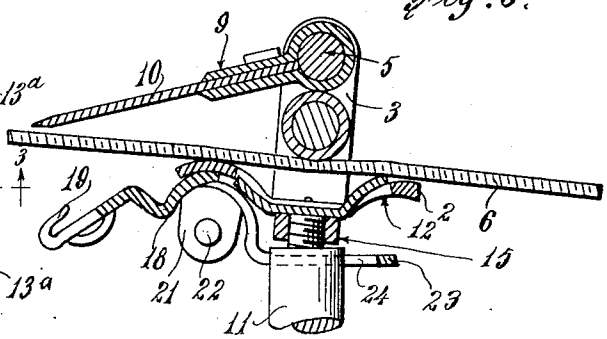


Fig. 6.

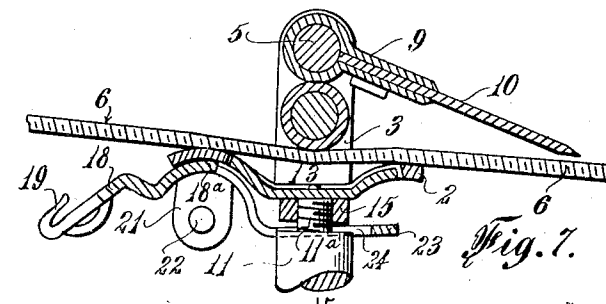


Fig. 7.

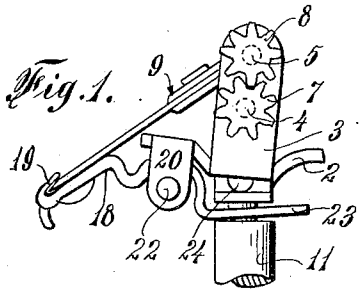


Fig. 1.

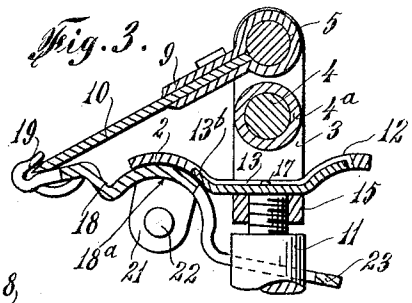


Fig. 3.

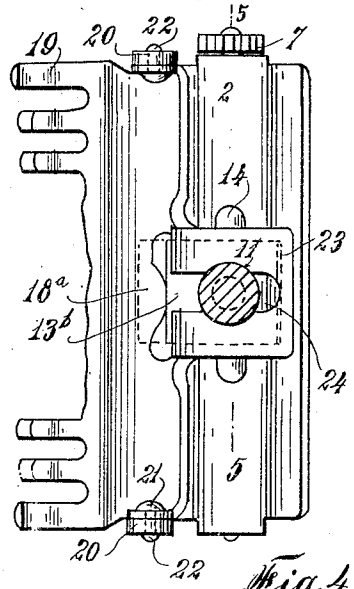


Fig. 4.

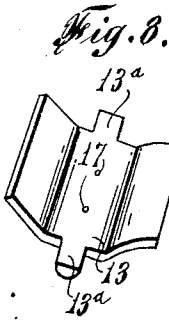


Fig. 8.

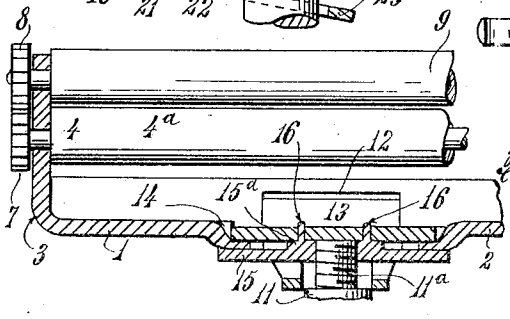


Fig. 5.

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UNITED STATES PATENT OFFICE

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MEANS FOR STROPPING BLADES

Original application filed January 31, 1923, Serial No. 616,006. Divided and this application filed November 14, 1925. Serial No. 68,974.

This application is a division of my application filed January 31, 1923, Serial No. 616,006, for razor stropping means.

My invention has reference to means for stropping the cutting edges of razor blades and particularly of the class in which a frame carrying a rockable blade holder is reciprocated along a strop.

One of the objects of my invention is to provide simple and effective means to cause the blade edge to be moved free from the strop upon the initiation of reverse direction of movement of the machine along the strop to reverse the position of the blade respecting the strop, so that the blade edge will be out of contact with the strop when the frame starts to travel in such direction along the strop, whereby to prevent the blade from injuring or cutting the strop.

I have illustrated my invention as embodied in the type of stropping machine set forth in United States Letters Patent granted to me under date of Dec. 7, 1915, No. 1,153,332, and as embodied in a safety razor of the class set forth in Letters Patent granted to me April 9, 1912, No. 1,072,726, and other Letters Patent granted to me of the class specified, my invention being illustrated in the accompanying drawings in connection with a safety razor known on the market as the Auto Strop.

In carrying out my invention I provide means for pivotally connecting the frame of the stropping means with the actuating handle so arranged that when the device is moved along a strop the initial action will be to cause the frame to tilt with respect to the strop to cause the blade edge to rise from the strop before the frame starts to slide along the strop to cause the blade to be reversed in position for stropping. In the class of razors referred to a guard for the blade edge is movably supported with respect to the frame so that lugs or hooks upon the guard engage or disengage the blade edge as required for shaving or stropping purposes. I have illustrated my invention embodied in such a safety razor wherein I provide means whereby the guard will cooperate with the handle, when the guard secures the blade in shaving position, to retain the frame and handle in firm or immovable relation so that the blade and guard will be correspondingly retained in cooperation, and whereby when the guard is released from the blade the guard will also be released from the handle to permit the frame and handle to have relative motion for stropping.

My invention comprises novel details of improvement that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part hereof, wherein

Fig. 1 is a side view illustrating my improvements as embodied in a safety razor provided with stropping means;

Fig. 2 is a partly broken plan view of Fig. 1;

Fig. 3 is a section on line 3, 3, in Fig. 2;

Fig. 4 is a partly broken underside view;

Fig. 5 is a section on line 5, 5, in Fig. 4;

Figs. 6 and 7 are detail cross-sections showing the parts in different stropping positions; and

Fig. 8 is a detail perspective view of one of the pivotal members.

Similar numerals of reference indicate corresponding parts in the several views.

The frame 1 is shown comprising a base 2 provided with spaced substantially parallel arms or uprights 3 at its ends in which spaced shafts 4, 5 are journaled, a space being provided between shaft 4 and base 2 for the passage of a suitable strop 6, all of which parts are well known in the art. The shaft 4 is provided with a gear 7 in mesh with a gear 8 on shaft 5 whereby contact of a taut strop against the under portion of shaft 4 or its encasing sleeve or tube 4^a will cause rotation of shaft 5. The shaft 5 is provided with a suitable blade holder 9 adapted to detachably retain a blade 10. The blade holder illustrated is substantially the same as that shown in Letters Patent granted to me April 9, 1912, No. 1,022,727.

At 11 is a handle that is pivotally connected with frame 1, being shown pivotally attached to the base 2. Said base is shown provided with a centrally disposed opening at 12 in

which is pivotally mounted a rockable member 13, shown provided with projections 13^a at its ends which serve as pivots for said member, the base 2 being shown provided with upwardly opening depressed seats 14 at opposite sides of opening 12 in the direction of the length of base 2, in which the pivotal projections 13^a are seated so that member 13 may rock on base 2 or vice versa. The handle 11 is connected to member 13 by means of a head 15 which is shown provided with a centrally disposed hub-like portion 15^a that is internally threaded to receive the threaded end portion 11^a of handle 11, the ends of head 15 extending against and opposing the outer surfaces of the seats 14, (Fig. 5). The member 13 and head 15 are secured together to retain the pivotal projections 13^a of member 13 rotatively in the seats 14 with the end portions of head 15 bearing against said seats. For such purpose the head 15 is shown provided with pins or projections 16 which enter holes 17 in member 13 and are riveted over against said member to retain the latter and the head 15 together, but in such a manner that said member and head may rock relatively to base 2 in a direction transverse to the length of said base and along the strop.

When the stropping mechanism is to be used for stropping the strop 6 is passed between base 2 and shaft 4, in a well known manner, and the strop is held taut, whereupon the user grasps handle 11 to reciprocate the machine or razor along the strop. When the machine or razor is first pushed respecting the strop, as to the left in Fig. 6, to reverse the position of the blade on the strop, the frame will initially tilt slightly toward the right in said figure, initially causing the blade edge to rise from the strop before the frame slides on the strop, and during such sliding to the left in said figure the blade will be reversed to drag on the strop, as indicated in Fig. 7. When the stroke described has been stopped and the machine or razor is to be moved toward the right in Fig. 7, the initial action will be to tilt the frame toward the left in said figure to cause the blade edge first to rise from the strop, and continued movement of the machine along the strop in said direction will cause reversal of the blade to drag on the strop, and so on as the machine or razor is reciprocated along the strop. The initial raising of the blade edge from the strop, before the machine or razor slides on the strop, will have the beneficial effect of preventing the blade edge from injuring or cutting the strop by reason of the advance of the blade edge toward the strop, which might occur in the event that the gears did not first cause the blade edge to move away from the strop when the machine or razor is reversed in its sliding direction along the strop.

In the example of my invention illustrated as embodied in a safety razor a movable guard is indicated at 18 provided with hooks or lugs 19 at its ends to engage the blade edge in a well known manner. The guard I have illustrated is pivotally carried by frame 1 by means of lugs 20 depending from base 2 and corresponding lugs 21 at the ends of the guard located adjacent to the lugs 20, rivets 22 through the corresponding pairs of lugs pivotally supporting the guard upon the frame. The guard is shown provided with a projection 23 having an opening 24 receiving the handle freely so that the guard may be rocked. The portion of projection 23 extending on the side of the handle opposite the guard serves as a finger piece to enable the guard to be rocked or moved to engage and release the blade. The particular construction of guard illustrated is substantially as that set forth in my application for Letters Patent for safety razor filed August 19, 1921, Serial No. 493,532, although my present invention is not limited for use with the particular guard illustrated. The guard is provided with a portion, shown in the form of a projection at 18^a, (Fig. 4), which will engage the adjacent side of member 13 at 13^b to oppose the latter when the guard engages the blade, as illustrated in Fig. 3, whereby the base 2 and the handle will be firmly united for shaving purposes since the guard then will oppose rocking of member 13 with respect to frame 2. When the razor is to be used for stropping and the guard is released from the blade for such purpose the projection 18^a of the guard will move away from the part 13^b of member 13 to release the latter so that it may rock respecting base 2, as illustrated in Figs. 6 and 7.

My improvements are simple in construction and effective in use whether utilized in a machine for stropping razor blades as distinguished from a safety razor, or when used in a safety razor having stropping means, whereby the blade may be stropped while in the frame without removing the blade therefrom.

Having now described my invention, what I claim is:—

1. Means for stropping blades comprising a frame having a blade holder and means to rock the blade, the frame having a base provided with an opening, a member pivotally located on one side of the base at the opening, a head attached to said member on the opposite side of the base at said opening with the frame between the member and the head to retain the frame rockably between the member and head, and a handle attached to said head.

2. Means for stropping blades comprising a frame having a blade holder and means to rock the blade, the base of the frame having an opening and seats at opposite sides of the

opening, a member provided with pivotal projections resting in said seats, a head attached to said member and bearing against the outer sides of said seats, with the frame rockable between the member and head, and a handle attached to said head.

HENRY J. GAISMAN.