

F. KOBER.
 HAIR CUTTING AND SHEARING MACHINE.
 APPLICATION FILED MAY 13, 1910.

994,470.

Patented June 6, 1911.

Fig. 1.

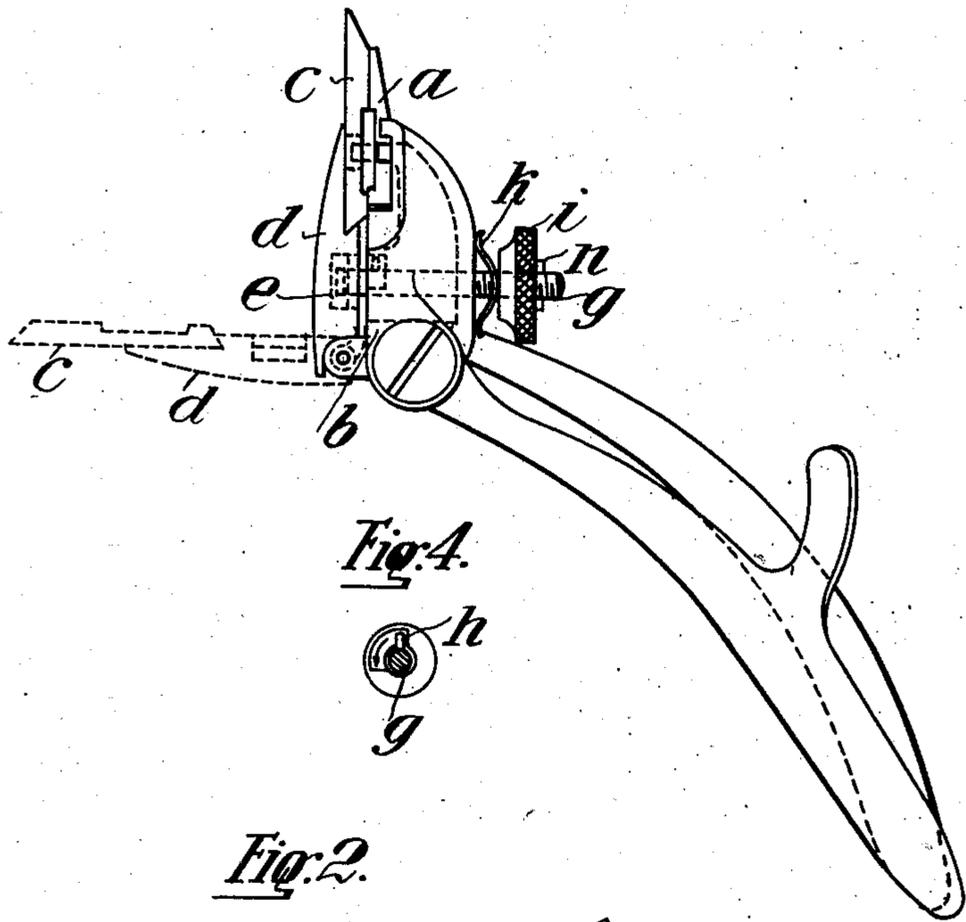


Fig. 4.



Fig. 2.

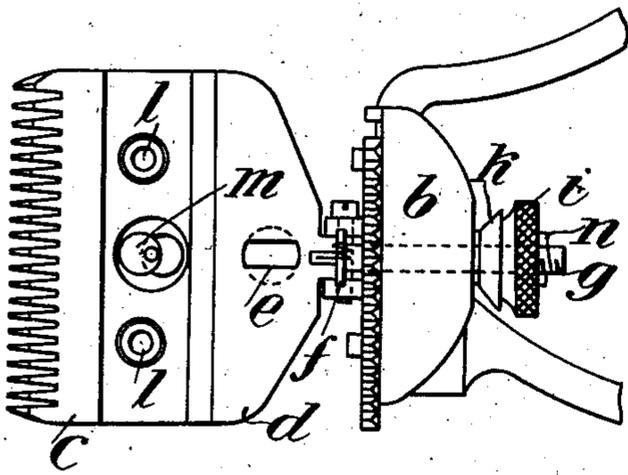
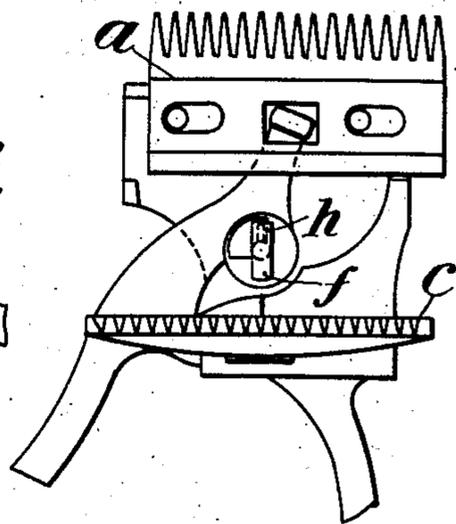


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRITZ KOBER, OF SUHL, GERMANY.

HAIR CUTTING AND SHEARING MACHINE.

994,470.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed May 13, 1910. Serial No. 561,082.

To all whom it may concern:

Be it known that I, FRITZ KOBER, a subject of the King of Prussia, German Empire, residing at Suhl, Thüringen, Germany, have invented certain new and useful Improvements in Hair Cutting and Shearing Machines, of which the following is a specification.

This invention relates to hair-cutting machines, shearing machines and the like.

Under my invention the hair-cutting machine or shearing machine is so constructed that it is possible to change the shearing blade without having to take the machine to pieces, that is to say, the change can be effected in a more simple and more convenient way than hitherto possible. This result is attained by the use of a flap which is adapted to carry the interchangeable shearing blade, and is so hinged or attached to the body of the machine that it can be turned around. This flap is held in position by the head of a screw bolt which passes through the body of the machine, and it can be released by giving the bolt a quarter of a turn. When this turn of the bolt is given and the flap released from engagement with the head thereof, a spring acts upon the flap and causes it to spring into the open position. When it is in that position, the shearing blade can be taken out very easily and another blade put in its place. The bolt only turns through 90°, so that its square head can be introduced without any difficulty into a notch or slot cut in the flap, and accessible when the flap is raised, and by turning the bolt, the head thereof can be engaged with the flap. When that has been done, the flap is drawn against the body of the apparatus by giving further turns to the screw nut, and the interchangeable shearing blade is thereby brought into position against the upper knife. To facilitate this, and render it possible for the interchangeable blade to lie close against the upper knife and make a faultless cut, the former is held or attached at two or more points lying in a straight line and not by three points forming a rigid triangle.

In order that my invention may be clearly understood, a hair-cutting machine, made in accordance with my invention, is shown in the drawing, by way of example.

Figure 1 is a side view of the machine. Fig. 2 is a plan view of the same showing the flap *d* in open position. Fig. 3 is a front

view of the same also in the open position and Fig. 4 shows a detail view of the recess in the body *b* with the bolt *g* in section.

The flap *d*, which carries the interchangeable shearing blade or under knife *c*, is hinged or turnably fastened to the body *b* of the cutting machine on which the movable upper knife or blade *a* is fitted. The flap *d* is turned into its open position by means of a spring which is wound around its axis of rotation. (In Fig. 1 the open position is shown in dotted lines.)

The flap *d* has a long four-sided opening *e* cut in its under side, and into this opening, the head of the screw bolt *g*, (which passes through the body of the apparatus *b*) can enter. The head of the bolt *g* is made of suitable form for this purpose, and, by turning it, it can be made to engage in the opening. The screw bolt *g* is provided with projection *h* and can make only one quarter of a turn, its movement being limited by its projection *h* which works in the recess formed in the body *b*. On the screw bolt there is a nut *i*, knurled on the edge, and between this nut and the body *b* an arched flat spring *k* is provided. The interchangeable shearing blade *c* is secured on two pins *l* provided on the flap *d*, and it is held fast thereon by means of a small turn bolt *m*. The points of attachment of the shearing blade *c* taken altogether do not form any rigid system, as they would do in a triangular bearing, but they lie in a straight line, and so it is possible for the under shearing blade *c* to turn about an axis drawn through these points of attachment, and, consequently, to lie close against the upper cutting blade.

When it is desired to change the blade *c*, the nut *i* is turned to the left *i. e.* the direction for unscrewing the nut from the bolt. During this rotation the nut *i* will come against the pin *n* which passes transversely through the screwbolt *g*. On further rotating the nut *i*, the nut will press tightly against the pin *n* and in consequence of the friction set up through this turning, the bolt *g* will itself be rotated and consequently its head *f* will come into its other end position parallel to the opening *e* in the flap *d*. The flap is thereby released and under the action of its spring, opens as shown in dotted lines at Fig. 1. In this position the shearing blade can be easily taken out and another put in its place. When this

has been effected the flap *d* is raised up again, and the nut which still bears against the pin *n* is turned around to the right *i. e.* in the direction in which the nut is screwed on to the bolt. At the beginning of this turning the bolt head *f* in consequence of the friction between the nut *i* and the pin *n* makes a quarter of a turn and engages in the opening *e* of the flap *d*. All that is now required is to turn the nut *i* further around thereby compressing the spring *k* so that the two cutting blades will press against each other. The apparatus is now ready for use.

15 Having now fully described my invention, what I claim and desire to secure by Letters Patent is:—

The combination in a hair-cutting or

shearing machine, of a body, a movable cutting blade thereon, a hinged flap secured to the body, a cutting blade removably and adjustably secured to the hinged flap, a slot in the flap, a screw bolt (*g*) having a head engaging in the slot and retaining the flap in the closed position and a nut (*i*) and stop pin (*n*) on the bolt whereby movement of the nut in the one direction presses the cutting blades together while movement in the other direction partially rotates the bolt and releases the flap.

In testimony whereof I affix my signature in presence of two witnesses.

FRITZ KOBER.

Witnesses:

O. HINZE,

CURT WAGNER.