April 27, 1926. 1,582,342

G. W. MOORE

HAIR CLIPPER

Filed June 15, 1925 2 Sheets-Sheet 1

Fig. 1

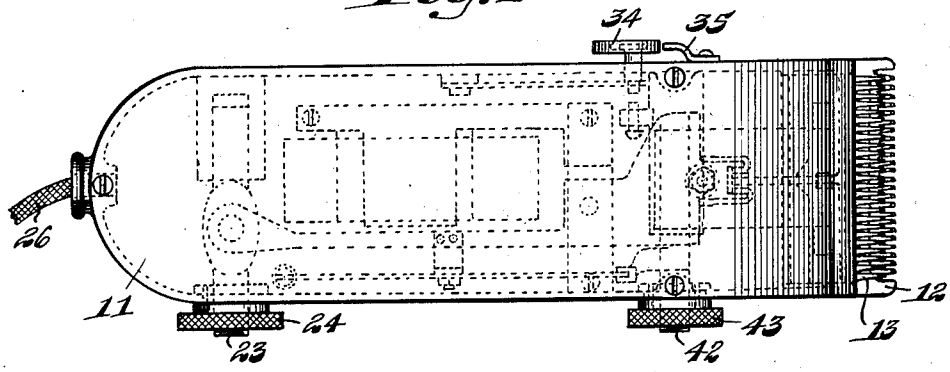
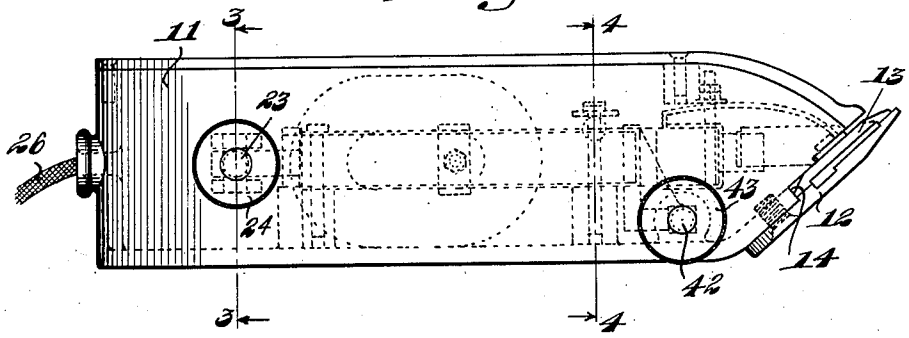



Fig. 2



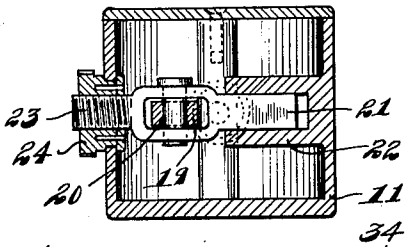




Fig. 3

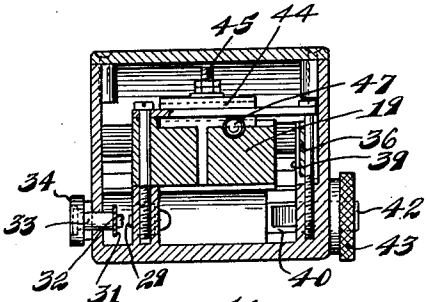



Fig. 4

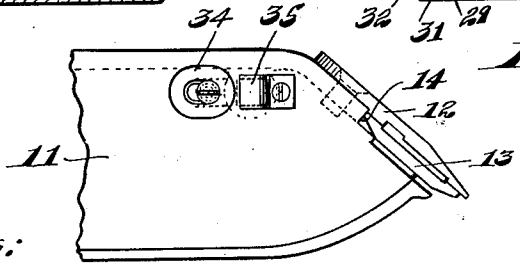



Fig. 5

Witnesses:
C. E. Wessels.
B. Y. Richards

Inventor:
George W. Moore,
By Joshua R. H. Potts
his Attorney.

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Fig. 6

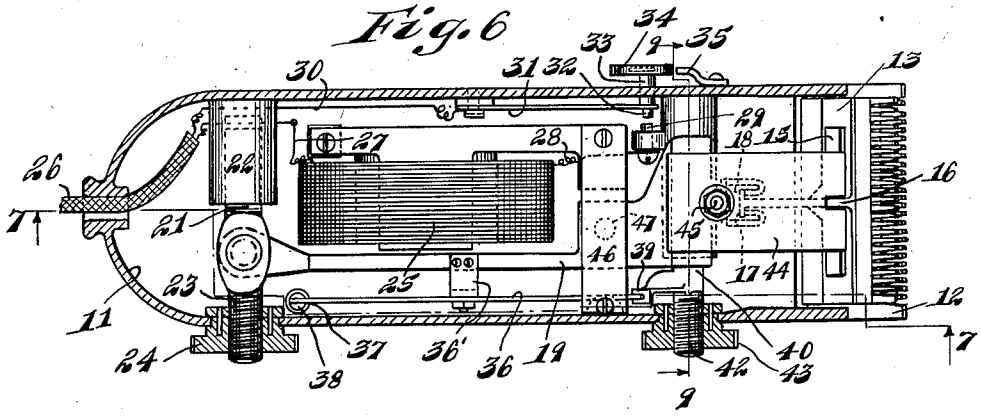
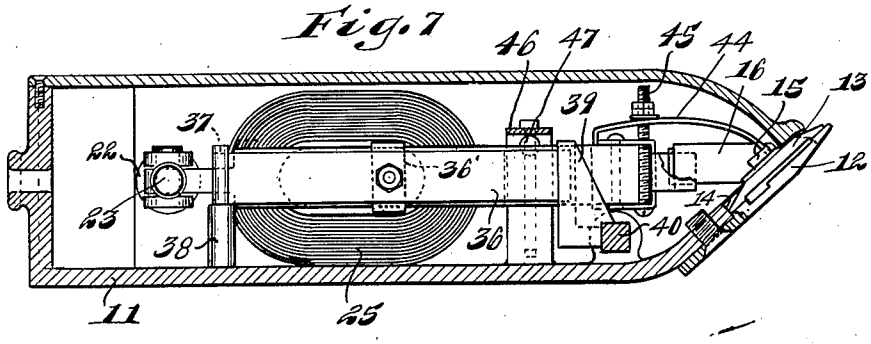



Fig. 7



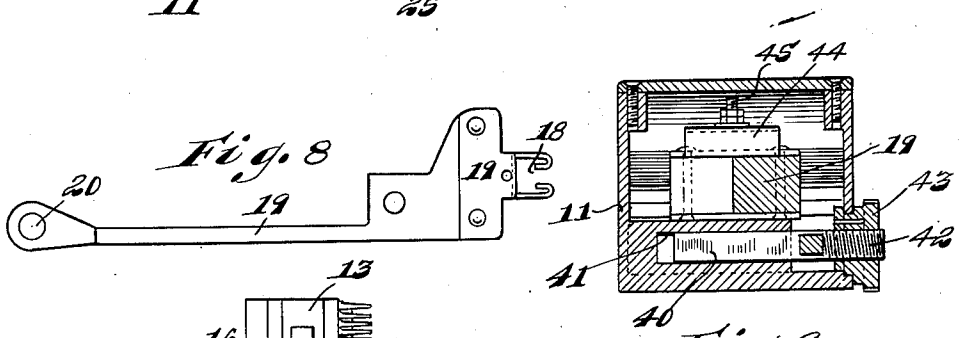




Fig. 8

Fig. 9

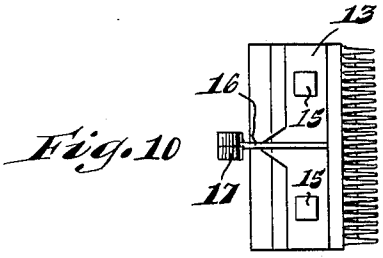



Fig. 10

Witnesses:
C. E. Wessels.
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Inventor:
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Patented Apr. 27, 1926. 1,582,342

# UNITED STATES PATENT OFFICE.

GEORGE W. MOORE, OF CHICAGO, ILLINOIS.

## HAIR CLIPPER.

Application filed June 15, 1925. Serial No. 37,007.

*To all whom it may concern:*

Be it known that I, GEORGE W. MOORE, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, 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 has for its object the provision of an improved construction of this character which is simple and efficient in operation. A further object is the provision of a hair clipper arranged to be operated by alternating electric current and requiring but few moving parts.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Fig. 1 is a top plan view of a hair clipper embodying the invention;

Fig. 2 is a side view of the same;

Fig. 3 is a section taken on line 3—3 of Fig. 2;

Fig. 4 is a section taken on line 4—4 of Fig. 2;

Fig. 5 is a partial side view of a clipper reversed;

Fig. 6 is a horizontal longitudinal section of the clipper;

Fig. 7 is a vertical longitudinal section taken substantially on line 7—7 of Fig. 6;

Fig. 8 is a detail view of an armature employed in the construction;

Fig. 9 is a section taken substantially on line 9—9 of Fig. 6; and

Fig. 10 is a detail view of the reciprocating blade of the hair clipper.

The preferred form of construction as illustrated in the drawings comprises a hollow handle 11 provided at one end with the usual stationary serrated blade 12 and the reciprocating blade 13 arranged as indicated, said blade 13 being arranged to slide against a guide shoulder 14 as indicated. The blade 15 is provided with two upstanding lugs or abutments 15 and with a rearwardly extending arm 16 having a T-head 17 formed at its rearward end. The T-head 17 is arranged to fit within a T-socket 18 formed on the forward end of an oscillating reciprocatory armature 19 pivotally mounted at its rear end 20 within the handle 11. The pivotal mounting of the rear end of the armature 19 is effected by means of a reciproeating bar 21 mounted in a guide post 22 arranged on one side of the handle 11. The bar 21 is pivotally connected with the armature 19 and carries a bolt 23 protruding laterally through one side of the casing 11, said bolt being threaded in a knurled nut or adjusting wheel 24 which is swivelled to the wall of the casing 11 and whereby said armature 19 may be nicely adjusted toward and away from the face of an electro-magnet 25 arranged centrally in casing 11, the armature 19 extending across the face of said magnet as shown. The electro-magnet 25 is supplied with alternating current through feed cable 26 as indicated. One wire 27 of the feed cable 26 is connected directly with one end of the coil of magnet 25, the other end of said coil being connected by wire 28 with a switch contact 29. The other lead wire 30 of cable 26 is connected with one end of a leaf spring switch 31, the free end of said switch carrying a contact 32 cooperating with the contact 29 to close the circuit through said magnet when the contact 32 is depressed. The switch 31 carries a pin 33 extending laterally through the right side of casing 11 and a slidable thumb piece 34 is mounted on the outer end of said pin. A detent clip 35 is arranged on the outer side of the casing 11 to engage the forward edge of the thumb piece 34 when said thumb piece is moved forwardly. By this arrangement the circuit for the magnet 25 may be readily closed by simply resting the thumb on the thumb piece 34 and applying slight pressure thereto, said circuit being opened by relieving said pressure. When it is desired to close the circuit and lock the circuit closed all that is necessary is to depress the thumb piece 34 and engage it under the dentent 35 by forward sliding.

A leaf spring 36 is arranged in the casing 11 substantially parallel with the armature 19, one end 37 of said leaf spring being secured in a slot in a post 38 in said casing. The central portion of the spring 36 is rigidly secured to the central portion of the armature 19 by means of a bracket 36′ as shown. The free end of the spring 36 is secured in a notch in an arm 39 carried by a laterally reciporcating bar 40 guided in a boss 41 on casing 11. The outer end of the bar 40 protrudes through the side of casing

11 and is threaded at 42 to engage a knurled wheel or nut 43 swivelled to the casing 11 as shown. By this arrangement the pivotal end of the armature 19 may be nicely adjusted with reference to the magnet 25 and the tension of the spring 36 may be nicely adjusted with reference to said armature, whereby the alternations of the current flowing through the magnet 25 will cause reciprocation of said armature and consequently of the blade 13 and whereby said blade may be employed for hair clipping purposes. But few moving parts are necessary and no circuit breaker is necessary for the electric current whereby a very simple and efficient mechanism is provided for reciprocating the blade 13.

A leaf spring 44 is mounted on the free end of the armature 18 being adjustably secured thereto by means of an adjusting screw 45, one end of the said spring resting against the top of the armature and the other end of the spring resting against the blade 13 and the abutments 15 thereon, thereby nicely holding said blade 13 against the blade 12 and against the guide shoulder 14. A guide bar 46 is arranged over the armature 19 as shown and a ball 47 is mounted in a suitable socket in the armature 19 to rest against the under side of said bar, said ball being yieldingly pressed against said guide bar by the reaction from leaf spring 44 and whereby the armature 19 will be nicely guided in its reciprocations and friction on the pivotal mounting of the armature relieved.

By means of the construction disclosed, a very simple and efficient hair clipper may be provided, capable of operation by means of an alternating electric current and therefore capable of construction with but few and simple moving parts. The specific form and arrangement of parts set forth, is a simple and effective one for the purpose.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. A hair clipper comprising a stationary and a reciprocating blade; an electro-magnet and circuit for operating the same; an armature pivotally mounted adjacent said magnet and operatively connected with said reciprocating blade; means for adjusting the pivotal mounting of said armature relatively to said magnet; a flat leaf spring secured at both ends adjacent said armature and connected centrally therewith; and means for adjusting one end of said spring toward and away from said armature, substantially as described.

2. A hair clipper comprising a stationary and a reciprocating blade; an electro-magnet and circuit for operating the same; an armature pivotally mounted at one end to extend across the face of said magnet and operatively connected at its other end with the reciprocating blade; means for adjusting the pivotal mounting of said armature relatively to said magnet; a flat leaf spring secured at both ends adjacent said armature and connected centrally therewith; and means for adjusting one end of said spring toward and away from said armature, substantially as described.

3. A hair clipper comprising a stationary and a reciprocating blade; an electro-magnet and circuit for operating the same; an armature pivotally mounted at one end to extend across the face of said magnet and operatively connected at its other end with said reciprocating blade; means for adjusting the pivotal mounting of said armature relatively to said magnet; a flat leaf spring secured at both ends adjacent said armature and extending substantially parallel therewith; a rigid connection between the central portion of said leaf spring and the central portion of said armature; and means for adjusting one end of said spring toward and away from said armature, substantially as described.

4. A hair clipper comprising a stationary and a reciprocating blade; an electro-magnet and circuit for operating the same; an armature pivotally mounted at one end to extend across the face of said magnet and operatively connected at its other end with said reciprocating blade; means for adjusting the pivotal mounting of said armature relatively to said magnet; a flat leaf spring secured at both ends adjacent said armature and extending substantially parallel therewith; a rigid connection between the central portion of said leaf spring and the central portion of said armature; means for adjusting one end of said spring toward and away from said armature; a laterally reciprocating bar connected with one end of said spring and having one end threaded and protruding laterally therefrom; and an adjusting nut having a swivelled mounting and engaging the threaded portion of said bar, substantially as described.

5. A hair clipper comprising a hollow casing in the form of a handle; a stationary and a reciprocating blade at one end of said handle; an electro-magnet in said handle; an alternating electric circuit for operating said magnet; an armature pivotally mounted at one end in said handle and extending across the face of said magnet and operatively connected at its other end with said reciprocat-

ing blade; means, located on the outside of said handle, for adjusting the pivotal mounting of said armature relatively to said magnet; a flat leaf spring rigidly secured in said handle at one end adjacent the pivotal connection of said armature and extending substantially parallel with said armature; a laterally reciprocating bar mounted in said handle and having a threaded projection extending laterally through a side thereof, said bar being connected with the other end of said spring; an adjusting nut on the outside of said handle threaded on the protruding end of said bar; and a rigid connection between the central portion of said spring and the central portion of said armature, substantially as described.

6. A hair clipper comprising a reciprocating blade and a reciprocating armature, an electro-magnet operatively connected with said blade; a flat leaf spring fixed at one end and adjustably mounted at the other end; and a rigid connection between the central portion of said spring and said armature, substantially as described.

7. A hair clipper comprising a reciprocating blade and a swinging armature operatively connected with said blade; a flat leaf spring rigidly mounted at one end and extending substantially parallel with said armature; a rigid connection between the central portion of said spring and the central portion of said armature; and an adjustable mounting for the free end of said spring, substantially as described.

8. A hair clipper comprising a stationary and a reciprocating blade; an electro-magnet and socket for operating the same; an armature pivotally mounted at one end and arranged to be reciprocated by said magnet; a T-socket at the free end of said armature; and an arm secured to said reciprocating blade and provided with a T-head fitting said socket, substantially as described.

9. A hair clipper comprising a stationary and a reciprocating blade; an electro-magnet and socket for operating the same; an armature pivotally mounted at one end and arranged to be reciprocated by said magnet; a T-socket at the free end of said armature; an arm secured to said reciprocating blade and provided with a T-head fitting said socket; a spring on said armature resting on said reciprocating blade; a guide bar resting over said armature; and a ball carried by said armature and resting against the under side of said guide ball, substantially as described.

In testimony whereof I have signed my name to this specification.

GEORGE W. MOORE.