J. G. BESHARA.

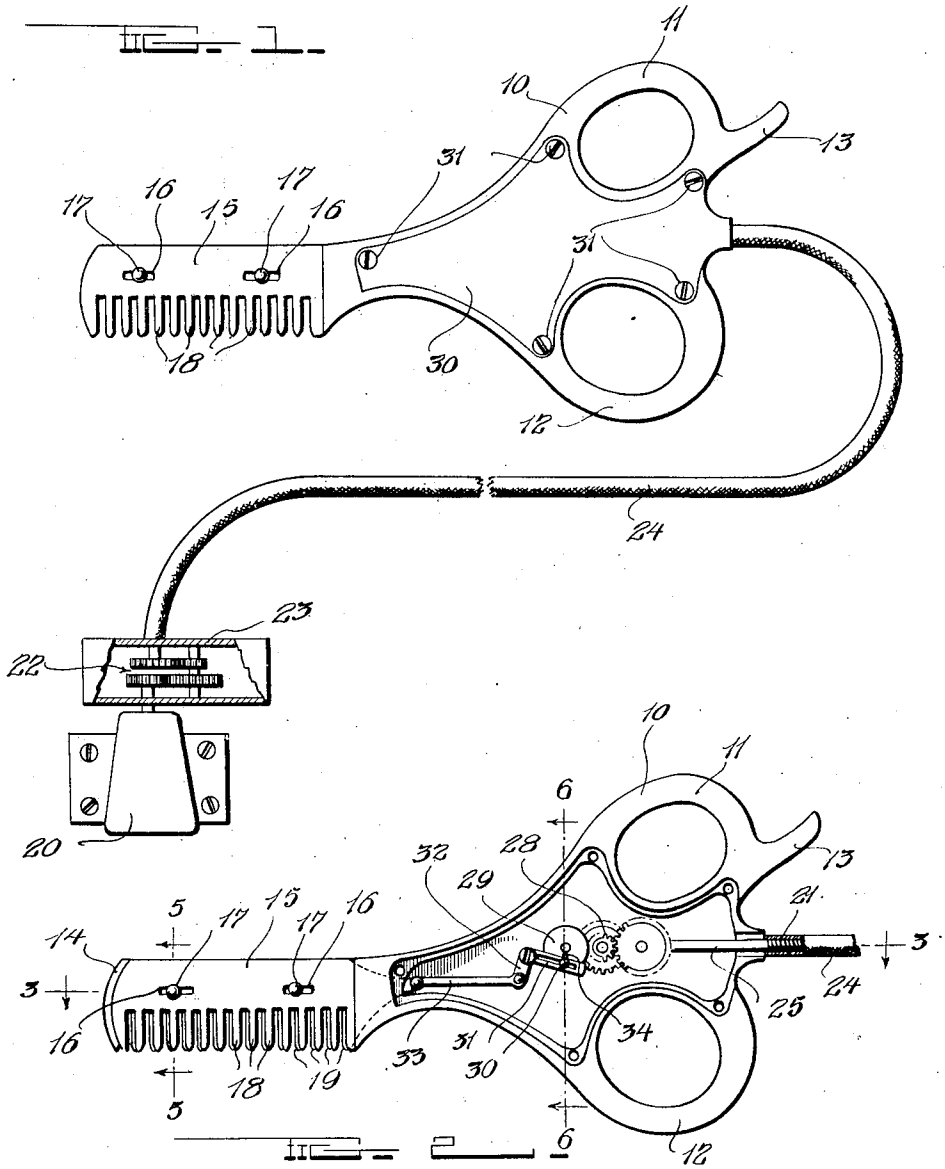
HAIR CUTTING MACHINE.

APPLICATION FILED DEC. 8, 1919.

1,359,020.

Patented Nov. 16, 1920.

2 SHEETS—SHEET 1.



Inventor

John G. Beshara

Witnesses

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Attorney

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2 SHEETS—SHEET 2.

FIG. 3.

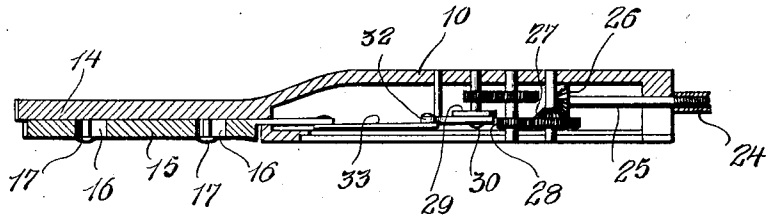


FIG. 4.

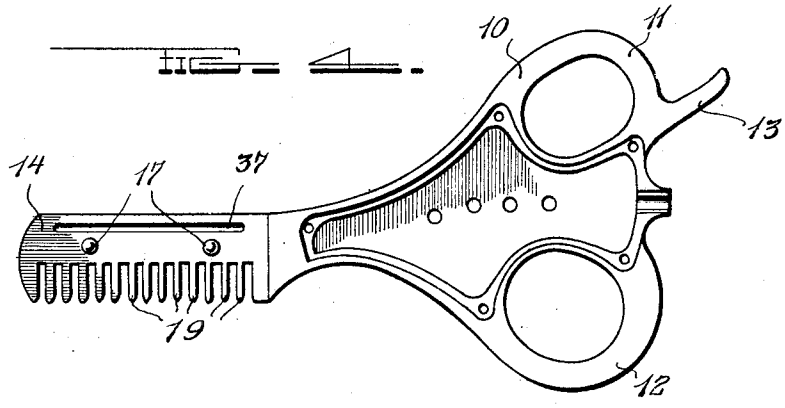


FIG. 5.

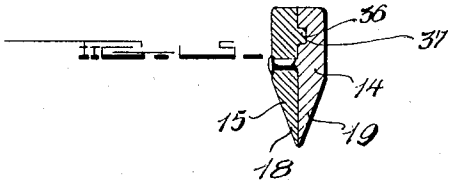


FIG. 6.

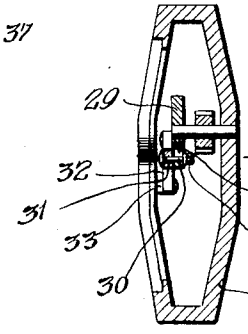


FIG. 7.

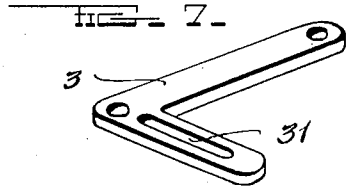
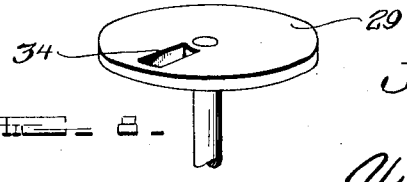


FIG. 8.



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UNITED STATES PATENT OFFICE.

JOHN G. BESHARA, OF LAWRENCE, MASSACHUSETTS.

HAIR-CUTTING MACHINE.

1,359,020. Specification of Letters Patent. Patented Nov. 16, 1920.

Application filed December 8, 1919. Serial No. 343,146.

To all whom it may concern:

Be it known that I, JOHN G. BESHARA, a citizen of Syria, residing at Lawrence, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Hair-Cutting Machines, of which the following is a specification.

The object of the invention is to provide a simple comparatively inexpensive and efficient apparatus designed especially for use in cutting or trimming hair but also adapted for shearing sheep and other animals and having advantages over the ordinary method of cutting human hair in the fact that the essentiality of the use of a comb in that operation is minimized by equipping the apparatus with means which enables it to combine with the shearing feature the functions of a comb in raising the hair and determining the length at which it will be cut by reference to the surface of the head; and furthermore to provide a power driven apparatus of the class indicated wherein the disadvantages of the rapidly driven flexible shaft serving as means of communicating motion from the motor to the knife or cutter proper and consisting in the possibility of the shaft becoming engaged or entangled destructively with adjacent or surrounding objects such as the clothing of the operator are minimized, and with these objects in view the invention consists in a construction and combination of parts of which a preferred embodiment is illustrated in the accompanying drawings, wherein.

In the drawings:

Figure 1 is a general view of the apparatus.

Fig. 2 is a side view of the cutter head with the face plate of the casing omitted.

Fig. 3 is a longitudinal sectional view upon the plane indicated by the line 3—3 of Fig. 2.

Fig. 4 is a side view of the cutter head with the knife plate and gearing omitted.

Fig. 5 is a detail transverse section on the plane indicated by the line 5—5 of Fig. 2.

Fig. 6 is a similar sectional view on the plane indicated by the line 6—6 of Fig. 2.

Fig. 7 is a detail view of the rocker.

Fig. 8 is a similar view of the crank disk.

The cutter head 10 is preferably provided with eyes 11 and 12 forming finger holds and a finger bearing 13, the body portion of said head being hollow to form a gear casing and being extended as indicated at 14 to form a finger bar 14′ constituting one element of a cutter bar of which the knife member 15, reciprocably mounted upon the finger bar is provided with longitudinal slots 16 engaged by guide pins or rivets 17, shown clearly in Fig. 3.

The cutting fingers 18 of the knife bar cooperate with the fingers 19 of the finger bar 14 to form the function of a comb and at the same time the rapid reciprocation of the knife bar serves to steer the hair which is engaged by the fingers to the end that an even and smooth trimming the hair may be effected without effort on the part of the operator other than that incident to the guiding of the implement.

In practice it is preferred to employ a motor such as that indicated at 20 as a means of operating the cutting mechanism, motion being communicated by capable means from said motor to the spindle 21 which is mounted in the cutter head, preferably at the rear end thereof as shown in the drawing and projecting terminally into the casing represented by the hollow portion of the cutter head, and in order that the possibility of injury to adjacent objects by the means of transmitting motion from the motor to the said spindle may be minimized it is preferred to employ speed reducing gearing 22 arranged in a casing 23 adjacent to the motor and to connect said speed reducing gearing with the spindle 21 by means of a flexible shaft 24 of any of the well-known or approved types. The portion of the spindle which is located within the casing and is represented in the drawings as at 25 preferably carries a bevel gear 26 meshing with a corresponding gear 27 forming elements of a speed multiplying gearing including pinions 28, for communicating motion to a crank disk 29, all of said mechanism and disks being mounted within the casing by which it is suitably and safely housed to prevent contact thereof with surrounding objects. The crank disk carries a crank pin 30 engaged with a slot 31 in a rocker 32 which may as illustrated be of the bell crank type of which one arm is connected by a link 33 with one extremity of the knife bar 15. In order that the stroke of the knife bar may be varied the crank pin 30 is preferably mounted adjustably upon the crank disk by means of a radial slot 34 formed in the latter and held in place in any suitable manner at the required adjust-

ment as by means of a nut 35. A removable cap or cover 30ª preferably closes the casing at one side to permit of ready access thereto for cleaning, repairing or readjusting the gearing, said cover being held in place by the fastening screws 31ª and as a means of insuring the true reciprocatory movement of the knife bar it may be provided with a guide rib 36 operating in a guide groove 37 in the finger bar, as shown clearly in Figs. 4 and 5.

It will be shown from the foregoing description that the apparatus may be constructed at a comparatively small cost and yet may be used with rapidity and accuracy in performing the functions for which it is specially designed, the same serving to very materially minimize the time required in cutting or trimming the hair or the beard while insuring an evenness or uniformity of result which is unattainable by the ordinary apparatus employed in this service except in the hands of the most skillful operator, because of the necessity in the ordinary practice of coördinating the action of the comb and shears and thereby involving the use of both hands of the operator instead of one as with the apparatus herein disclosed.

Having described the invention what is claimed is:—

A hair cutting apparatus comprising a cutting bar and a reciprocatory knife, a handle having a central depression and a tubular portion projecting from one edge thereof, a power driven spindle projecting through said tubular portion into said depression, a disk rotatably fitted within the depression, a pin eccentrically mounted on said disk, a bell crank lever pivoted within the handle and having a slot branch receiving said pin, an arm connecting the branch of said lever with the said knife, gearing interposed between the disk and said spindle for operating said disk, and a removable plate covering said depression and secured to the handle.

In testimony whereof I affix my signature.

JOHN G. BESHARA.