

No. 785,960.

PATENTED MAR. 28, 1905.

W. T. LEES.
HAIR CLIPPER.

APPLICATION FILED AUG. 5, 1904.

Fig. 1.

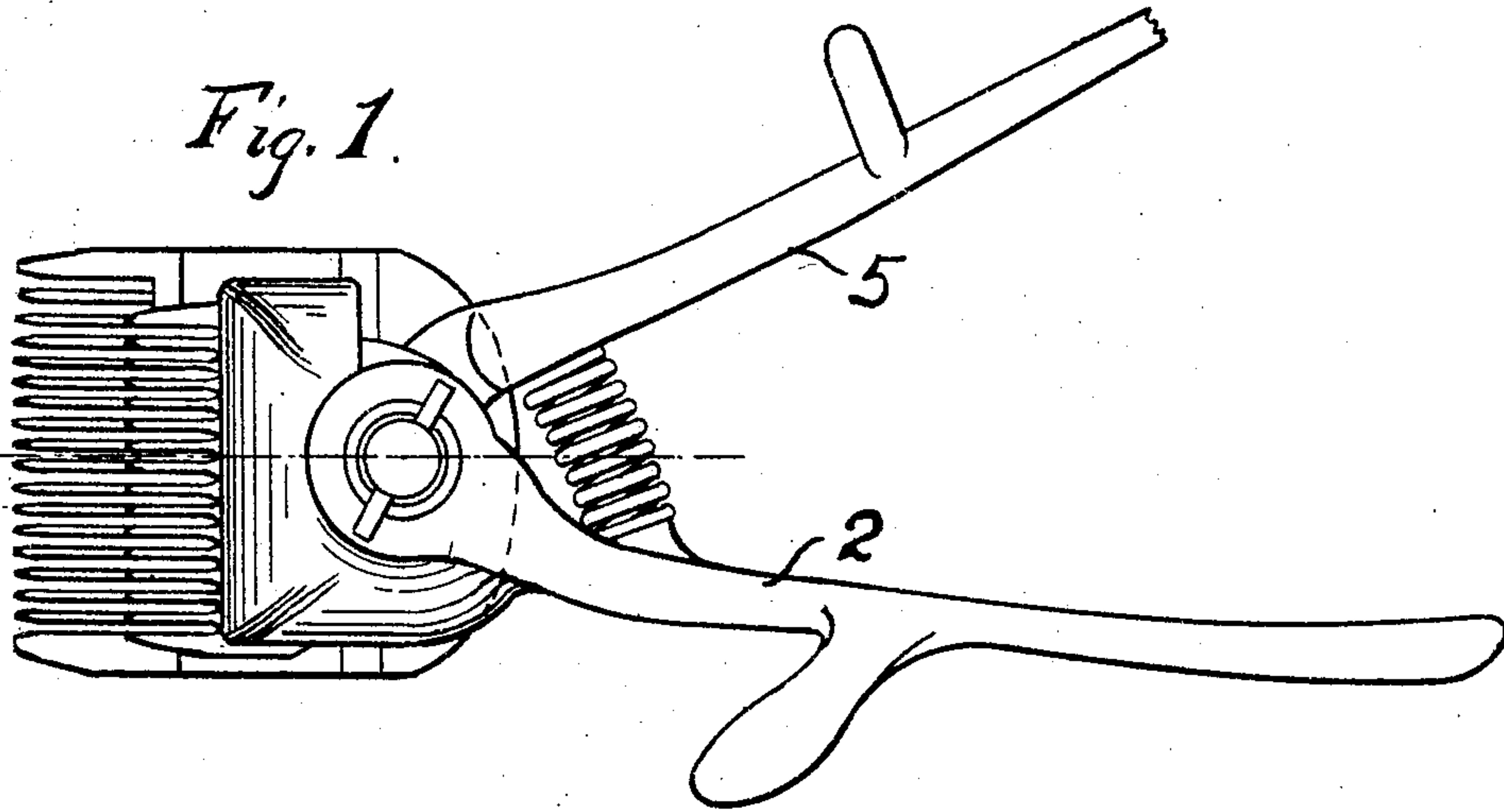


Fig. 2.

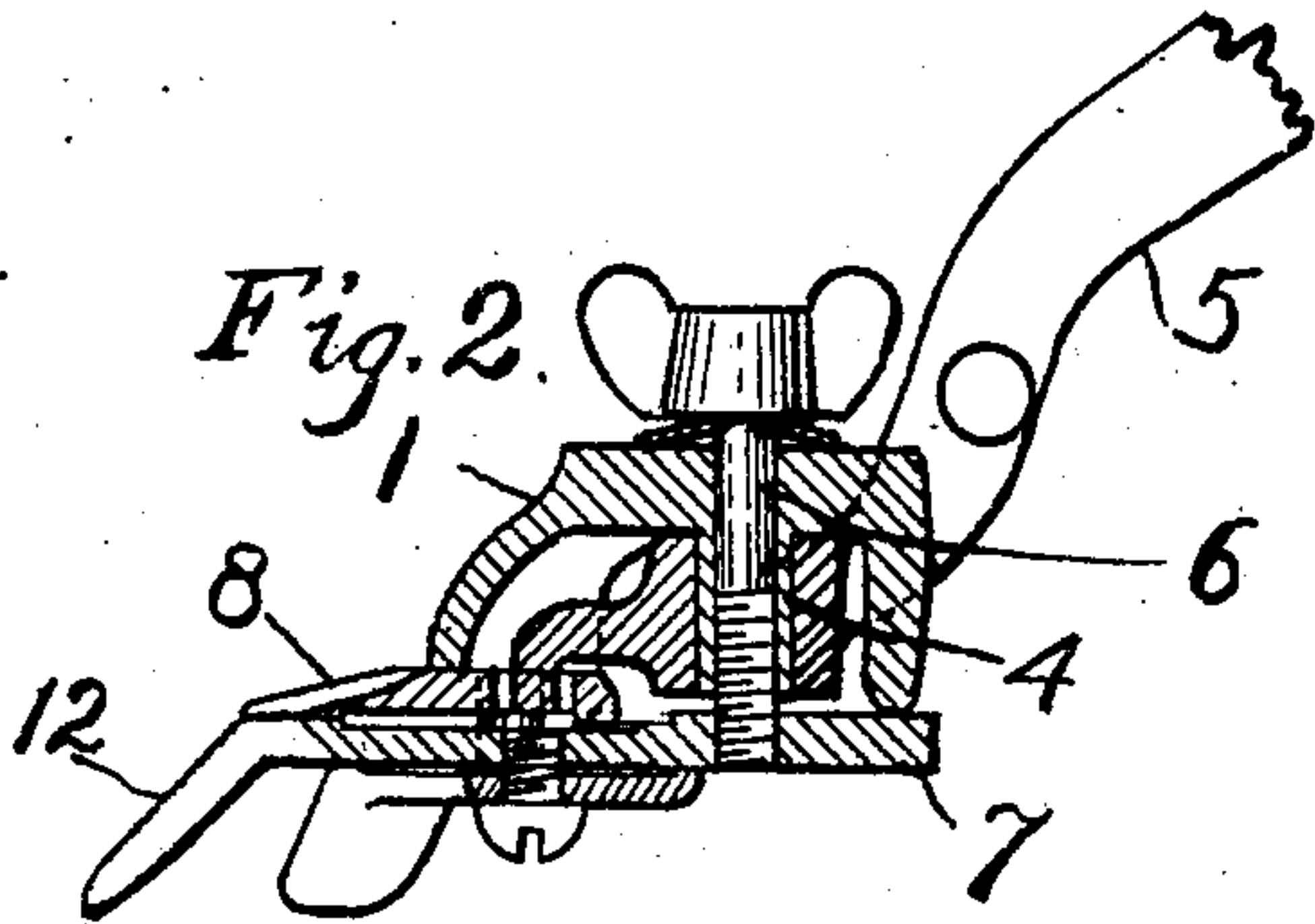


Fig. 3.

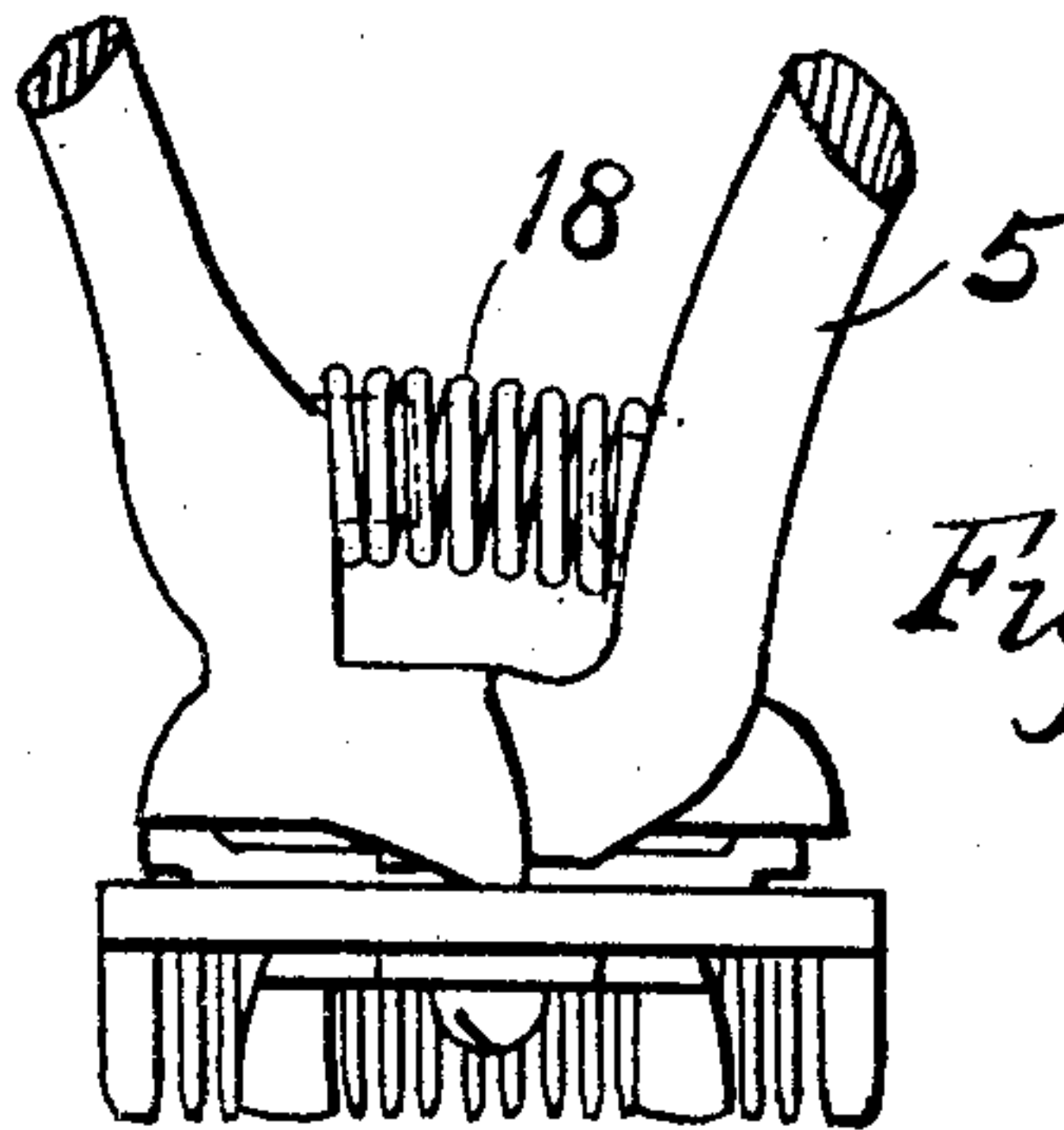


Fig. 4.

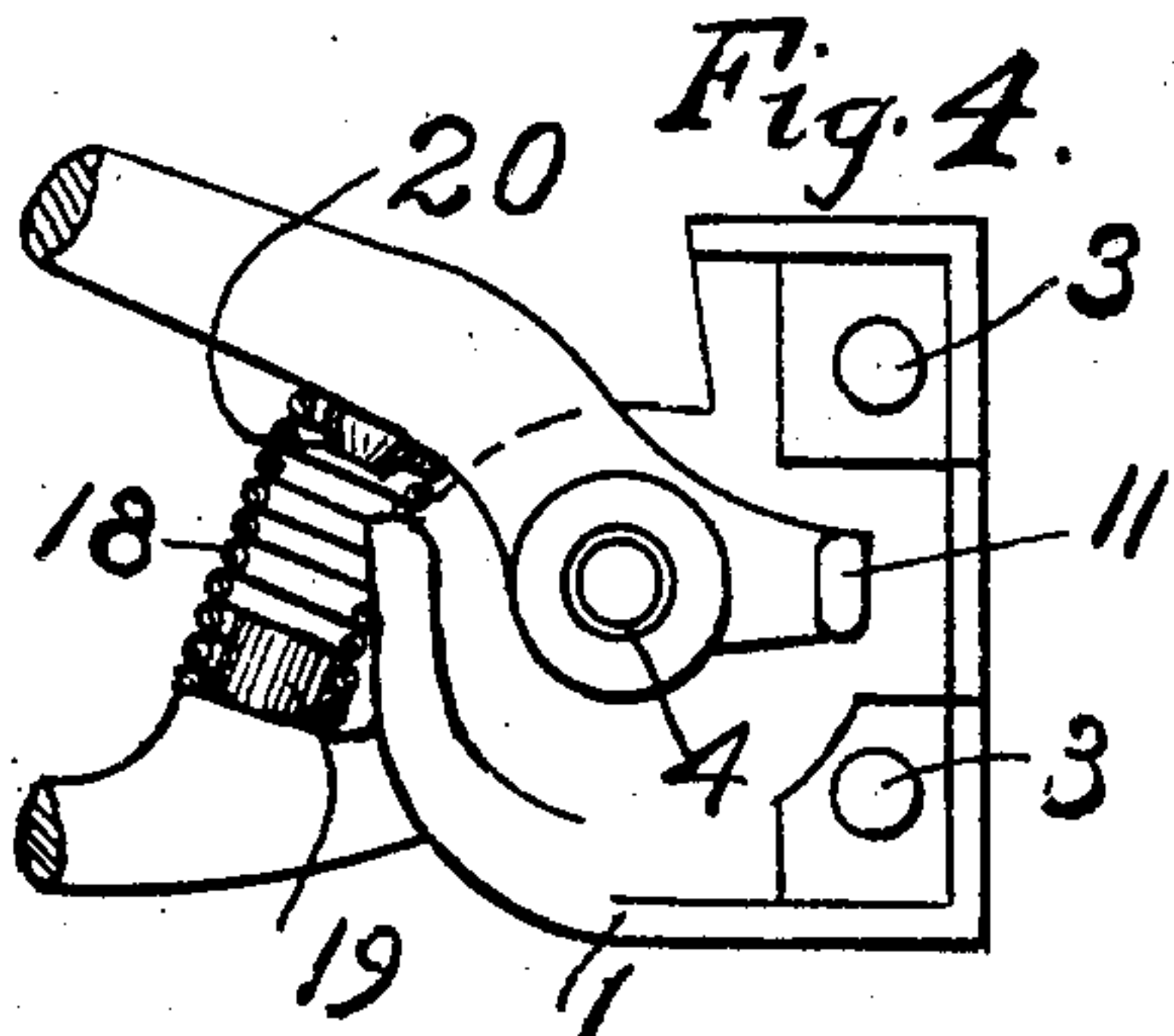


Fig. 8.

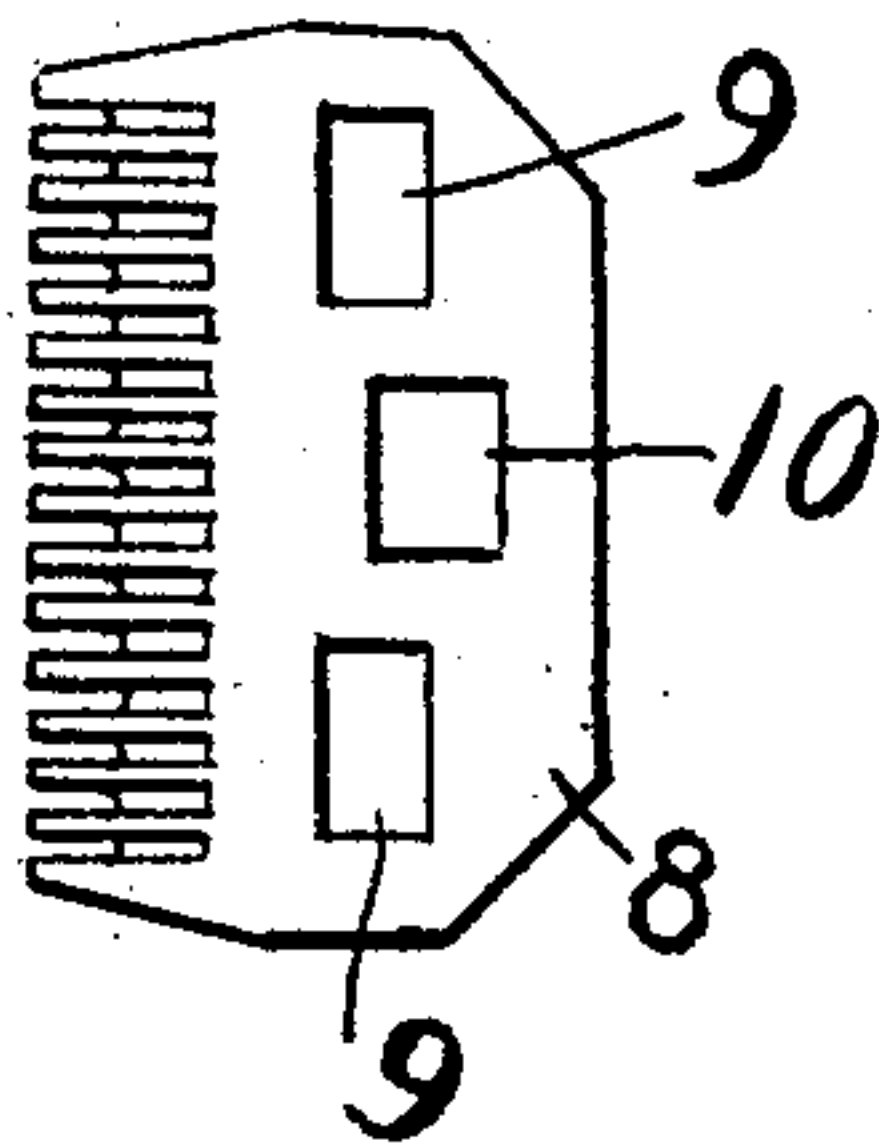


Fig. 5.

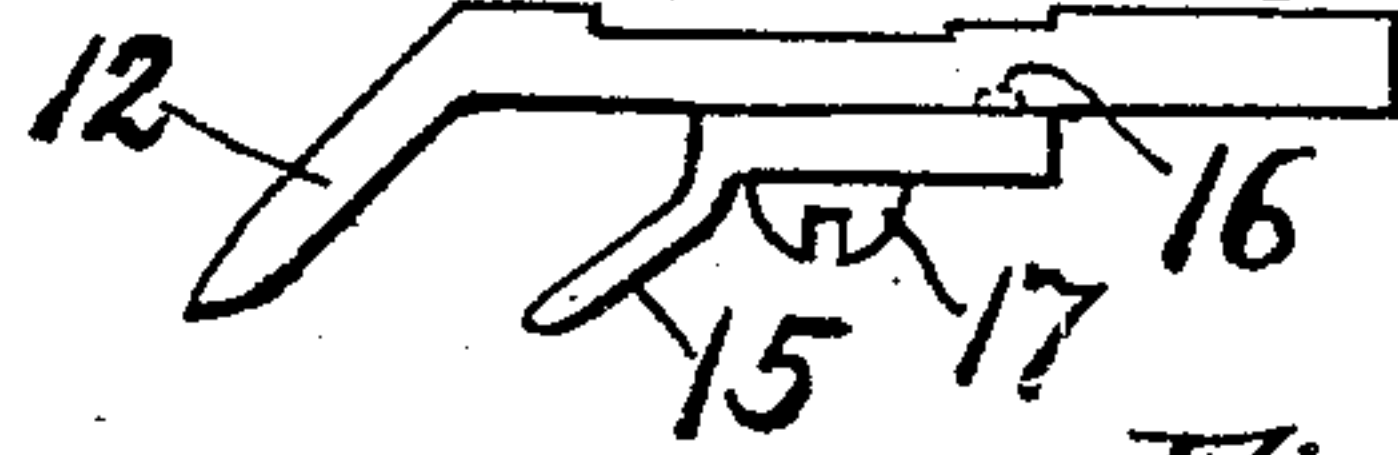


Fig. 6.

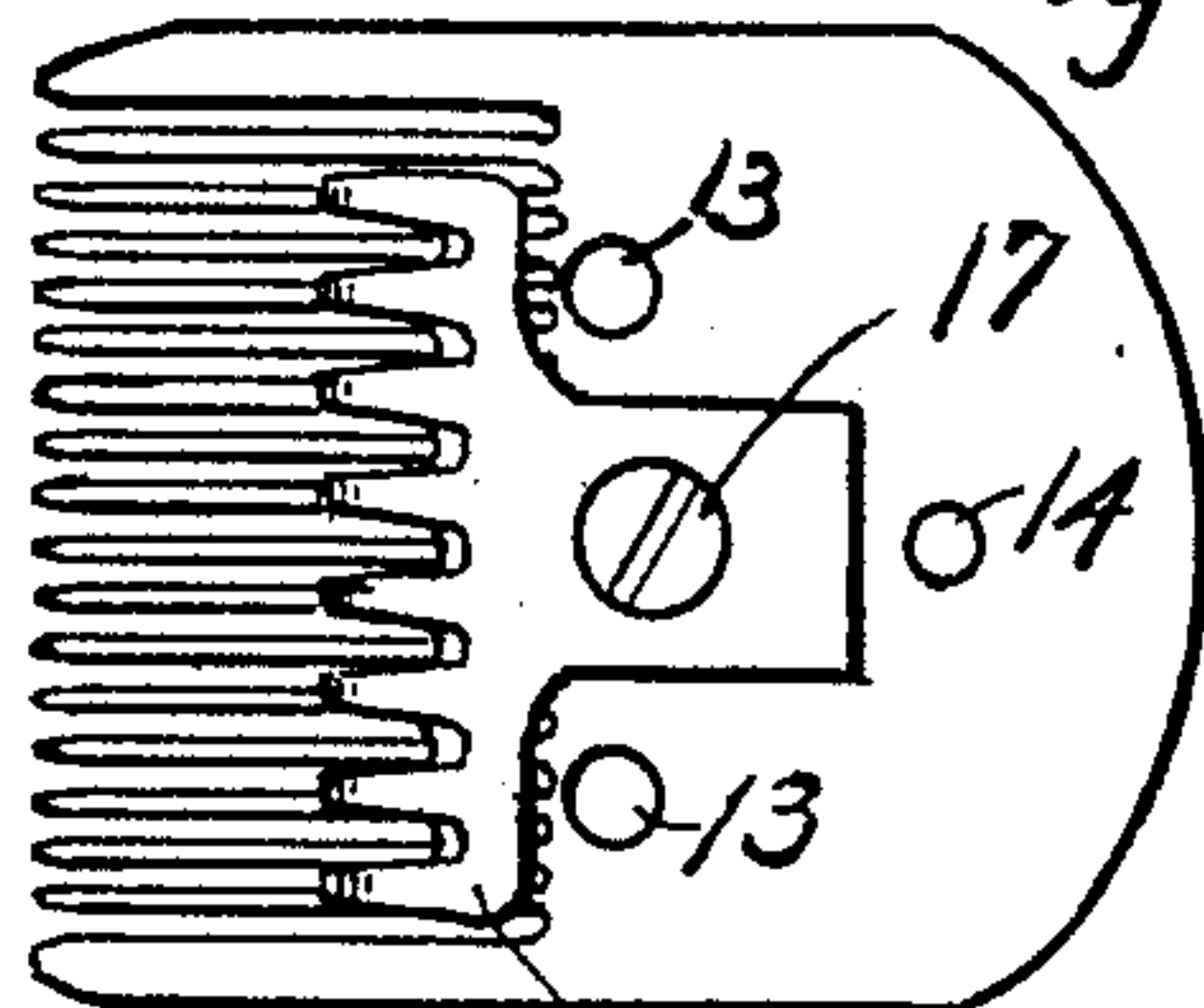
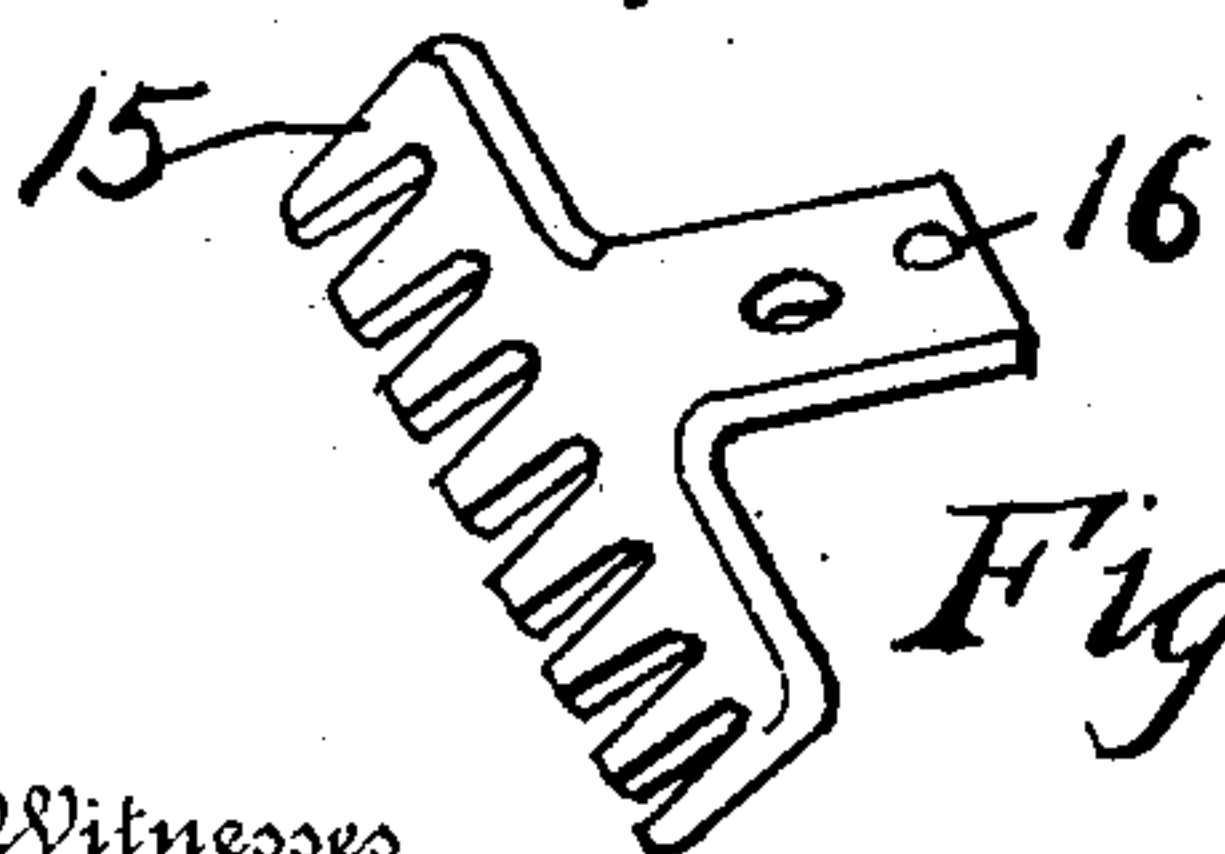


Fig. 7.



Witnesses

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HAIR-CLIPPER.

SPECIFICATION forming part of Letters Patent No. 785,960, dated March 28, 1905.

Application filed August 5, 1904. Serial No. 219,658.

To all whom it may concern:

Be it known that I, WILLIAM THOMAS LEES, a resident of the city of Pawtucket, in the county of Providence and State of Rhode Island, 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 thereof, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to hair-clippers, and has for its object to produce a hair-clipper that will be of a simple and practical construction and the plates of which being made interchangeable for the purpose of regulating the cutting of the hair to any desired length.

A further object of the invention is to so construct the bottom plate that it will easily raise the hair up to the cutting edge and hold it upright while it is being cut.

It has heretofore been found impracticable to cut a head of hair with a clipper and leave the same from one-half to three-fourths of an inch in length, the difficulty having been to raise the hair to such a height and cut it evenly. On most heads it is desirable to leave the greater portion of the hair comparatively long, and in order to do this the barbers have been obliged to use ordinary scissors to accomplish that result, clippers only being used around the neck and edges where the hair is cut short. This clipper is found in practical use to raise and cut the hair any desired length and do the work evenly, and by its use the cutting of a head of hair is greatly facilitated.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a top plan view of the cutter. Fig. 2 is a central longitudinal section of the device. Fig. 3 is the device in elevation looking at it from the rear. Fig. 4 is an underneath view showing the plates removed and illustrating the pivoting-trunnion on which the handle swings. Fig. 5 is a side elevation of the bottom plate, show-

ing the back-bearing plate which regulates the cutter. Fig. 6 is a bottom plan view of said plate with the back bearing in place. Fig. 7 is a detail view showing this back bearing as having a plurality of fingers. Fig. 8 is a detail plan view of the movable cutter-plate.

Referring to the drawings, at 1 is the head, to which is fixed the handle 2. This head is made in an inverted-cup shape, as best shown in section in Fig. 2. At 3 3 are guide-pins projecting downward from the under side of said head. The hollow trunnion 4 also projects downward from the under side of this head and has mounted upon it the swinging handle 5. This trunnion is made hollow to allow the screw 6 to pass through it and hold the bottom plate 7 in position, into which plate said screw is threaded.

At 8 is the sliding cutter-plate. (Best shown in Fig. 8.) The pins 3 3 in the head project through the holes 9 9 in the plate and are elongated to admit of a transverse movement of said plate. The aperture 10 is to receive the downwardly-projecting end 11 on the handle 5, by which projection said plate receives its motion when the handle 5 is operated.

One of the important features of this device is the construction of the bottom cutter-plate 7. This plate is preferably made of thin stock and has its outer end 12 bent down on an angle of about forty-five degrees. The end is then milled out, forming thin teeth of shallow depth, as best shown in Figs. 1, 2, and 6. It is found in practice that if the end is turned down sharp, forming a blunt end, the hair will be pushed over instead of being raised; but by carrying the teeth out or forward on an easy angle the teeth work under the hair and it is readily raised up to the cutting edge of the clipper. Another advantage in this construction is that the downwardly-projecting teeth are made as shallow as possible in order to reduce the friction on the hair to the minimum. This plate is held in position by the two pins 3 3 in the head, which enter corresponding holes 13 13 in the plate, and also by the bolt 6, which is threaded into the hole 14 in said plate and by which bolt the plate is drawn up and held in position. Another feature which works in conjunction with the angular teeth to raise the

hair and hold it upright while being cut is the bearing-fingers 15, which are secured to the lower side of the plate and also extend down on an angle to the same level as the forward end of the teeth 12. This bearing may be made with two fingers, as shown in Figs. 2 and 3, but is found to work better in practice when it has a number of fingers, as shown in Figs. 6 and 7. At 16 is a small projection on the back side of the bearing, which enters a corresponding recess in the plate 7 and serves, with the screw 17, to hold said bearing in position. The arrangement of the actuating-spring 18, which serves to open the closed handles 2 and 5, also simplifies the construction. This spring is held on small teats or projections 19 and 20, so as to cause the spring to give an upward tension on the swinging handle 5, causing it to stay up on the trunnion 4 without requiring other means for holding it from dropping off. The action of the upward tension is best shown in Fig. 3.

The operation of the device is further explained as follows: The ordinary method of constructing the teeth of a hair-clipper that is designed to cut the hair comparatively long is to take a thick plate and mill out its under side, leaving a deep tooth. This deep tooth gets clogged with oil and dust from the hair and causes a friction, which acts to turn the hair down, preventing it from being raised into the cutter. In my cutter the bottom plate consists of a thin piece of sheet material turned down at an easy angle at its outer edge. A gang of saws is then applied to this edge and thin or shallow teeth are formed. These teeth are made as shallow as possible in order to effectually do away with the friction on the hair, the bearing-point extending far out beyond the cutting-point and is turned downward at a slight angle, causing the hair to be raised gradually to the cutting-point in the cutter. Back of these teeth is secured a bearing having a plurality of teeth or fingers, which serve to regulate the length of the hair and keep the cutter-plate level. This back bearing also serves to press down the scalp, causing the hair to stand upright and be cut evenly.

This clipper is adapted for barbers' use as well as home use for cutting children's hair, as the plates are readily interchangeable and set to cut any desired length of hair.

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

1. In a hair-clipper, an upper cutter-plate, a lower cutter-plate, said lower plate having downwardly-projecting teeth and a bearing back of the point of said teeth arranged to assist in raising the hair to the cutting-point.

2. In a hair-clipper the combination of a fixed plate, a movable plate, said fixed plate having its outer edge formed into teeth and extending forward and downward of the cutting-point, a second bearing located back of the point of said teeth to assist in raising the hair and causing the same to be cut evenly.

3. In a hair-clipper the combination of a fixed plate, a movable plate, said fixed plate having its outer edge formed into teeth and extending forward and downward of the cutting-point, a bearing located back of the point of the downwardly-projecting teeth, said bearing having a plurality of downwardly-extending fingers and secured to said fixed plate to assist in raising the hair and causing the same to be cut evenly.

4. In a hair-clipper, a fixed handle, a movable handle, a coil-spring acting on the handles to return them when pressed together, a fixed cutter-plate, a movable cutter-plate, said fixed plate having its outer edge formed into teeth and extending forward and downward of the cutting-point, a bearing back of the downwardly-projecting point of said teeth to assist in raising the hair and causing the same to be cut evenly.

5. In a hair-clipper, a fixed handle, a movable handle, a coil-spring acting on the handles to return them when pressed together, a fixed plate, a movable plate, said fixed plate having its outer edge formed into teeth which teeth extend forward and downward of the cutting-point, a downwardly-projecting bearing located back of the point of the downwardly-projecting teeth, said bearing having a plurality of fingers and secured to said fixed plate to assist in raising the hair and causing the same to be cut evenly.

6. In a hair-clipper, a fixed handle, a movable handle pivotally mounted on a trunnion, a coil-spring acting on the handles to return them when pressed together, said coil-spring also acting on said pivoted handle to hold it up on said trunnion, a fixed plate, a movable plate, said fixed plate having its outer edge formed into teeth and extending forward and downward of the cutting-point, a bearing located back of the point of the downwardly-projecting teeth, said bearing having a plurality of fingers and secured to said fixed plate to assist in raising the hair and causing the same to be cut evenly.

In testimony whereof I have hereunto set my hand this 4th day of August, A. D. 1904.

WILLIAM THOMAS LEES.

In presence of—

FREDERIC A. GREENE,
FRANK A. FOSTER.