

No. 719,313.

PATENTED JAN. 27, 1903.

H. DRÖSSE.

RAZOR.

APPLICATION FILED OCT. 21, 1902.

NO MODEL.

Fig. 1.

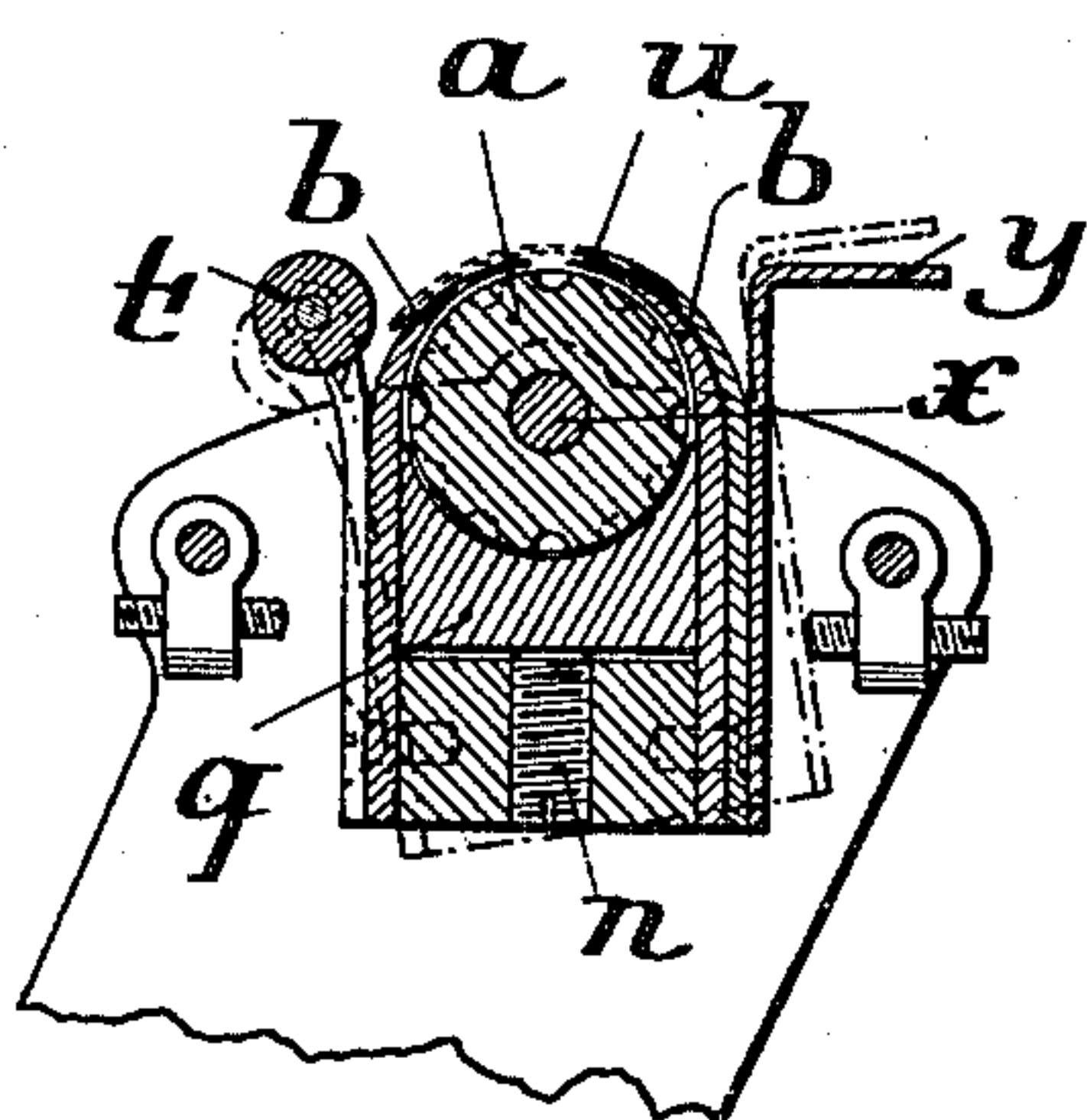
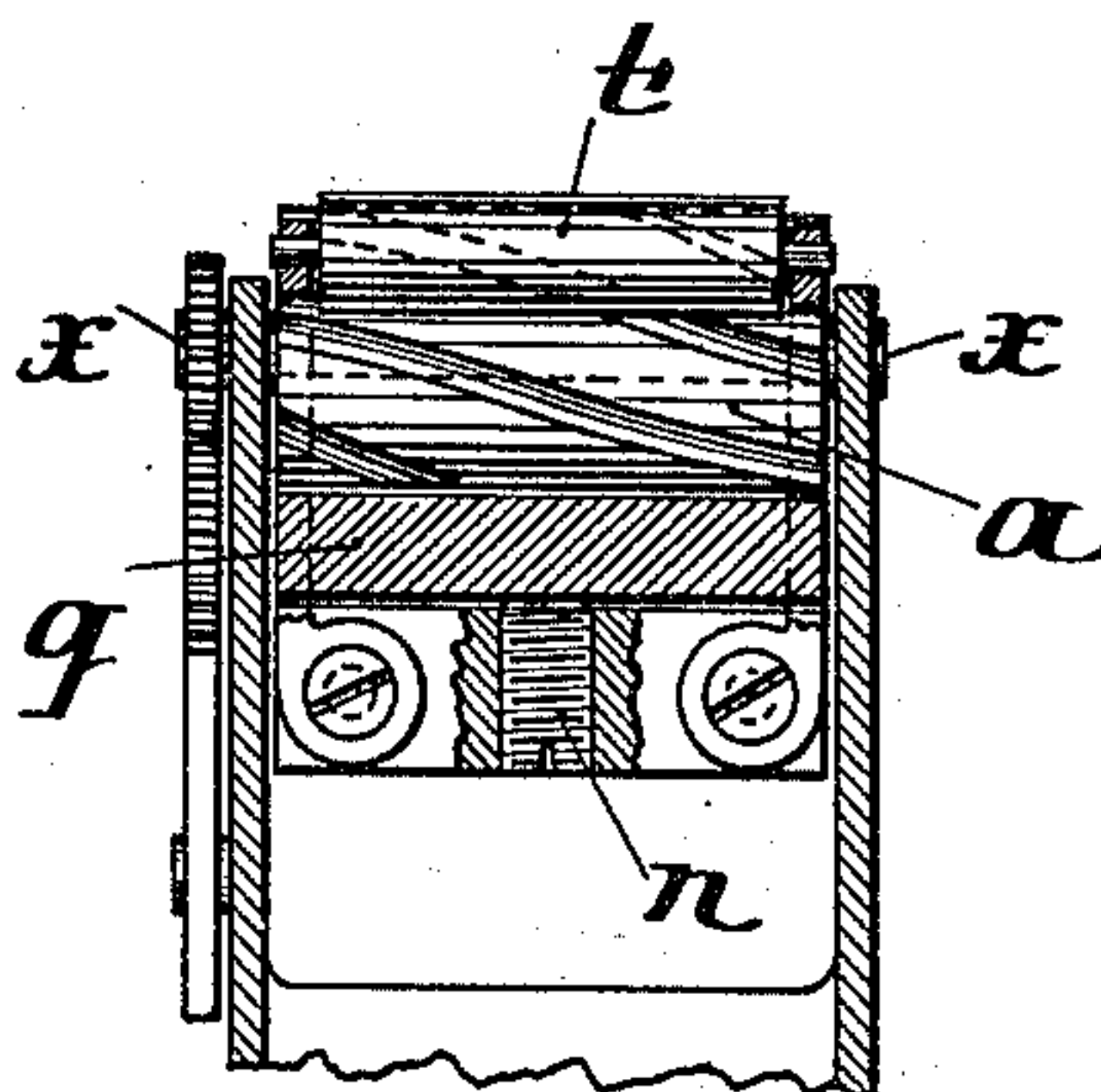


Fig. 2.



WITNESSES

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HERMANN DRÖSSE, OF CHARLOTTENBURG, NEAR BERLIN, GERMANY.

RAZOR.

SPECIFICATION forming part of Letters Patent No. 719,313, dated January 27, 1903.

Application filed October 21, 1902. Serial No. 128,185. (No model.)

To all whom it may concern:

Be it known that I, HERMANN DRÖSSE, manufacturer, a subject of the German Emperor, residing at 39 Berlinerstrasse, Charlottenburg, near Berlin, Germany, have invented certain new and useful Improvements in Razors, of which the following is a specification.

This invention relates to improvements in razors in which instead of the usual safety-blade there is a cutting arrangement having a shearing action. This kind of razor consists of a fixed knife-blade forming the one shearing edge and a roller capable of rotating against this edge and having in its surface screw-formed grooves.

The invention will be made clear by reference to the accompanying drawings, in which—

Figure 1 is a vertical transverse section through the razor-head, while Fig. 2 is a longitudinal vertical section.

The fixed blades *b b* in razors of this kind are attached to or made in one piece with the frame, the handle being attached to the latter. It has been found, however, that in such an arrangement it is difficult to keep the razor at the same angle to the surface of the skin, which is essential in effective shaving, for when the razor is tipped the shearing edge leaves the surface of the skin. By the present invention the frame which carries the shearing-roller and completely or partly surrounds it is pivoted so as to swing on the axis *a*, which carries the roller, and to this part the fixed blades are also attached. By this arrangement, even when the apparatus is incorrectly placed against the skin, the shearing action can nevertheless occur. When the razor is brought in contact with the face, the whole of the swinging frame and therefore the shearing-roller *a* and the fixed blades *b b* place themselves in proper position on the surface of the skin to insure efficient shearing.

There is ranged flush with the sharp edges of the fixed blades *b b* a broad surface *y*, which may either be attached to one of the knife-blades or be suitably supported in front of it. The smooth guiding-surface *y* thus provided need not be fixed, but may advantageously be capable of rotation for better handling. In Fig. 1 the surface in front of

the left-hand knife-blade is shown as a roller *t* of any suitable material, which in use rolls against the surface of the skin.

The frame which carries the fixed blades and the shearing-roller is provided with a block *q*, which can be adjusted in position so as to press against the shearing-roller by a set-screw *n* or the like. When the roller *a* has been diminished in diameter either by wear or by grinding, which diminution is injurious even if it be only a fraction of a millimeter, the roller can be easily adjusted again with the aid of the block *q*, so that it may be brought into position against the fixed blades without leaving any unnecessary play. In this manner the life of the razor is considerably lengthened.

In shaving the roller *a* rotates directly against the skin in the channel formed between the cutting edges of the blades *b*. The broader this channel is the easier is the shaving operation, especially if the hair is long. On the other hand, the broader the channel the less likely is the operator to avoid cutting the skin.

According to the present invention the advantage of a broad channel in a one-sided working razor is achieved without diminishing the protection against damaging the skin by arranging that the cutting edge which forms one side of the channel and is for the time out of use—that is to say, that edge opposite to the direction in which the roller is rotating—shall be higher than the cutting edge which is in action—that is to say, the edge against which the roller is rotating. This can be effected either by making the knife-blade which is not in use somewhat thicker than the other or by setting it farther off from the roller, or there may be a special plate *u*, held by suitable screws or the like over the blade which is not in use. This may with advantage be made to extend at the narrow sides of the channel over the blade which is in use, as is shown in Fig. 1 in dotted lines.

All the novel arrangements hereinbefore described are applicable also to razors of the kind described in which only one knife-blade is used or those which can be used both forward and backward, as well as in those in which the roller rotates always in one direction.

Having thus described the nature of this invention and the best means I know of carrying the same into practical effect, I claim—

1. In a razor having a shearing-roller rotating against a fixed blade, the swinging frame which carries the fixed blade and the shearing-roller, substantially as described.
2. In a razor having a shearing-roller rotating against a fixed blade, a swinging frame carrying the fixed blade and the shearing-roller, and a block adjustable in the frame to bear against the shearing-roller, substantially as described.
3. In a razor having a shearing-roller rotat-

ing against a fixed blade, a guiding-surface fixed in the plane of the shearing edge, substantially as described.

4. In a razor having a shearing-roller rotating against two fixed blades, one of the said blades made thicker than the other, substantially as described.

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

HERMANN DRÖSSE.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.