F. L. DOLAN.

HAIR CLIPPER.

APPLICATION FILED MAR. 16, 1908.

919,833.

Patented Apr. 27, 1909.

Fig. 5

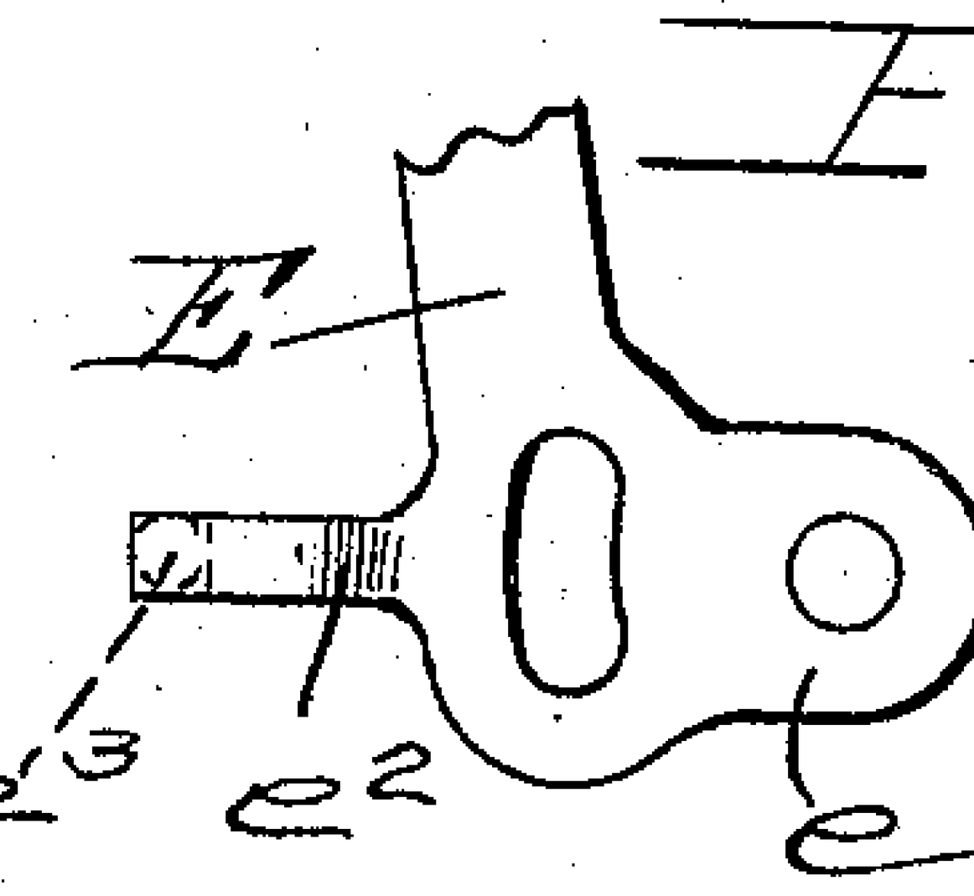


Fig. 1

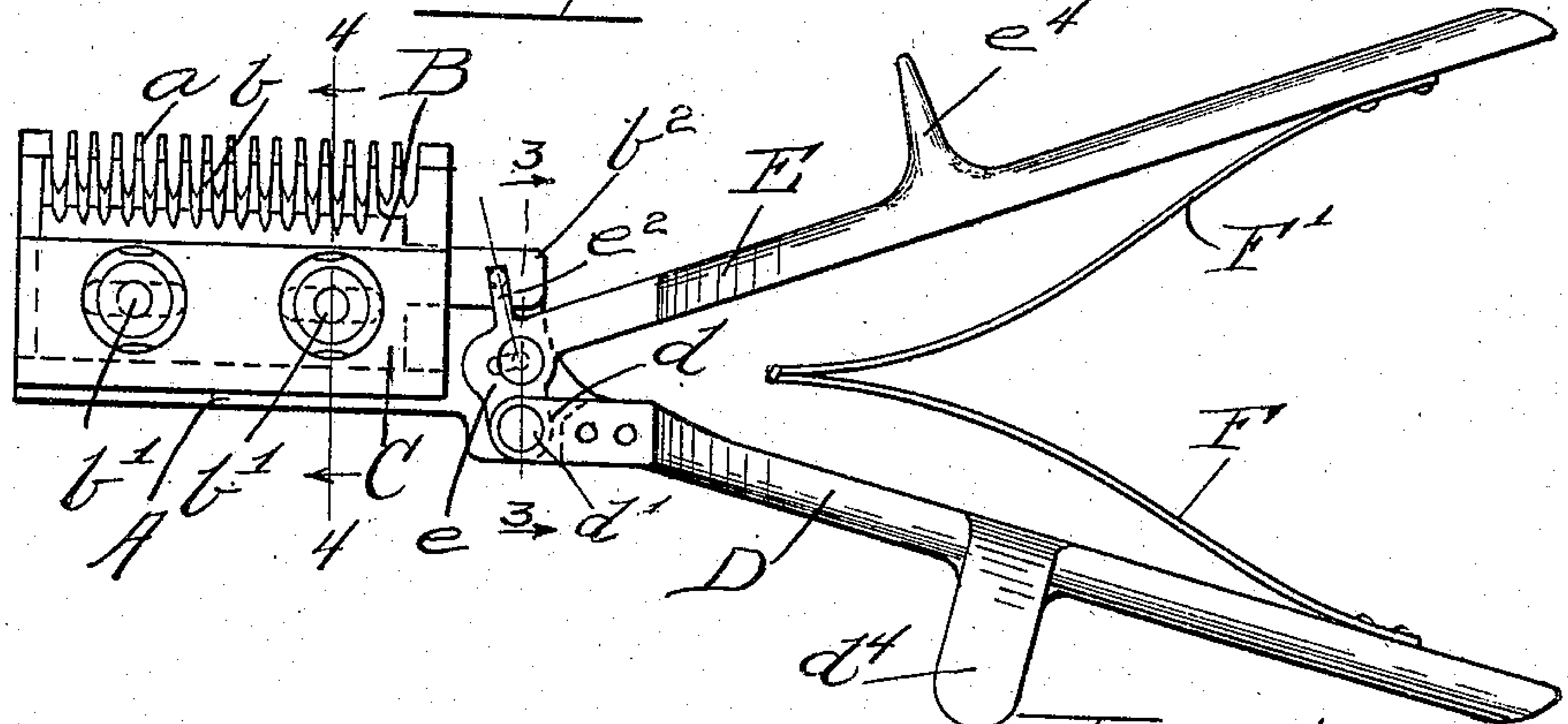


Fig. 3

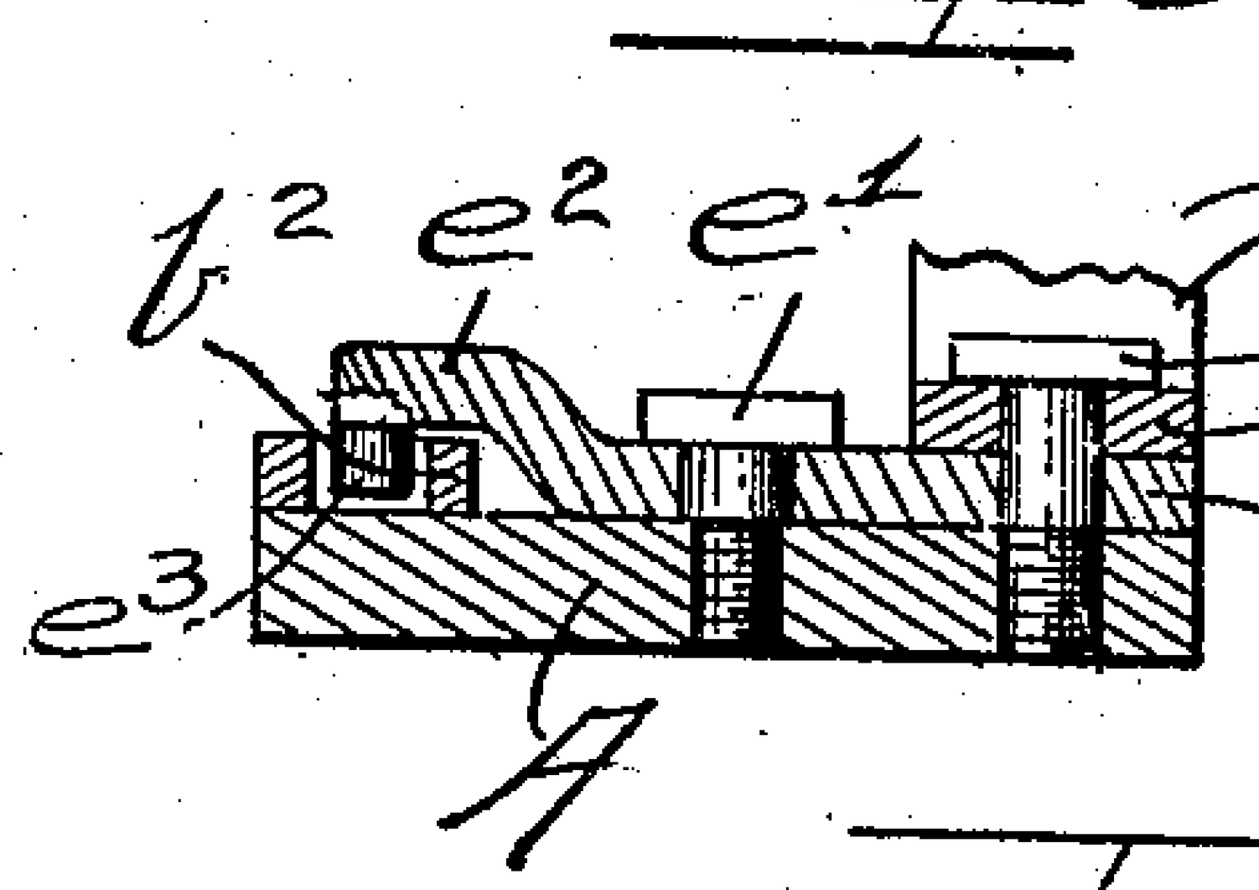


Fig. 6

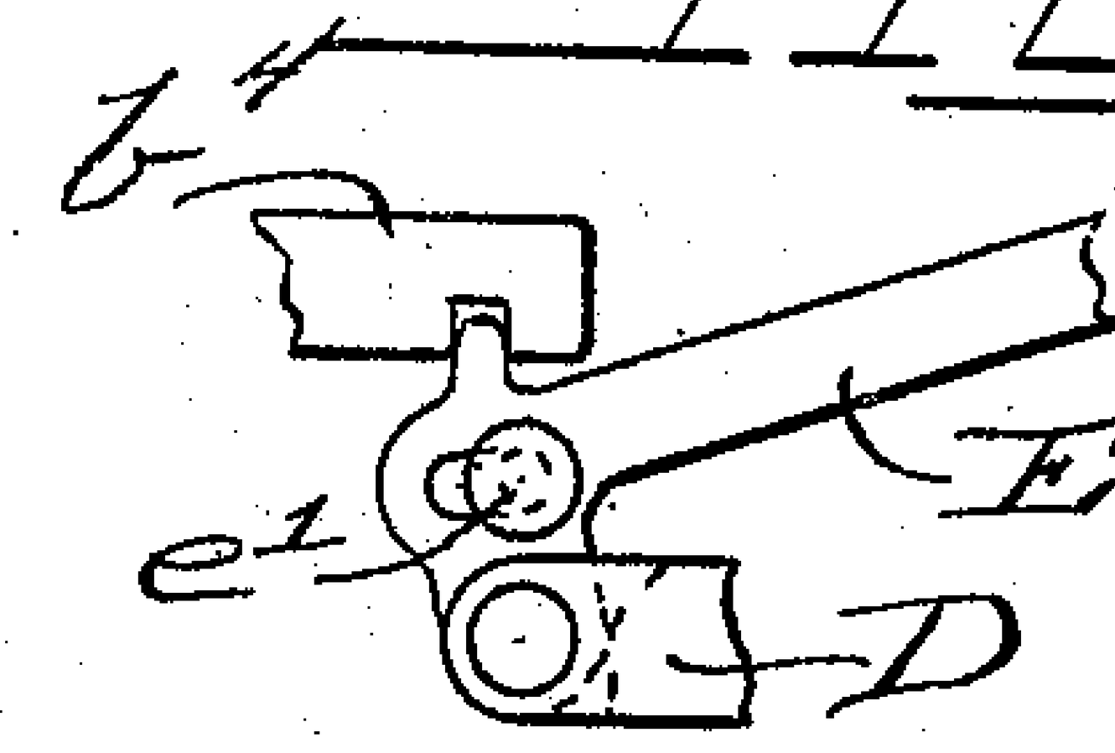


Fig. 2

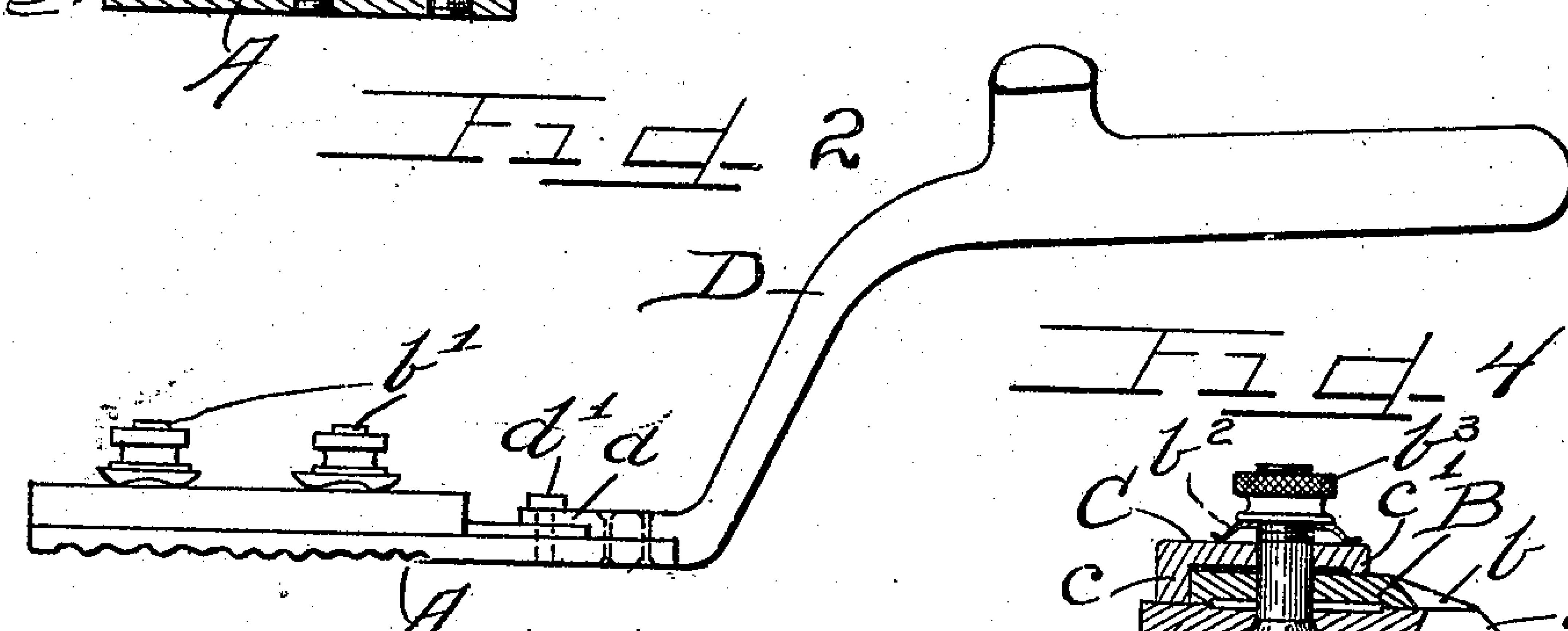
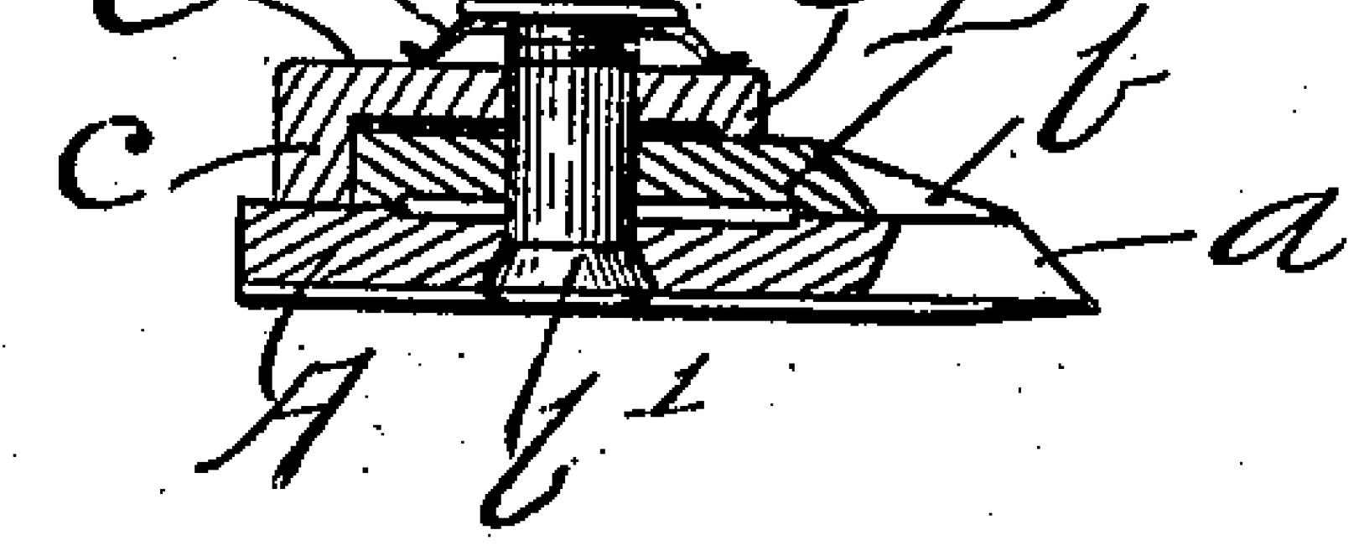


Fig. 4



Witnesses

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HAIR-CLIPPER.

No. 919,833. Specification of Letters Patent. Patented April 27, 1909.

Application filed March 16, 1908. Serial No. 421,298.

To all whom it may concern:

Be it known that I, FRANK L. DOLAN, a citizen of the United States, and a resident of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Hair-Clippers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of hair clippers wherein a reciprocating toothed plate coacts with a metallic comb when manually actuated to cut hair close to the skin or scalp.

With manually operated clippers heretofore devised it has been usual for the hair to be cut by the reciprocation of the knife transversely the general line of the handles and although the handle of such tools is usually bent outwardly and upwardly from the tool, this form and mode of operation has proven in many instances inconvenient owing to the inability of the user of the clipper to cut close to the coat collar or to cut properly on the neck above the shoulder.

Several different attempts have been made to construct a clipper along lines that would obviate the objectionable features of those in which the cutters operate transversely the handles but heretofore without avail and in consequence a general desire on the part of barbers and others likely to use such a tool is expressed for a clipper of the class described in which handles are so disposed as to avoid interference with the work by the hand of the operator.

The object of the invention is to provide a clipper of the class described, the cutter of which reciprocates and cuts longitudinally of the handle instead of transversely thereof.

It is also an object of the invention to very greatly reduce the width of the clipper to enable the same to be used in smaller space and also to simplify and improve the construction in every particular, especially in the construction and the direction of the handles from the blade and to afford a pivotal connection between the handle and said blade whereby maximum power may be delivered therefrom to the cutters.

It is also an object of the invention to afford means for slidably connecting the cutting elements of the clipper and to afford a pivotal connection of one of the handles with one of said cutters whereby great strength and positive action are assured.

The invention consists in the matters hereinafter described and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is a top plan view of a clipper embodying my invention. Fig. 2 is a rear elevation of the same. Fig. 3 is a section on line 3—3 of Fig. 1. Fig. 4 is a section on line 4—4 of Fig. 1. Fig. 5 is an enlarged face view of the inner end of the pivoted handle. Fig. 6 is a detail illustrating a slight modification of the connection of the pivoted handle with the reciprocating blade.

A indicates a steel bottom plate or comb which, as shown, is transversely grooved on the bottom, as is common with devices of the kind and is provided on its front edge with teeth *a*, which afford on the upper side thereof, oppositely disposed cutting edges. Slidably secured on the comb A, is the reciprocating cutter B, also of steel and provided with teeth *b*, as shown in Figs. 1 and 4, which project outwardly on the teeth *a* and are provided on the under side with opposed cutting edges adapted to coact with the cutting edges of the teeth *a*.

As shown, the bottom plate A and the reciprocating cutter B are milled or formed on the adjacent sides to afford an open, central space for the entire length leaving a bearing for the cutter in a line slightly back of the teeth and also along the rear edge, as shown in Fig. 4. Bolts b', two in number, are countersunk into the bottom plate and protrude therethrough and through the cutter B, which is slotted longitudinally to receive the same, as shown in dotted lines in Fig. 1. As shown also a clamping and cover plate C provided with a downwardly directed flange *c* at its rear edge and having a forward edge c' also slightly downturned, engages on the reciprocating cutter B just back of the teeth *b* and said flange *c* bears upon the bottom plate or comb A and affords a guide against which the rear side of the cutter B slides. Springs b^2 shown as spring washers are engaged on the bolts b' and any requisite tension is secured on the clamping cover plate to bind the cutter B upon the comb A by means of the milled nuts b^3 which are threaded upon the upper ends of the bolts.

As shown, a rigid handle D is rigidly

secured to the bottom plate or comb which is longitudinally extended for that purpose by means of rivets or screws and is shaped to extend upwardly and slightly rearwardly from the comb for a portion of its length and thence approximately parallel with the plane of the comb, as shown in Figs. 1 and 2. The forward end of said handle or that secured on the end of the comb is provided with a forwardly projecting flange *d*. The handle E is shaped to correspond with the handle D and is pivotally engaged upon the end of the base plate or comb by means of a cap screw *e'* which extends through a longitudinal slot in the inner end of said handle. Intergal with the inner end of the handle E is a laterally directed arm *e*, which pivotally engages a screw bolt *d'*, which extends through said flange *d*, and the base plate as shown in Figs. 1 and 3. An arm e^2 integral with the handle, extends oppositely from the arm *e* and is provided at its extremity with a pin e^3 shown in Fig. 3 and in dotted lines in Fig. 5, which engages in a suitable aperture in the extended end b^2 of the reciprocating cutter. As shown laterally projecting spurs e^4—d^4 are provided on the respective handles to afford a better grip for the hand and to prevent the hand from sliding downwardly on the handle and as shown, leaf springs comprising plates F—F' are secured near the outer end of the handle interlocking in any suitable manner to exert outward pressure on the handles to retract the reciprocating plate B, after which the plate is thrown forwardly by bringing the handles together. As shown, the outer ends of said spring blades F—F' are screwed or otherwise engaged on the handle and if desired one or both of the same may be adjustably engaged to the handle to permit varying tension of the spring.

The operation is as follows: In operating the clipper (which, of course, is used for the same purpose and in very much the same manner as such devices have heretofore been used), the hand of the operator is kept well away from the shoulder and back of the customer and it is possible to work into narrower spaces and to more efficiently use the clipper than has been heretofore possible. This is particularly true in using the clipper upon very fleshy people having short necks. The construction of the base plate or comb and the actuating handles being on the ends of the clipper instead of on the rear enable a very narrow construction to be used.

Of course, any desired tension may be maintained upon the reciprocating blade by adjustment of the thumb screws.

Of course, it is not essential that the exact construction described be employed. For instance instead of the pin e^3 engaging in an aperture in the extended end b^2, of the cutter, the cutter may be notched as indicated by b^4 in Fig. 6 and in that event the arm e^2 may be made comparatively short and may be projected into the notch to reciprocate the cutter in either direction as the notches are actuated.

Of course, various details of construction may be modified. I therefore do not purpose limiting this application for patent otherwise than necessitated by the prior art.

I claim as my invention:

1. A clipper embracing a comb having corrugations extending the entire width of the bottom, a reciprocating cutter, means for securing the comb and cutter together, an extended narrow end integral with the cutter and provided with an aperture therein, a plurality of pivot bolts at the extremity of the comb, a handle rigidly secured to one extremity of the comb curved upwardly and rearwardly adjacent the comb, with the outer end of the handle directed parallel with the comb, said curved portion and parallel end being approximately equal in length and the handle extending in the direction of reciprocation of the cutter, a handle provided with a slot at one end directed longitudinally of the handle and in which one of said pivot bolts engages, an arm extending transversely of the handle and pivoted to the other of said pivot bolts, an arm extending oppositely from the aforesaid arm and a pin at the extremity thereof engaging in the aperture in the extended narrow end of the cutter.

2. The combination with a comb of a reciprocating cutter, coacting teeth integral with the comb and cutter, guide means for the cutter, transversely alined pivot bolts secured to one extremity of the comb, a handle provided with transverse arms, one of which is pivotally engaged by one of the bolts and a slot at the middle of the arms directly longitudinally in the direction of reciprocation of the cutter in which the other pivot bolt engages, the other of said arms curved upwardly, means secured to the extremity of the curved arm for engaging the cutter, a handle rigidly secured to the comb, and leaf springs connecting the handles and normally forcing the handles outwardly.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

FRANK L. DOLAN.

Witnesses:

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