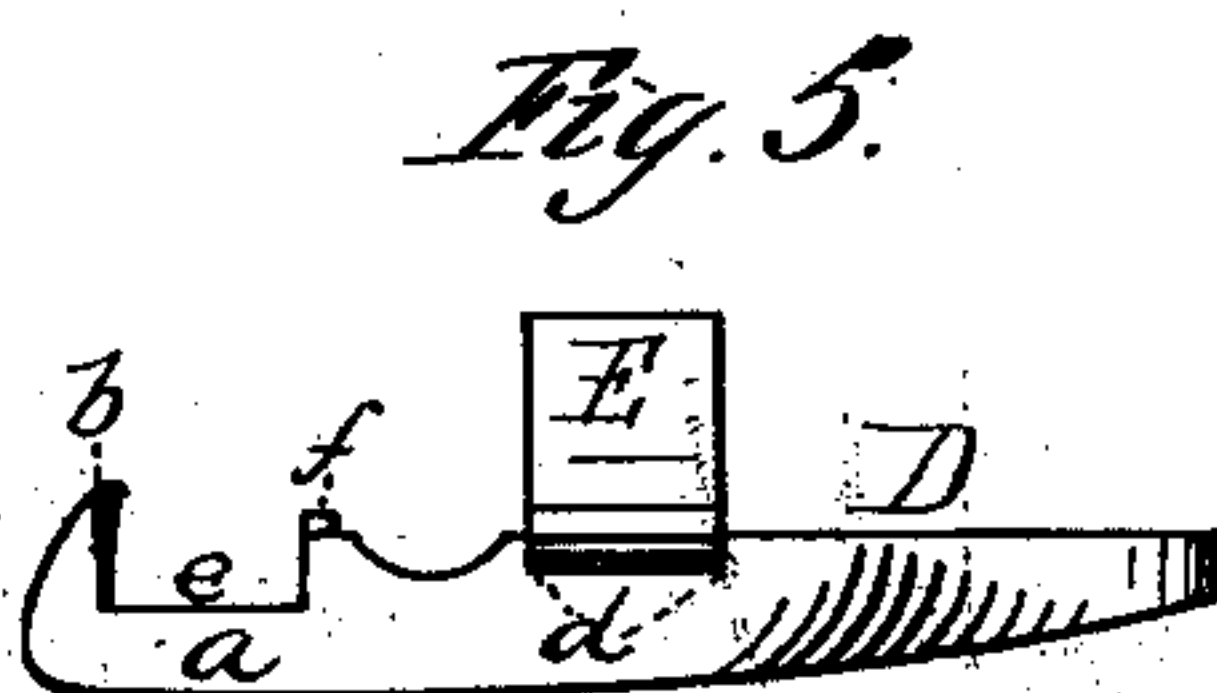
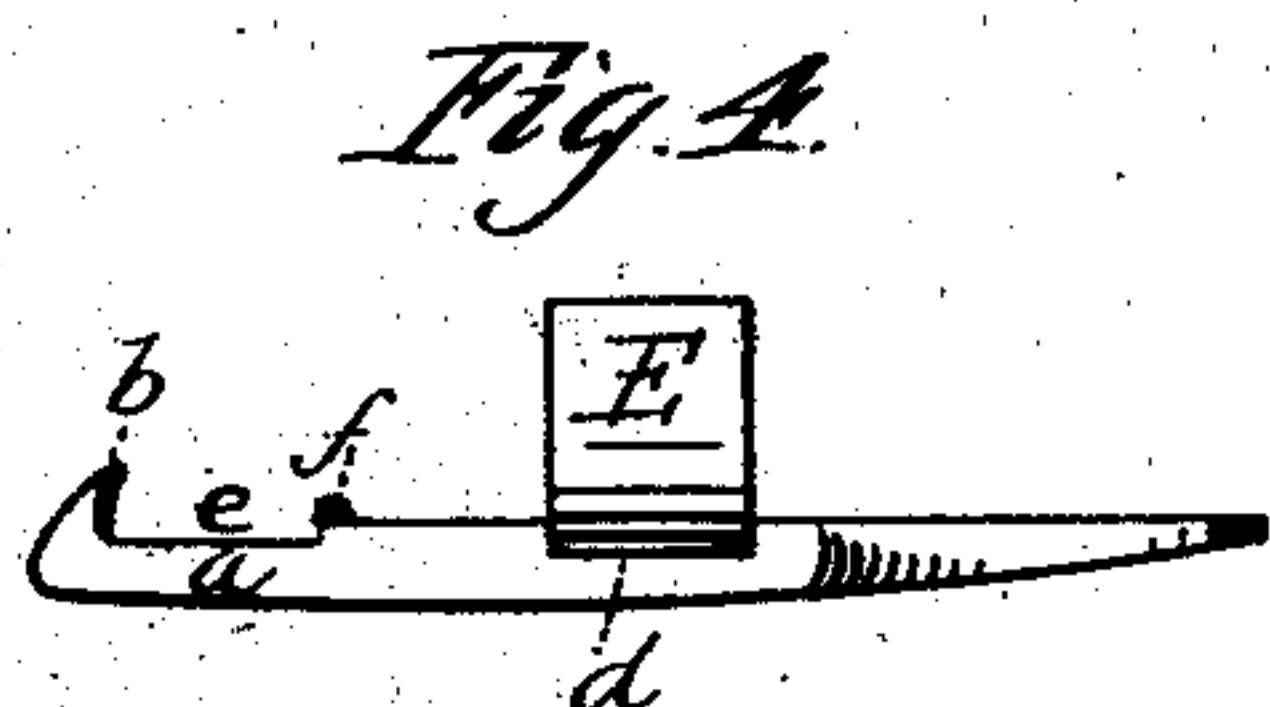
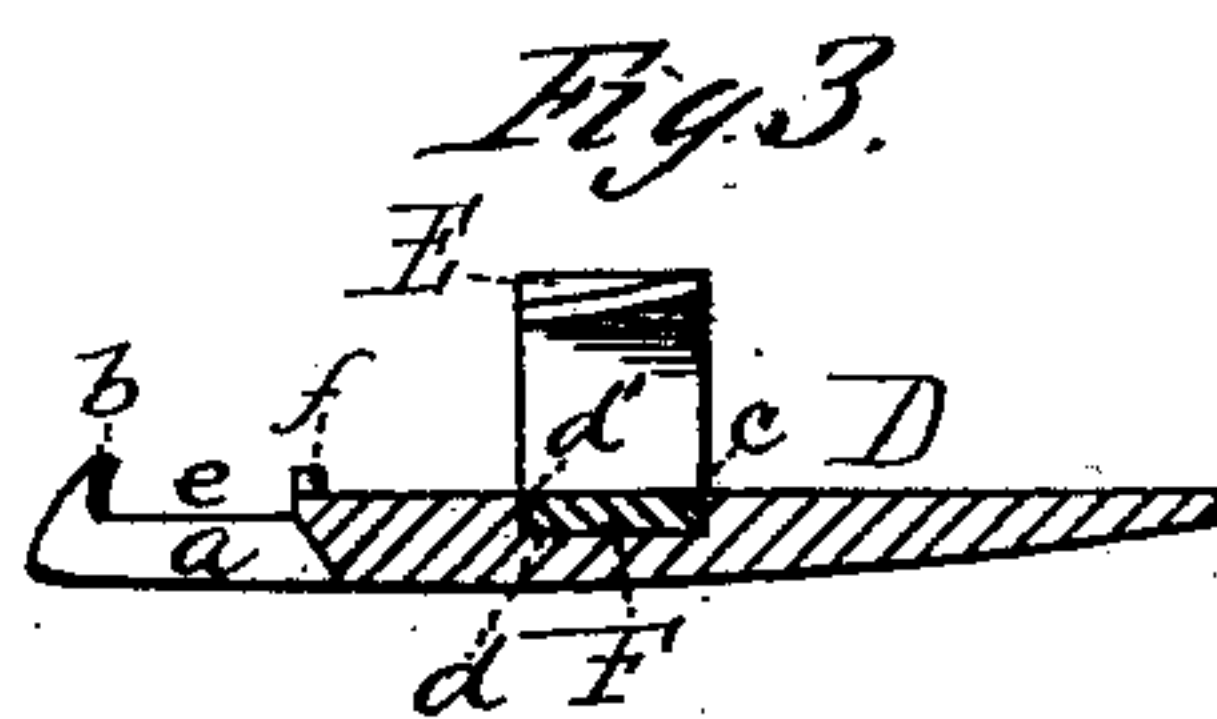
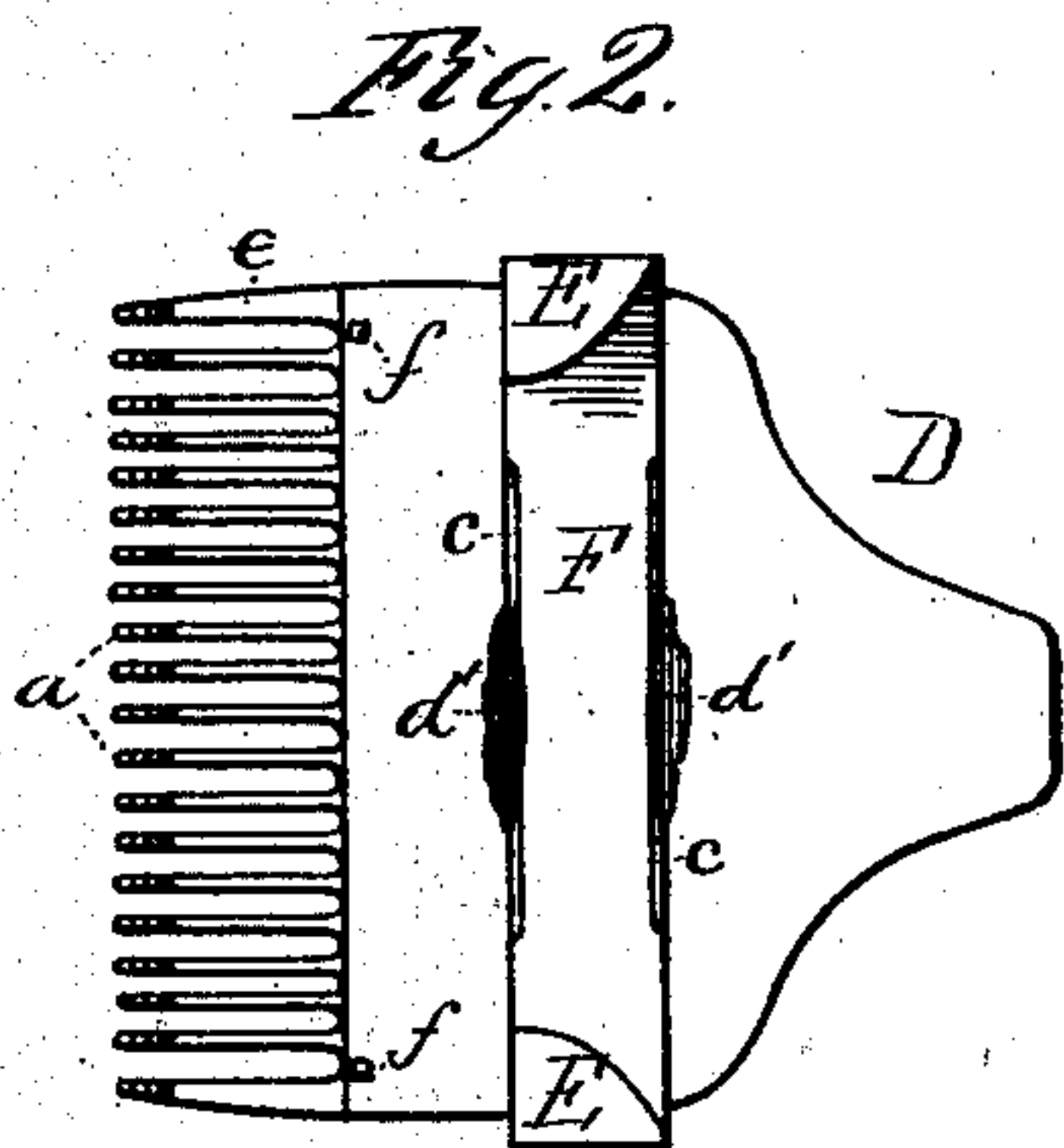
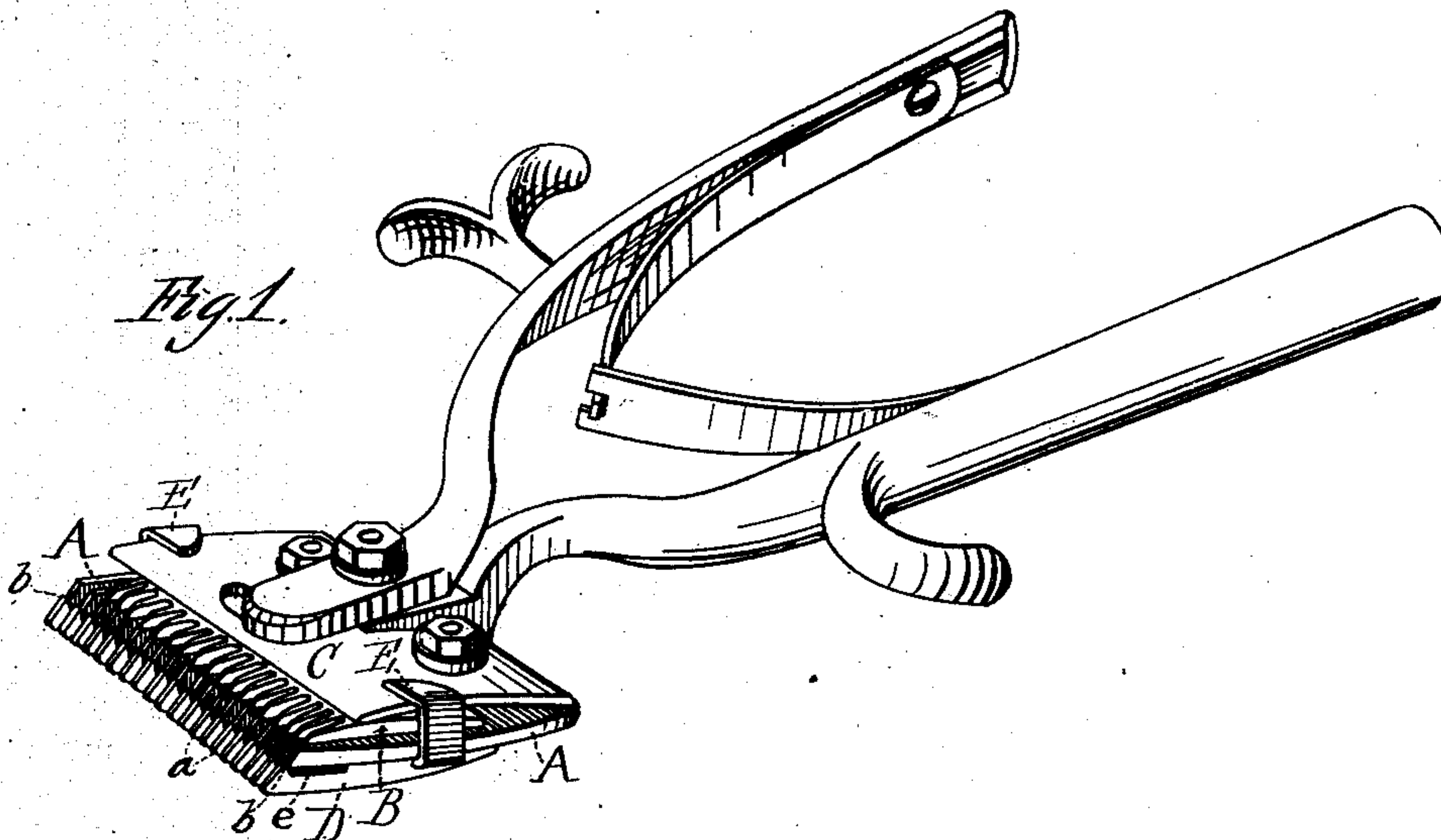


(Model.)

H. A. CANDRIAN.  
Hair Clipper.

No. 237,090.

Patented Feb. 1, 1881.



Witnesses:  
F. B. Townsend  
Wm. Rotthoff

Inventor:  
Herman A. Candrian  
per Lotz & Dyer,  
Attorneys.



# UNITED STATES PATENT OFFICE.

HERMAN A. CANDRIAN, OF CHICAGO, ILLINOIS.

## HAIR-CLIPPER.

SPECIFICATION forming part of Letters Patent No. 237,090, dated February 1, 1881.

Application filed July 26, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, HERMAN A. CANDRIAN, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Hair-Clippers, of which the following is a specification.

The object I have in view is to produce means whereby the clippers most generally used by barbers for cutting hair off close to the scalp can be conveniently adapted to cut hair different lengths, which means will be simple, cheap, easily applied, and will not necessitate any change in the construction of the clippers.

The device is especially adapted for Clark's barber-clippers, but can be used on any other clippers of similar construction, and can also be employed to advantage on clippers for horses, or other like purposes.

My invention consists, principally, in providing hair-clippers having stationary and reciprocating cutting-combs with one or more removable comb-plates adapted to be secured against the stationary cutting-comb of the clippers, so as to increase the thickness of the same; and, further, in the peculiar manner of securing the additional comb plate or plates to the clippers, and in the several novel features of construction involved in my removable comb-plates, all as fully hereinafter explained, and pointed out by the claims.

In the accompanying drawings, forming a part hereof, Figure 1 is a perspective view of hair-clippers with one of my removable comb-plates attached; Fig. 2, a top view of the removable comb-plate detached; Fig. 3, a sectional view of the removable comb-plate; Fig. 4, a side elevation of one size of the removable comb-plate, and Fig. 5 an elevation of a larger-sized comb-plate.

Like letters denote corresponding parts in all the figures.

The clippers are of the usual construction. They have a stationary cutting-comb, A, and a reciprocating cutting-comb, B, which slides between the stationary cutting-comb and a plate, C, above, secured to the stationary cutting-comb by bolts. The clippers are worked by the handles, as will be readily understood.

These clippers are only adapted for cutting the hair one length. To adapt them for cut-

ting two or more lengths, I employ one or more removable comb-plates D, which are the same width as the stationary cutting-comb A, and have comb-teeth *a* corresponding to those of the stationary comb A. The teeth *a* of each comb-plate D, when such comb-plate is in position on the clippers, project upwardly in front of the teeth of the cutting-comb A, as shown by *b*, so as to guide the hair into the teeth of the cutting-combs, and preventing the same from catching between the ends of the teeth *a* and those of the stationary cutting-comb.

The removable comb-plate D is secured to the clippers by spring-clips E at the sides thereof, which spring-clips press upon the plate C of the clippers. To avoid passing bolts through the comb-plate, the spring-clips E are made from a single strip, F, of spring metal, which strip is filed off at its center to form bevel edges *c*. The strip is then laid in a groove, *d*, cast across the upper side of the comb-plate, and is rigidly secured by hammering the metal of the comb-plate over upon the bevel edges of the spring-strip, as shown at *d'*, Figs. 2 and 3.

The teeth *a* of the comb-plate are cut away on their upper sides, *e*, between the upwardly-projecting points *b* and the upper surface of the body of the comb-plate, so as to leave a space between the teeth of the removable comb-plate and those of the stationary cutting-comb, to allow any hairs that may work in between the teeth to pull out easily and without catching.

On the upper surface of the removable comb-plate, close to the teeth *a*, are cast two or more small lugs *f*, which project upwardly between the teeth of the cutting-comb A and keep the removable comb-plate in position.

I propose to make two or more thicknesses or sizes of my removable comb-plates, so that the barber can cut a number of different lengths with the clippers simply by slipping a comb-plate of the right thickness upon the clippers.

The removable comb-plates are nickel-plated or otherwise finished, and will be ornamental in appearance.

It will be seen that the comb-plates could be used upon clippers the stationary cutting-combs of which have one or two teeth less than my comb-plates, if the teeth are spaced



the same distance apart, the lugs *f* bringing the teeth in line with each other and determining the lateral position of the removable comb-plates.

5 The upwardly-projecting point *b* of teeth *a*, besides performing the office before stated, also protect the teeth of the clippers from being accidentally broken.

What I claim as my invention is—

10 1. A comb-plate adapted to be removably secured to hair-clippers, to increase the thickness of the stationary cutting-comb of such hair-clippers, substantially as described.

2. A removable comb-plate, for the purpose set forth, having spring-clips to secure it in position, substantially as described. 15

3. The removable comb-plate D, for the purpose set forth, having spring-clips E, for securing it in position, teeth *a*, provided with depressions *e* and upwardly-projecting points 20 *b*, and lugs *f*, all constructed and arranged substantially as described and shown.

HERMAN A. CANDRIAN.

Witnesses:

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