

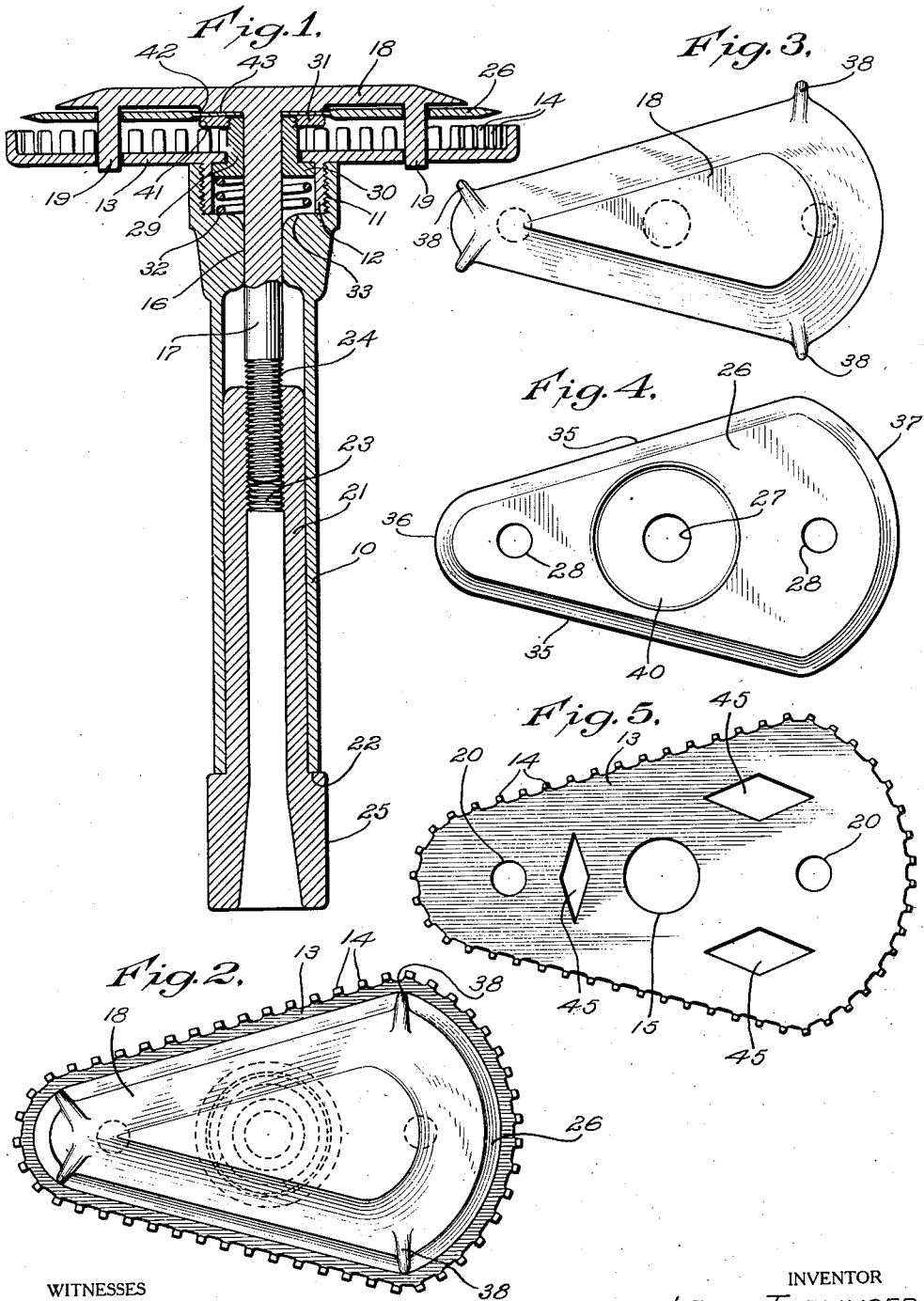
Feb. 22, 1927.

L. TAPLINGER

1,618,895

SAFETY RAZOR

Filed Jan. 27, 1926



WITNESSES

E. A. Wilson
Franklin J. Foster

INVENTOR
LEWIS TAPLINGER,
BY *Mumford*
ATTORNEYS

UNITED STATES PATENT OFFICE.

LEWIS TAPLINGER, OF BROOKLYN, NEW YORK.

SAFETY RAZOR.

Application filed January 27, 1926. Serial No. 84,208.

An object of the present invention is to provide a safety razor which is peculiarly suited for removing hair from hollows or depressions in the skin as well as suited for the ordinary operation of shaving relatively flat or convex skin areas.

A further object of the invention is to provide a razor which entirely eliminates the common inconvenience of catching hairs between the blade and blade guard and pulling rather than cutting the hairs.

A further object of the invention is to provide a razor in which the blade is so mounted that the pulling of hair out by the roots is not only prevented, but the slight pull caused by the microscopic saw teeth of the blade is utilized to flex the blade and upon recoil of the blade edge causes a recoil of the hair itself which facilitates the severance of the hair.

A further object of the invention is to provide a razor with which the blade may be finely and accurately adjusted.

Another object of the invention is to provide a unique and efficient type of razor blade embodying both curved and straight edges which will be capable of use with holders other than the holder of the present invention.

Other objects are to provide a razor of simple, practical construction, which will be rugged, durable and efficient in construction, which may be readily taken apart and cleaned, and which may be manufactured with comparative economy.

With the above noted and other objects in view, the invention consists in certain novel features of construction and combination and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

The invention may be more fully understood from the following description when read in connection with the accompanying drawings in which—

Figure 1 is a view in longitudinal section through a razor embodying the present invention.

Fig. 2 is a top plan view thereof.

Fig. 3 is a plan view of the backing plate.

Fig. 4 is a plan view of the blade.

Fig. 5 is a plan view of the guard plate.

I use the reference numeral 10 to designate

a hollow handle provided at one end with a threaded socket 11 receiving a hollow threaded nipple 12 integral with a guard plate 13. The guard plate is provided with a peripheral series of upstanding guard teeth 14 and with an approximately central opening 15 aligning with the hollow nipple 12.

The nipple 10 is of reduced internal diameter at 16 to provide a substantial bearing for an elongated stud 17 integral with a backing plate 18. The backing plate 18 also carries stud members 19 working through openings 20 in the guard plate to prevent rotational movement of the backing plate relative to the guard plate.

For adjusting the guard plate relative to the backing plate I provide a hollow operating rod 21 journaled in the hollow handle 10 and formed with an external shoulder 22 which abuts the end of the handle. The member 21 is internally threaded as at 23 for coaction with the threaded extremity 24 of the elongated stud 17. It will be evident that by rotating the outer end 25 of the member 21 the backing plate will be adjusted toward and away from the guard plate.

A blade 26 is formed with a central opening 27 receiving the stud 17 and with openings 28 for the reception of studs 19. For firmly clamping this blade against the under face of the backing plate 18 I utilize a sleeve 29 encircling stud 17 and slidable thereon. This sleeve is integral with a flange 30 engaging the under face of the guard plate to limit outward movement of the sleeve. It also carries a detachable flange 31 bearing against the under face of the blade 26 to retain the blade clamped against the under face of the backing plate. A coiled expansion spring 32 housed within the nipple 12 and bearing against an internal shoulder 33 in the handle urges the sleeve 29 outwardly into blade clamping position.

It will be noted that the edges of the blade are spaced slightly inwardly from the edges of the guard plate so that there is no possibility of pulling a hair by catching it between the blade edge and the guard plate.

The construction as thus far described embodies principles of the present invention regardless of the particular shape of the blade and its associated guard plate and backing plate. A feature of the invention,

however, is the shape of the blade which permits the razor to be efficiently used for shaving concave surfaces. The exact shape of the blade is subject to a wide range of variations but preferably embodies both straight and curved cutting edges. As shown, the blade includes a pair of straight shaving edges, 35, 35 converging at one end into a short sharply curved shaving edge 36 and diverging at their opposite ends into a relatively long slightly curved shaving edge 37. The guard plate and the backing plate are shaped in conformity with the blade and the backing plate carries at the four corners thereof radially projecting guard fingers 38 which overlie the corners of the blade and protect the skin of the user from contact with such corners.

It will be noted that the blade is of decreased thickness adjacent the central opening 27. The blade may either be formed with a flat thin annular central portion 40 or may taper gradually toward the central opening 27. The edges 41 of the flange 31 and the edge 42 of a depending blade engaging portion 43 of the backing plate are suitably rounded in order that they may not interfere with the flexing or springing of the blade. The portion 40 of reduced thickness adjacent the blade center makes it possible to use a relatively heavy stiff blade and at the same time permits a certain amount of flexibility due to the inherent resiliency of such reduced portion.

As noted above when the fine saw teeth at the blade edges engage a hair and tend to pull the same, the blade will be slightly flexed and when the blade recoils the hair will also recoil and assist the severing action.

For the proper drainage of lather which may tend to collect between the back plate and the guard, the guard is formed with a suitably arranged series of drain openings 45.

From the foregoing description it will be apparent that I have provided a razor which eliminates the possibility of pulling rather than shearing hairs, a razor in which the blade may be finely adjusted in accordance with the taste of the user, and a razor which may be readily taken apart and cleaned. The straight blade edges permit use of the razor in a conventional manner and the curved blade edges greatly facilitate the removal of hairs from grooves or depressions in the face.

While I have illustrated one of the preferred embodiments of the invention, it will be understood that numerous changes and alterations might be made in the general form and arrangement of parts described, without departing from the invention. Hence I do not wish to limit myself to the details set forth, but shall consider myself

at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. A safety razor blade of relatively stiff inflexible steel having a central opening therein, and being of reduced thickness adjacent said opening to provide a central relatively flexible portion surrounding said opening, whereby, when the blade is clamped adjacent the opening, it will yield bodily without flexure near any of its marginal edges.

2. A razor including a handle having a socket in one end thereof, a guard plate including a hollow post retained in said socket, a backing plate including a threaded stud passed through said socket and other studs working in openings in the guard plate, a sleeve sliding over the stud, a spring in the socket urging the sleeve toward the backing plate, and a blade clamped between the sleeve and backing plate.

3. A razor including a handle having a socket in one end thereof, a guard plate including a hollow post retained in said socket, a backing plate including a threaded stud passed through said socket and other studs working in openings in the guard plate, a sleeve sliding over the stud, a spring in the socket urging the sleeve toward the backing plate, and a blade clamped between the sleeve and backing plate, said guard plate including a peripheral series of angularly disposed guard fingers, said blade being smaller than the guard plate whereby to prevent the pinching of hair between the fingers and the blade edge.

4. A device of the class described in claim 2 and wherein the guard plate is formed with drain holes.

5. A razor including a handle having a socket in one end thereof, a guard plate including a hollow post retained in said socket, a backing plate including a threaded stud passed through said socket and other studs working in openings in the guard plate, a sleeve sliding over the stud, a spring in the socket urging the sleeve toward the backing plate, and a blade clamped between the sleeve and backing plate, said backing plate and sleeve including means clamping said blade only adjacent the center of the latter.

6. A razor including a handle having a socket in one end thereof, a guard plate including a hollow post retained in said socket, a backing plate including a threaded stud passed through said socket and other studs working in openings in the guard plate, a sleeve sliding over the stud, a spring in the socket urging the sleeve toward the backing plate, and a blade clamped between the sleeve and backing plate, said backing plate and sleeve including means clamping said blade only adjacent the center of the latter,

said blade being of reduced thickness at its center whereby it may flex relatively to its clamping means.

5 2 7. A device of the class described in claim 2 and including means coacting with the threaded stud to adjust the backing plate toward and away from the guard plate.

10 8. A razor including a handle having a socket in one end thereof, a guard plate including a hollow post retained in said socket, a backing plate including a threaded stud passed through said socket and other studs working in openings in the guard plate, a sleeve sliding over the stud, a spring in the

socket urging the sleeve toward the backing 15 plate, and a blade clamped between the sleeve and backing plate, the blade including both straight and curved shaving edges, and fingers on the backing plate overlying the corners of the blade. 20

9. A safety razor including a dished guard plate, a blade of less area than the guard plate, a backing plate of less area than the blade, and means coacting with the backing plate to adjustably clamp the blade 25 between the backing and guard plate in spaced relationship to the latter.

LEWIS TAPLINGER.