(No Model.)

R. M. KEATING.

SHAVING APPARATUS.

No. 371,945. Patented Oct. 25, 1887.

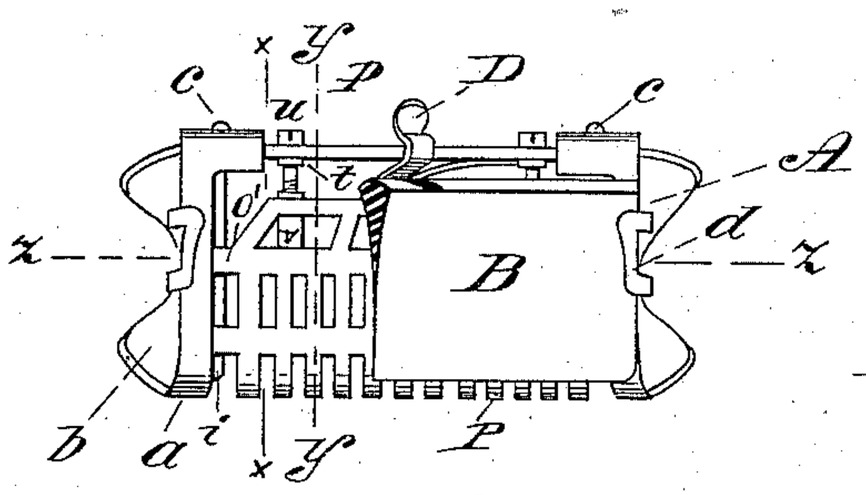

Fig I.

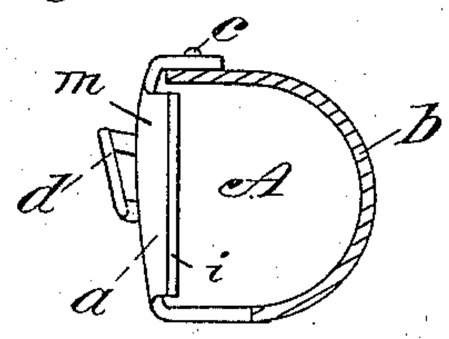

Fig II,

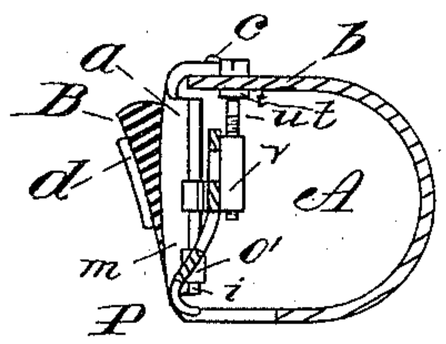

Fig III,

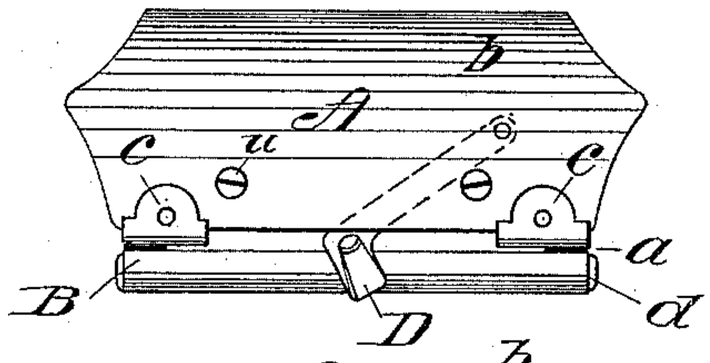

Fig IV,

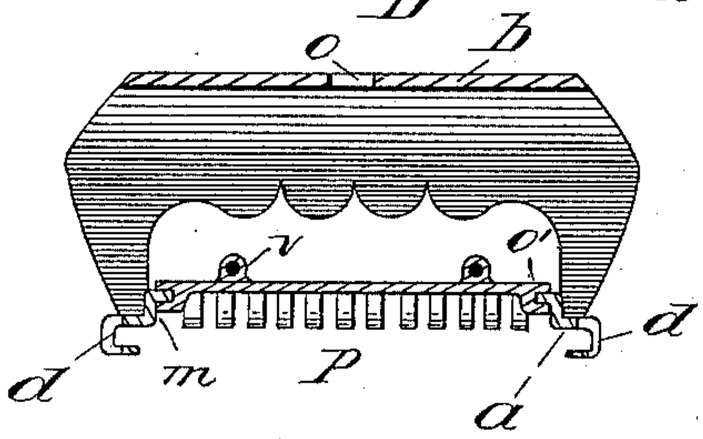

Fig V,

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UNITED STATES PATENT OFFICE.

ROBERT M. KEATING, OF SPRINGFIELD, MASSACHUSETTS.

SHAVING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 371,945, dated October 25, 1887.

Application filed April 15, 1887. Serial No. 234,874. (No model.)

To all whom it may concern:

Be it known that I, ROBERT M. KEATING, a citizen of the United States, residing at Springfield, Hampden county, State of Massachusetts, have invented a new and useful Improvement in Shaving Apparatus, of which the following is a specification.

My invention relates to improvements in the class of shaving apparatus in which the blade is held by end sockets or clips at opposite ends thereof, and is held in said sockets or clips by a clamping device bearing upon its back from a frame-back connected to said clips or sockets, and in which the blade is backed by a guard rigidly connected to said clips and frame-back, of which class the patented device of F. and O. F. Kampfe, dated June 15, 1880, No. 228,904, is a type; and my improvements have for their object the provision of an adjustable guard adapted to be moved from the frame-back, to maintain a relative position to the blade-edge through all wear of the same.

My invention consists in the combination and construction as hereinafter described, and more particularly pointed out in the claim, and is fully illustrated in the accompanying drawings, in which—

Figure I is a face view, with a part of the blade removed, of a shaving apparatus embodying my improvements. Fig. II is a transverse section on the dotted line *x x* of Fig. I. Fig. III is a transverse section on the dotted line *y y* of Fig. I, and through a guard and blade. Fig. IV is a top view of a complete apparatus, and Fig. V is a section in plan on the dotted line *z z* of Fig. I.

A is the blade-holder, formed, in effect, of a sheet of metal bent to leave a back, *b*, and to form a front plate, *a*, against which the blade B can bear on its inner face near its ends, and having the back and front permanently united at *c*. The front plates, *a*, are provided at their outside edges with clips or sockets *d*, which serve to retain the blade in position and against the plate or plates *a*.

D is a clamp bearing from the back *b* upon the blade B, to hold it immovable in the clips, said clamp being adapted to release the blade when it is desired to withdraw it.

o, Fig. V, is a socket in the back, in which is screwed a handle, (not shown,) and P is a guard held to the blade-holder A in rear of the blade B.

These general features of a shaving apparatus are old, and I make no claim thereto; but hitherto the guard P in a holder, A, formed of a sheet of metal bent to present a front plate, *a*, and back *b*, and secured at its edges, as at *c*, has formed an immovable part of said sheet of metal, in being rigidly connected or integral with the clip-bearing plate *a*, so that as the blade-edge wears and is changed relative to the fixed guard edge or surface it has been necessary to rebend the clips to form a new seat for the blade B, which change requires in the operator a certain amount of mechanical skill not possessed by every one needing a shaving apparatus, and which necessity constitutes, to some extent, a defect in a useful class of apparatus, and to obviate which I combine and construct the guard P, back *b*, and plate *a* as follows: The opposite inner edges of the plate *a* are depressed from the blade-bearing surface thereof, to form parallel straight edges *i i* in the same plane and in one parallel to the vertical axis of the blade, and the shoulder *m* between the edges *i i* and the blade-bearing surface of plates *a* is deep enough to permit grooved ends *o' o'* of the guard P to slide upon said edges *i i* as ways without interference with the inner side of the blade B. This configuration of plate *a* is shown particularly in its transverse section, Fig. V.

The guard P is provided with end grooves, *o' o'*, fitting over the edges *i i*, so as to be held by them from having any but a movement over their edges; and in practice the guard is engaged with the plate *a* by being slid over the open ends of the edges *i i* from beneath, and when free to do so can be slid entirely clear from the rest of the apparatus for the purpose of being cleansed. In rear of the guard P and secured thereto, as seen more particularly in Fig. III, is a nut, *v*, into which is received a screw, *u*. The screw *u*, having its threaded end in the nut *v*, has its head adapted to be operated either by a screw-driver or by the fingers direct, comes upon the outside of back *b*, its stem passing through a corresponding opening in said back and bearing upon said

back, and has a collar, *t*, bearing beneath said back, so that the screw, while free to rotate, is held by its head and collar from any longitudinal movement. The result of any rotation of the screw *u*, it is apparent, will be to raise or lower the guard P, and by means of the screw and grooved edges of the guard, combined with the ways formed by edges *i i*, the guard can be adjusted to the blade-edge.

Although one screw *u* and nut *v*, arranged near the center of the guard and out of the way of the clamp D, would be sufficient to slide the guard to adjust it, I prefer to use two, as shown, disposed upon opposite sides of the guard-center.

Now, having described my invention, what I claim is—

In shaving apparatus, the combination, with a blade-seating plate, *a*, having clips *d*, with straight-edge ways *i i*, combined with said plate, and with back plate, *b*, united to plate *a*, of a guard, P, provided with end grooves, *o' o'*, nut *v*, and screw *u*, collared to back *b*, all arranged and operating substantially as and for the purpose set forth.

ROBERT M. KEATING.

Witnesses:
PHILIP MAURO,
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