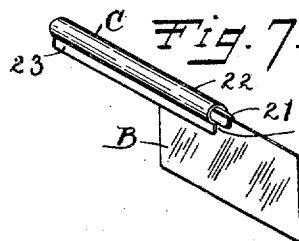
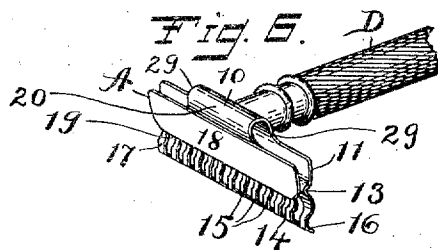
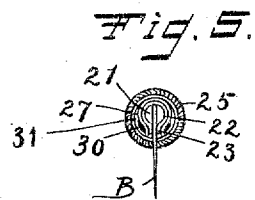
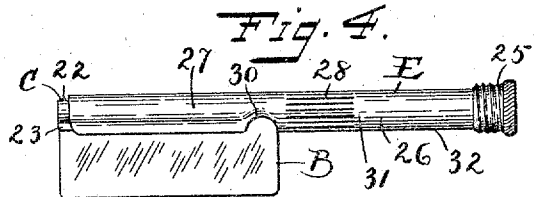
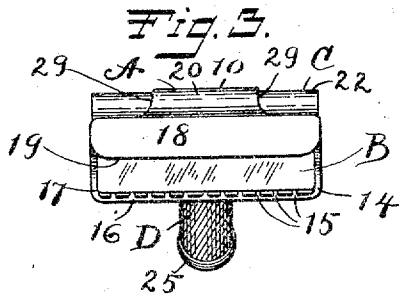
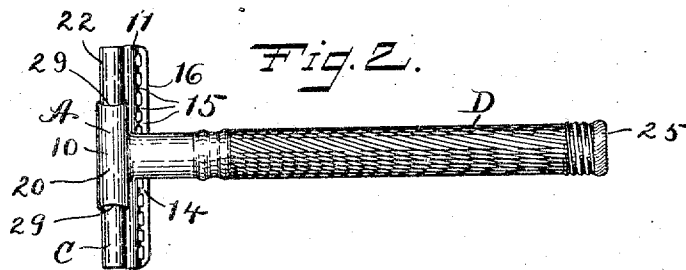
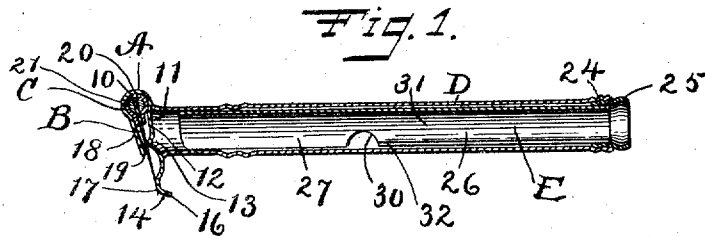


C. F. SMITH.
SAFETY RAZOR.
APPLICATION FILED MAY 17, 1909.

957,008.

Patented May 3, 1910.



WITNESSES.

S. H. Clark.
W. L. Lockwood

INVENTOR.

Charles F. Smith
By Louis M. Schmidt,
Att'y.

UNITED STATES PATENT OFFICE.

CHARLES F. SMITH, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO LANDERS, FRARY AND CLARK, OF NEW BRITAIN, CONNECTICUT, A CORPORATION.

SAFETY-RAZOR.

957,008.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed May 17, 1909. Serial No. 496,344.

To all whom it may concern:

Be it known that I, CHARLES F. SMITH, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

My invention relates to improvements in safety razors, and the objects of my improvements are simplicity and economy in construction and convenience and efficiency in use.

In the accompanying drawings:—Figure 1 is a longitudinal section of my razor. Fig. 2 is a plan view of the same. Fig. 3 is an end view of the same. Fig. 4 is a side elevation of the stropping device to my razor and a blade. Fig. 5 is an end view of the same. Fig. 6 is a perspective view of my guard piece and handle. Fig. 7 is a perspective view of a blade and blade back with the blade out about half way from the normal position.

My safety razor is of the type provided with a removable blade and a stropping device for holding the blade for convenience in stropping, all as will be hereinafter described.

A is the guard piece to my razor and comprises a piece of sheet metal doubled back on itself longitudinally to form a tubular back 10, a guard wing 11 on the front side comprising first a flat portion forming essentially a downwardly projecting flange 12 along the edge of the slot in the said tubular back 10, then a backwardly projecting upper bearing rib 13, below which the said guard wing swells outward and again back and is provided at the lower end with a closed comb formation 14 comprising a series of teeth 15, closed at the outer edge by a bar 16, the said teeth beginning intermediate the said swelled portion and curving backward to a point near the lower edge to form an interrupted lower bearing rib 17, and then bending abruptly outward to the said bar 16 at the extreme edge.

The back member of my guard piece A comprises a downwardly and forwardly projecting clamping wing 18, forming essentially a flange extending from the back side of the slot in the said tubular back 10, and has at the lower extremity the bearing edge 19 extending longitudinally intermediate the said upper bearing rib 13 and the

said lower bearing rib 17. The ends and corners 28 of the said tubular back are cut away for facilitating the removal of the blade B and blade back C to be described, leaving a central portion 20, the resiliency of which is adapted to hold the blade B when in position and in use.

The blade B comprises a flat piece of steel of rectangular shape, provided along the center of the back edge with a short cylindrical guide lug 21, preferably cast on in some suitable manner, of a diameter to fit within the said blade back C.

The blade back C comprises a slotted tube of sheet metal having a tubular back 22 and provided with short downwardly projecting flanges 23, along the edges of the slot 24, the tubular back 22 being adapted to receive longitudinally the said cast guide lug 21 on the blade B and the said flanges 23 being adapted to bear against the faces of the blade B and to serve as clamping members to rigidly hold the said blade B within the said blade back C. Exteriorly the said blade back C is adapted to be received longitudinally within the guard piece A, the downwardly projecting flanges 23 located between the said downwardly projecting flange 12 and the back clamping wing 18, so that the said blade back C and the blade B are adapted to be received as a unit within the guard piece, the blade being clamped between the front and back members of the guard piece, the bearing points for the front member being the said upper longitudinal bearing rib 13 and the lower bearing rib 17 and for the back member the said bearing edge 19.

Any suitable handle may be provided for my razor. I prefer however to use a tubular handle D, mounted at the longitudinal center of the guard piece A on the front member at a point intermediate the said tubular back 10 and the said closed comb portion 14, in a plane at right angles to the general alinement of the guard piece and at an angle to the wings suitable for convenience in use. The outer end of the handle D is internally threaded as at 24 to receive the threaded outer tip 25 of the stropping device E. Inwardly from the said threaded tip 25 the said stropping device E comprises a slotted tube 26 adapted to be received within the said tubular handle D and the inner end 27 up to the division notch 30 being essentially the counterpart of the said tubu-

lar back 10 of the guard piece A and accordingly is adapted to receive and hold the blade B and blade back C as a unit. The outer end 31 beyond the said division notch 5 30 serves conveniently as a handle, and may have a portion 28 roughened for a friction holding surface. The slot in the handle end 31 of the stropping device is essentially closed, so that the edge 32 opposed to the 10 blade B serves as a back stop for the same when inserted. The stropping device E when not in use may be conveniently stowed away within the handle D, and secured in place by means of the said threaded portions 24 and 25 of the handle and stropping 15 device respectively. The stropping device as described is made of a strip of sheet metal, blanked out and rolled up to the tubular formation and has the outer end closed by 20 the said threaded tip 25.

As described my razor comprises essentially a blade holder, guard piece, handle and receptacle for the stropping device as a unit, and combined with the same a stropping device all self contained and conveniently available for use. The blades are individually removable and replaceable in the blade back, and the blade and blade back as a unit are removable and replaceable in the 30 guard piece and also in the stropping device. The stropping may be effected by means of the stropping device provided essentially as is the case with an ordinary razor. The cutting away of the ends and 35 corners 28 of the tubular back 10, exposes for convenience in removal, the ends of the said blade back C with the blade B contained therein. The closed comb formation 14 of the guard piece A avoids exposed projecting ends of the teeth. The single short 40 guide lug 21 at the back of the blade serves effectively to hold the blade rigidly in the blade back in combination with the clamping of the flanges 23, without appreciably 45 effecting the flexibility of the blade. The results described are obtained by a construction that is compact, efficient and reliable.

I claim as my invention:—

1. In a safety razor, a flat, thin, sheet 50 metal blade having a cylindrical guide lug adjacent to its back edge, a combined spring holder and a guard formed of sheet metal and comprising two clamping members suitably spaced and a hollow back by which the 55 said clamping members are united, and a

second spring holder formed of sheet metal and comprising two clamping members suitably spaced, one of the said members having a safety guard formed thereon, and a hollow back that connects the said two members and 60 into which second holder the said first holder and blade are adapted to be received and held.

2. In a safety razor, a flat, thin, sheet metal blade having a cylindrical guide lug 65 adjacent to its back edge, a holder formed of sheet metal and comprising two clamping members suitably spaced and a hollow back by which the said clamping members are united, and a second spring holder formed 70 of sheet metal, and comprising two clamping members suitably spaced, one of the said members having a safety guard formed thereon, and a hollow back that connects the said two members and into which second 75 holder the said first holder and blade are adapted to be received and held, with a handle secured to and extending at a right angle to the length of the said second spring holder. 80

3. In a safety razor having a removable blade, a blade having a back edge, a short guide lug on said back edge, a blade back fitting and adapted to receive said guide lug and provided with blade clamping members, 85 a holder fitting and adapted to receive said blade and blade back as a unit, clamping members on said holder adapted to clamp said blade and blade back as a unit, and a guard comprising an extension of one of 90 said clamping members on said blade holder.

4. In combination in a razor having a removable blade, a handle, and a stropping device, the said handle tubular in formation, having an open end, otherwise complete and 95 unbroken in its inclosing walls and provided with an internal screw thread adjacent said end, the said stropping device generally tubular in formation, receivable within said handle, provided adjacent one end with a 100 screw thread adapted to fit and be received by the said screw thread on said handle, and at the extreme end having a tip suitable for manipulation in inserting and withdrawing said stropping device and for a finish for 105 the said handle.

CHARLES F. SMITH.

Witnesses:

S. H. RAYMOND,
GEORGE JOHNSTON.