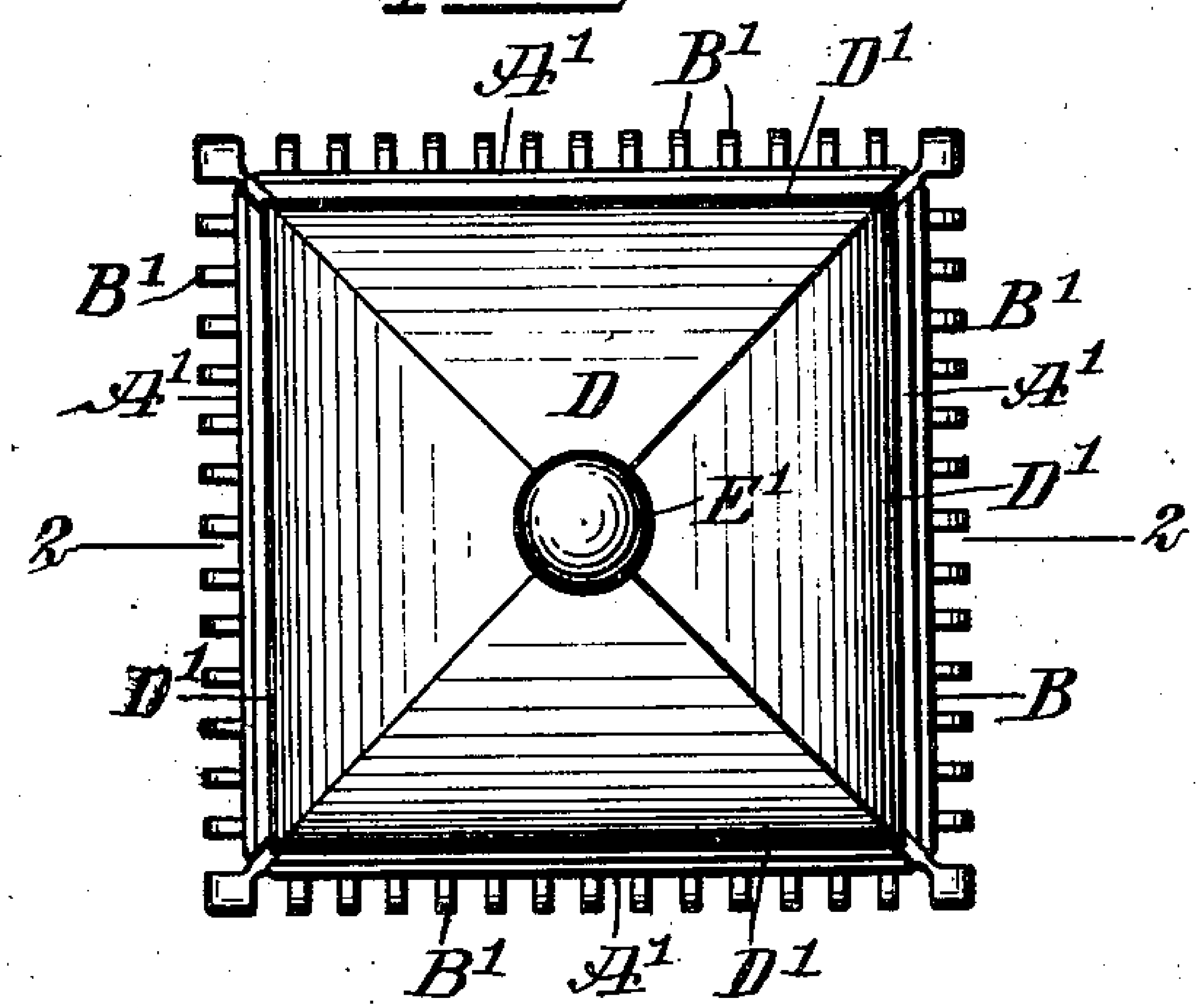
No. 855,252. PATENTED MAY 28, 1907.

E. KRUSIUS.

SAFETY RAZOR.

APPLICATION FILED NOV. 1, 1905.

Fig. 1



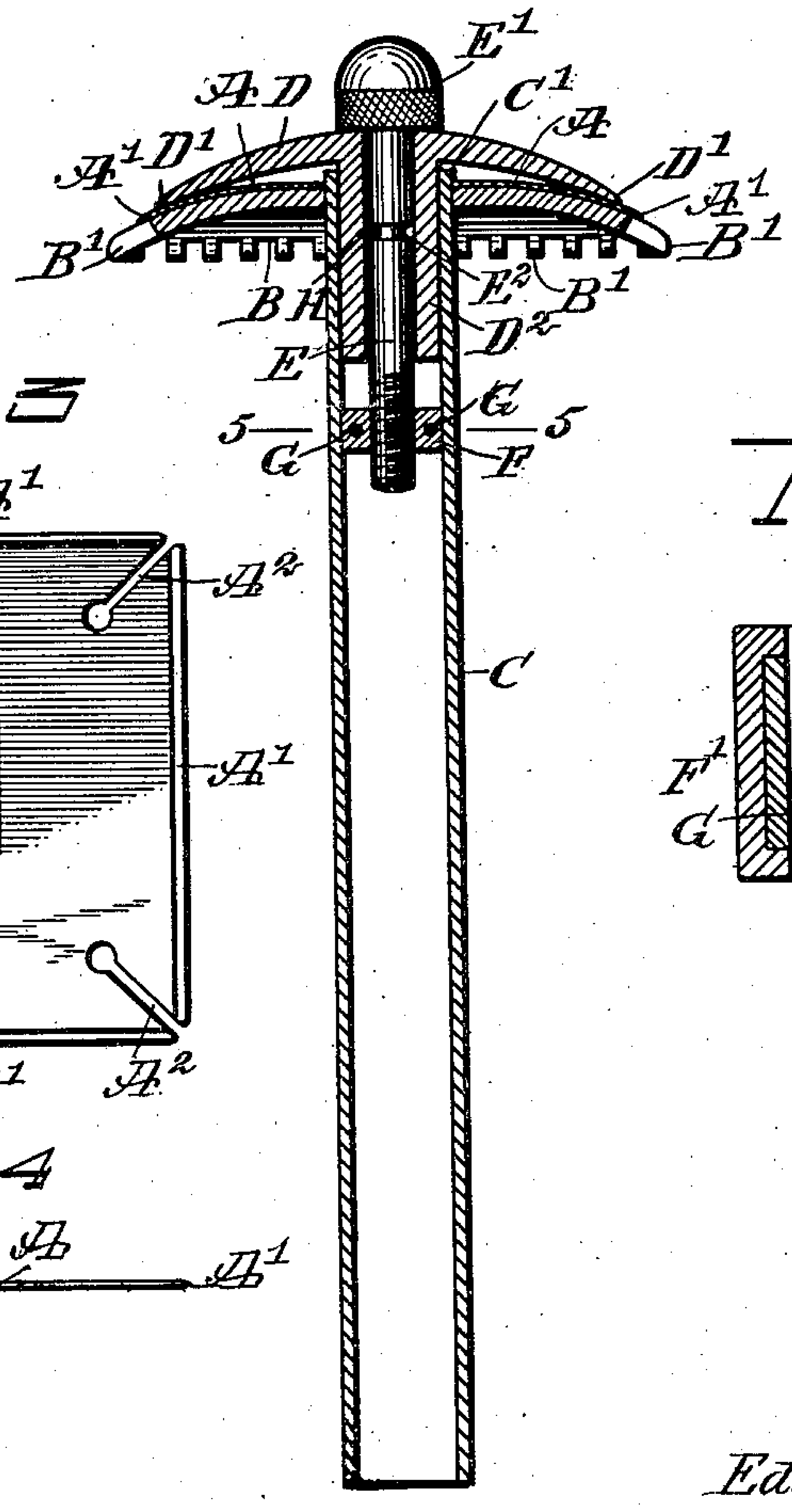


Fig. 2

Fig. 3

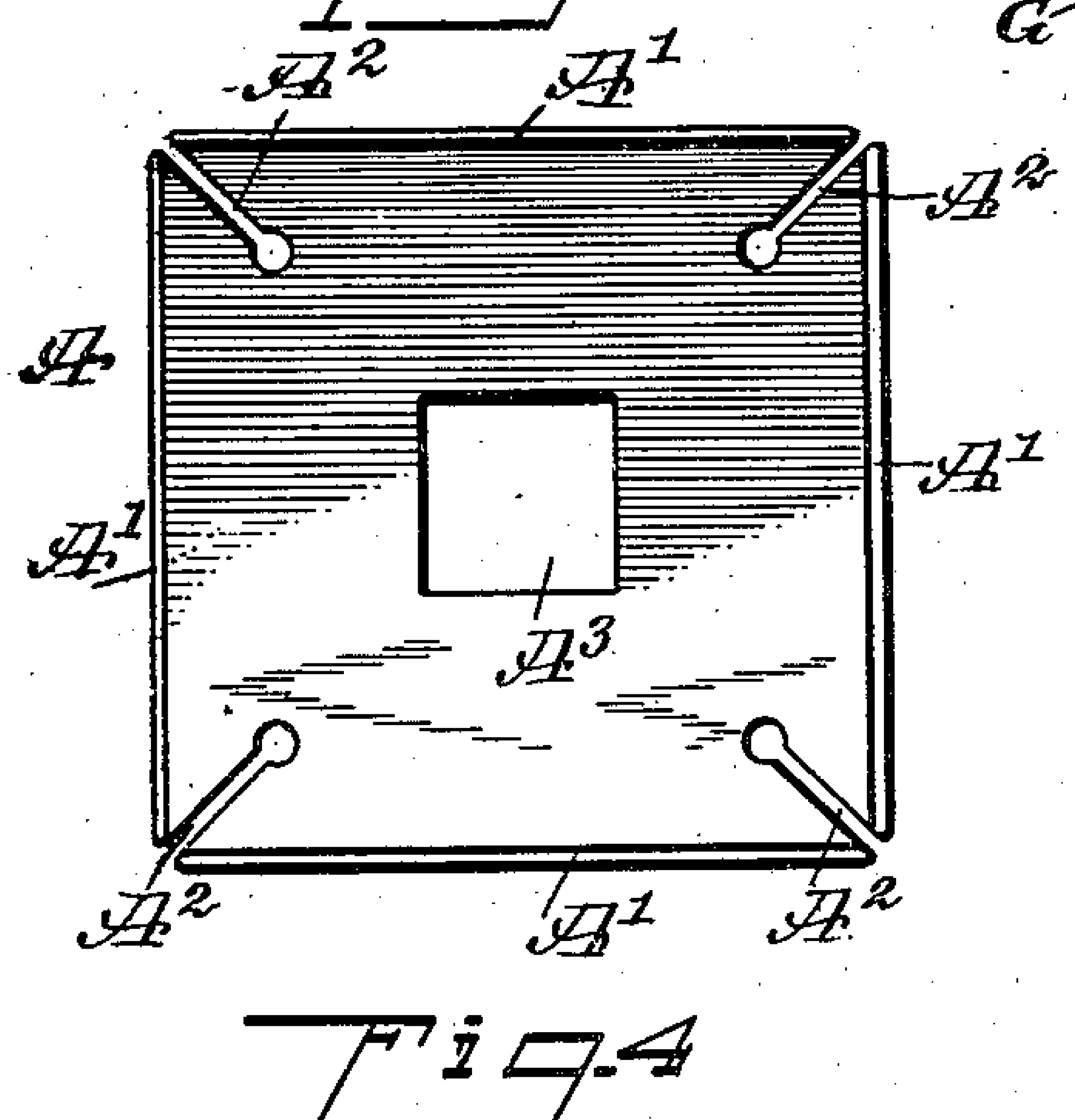
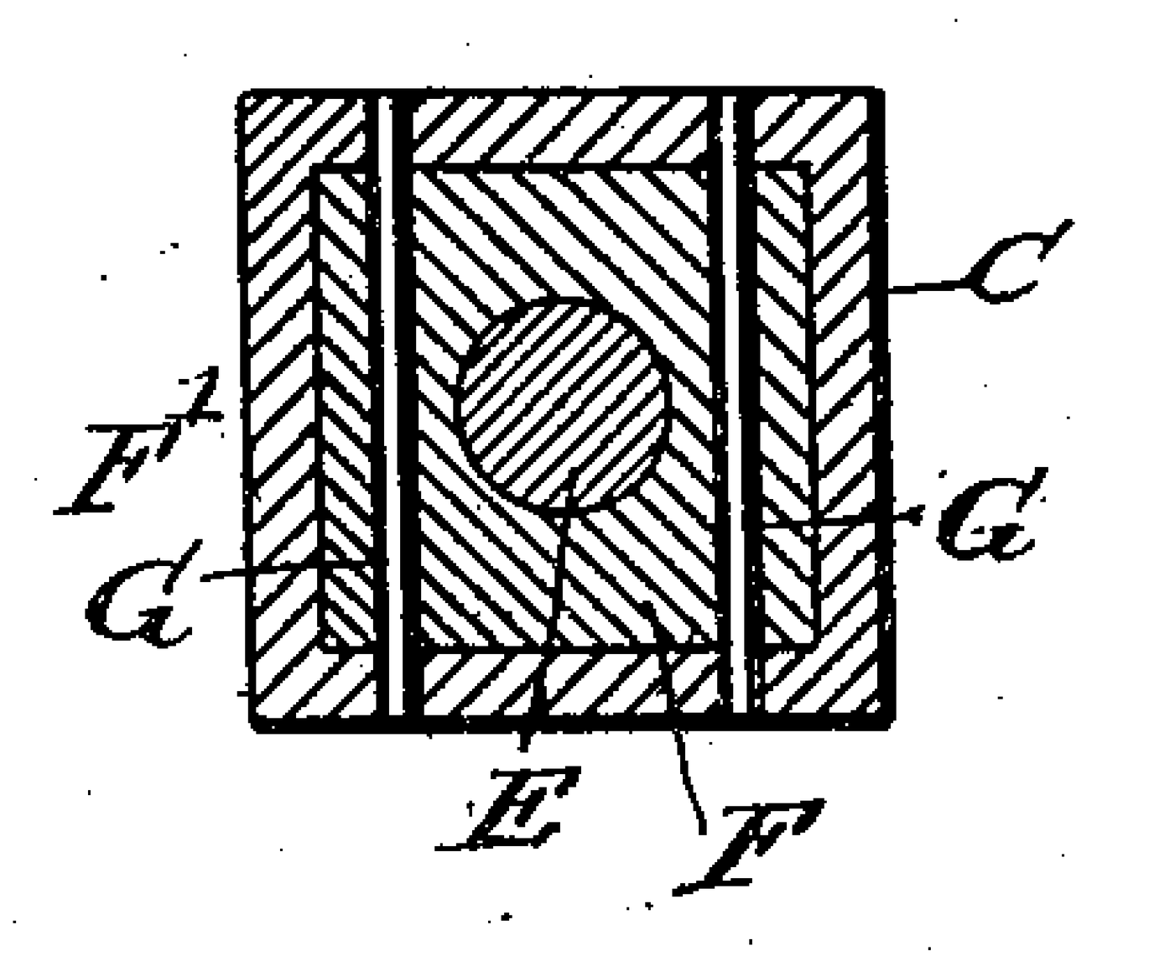


Fig. 4

Fig. 5



WITNESSES:

INVENTOR

Edward Krusius

BY

ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWARD KRUSIUS, OF NEW YORK, N. Y.

SAFETY-RAZOR.

No. 855,252. Specification of Letters Patent. Patented May 28, 1907.

Application filed November 1, 1905. Serial No. 285,449.

To all whom it may concern:

Be it known that I, EDWARD KRUSIUS, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Safety-Razor, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved safety-razor having interchangeable razor-blades arranged to provide a large number of cutting edges on each interchangeable blade, and to permit of conveniently and quickly placing the razor-blade in position on the holder, or removing it therefrom.

The invention consists of novel features and parts and combinations of the same which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement; Fig. 2 is a sectional side elevation of the same, on the line 2—2 of Fig. 1; Fig. 3 is a face view of the razor-blade; Fig. 4 is an edge view of the same; and Fig. 5 is an enlarged cross section of the improvement, on the line 5—5 of Fig. 2, showing more particularly the fastening of the nut in the handle.

The safety razor is provided with interchangeable razor-blades A, alike in construction, and each formed of an exceedingly thin piece of steel of polygonal shape, preferably square, as illustrated in the drawings, each side of the blade being formed into a straight cutting edge A′, to provide a large number of cutting edges for each blade; that is, for a square blade, four cutting edges, as illustrated in Figs. 1 and 3. By making the razor-blade A of very thin steel, it is rendered flexible, and in order to allow each cutting edge A′ to flex properly and independently of the others, a diagonal slot A^2 is cut inward from each corner, as indicated in Fig. 3. The razor-blade A is also provided with a central aperture A^3, made polygonal, preferably squared as shown.

The razor-blade A arranged and constructed in the manner described is removably held in a holder, consisting essentially of a blade support B, made polygonal in shape and having each edge formed into a guard B′ for the corresponding cutting edge A′. A handle C is centrally secured to the blade support B, and is preferably made hollow and square in cross section, the upper end of the handle projecting beyond the outer face of the support B, to form an offset C′, fitting the aperture A^3 of the blade A, to position the latter on the support B; that is, to bring its cutting edges A′ in proper relation to the guards B′.

The backing D for the razor-blade A is in the form of a square plate, the sides D′ of which engage the sides of the razor-blade A adjacent to the cutting edges A′ for firmly clamping the blade A between the support B and the backing D. The latter is provided with a square shank D^2 fitting the interior of the hollow handle C, so as to hold the backing against turning, but to allow the backing to slide in the direction of the length of the handle C. In the backing D and its shank D^2 is mounted to turn a screw-rod E, screwing with its threaded portion in a nut F secured within the handle C by transverse pins G or other suitable means; and the head E′ of the said screw E abuts against the outer face of the backing D at the middle thereof. The said head E′ is rounded off to form a guide adapted to engage the face of the user of the razor, with a view to bring the corresponding cutting edge of the blade A and the guard B′ in proper relation to the face, with a view to insure correct shaving.

The screw-rod E is held against displacement on the backing D by a transverse pin H secured to the shank D^2 and extending transversely in an annular groove E^2 formed on the screw-rod E, as plainly shown in Fig. 2.

In turning the head E′ in one direction, the backing D is caused to move inward toward the support B, to bend the normally straight razor-blade A on the curved or arched upper face of the support B, to bring the cutting edges A′ of the blade A in proper relation to the guards B′. When turning the head E′ in a reverse direction, the backing D is moved away from the support B, and in doing so releases the blade A, to allow the latter to return to its normal straight position by its own resiliency.

When it is desired to remove a razor-blade A, the screw-rod E is turned until it unscrews completely from the nut F, to allow of removing the backing D and its screw-rod E, so that the operator may take hold of the

blade A and lift the same from the support B. Another blade may now be substituted, and then the backing D replaced and the screw-rod E screwed up, so that the backing engages the blade A and bends the same on the support B, whenever it is desired to use the safety razor for shaving purposes.

The safety razor shown and described is very simple and durable in construction, permits of conveniently interchanging the razor-blades, and, owing to the large number of cutting edges on each blade, the user can repeatedly shave without changing the blade.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. In a safety razor, a square support having a convex outer face and provided with a guard at each edge, a handle secured to the support, a flat and resilient blade square in shape and having a slot at each corner, means for holding the blade on the support to prevent it from turning thereon, a square backing plate having a concave inner face and engaging the blade adjacent to its edges, a nut in the handle, and a screw passing through the backing plate and engaging said nut.

2. A safety razor, comprising a flexible square blade having a central polygonal aperture and a cutting edge at each side, a blade support made square and having a central polygonal offset for engaging the said blade aperture, a handle secured to the said support and having a polygonal bore, a backing plate for the blade having a polygonal shank fitting the said handle bore, a nut in the handle, and a screw-rod mounted to turn in the said backing plate and screwing in the said nut, the head of the screw-rod being centrally arranged on the outside of the said backing plate to form a guide.

3. A safety razor, comprising a flexible square blade having a central polygonal aperture and a cutting edge at each side, a blade support made square and having a central polygonal offset for engaging the said blade aperture, a handle secured to the said support and having a polygonal bore, a backing plate for the blade having a polygonal shank fitting the said handle bore, a nut in the handle, a screw-rod mounted to turn in the said backing plate and screwing in the said nut, and means on the said backing plate for holding the said screw-rod against movement in the direction of its length.

4. In a safety razor, a hollow polygonal handle, a polygonal support secured upon the handle a short distance from one end thereof, a polygonal blade on the support and having a central polygonal opening through which the projecting end of the handle extends, a backing plate having a polygonal tubular shank fitting in the handle, a nut in the handle, a screw passing through the tubular shank of the backing plate and engaging the nut, and means for preventing the screw from moving endwise.

5. In a safety razor, a support having a curved outer face, a handle secured to the support with its end projecting a short distance beyond the outer face of the support, the inner end of the handle being polygonal and having a correspondingly shaped bore, a thin resilient blade on the support and having a central polygonal opening through which the end of the handle extends, a backing plate having a concave inner face and a polygonal tubular shank fitting in the bore of the handle, a nut in the handle, a screw in the shank of the backing plate and engaging the nut, the screw being provided with an annular groove, and a transverse pin in the shank of the backing plate and engaging the said groove.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD KRUSIUS.

Witnesses:
DANIEL BACH,
CARL RAUTENBACH.