

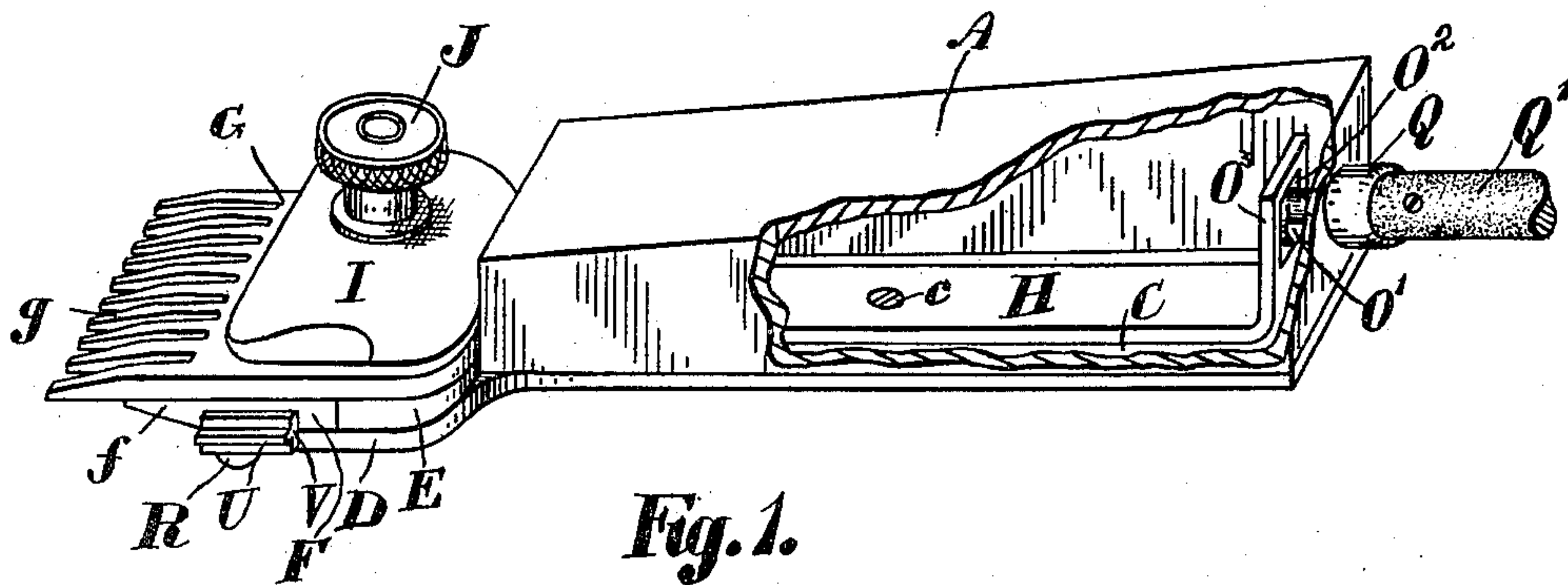
No. 685,707.

Patented Oct. 29, 1901.

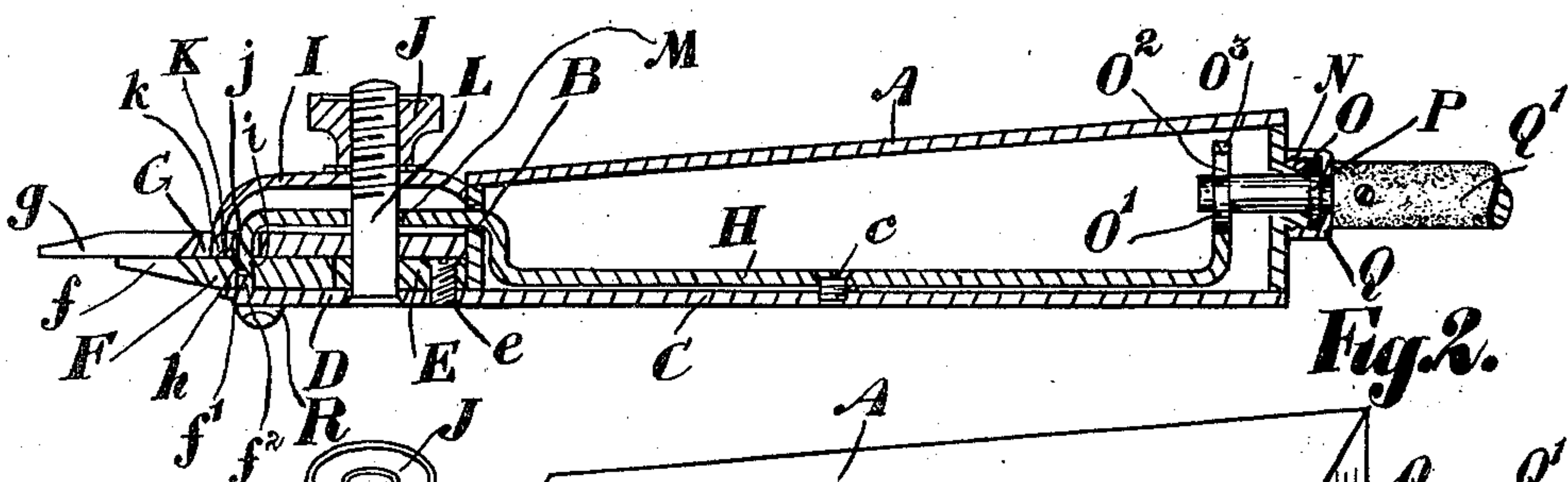
**D. J. ARCHER.**  
**HAIR CLIPPER.**

(Application filed Mar. 7, 1901.)

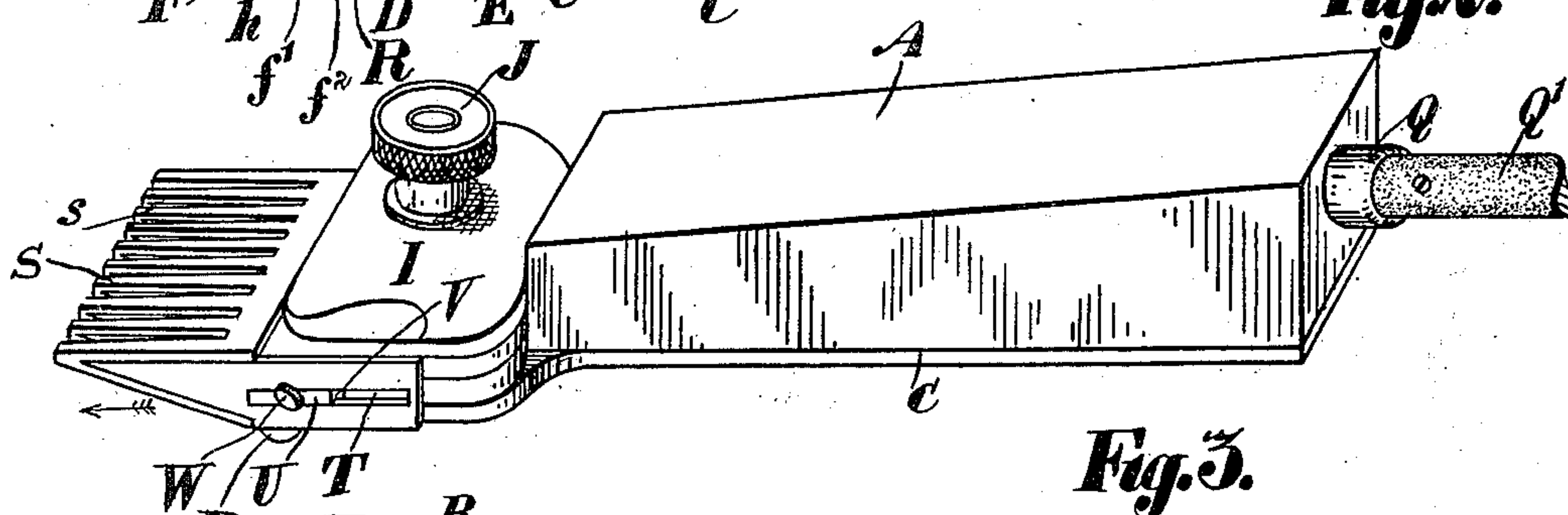
(No Model.)



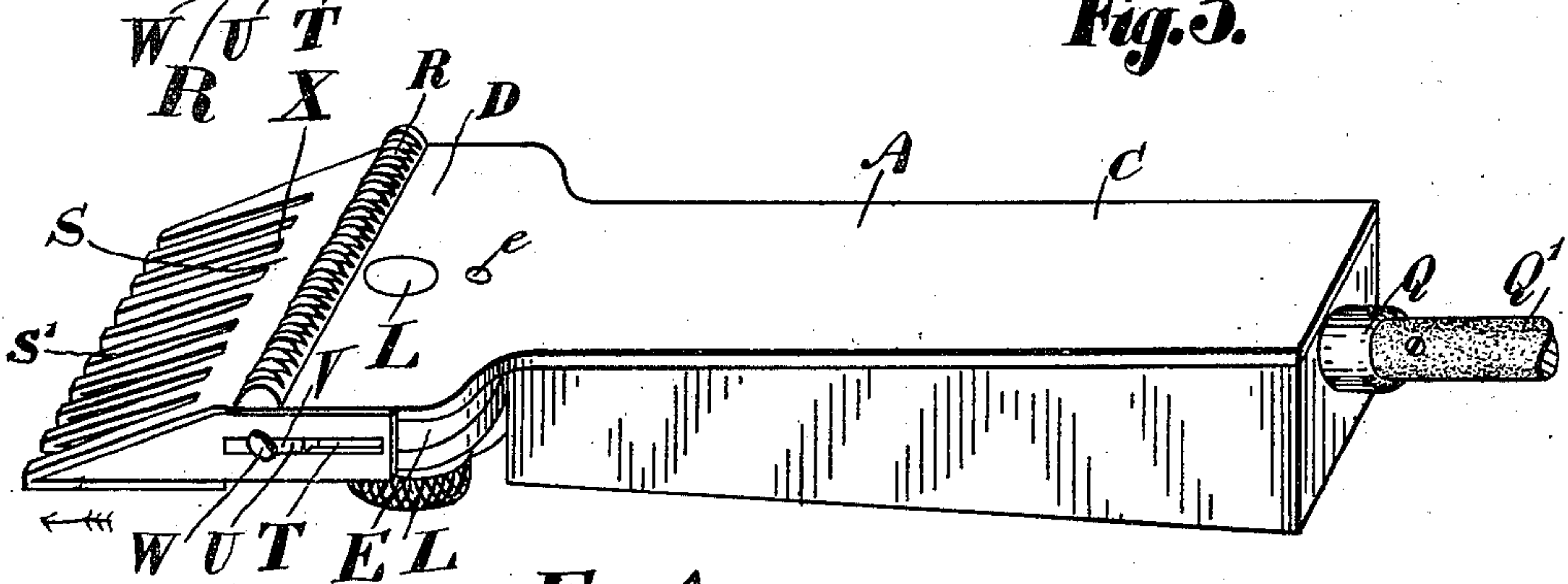
**Fig. 1.**



**Fig. 2.**



**Fig. 3.**



**Fig. 4.**

**Witnesses.**

L. C. Reynolds.  
J. H. McDonald.

**Inventor:**

D. J. Archer  
by Agator R. Case,  
Atty.



# UNITED STATES PATENT OFFICE.

DAVID JOHN ARCHER, OF TORONTO, CANADA.

## HAIR-CLIPPER.

SPECIFICATION forming part of Letters Patent No. 685,707, dated October 29, 1901.

Application filed March 7, 1901. Serial No. 50,203. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID JOHN ARCHER, a subject of the King of Great Britain, and a resident of Toronto, in the county of York, Province of Ontario, Canada, have invented certain new and useful Improvements in Hair-Clippers, of which the following is a specification.

My invention relates to improvements in hair-clippers, and is a further improvement in the hair-clipper patented to me in the United States September 4, 1900, under No. 657,074; and the object of my invention is to design a hair-clipper that will enable me to cut hair no matter in what direction the clipper is run over the head; and it consists, essentially, of a cutter-bar secured above the knife, the teeth of said cutter-bar extending the required distance in advance of the teeth of the said knife, means for operating said knife, and a suitable casing for said hair-clipper, as hereinafter more particularly explained.

Figure 1 is a perspective view of my hair-clipper, part of casing being removed in order to show internal parts. Fig. 2 is a vertical longitudinal section through the hair-clipper. Fig. 3 is a top perspective view of my hair-clipper, showing a guard attached thereto for regulating the length of cut of the hair. Fig. 4 is an under side perspective view of Fig. 3.

In the drawings like letters of reference indicate corresponding parts in each figure.

With the hair-clippers now on the market it is not possible to cut hair if the clipper is run over the head in the direction in which the hair lies—that is, for example, if the clipper were run from the top of the head down to the back of the neck it would not cut the hair. These clippers have to be run against the hair—that is, in the direction opposite to that just described. With my clipper I can cut hair and cut same well no matter in what direction the clipper is run over the head; but my clipper is particularly designed to cut hair when run in the direction in which the hair lies.

A is any suitable casing provided with a longitudinal slot B in its front end. The bottom plate C of said casing is extended out, so as to form a plate D. This plate D could

of course be formed separately from the plate C and simply secured to the same. Secured to the plate D, as by a screw *e*, (or forming part thereof,) is a plate E, against which the inner end of the knife F works. Upon the knife F and plate E is placed the cutter-bar G. Pivoted to the casing A, as at *c*, is a reciprocating arm H, which extends through the slot B and has its end *h* fitted into a slot *i* in the knife F. The end *h* passes through the cutter-bar G by means of the longitudinal slot *j*. As is usual in hair-clippers the knife F has a groove *f'*, extending from side to side of same, in which rests the rib *f*<sup>2</sup>, secured to or forming part of the plate D, thus keeping the said knife in alinement.

L is a threaded pin extending from the plate D through the plate E, cutter-bar G, arm H, and cap I and having on its threaded end a nut J, which rests on the said cap, thus keeping the mentioned parts together. The cap I fits over the cutter-bar G, as shown. Near the front end of this cap is a lug *k*, which fits into a slot K in the cutter-bar G.

M is a longitudinal slot in the arm H, through which the threaded pin L passes.

The back part of the casing A is provided with a bearing N, in which has bearing the stud O, on one end of which is a cam O', operating in the longitudinal slot O<sup>2</sup>, formed in the end O<sup>3</sup> of the arm H.

P is a collar forming part of the stud O and abutting the end of the bearing N. Screwed over the bearing N is a cap Q, which abuts the collar P and keeps the stud O in place. The stud O extends through the cap Q, so that any suitable means for driving the said stud and its connected parts for operating the arm H may be secured thereto. If desired, a connection Q' may be suitably secured to the stud O and driven from any suitable source.

I of course do not confine myself to the construction of my clipper shown, which may be altered in many ways without departing from the spirit of my invention.

It will be understood that to operate the knife F the cam O' is operated in the longitudinal slot O<sup>2</sup>, thus giving the pivoted arm H the necessary reciprocating movement necessary for the knife F.

From the drawings it will be seen that the teeth *g* of the cutter-bar G are considerably



longer than the teeth *f* of the knife *F* and extend beyond same. By so extending the teeth *g* I am enabled to use my clipper as before described. I find from experiment that the extended teeth *g* hold the hair so that the same can be cut by the teeth *f*. If the teeth *g* are made of the same length as the teeth *f*, or even extend a short distance beyond the same, it will not suffice, as the teeth *f* when they come in contact with the hair will not be able to cut same, as the teeth *g* not being sufficiently long to support the hair the same is naturally not cut. By making the teeth *g* extend far enough in advance of the teeth *f* I support the hair between the said teeth and feed it into the teeth *f* to cut same. I am now speaking of when I cut hair running the clipper over the head in the direction in which the hair lies. The clippers now on the market can only be used to cut the hair when they are run over the head against the direction in which the hair lies; but by placing the knife *F* under the cutter-bar *G* and extending the teeth *g* of same out the required distance I am enabled with my clipper to cut hair no matter in what direction the clipper may be run over the head. This is the particular object of my invention, and I claim that this has not heretofore been possible with the clippers now in use. Secured to or forming part of the plate *D* and near its forward end is a toothed bar *R*. When the clipper is being used in hot weather and happens to be run over the neck, if the toothed bar *R* or its equivalent were not used the skin would be pulled and cause discomfort to the person in the chair. The teeth in the bar *R* are of course blunt. I may use the bar *R* or not, as I see fit.

In order to enable the hair to be cut different lengths, I secure over the cutter-bar *G* and knife *F* a guard *S*, provided with teeth *s*. In the sides of the guard *S* is a longitudinal slot *T*, in which has movement the flange *U* of the piece *V*, secured to or forming part of the plate *D*. In order to cut hair longer, the pinch-screws *W* are loosened and the guard *S* moved in the direction indicated by arrow. When the said guard is properly adjusted, the screws *W* are screwed in. As the clipper is run over the head (I am now considering the guard as having been moved outwardly, as just described) the root *X* of the teeth *s* comes in contact with the hair and pushes same in front of it, so that when the teeth *f*

come in contact with the hair it is nearer the upper end of same, and consequently only a short end of the hair is cut off. I may, if desired, dispense with the upper teeth *s* of the guard *S*, but preferably use same, so as to form a support for the under teeth *s'* of said guard. It will of course be understood that to shorten the cut of hair it is only necessary to move the guard *S* inwardly.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a hair-clipper, the combination with the cutter-bar and teeth thereof, of a knife resting underneath said cutter-bar, teeth of said knife, the same resting against the teeth of said cutter-bar, the teeth of said cutter-bar extending a suitable distance beyond the teeth of said knife, suitable supports for said cutter-bar and said knife, and means for operating said knife, as and for the purpose specified.

2. In a hair-clipper, the combination with the cutter-bar and teeth thereof, of a knife resting underneath said cutter-bar, teeth of said knife, the same resting against the teeth of said cutter-bar, the teeth of said cutter-bar extending a suitable distance beyond the teeth of said knife, suitable supports for said cutter-bar and said knife, a support secured to one of said suitable supports, an arm pivoted on said support with its front end engaging said knife, and means for operating said pivoted arm, as and for the purpose specified.

3. In a hair-clipper, the combination with the cutter-bar, teeth thereof, a knife resting underneath said cutter-bar, teeth of said knife, the same resting against the teeth of said cutter-bar, the teeth of said cutter-bar extending a suitable distance beyond the teeth of said knife, suitable supports for said cutter-bar and said knife, and means for operating said knife, of a tooth-provided longitudinally-adjustable guard held by one of said suitable supports underneath the teeth of said knife for regulating the length of cut of hair, as and for the purpose specified.

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

DAVID JOHN ARCHER.

Witnesses:

EDGERTON R. CASE,  
LAWRENCE C. REYNOLDS.