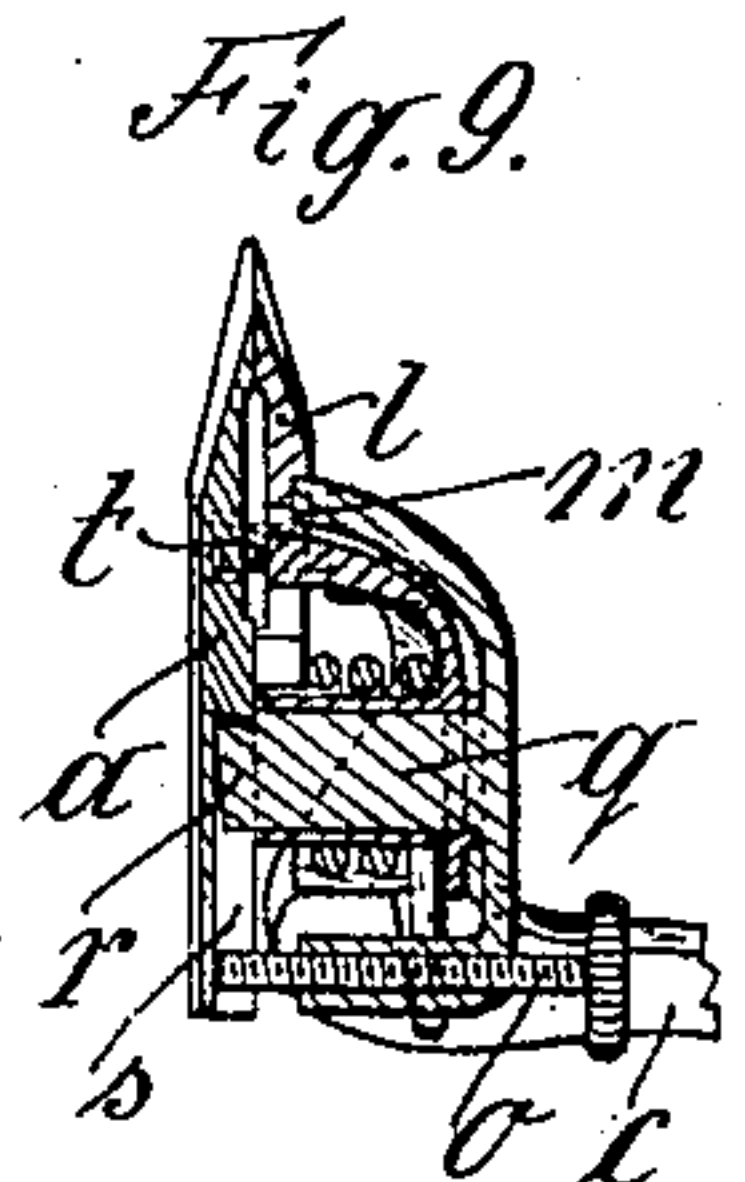
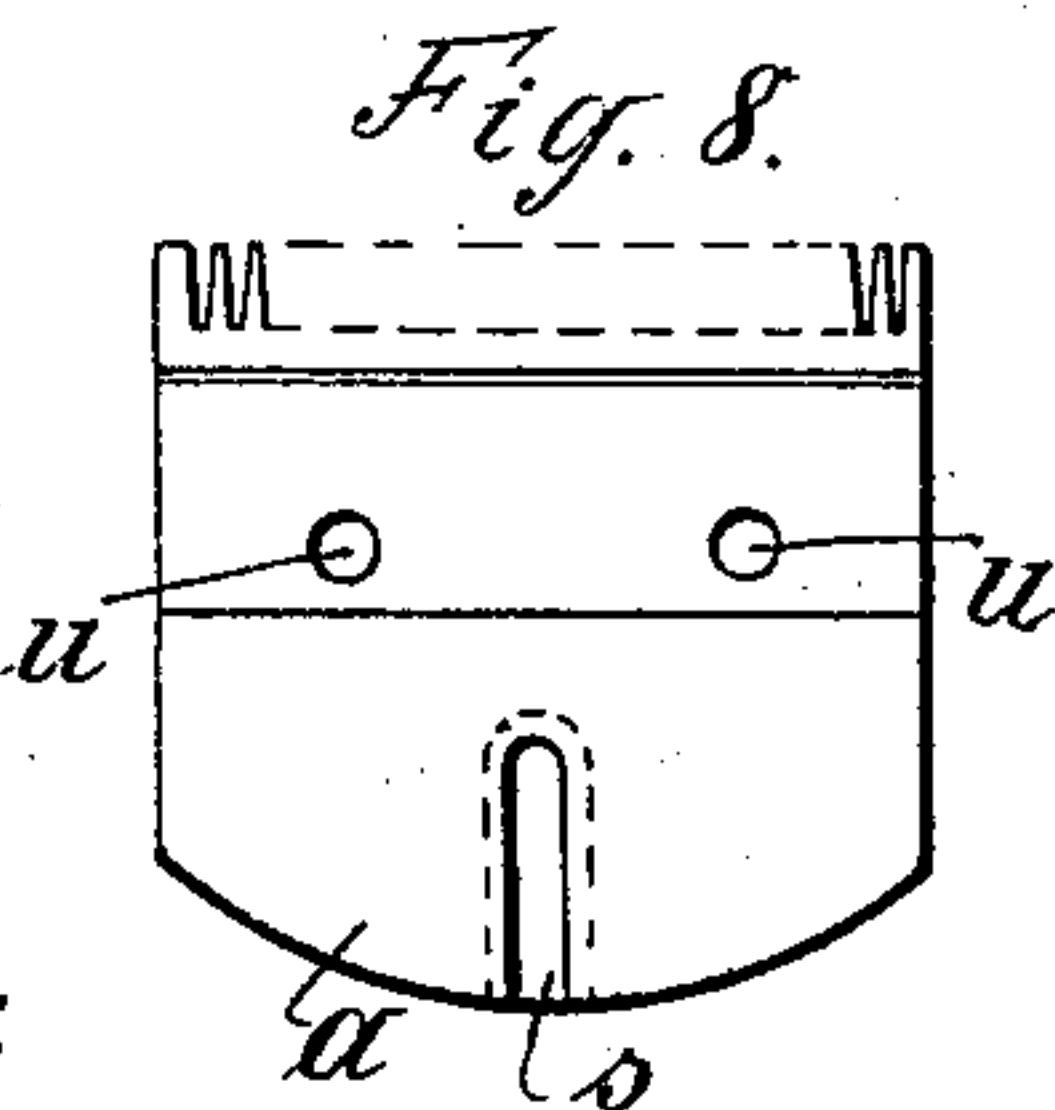
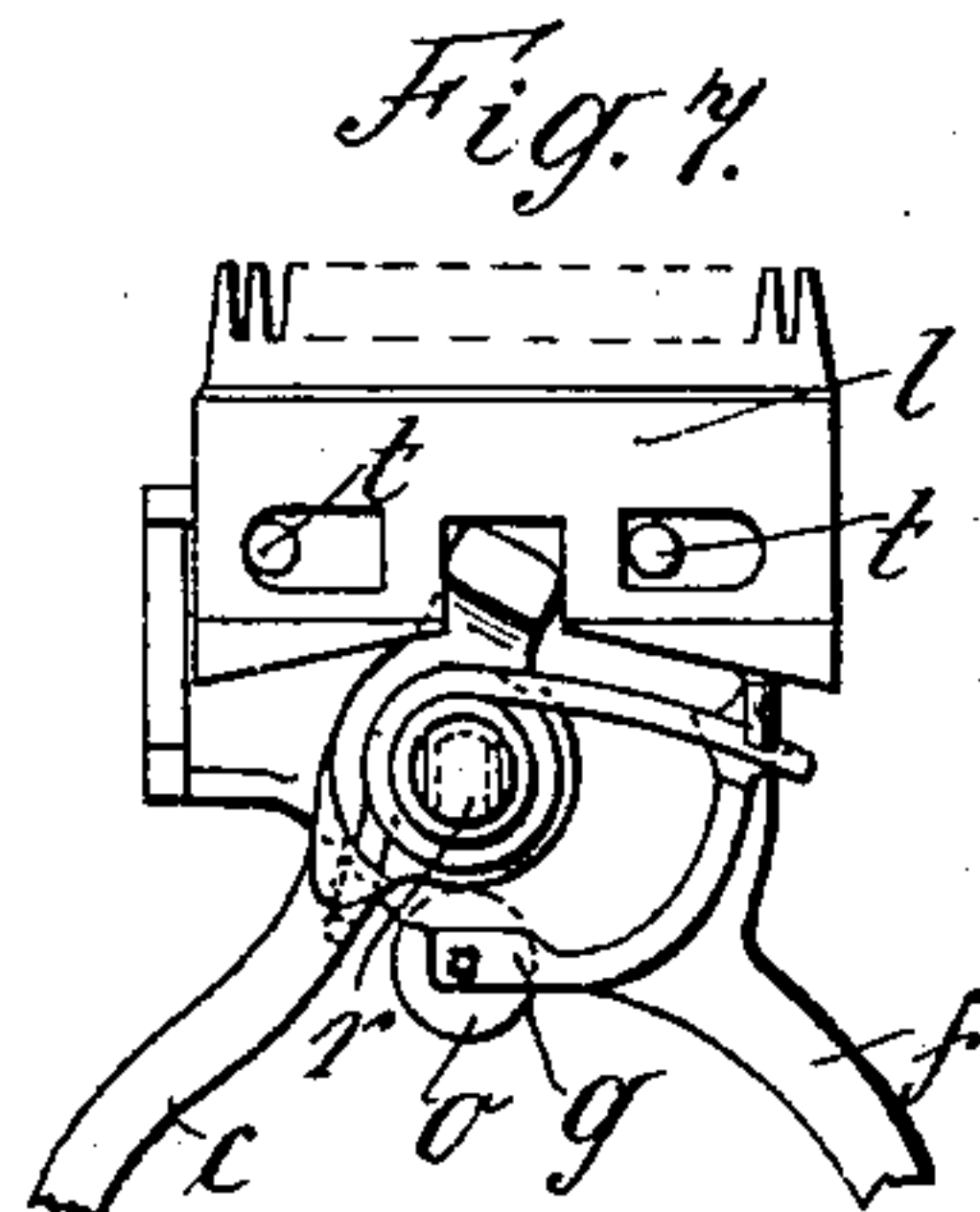
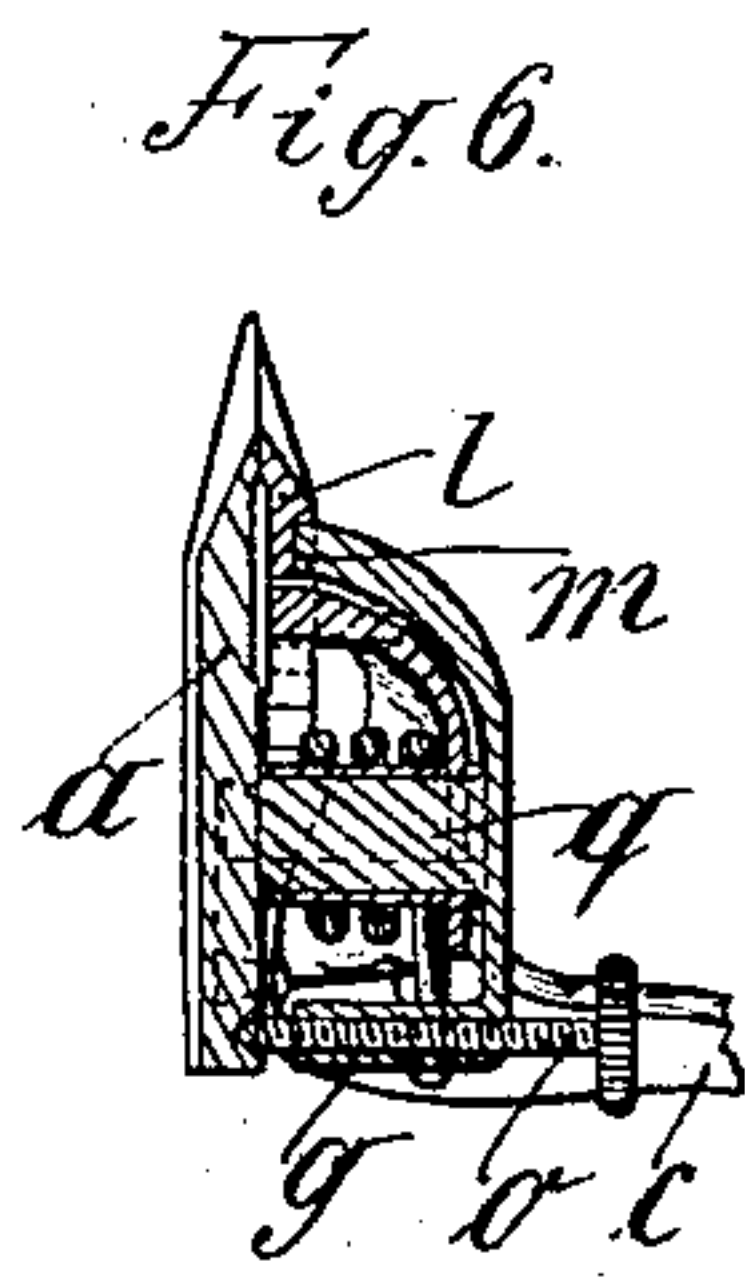
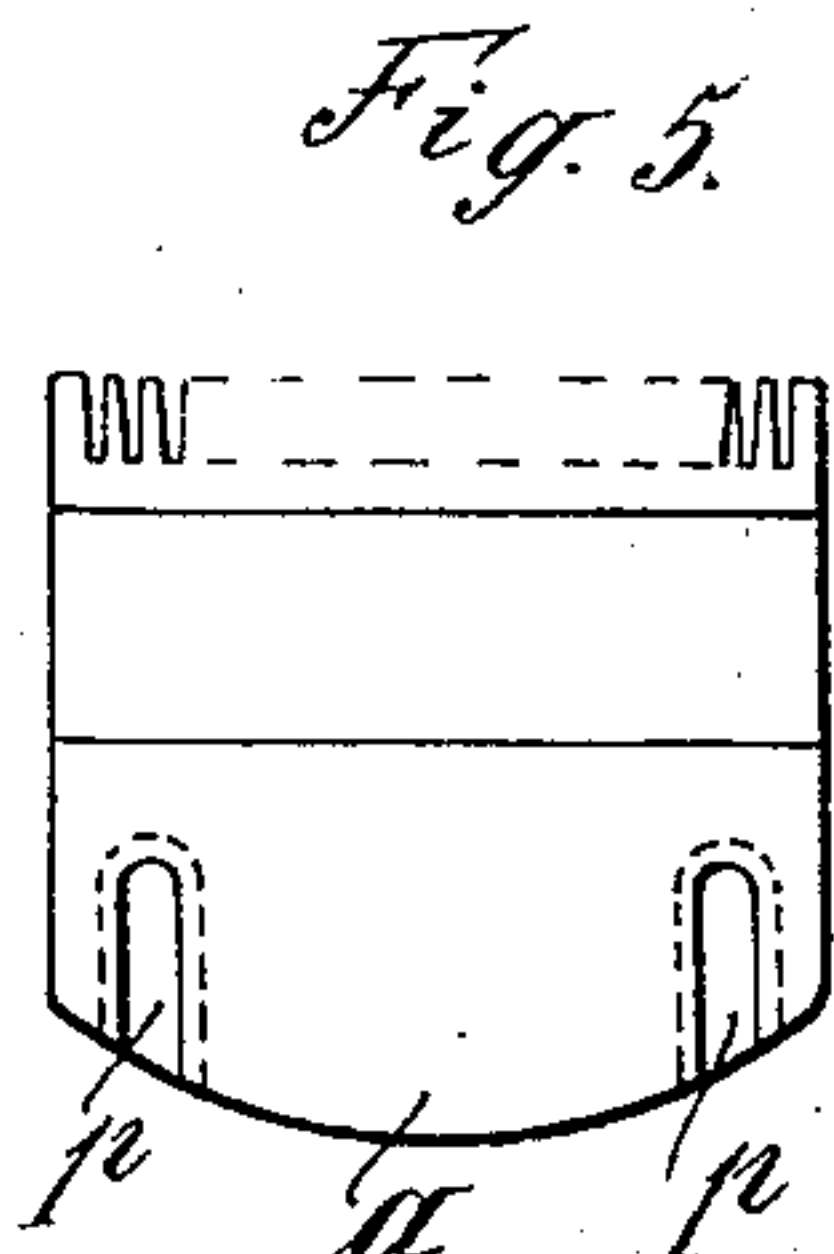
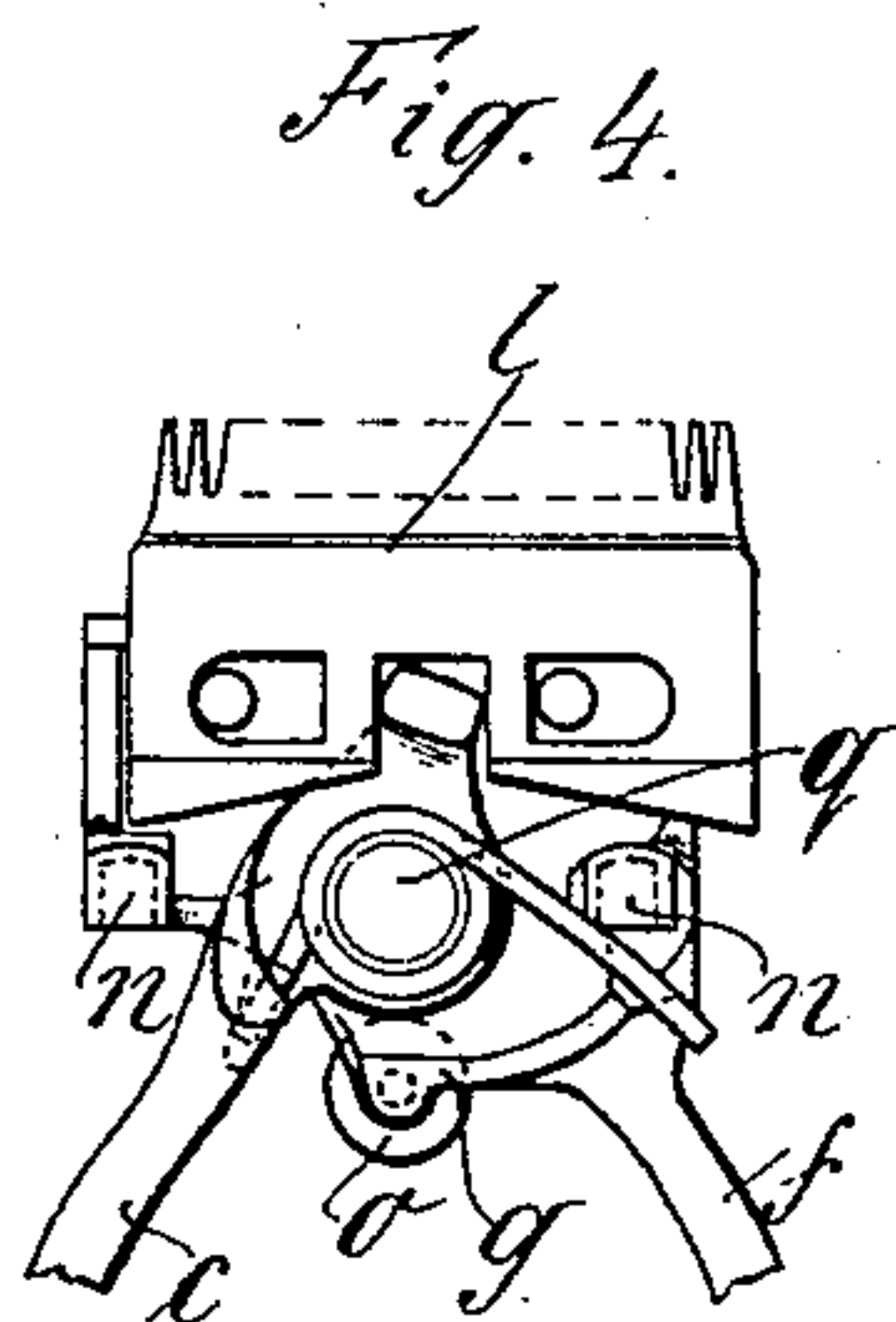
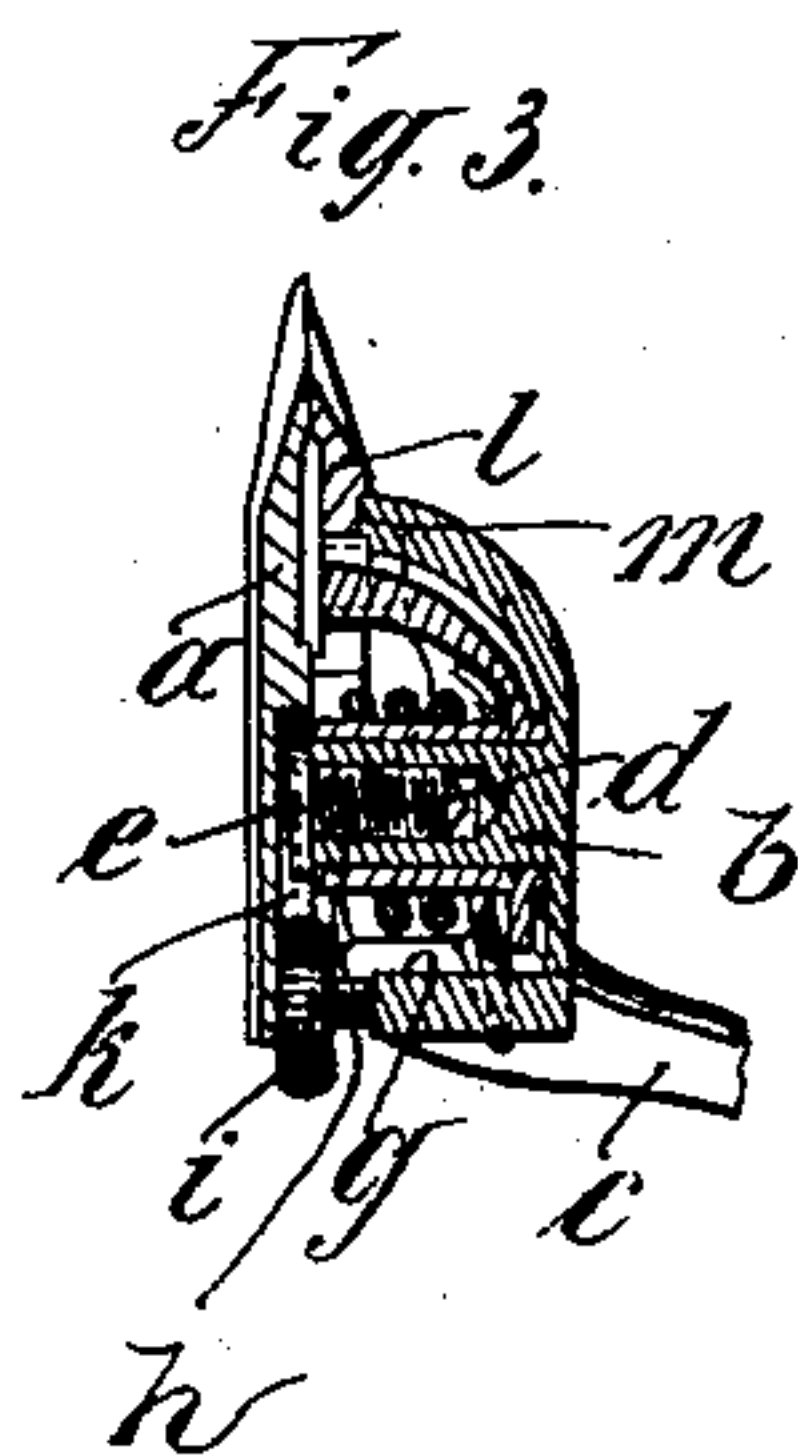
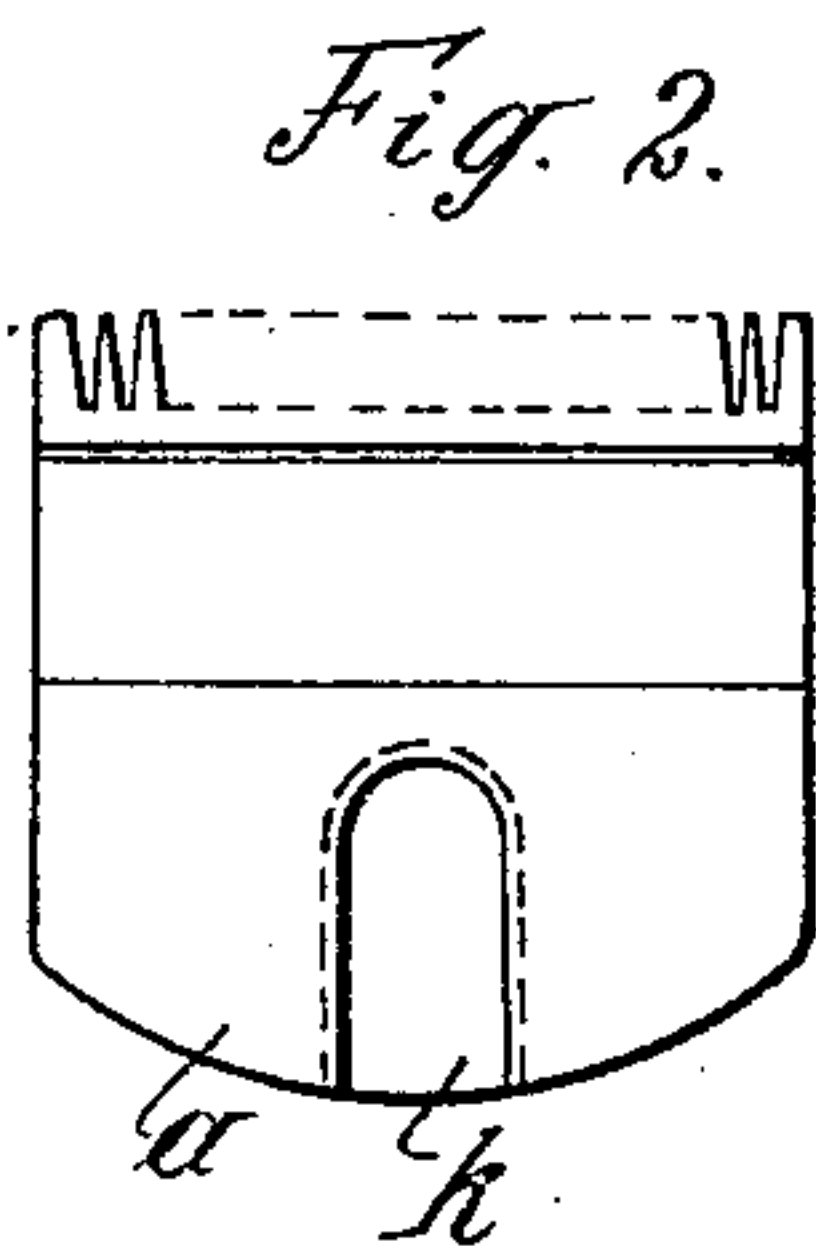
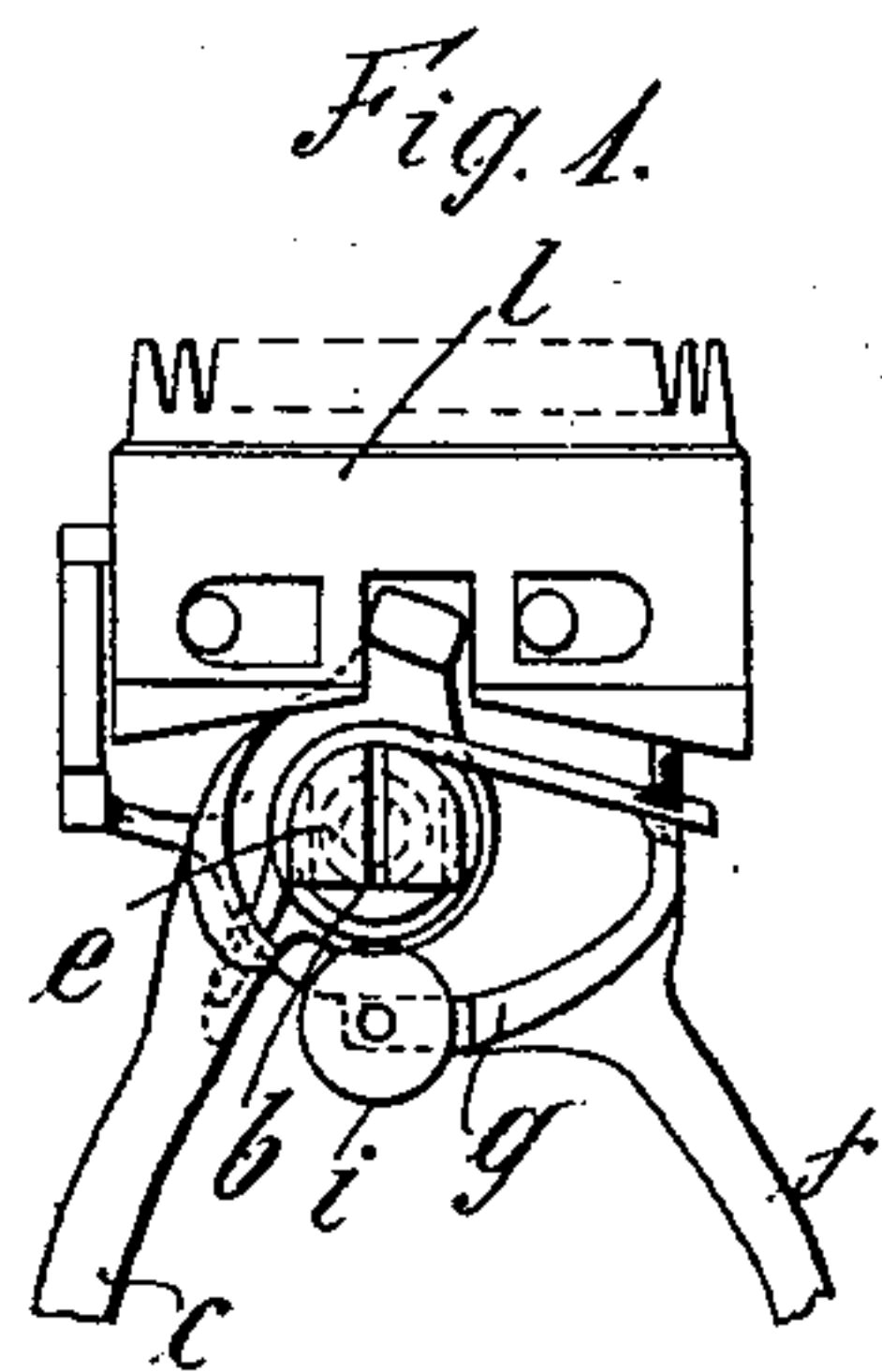


No. 868,453.

PATENTED OCT. 15, 1907.

F. KOBER.
HAIR CUTTING DEVICE.
APPLICATION FILED MAR. 22, 1907.



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UNITED STATES PATENT OFFICE.

FRITZ KOBER, OF SUHL, GERMANY.

HAIR-CUTTING DEVICE.

No. 868,453.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed March 22, 1907. Serial No. 363,918.

To all whom it may concern:

Be it known that I, FRITZ KOBER, a subject of the Emperor of Germany, residing at Suhl, Thuringia, Germany, manufacturer, have invented certain new and useful Improvements in Hair-Cutting Devices, of which the following is a specification.

The present invention relates to improvements in hair cutting devices or hair clippers as they are sometimes called in which two plates or blades having teeth or projections are pressed against each other and by means of suitable mechanism are moved so as to give a cutting action.

In carrying out my invention I so construct the clipper that the bottom plate is not pressed against the top plate in the ordinary way, by the pull of a screw which passes through the bottom plate; but on the contrary, is effected by causing the bottom plate, which is suspended on the turning pivot of the movable handle, or on two projections arranged at the side of that pivot, to be tipped forward about the suspension pins by means of a screw which presses against the back end of the bottom plate so that the fore end of the bottom plate is pressed like a lever against the top plate. The top plate is thus caused to bring its back working edge, as well as its front working edge, against the bottom plate, it being provided with a bearing only in the center, and being thus capable of accommodating itself to the inclination of the bottom plate.

The advantage attained by an arrangement such as described is that when the bottom plate is in total contact with the top plate, less power or force requires to be exerted to maintain the contact, as, when pressure is exerted, a lever-action comes into play. Further, when it becomes necessary to change the bottom plate, there are no detached parts to deal with,—such as screws, nuts, and washers or such like, as the pressure screw and its nut always remain firmly united with the body of the device. A further advantage is that the pressure screw and its nut can be placed in such a position that it will be possible to easily clean both sides of the device while the construction is such that the sticking or catching of the hair in the attachment screw is rendered much less likely, if not altogether impossible.

On the drawing:—Figure 1 shows the device as seen from below, with the bottom plate removed, the bottom plate in this case being attached to the pivot of the moving handle. Fig. 2 shows the removed bottom plate. Fig. 3 shows in cross section the hair cutting device illustrated at Figs. 1 and 2. Fig. 4 shows a slightly modified construction of hair cutting device with the bottom plate removed, as seen from below, two lateral projections being provided on the fixed handle which serve as bearings for the bottom plate. Fig. 5 shows the removed bottom plate. Fig. 6 shows

in cross section the hair cutting device illustrated at Figs. 4 and 5. Fig. 7 shows another slightly modified construction of hair cutting device, as seen from below with the bottom plate removed, the central pins or pivots for the handles forming bearings for the bottom plate, means being provided for limiting the movement and insuring the proper position of the bottom plate. Fig. 8 shows the removed bottom plate, which is provided with a central groove or recess and two depressions or holes, these depressions or holes being made slightly larger than the central pins or pivots. Fig. 9 shows in cross section the hair cutting device illustrated at Figs. 7 and 8.

Referring to the drawings:—In the construction of device represented in Figs. 1 to 3, the bearing and attachment for the bottom plate *a* is formed by a screw *d*, which is secured in the hollow pivot *b* of the moving handle *c*. The head *e* of the screw *d*, has two parallel sides and a rounded side (see Fig. 1) and both these sides and the third rounded side are beveled towards the inside. On the casing *g*, formed on the upper end of the fixed handle *f*, there is secured a pin *h*, having a screw thread on it. This pin *h* is provided with a milled-edged nut *i*, by means of which, when the nut is turned round, the bottom plate *a*, having on its upper side a groove or recess *k*, corresponding to the head *e* of the screw *d* to which it is attached, is tipped over the screw head *e*, and its fore end presses like a lever the top plate *l*, the plate *a* when desired, being secured in this position by the nut *i*. Although the bottom plate *a* exerts pressure only on the front end of the upper plate, yet, as the top plate bears movably on the projecting edge *m* of the casing *g*, it will constantly press firmly against the bottom plate. In this form of the device the head *e* of the screw *d* is preferably made of such breadth that any lateral displacement of the bottom plate *a*,—and such displacement is possible owing to the play between the groove or recess *k* and the head *e* of the screw *d*,—will occasion only very slight deviations in the direction of the edges of the teeth. The nut *i*, by means of which the attachment is effected, being arranged behind the casing *g*, the latter can be made perfectly smooth on the top, thereby preventing hair getting caught in the screw *d*.

In the construction of device shown in Figs. 4 to 6, the broad head *e* of the screw *d* (see Figs. 1–3) which serves as a bearing for the bottom plate *a* is dispensed with, and is replaced by two small lateral projections *n* formed on the casing *g* which projections are formed like the said head *e*. These projections *n* are also formed so that their lateral edges are beveled on the inside. With this construction the screw-threaded pin *h* on the casing *g* is also dispensed with, its place being taken by an adjusting screw *o*, which passes through the casing *g*. By means of this screw *o* when

- screwed against the rear part of the bottom plate *a* the bottom plate *a* which is provided with grooves or recesses *p*, formed so as to correspond with the projections *n*, can be tipped over the projections *n* and thus the fore end of the bottom plate pressed against the top plate *l* like a lever and be held securely in that position. With this construction of apparatus the hollow pivot *b* is dispensed with and is replaced by the solid pivot *q*.
- 10 In the construction of device represented in Figs. 7 to 9, the somewhat extended pivot *q* is provided with a head *r* which corresponds to the head *e* of the screw *d* in the arrangement shown in Figs. 1 to 3. In this case the arm *c* can be pushed over the pivot *q*, without previously loosening any part. As there is only one head *r* which is smaller than the head *e*, Figs. 1-3, the bottom plate *a*, which is provided with a corresponding groove or recess *s* could easily be displaced to some extent, and consequently, in this case, the pins *t*, fitted to limit the movement of the top plate *l* are made so long that they catch in the ordinary way into corresponding depressions or holes *u* formed in the bottom plate *a*. The pins *t* and the head *r* of the pivot *q* therefor render any displacement of the bottom plate *a* impossible while that plate is held fast by the action of the screw *o*. It is further to be observed that the depressions or holes *u* must be made sufficiently large to allow of a tipping forward or lever like movement of the bottom plate *a*.
- 30 Having now fully described my invention what I claim and desire to secure by Letters Patent is:—
1. A hair cutting device comprising, in combination, a movable top plate, a handle therefor, a movable bottom plate said bottom plate being pivotally secured on said handle and means for pressing the bottom plate against the top plate.
 2. A hair cutting device, comprising, in combination, a movable top plate, a handle therefor, a movable bottom plate said bottom plate having a groove therein for adjustably securing it to said handle and means for pressing the bottom plate against the top plate.
 3. A hair cutting device comprising, in combination, a movable top plate, a handle therefor, a movable bottom plate having a groove therein, a screw in the handle having a head engaging with said groove and means for adjustably securing the movable bottom plate on the head of the screw so it may be tipped over the latter.
 4. A hair cutting device comprising, in combination, a casing, a movable top plate carried in a bearing fitted in the casing, a screw secured in the bearing, a movable and grooved bottom plate adjustably fitted to the head of said screw and an adjusting screw for pressing the bottom plate against the top plate.
 5. A hair cutting device comprising, in combination, a casing, projections thereon, a movable top plate, a movable bottom plate said bottom plate having grooves for adjustably securing it to said projections so it may be tipped over the latter and a screw in the casing for pressing the bottom plate against the top plate.
 6. A hair cutting device comprising, in combination a casing, a pivot thereon, projections thereon, a movable top plate, a bottom plate movably fitted on said pivot, said bottom plate having grooves for adjustably securing it to the said projections so it may be tipped over the latter and a screw for varying the pressure of the bottom plate against the top plate.
 7. A hair cutting device comprising, in combination, a casing, pins on the casing, a movable grooved bottom plate having recesses into which the ends of the pins fit, a solid pivot on the casing to which the bottom plate is adjustably secured so it may be tipped over the latter, a top plate, and means for pressing the top plate against the bottom plate.
 8. In a hair cutting device, the combination of a casing, a movable top plate, a movable handle, a movable bottom plate suspended on the turning pivot of said handle, and means constructed to tilt forward the bottom plate and press it against the top plate to allow the top plate to accommodate itself to the inclination of the bottom plate.
- In testimony whereof I affix my signature in presence of two witnesses.
- FRITZ KOBER.
- Witnesses:
WOLDEMAR HAUPT,
HENRY HASPER.