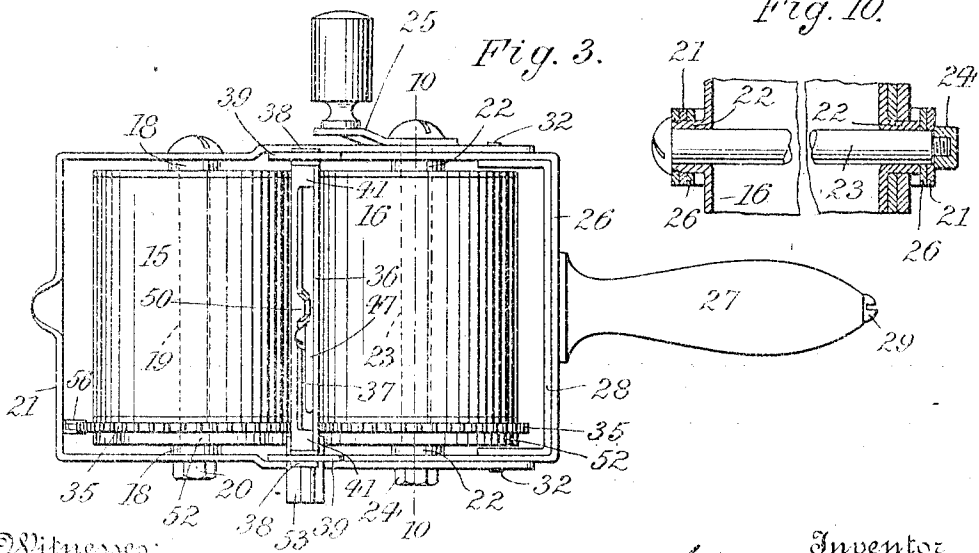
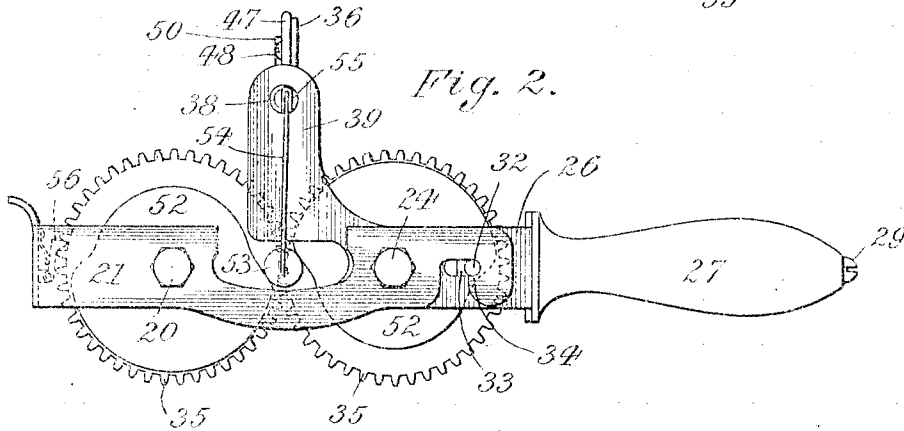
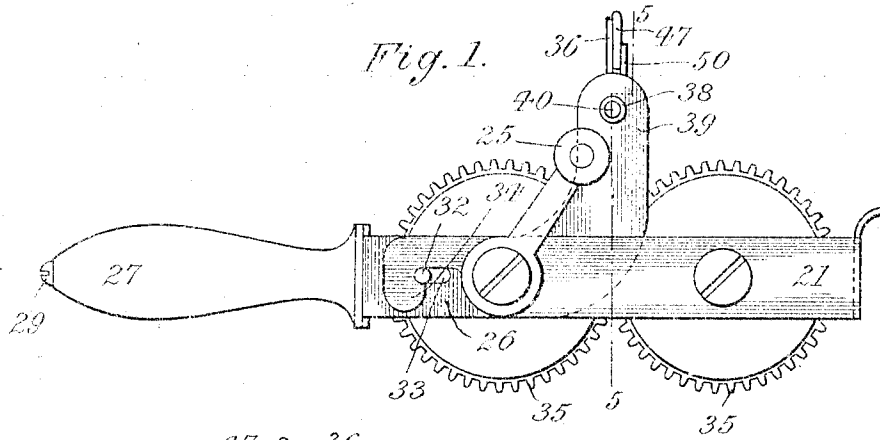


M. H. AVRAM.
 RAZOR STROPPING MACHINE.
 APPLICATION FILED JUNE 21, 1909.

950,504.

Patented Mar. 1, 1910.

2 SHEETS—SHEET 1.



Witnesses:
H. P. Schuch
Edward Schuch

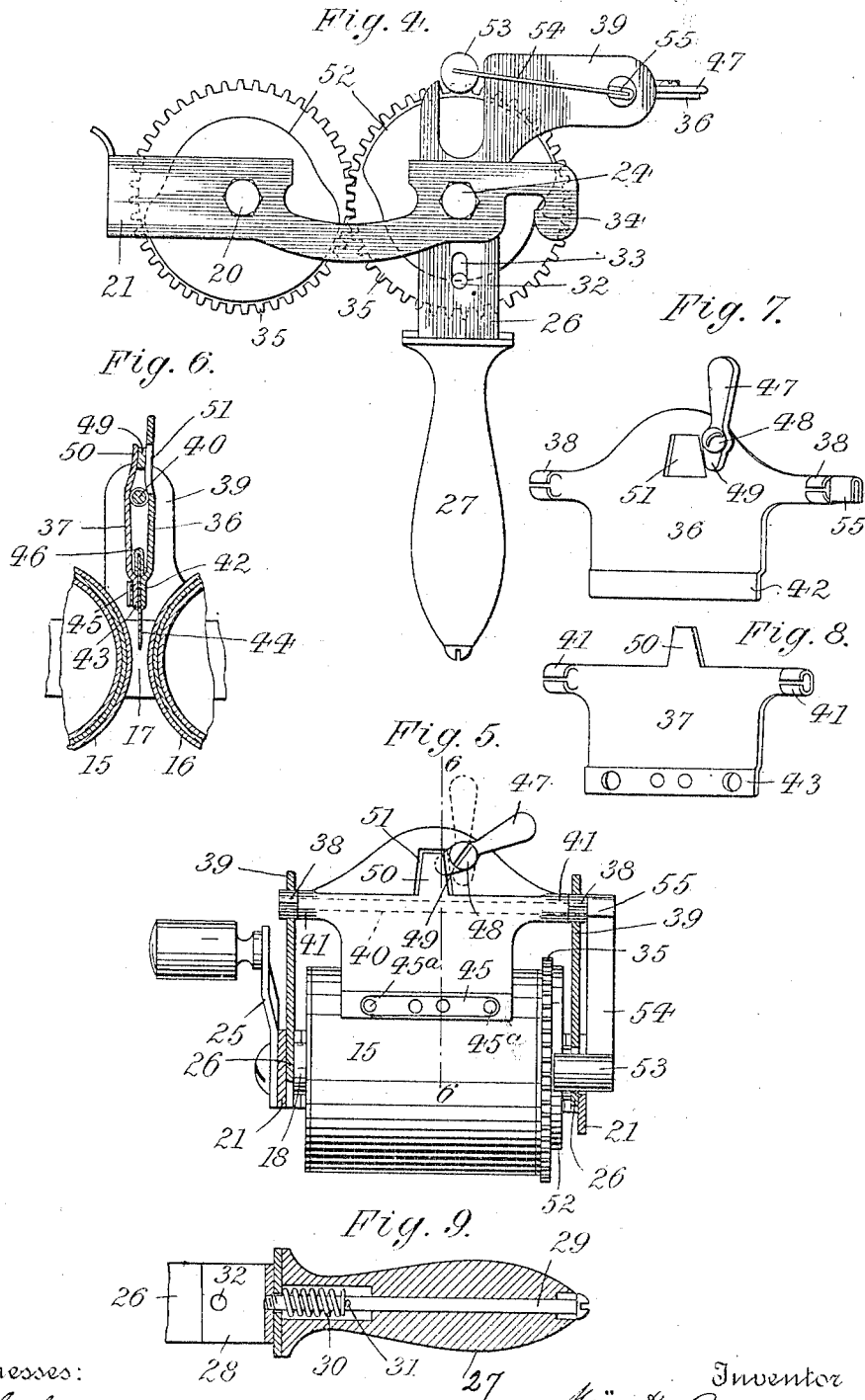
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UNITED STATES PATENT OFFICE.

MOÏS H. AVRAM, OF NEW YORK, N. Y.

RAZOR-STROPPING MACHINE.

950,504.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed June 21, 1909. Serial No. 503,492.

To all whom it may concern:

Be it known that I, MOÏS H. AVRAM, a citizen of the United States, and a resident of New York city, Manhattan, county of New York, State of New York, have invented new and useful Improvements in Razor-Stropping Machines, of which the following is a specification.

This invention relates to a machine of novel construction for stropping razor blades, which is more particularly adapted for sharpening the blades of safety razors.

The machine is so constructed that the blades to be stropped may be readily brought into proper operative engagement with a pair of stropping rollers and that the sharpened blades may be quickly removed from the machine.

In the accompanying drawing: Figure 1 is a front view of my improved stropping machine, showing it closed, Fig. 2 a rear view thereof, Fig. 3 a plan, Fig. 4 a rear view showing the machine opened, Fig. 5 a vertical section on line 5—5, Fig. 1, Fig. 6 a cross section, partly broken away, on line 6—6, Fig. 5, Fig. 7 a perspective view of one of the clamping plates, Fig. 8 a similar view of the other clamping plate, Fig. 9 a longitudinal section through the handle and adjoining parts, and Fig. 10 a section, partly broken away, on line 10—10, Fig. 3.

The machine comprises essentially a pair of parallel stropping rollers 15, 16 which are so spaced as to form an intervening gap 17. Roller 15 is provided with a pair of hubs 18 which loosely embrace a headed pin 19 secured by nut 20 to a first U-shaped frame member 21. In like manner, roller 16 has a pair of hubs 22 loosely mounted upon a pin 23 which is secured by nut 24 to frame 21. One of the hubs 22 passes through the latter and carries at its free end a crank 25. Pin 23 and the crank-carrying hub 22 constitute the fulcrum for a second U-shaped frame member 26 provided with a handle 27. Frame members 21, 26 are normally in substantial alinement, for which purpose there is mounted within member 26 a movable U-shaped bail 28 into which is tapped a screw 29 passing through a central perforation of handle 27. A spring 30 interposed between member 26 and a pin 31 carried by screw 29 serves to normally retract bail 28. To the shanks of the bail are secured outwardly projecting pins 32 passing through corresponding slots 33 of frame

member 26 and adapted to engage a pair of hooks 34 formed on frame member 21. These hooks when engaged by pins 32 serve to maintain frame members 21, 26 in their alined position (Figs. 1 and 2). If it is desired to open or break the frame for inserting or withdrawing a razor blade as hereinafter more fully described, screw 29 is pressed inward to withdraw pins 32 from hooks 34 so that frame member 26 may be freely swung on pin 23 into the position shown in Fig. 4.

Rollers 15, 16 are adapted to be simultaneously rotated in opposite directions by crank 25 for which purpose, rollers 15, 16 are provided with toothed wheels 35 meshing into one another.

The means for presenting the blade to be sharpened to the stropping rollers consist of a pair of clamping plates 36, 37. Plate 36 is provided with eyes 38 which are pivotally mounted within arms 39 projecting upwardly from frame member 26. Into eyes 38 is fitted a pin 40 upon which are loosely mounted a pair of corresponding eyes 41 forming part of plate 37. At their lower ends, plates 36, 37 are bent inwardly to form a pair of shouldered jaws 42, 43 between which the razor blade 44 to be stropped is inserted. Jaws 42, 43 are preferably so constructed that blades of the various makes of safety razors now in the market may be readily grasped thereby. For holding a blade of the so-called "Gillette safety razor," a flat spring 45 is riveted to plate 37, said spring being provided with a pair of studs 45^a which by passing through corresponding apertures of jaw 43 are adapted to enter the usual perforations formed in such blades. Other makes of blades are provided with ribs extending along their rear edges, a blade of this construction being shown in Fig. 6. The rib 46 of such a blade rests upon the shoulders formed on jaws 42, 43. In order to force jaws 42, 43 against one another, a lever 47 is fulcrumed at 48 to plate 36. If lever 47 is turned into the position shown in Fig. 5, the heel 49 of said lever is forced against a lug 50 projecting upwardly from plate 37. This lug is thereby swung away from plate 36, thus pressing jaw 43 toward jaw 42. For removing the blade, lever 47 is turned into the position shown by dotted lines in Fig. 5, and lug 50 is swung toward plate 36, an aperture 51 of said plate accommodating the lug. In

this way jaws 42, 43 are spread apart to permit a ready removal of the razor blade.

Means are provided for oscillating holder 36, 37 so as to bring the blade to be sharpened into alternating engagement with rollers 15 and 16. For this purpose, there is secured to each gear wheel 35 a cam disk 52. Between cams 52 is interposed a pin 53 firmly secured to the lower end of a resilient cam lever or arm 54 the upper end of which is connected at 55 to plate 36. Cams 52 are so shaped that upon their rotation, they impart to pin 53 an oscillating movement which in turn causes a corresponding oscillation of blade holder 36, 37. In this way the razor blade carried by said holder will be brought into alternate engagement with the stropping rollers.

If it is desired to insert a razor blade into the machine, screw 29 is pushed inward to withdraw pins 32 from hooks 34 and permit the breaking of the frame so that the parts assume the position shown in Fig. 4. Blade holder 36, 37 may now be freely swung into any desired position to permit a convenient introduction of the blade. The blade holder is then turned downward so that pin 53 rests upon cam 52 whereupon the frame members 21, 26 are again brought into alignment, the pins 32 and hooks 34 preventing a subsequent accidental opening of the frame. Crank 25 is now rotated in the proper direction to cause a corresponding rotation of stropping rollers 15, 16 and a simultaneous oscillation of the blade holder and blade carried thereby. In this way the blade is alternately swung from one stropping roller toward the other roller, so that both sides of its cutting edge are uniformly sharpened.

In order to prevent any reverse rotation of the stropping rollers against the cutting edge of the blade to be sharpened, a spring-influenced pawl 56 is pivoted to frame member 21 said pawl engaging the teeth of one of the gear wheels 35.

It will be seen that by the construction described novel and reliable means are pro-

vided for stropping the blades of safety razors and similar articles.

I claim:

1. In a razor stropping machine, a frame comprising a first member and a second member fulcrumed to the first member, a pair of intergeared stropping rollers journaled in the frame, a blade holder and means actuated by the rollers for oscillating said blade holder.

2. In a razor stropping machine, a frame comprising a pair of members fulcrumed to one another, a hook formed on one of said members, a movable pin carried by the other member and adapted to engage said hook, a pair of stropping rollers journaled in the frame, a blade holder hung in one of the frame members, and means actuated by the rollers for oscillating said blade holder.

3. In a razor stropping machine, a frame comprising a pair of members fulcrumed to one another, means for interlocking said members, a pair of intergeared stropping rollers journaled in the frame, cams carried by the rollers, a blade holder hung in the frame, and a resilient arm secured to the blade holder and engaging the cams.

4. In a razor stropping machine, a frame, a blade holder hung in said frame and comprising a pair of pivoted clamping plates, a lever fulcrumed to one of said plates, a heel formed on said lever and adapted to engage the other plate, and means for oscillating the blade holder.

5. In a razor stropping machine, a frame having a pair of aligned perforations, a first clamping plate having a pair of eyes that engage the frame-perforations, a pin fitted into said eyes, a second clamping plate having a pair of eyes that encompass the pin, and means for forcing the lower ends of the clamping plates against one another.

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