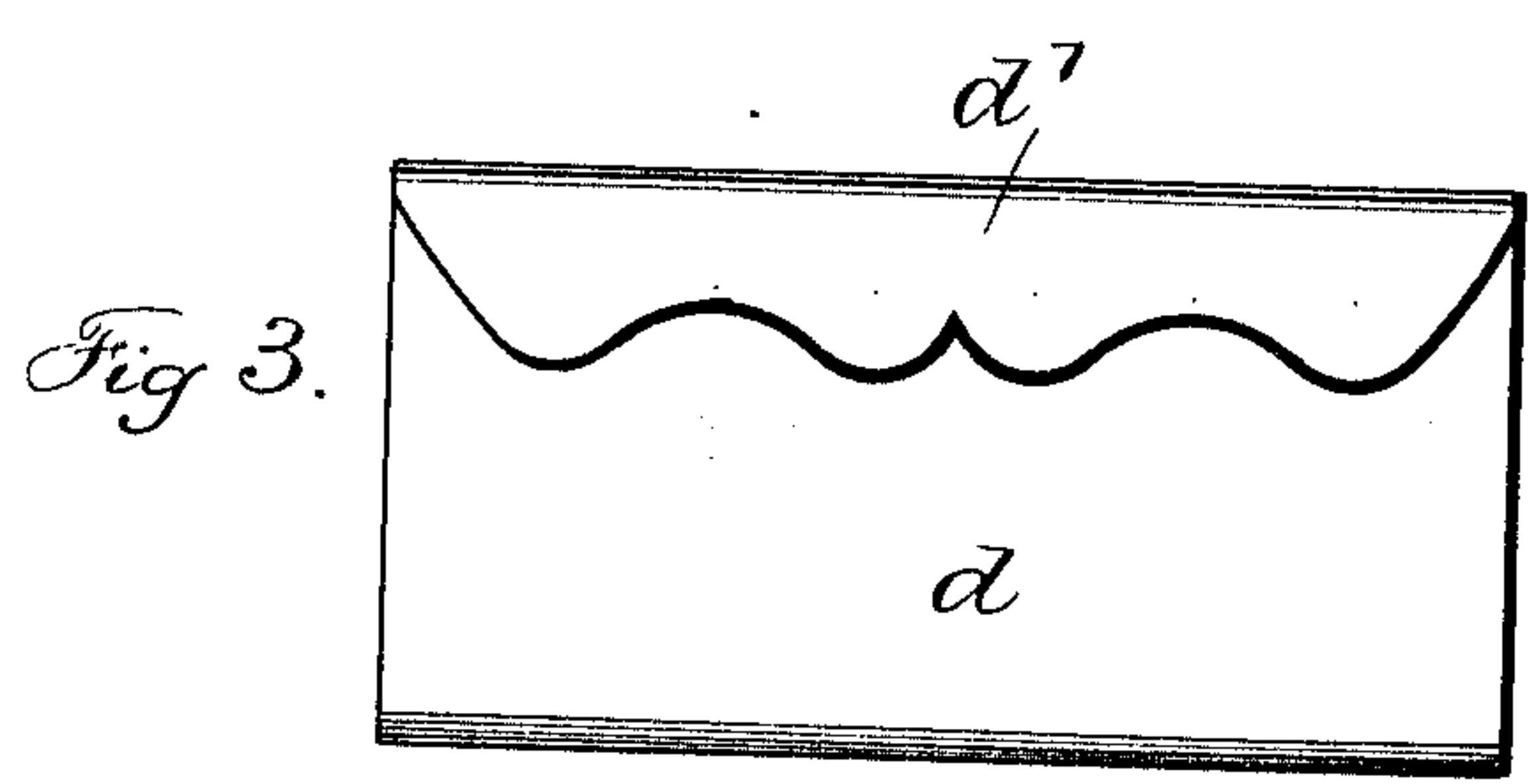
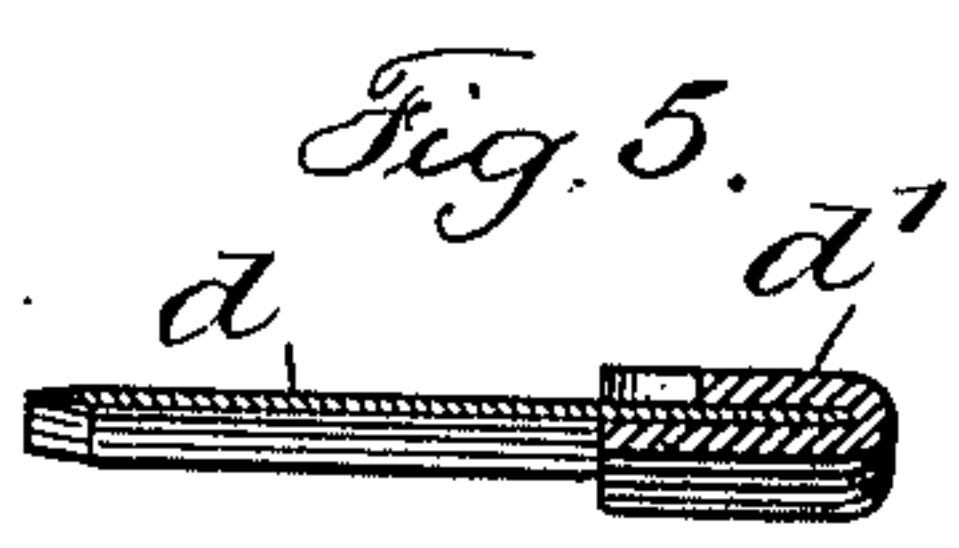
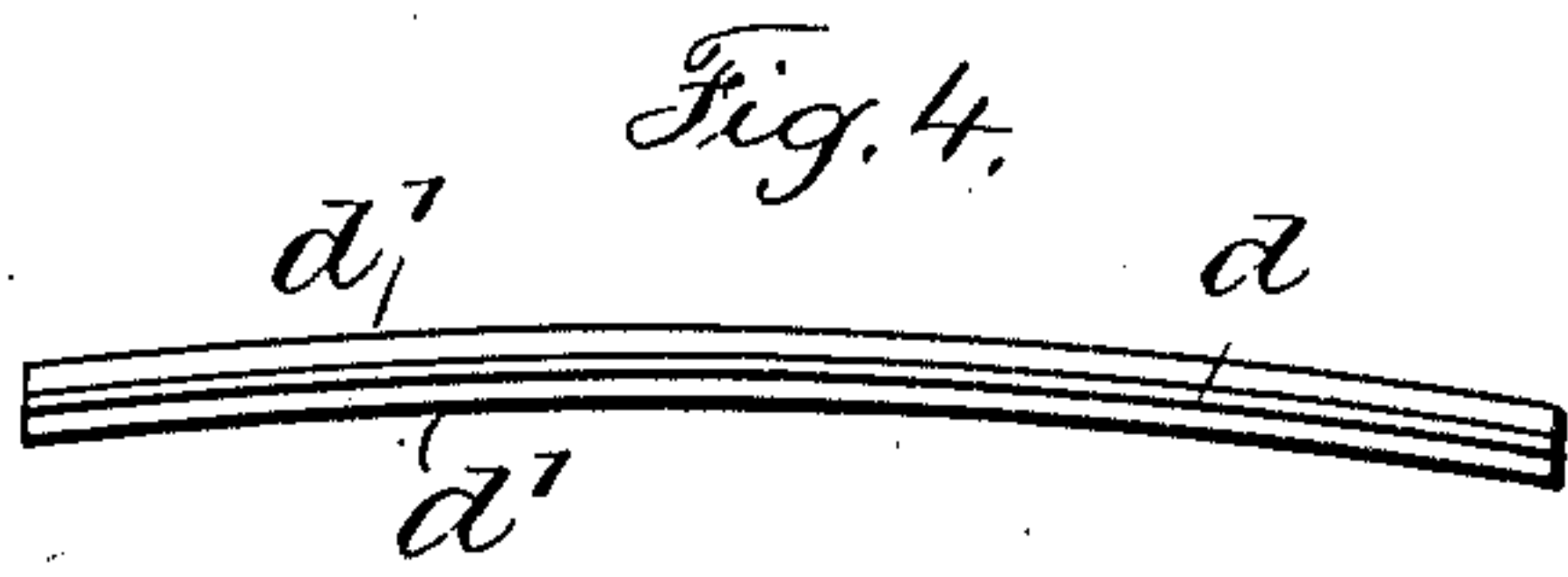
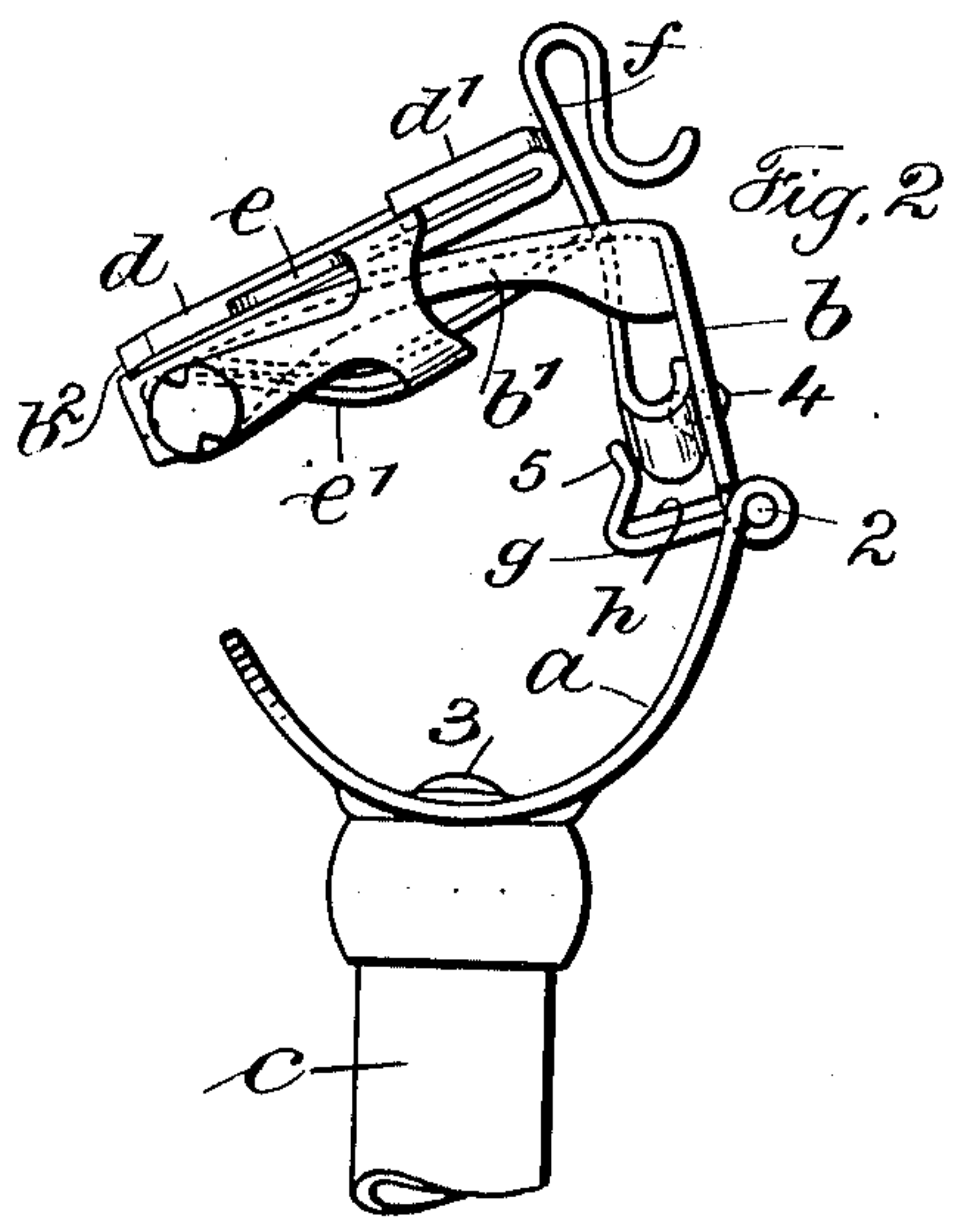
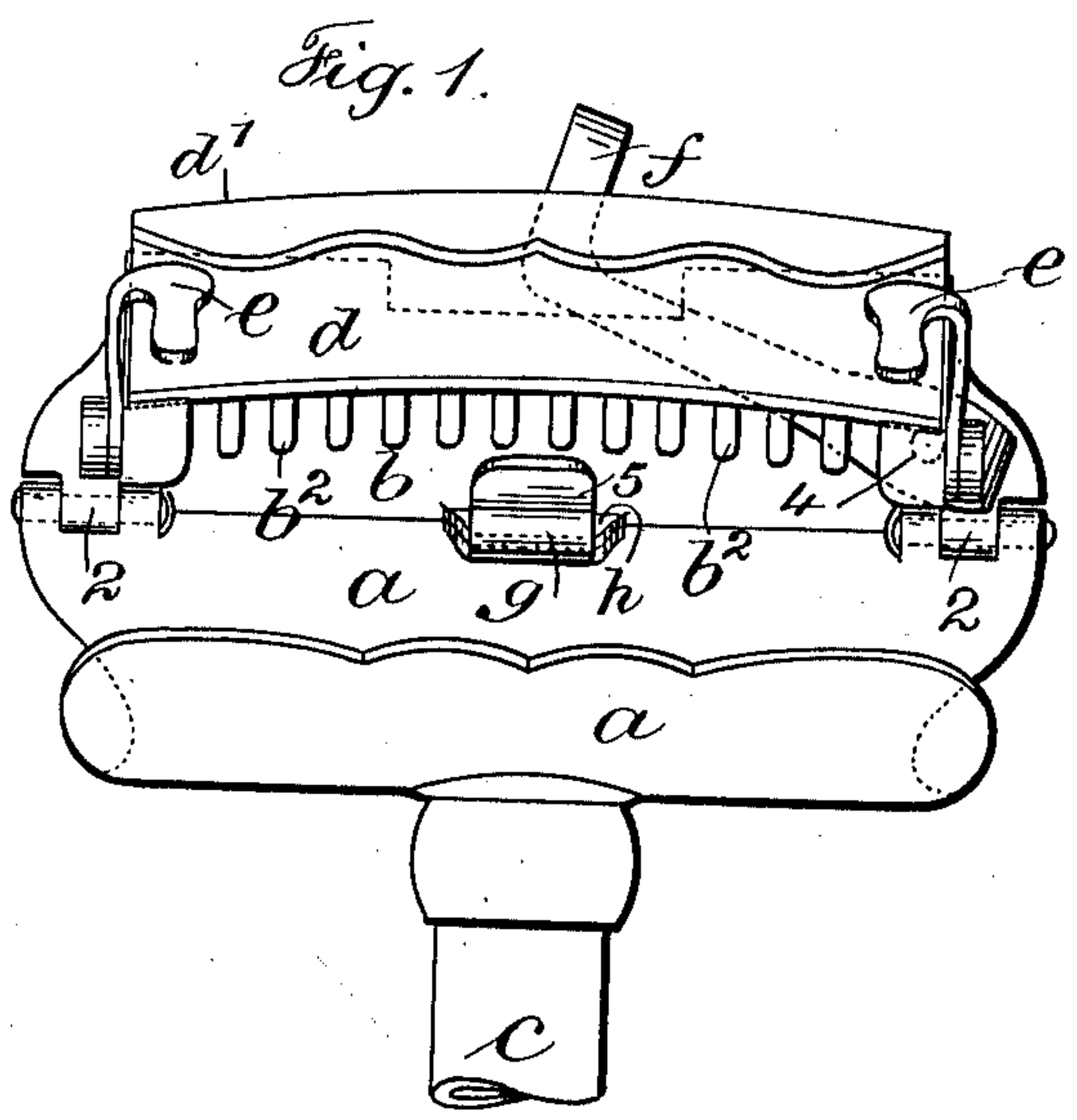


O. KAMPFE.  
SAFETY RAZOR BLADE.  
APPLICATION FILED DEC. 20, 1909.

978,303.

Patented Dec. 13, 1910.



Witnesses  
*Chas. H. Smith*  
*A. J. Berrell*

Inventor  
*Otto Kampfe.*  
 by *Harold Terrell*  
 his atty.

# UNITED STATES PATENT OFFICE.

OTTO KAMPFE, OF NEW YORK, N. Y., ASSIGNOR TO KAMPFE BROS., A CORPORATION OF NEW YORK.

## SAFETY-RAZOR BLADE.

978,303.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed December 20, 1909. Serial No. 533,998.

*To all whom it may concern:*

Be it known that I, OTTO KAMPFE, a citizen of the United States of America, residing in the borough of Brooklyn, in the county of Kings, city and State of New York, have invented an Improvement in Safety-Razor Blades, of which the following is a specification.

Safety razors have heretofore and of late been provided with blades of thin flexible steel and it has been common practice to furnish a shaving outfit with a dozen or more in number of such blades which because they are comparatively inexpensive have been discarded and thrown away as soon as they lose their edge with use, instead of making any effort to re-sharpen them. In fact, these blades have not been adapted to be re-sharpened. These thin flexible normally flat steel blades have been removably placed in a suitable holder and secured for use in a transversely bent form and in a longitudinally bent form, and where bent were flexed and put under tension by the act of placing and securing the blade in the holder.

My invention relates to adapting a thin flexible steel blade for use in the holder of the well-known Star safety razor of my make; the blade at the same time being longitudinally bent, flexed and curved as shown and described in applications for Letters Patent therefor filed by me one October 2, 1906, Serial No. 337,152; one July 20, 1907, Serial No. 384,798, and one October 6, 1909, Serial No. 521,270. The guard-comb is also bent between the end holding means to the curve given to or desired of the blade and the blade is secured in a bent and flexed form to a metal frame also of like curve or arc located along one edge thereof. In this manner the blades are each given a permanent curved form to fit the holder, which except for the bend given to the guard-comb is of well-known construction. This frame is of elongated flat U-shape in cross section and of a size and strength sufficient to overcome any tendency of the blade to return to a flat form, and the blade while thin is of sufficient substance to be ground and sharpened and to be a substantial article.

In the drawing I have represented both the holder and the blade and in this draw-

ing Figure 1 is a front elevation and Fig. 2 a side elevation of the holder of the well-known Star safety razor and a blade of longitudinally bent form. Fig. 3 is a plan, Fig. 4 an edge view and Fig. 5 a central cross section representing my improved blade.

Referring particularly to the holder which shows a two-part blade-carrying frame elongated and connected with the handle, *a* represents a part of the frame of approximately semi-circular elongated form.

*b*, *b*<sup>1</sup>, represent parts at right angles to one another connected to the part *a* by hinges 2, and *c* represents a handle of suitable form advantageously secured by a screw or rivet 3 to the part *a*.

The part *b*<sup>1</sup> in the regular form of Star safety razor is provided with a flat edge or flat toothed edge to receive a section of razor blade lying flatly thereon, but in the device of my present invention *b*<sup>2</sup> represents a guard-comb in which the teeth are raised to an arc or curvature which agrees with the concavity of the blade *d*. This member *b*<sup>1</sup> is provided at the respective ends with blade retaining clips *e*, the under portions of which have formed therewith the springs *e*<sup>1</sup> adapted to bear upon the under side of the member *b*<sup>1</sup>.

*f* is a spring which has heretofore been used in my style of safety razor, pivoted at 4 to the member *b* and adapted to come against the back of the razor blade to hold the same in position upon the guard-comb.

*g* represents a bracket formed preferably integral with the member *a* and having a lip 5, and *h* represents a lock-lug preferably formed integral with the member *b* and adapted in the position of the parts shown in Figs. 1 and 2, to come into engagement with the bracket *g*; being held in place and in connection therewith by the lip 5 which device serves to lock the parts *b*, *b*<sup>1</sup> which are at right angles to one another and integral, in place in relation to the frame member *a* and handle *c*.

The foregoing description has reference to the well-known form of razor blade holder comprising my Star safety razor except that in the present instance the guard-comb *b* is raised at the center and gradually raised between the center and the ends so as to present a convex upper surface. In Figs.



3, 4 and 5 I have represented my improved form of blade adapted to fit this well-known form of holder after the guard-comb has been given the described curvature. In these figures, *d* represents a blade which is longitudinally curved by bending and flexing, and *d*<sup>1</sup> represents a frame of flattened U-shape engaging one longitudinal edge, which frame is permanently bent to about the arc shown in Figs. 4 and 5 and the thin flexible blade inserted in this frame and held securely in position. This blade is therefore always bent and flexed, is made and adapted for the holder with the convex guard-comb and the object of making the blade bent and flexed permanently and a guard-comb to conform to and receive the same, is because it has been found by experiment that a curved blade is better adapted to reach into hollows or inequalities in the face in the shaving act and produces a clean and more perfect shave than can be effected with a straight edge blade as ordinarily employed in safety razors.

I claim as my invention:

1. As a new article of manufacture, a thin, flexible razor blade and a bent or curved frame secured thereto along one edge thereof. 25
2. As a new article of manufacture, a thin, flexible razor blade and a bent or curved frame receiving one edge of the blade and secured thereto so as to impart a permanent bent or flexed form to the blade. 30
3. As a new article of manufacture, a thin, flexible razor blade sharpened along one longitudinal edge, and a metal frame of flattened U-form in cross section longitudinally bent or curved and receiving the opposite unsharpened edge of the razor blade and secured thereto along said edge. 35 40

Signed by me this 9th day of December 1909.

OTTO KAMPFE.

Witnesses:

GEO. T. PINCKNEY,  
E. ZACHARIASEN.