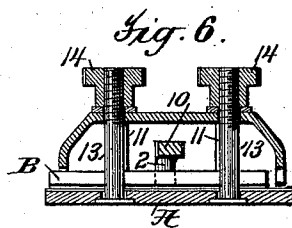
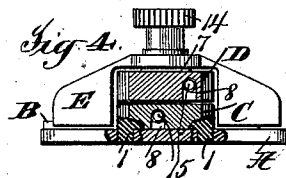
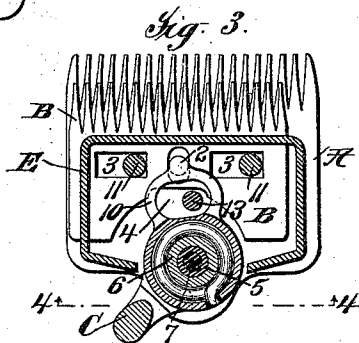
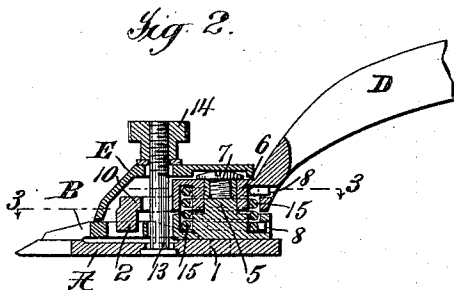
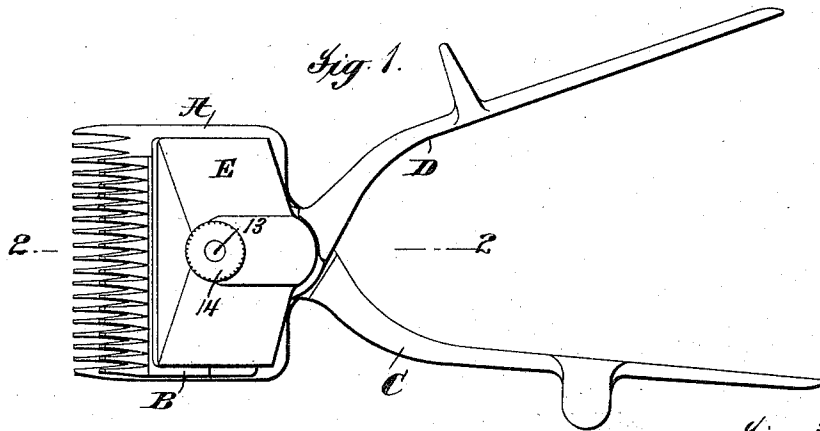


(No Model.)

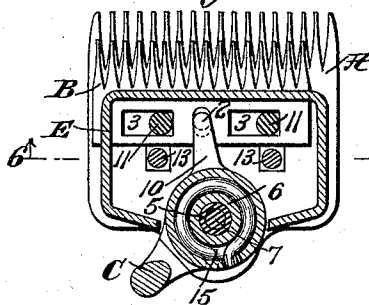
E. S. HOTCHKISS.  
CLIPPERS.

No. 535,620.

Patented Mar. 12. 1895.



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

EDWARD S. HOTCHKISS, OF BRIDGEPORT, CONNECTICUT.

## CLIPPERS.

SPECIFICATION forming part of Letters Patent No. 535,620, dated March 12, 1895.

Application filed May 12, 1894. Serial No. 510,979. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD S. HOTCHKISS, a citizen of the United States, residing at Bridgeport, county of Fairfield, and State of Connecticut, have invented certain new and useful Improvements in Clippers, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of the invention is to provide an improved construction of clipper, and especially to provide an improved construction of toilet hair clipper having a concealed spring for operating the movable handle in one direction, and to improve the construction of pressure devices and of the means for securing the movable and stationary handles to the bottom plate.

For a full understanding of the invention, a detailed description of a construction embodying all the features of the same in their preferred form will now be given, reference being had to the accompanying drawings forming a part of this specification, and the features forming the invention will then be specifically pointed out in the claims.

In the drawings: Figure 1 is a plan view of the improved clipper in one of the preferred forms. Fig 2 is a section of the same on the line 2 of Fig. 1. Fig. 3 is a section on the line 3 of Fig. 2. Fig. 4 is a section on the line 4 of Fig. 3, looking in the direction of the arrow. Fig. 5 is a section similar to Fig. 3 showing a modified construction employing two bolts for securing the cap. Fig. 6 is a section on the line 6 of Fig. 5, looking in the direction of the arrow.

In the drawings, A is the bottom or stationary comb plate; B, the top or movable comb plate; C, the stationary handle; D, the movable handle, and E the cap. The stationary handle C is secured to the bottom comb plate A by two studs 1 carried by the body of the stationary handle and passing through openings in the bottom plate. The movable handle is provided with the operating arm 10 carrying the stud 2, which enters the usual slot in the top of the movable comb plate B for moving the latter, and the movable plate is guided by the usual guide pins 11 carried by

the cap E, and passing through slots 3 in the movable plate B and holes in the bottom plate A, the cap thus being held in position upon the bottom plate at its front edge.

The operating arm 10 of the movable handle, in the form shown in Figs. 1 to 4, is provided with a slot 4 transverse to the clipper, and a pressure bolt 13 by which the cap E is secured, passes upward through the bottom plate and this slot 4 and through cap E, and is secured by a thumb nut 14 pressing upon the cap, a washer being shown between the nut and cap, as usual in such constructions.

The top of the body portion of the stationary handle C and the bottom of the body portion of the movable handle B are milled out to form a circular groove located partially in each handle, a hub 5 being left within the groove on the stationary handle and a sleeve 6 within the groove in the movable handle, the hub receiving the sleeve when the handles are joined and thus forming a bearing for the movable handle. The top of the hub 5 in the stationary handle is shown as tapped to receive a screw 7, the head of the screw overlapping on the top of the movable handle, so that the two handles are thus held together, and the movable handle prevented from working off the hub on the stationary handle.

Within the groove formed in the two handles is inserted a coiled spring 15, one end of which is secured to the movable handle and the other to some stationary part of the construction, preferably to the stationary handle, as shown, the ends of the springs in the construction illustrated being simply passed through openings 8 in the respective handles.

It will be seen that with the two circular grooves lying one above the other when the parts are assembled, the walls of the grooves may be so formed as to substantially inclose and conceal the spring, as in the preferred construction shown. This feature, although not essential, is important, in that it improves the appearance of the clipper and avoids the necessity for the frequent disassembling of the parts which is necessary for cleaning the springs when the latter are exposed, on account of the accumulation of fine hair, dandruff, &c., therein.

Where the parts are assembled, the cap E bears upon the head of the screw 7, and thus, by the single pressure bolt 13 and the cap, all the parts of the construction are held together, there being no separate bolts for securing the handles to the bottom plate but this result being attained by the studs 1 on the stationary handle passing through the bottom plate, and the pressure of the cap upon the screw 7.

The construction shown in Figs. 5 and 6 is the same as that above, except that two pressure bolts 13 and thumb nuts 14 are shown, these two bolts preferably being placed on the same line transversely to the cutter, as the single bolt 13 of the construction previously described, that is, on a line between the pivot of the movable handle and the point of connection between the movable handle and the movable comb plate, this position of the bolt or bolts securing a more central pressure. The two bolts secure a more evenly distributed pressure, and are especially desirable for large clippers. In this construction, the movable comb plate B is shown as terminating in front of the bolts 13, but it may extend farther back and be slotted for the bolts, if preferred, or any other suitable arrangement be used.

It will be understood that the features forming the invention may be used in clippers of other detail construction than that shown, and that modifications may be made in the construction of the parts shown as embodying these features without departing from the invention.

What I claim is—

1. The combination with the stationary and movable comb plates and handles of a clipper, of an operating spring for the movable handle coiled about the pivot and inclosed within a groove formed partially in the body portion of each handle, and a pressure bolt for the comb plates outside said grooves, substantially as described.

2. The combination with the stationary and movable comb plates and handles of a clipper, the body portions of the stationary and movable handles being provided with recesses lying one above the other when the parts are assembled, of an operating spring for the movable handle coiled in said recesses and inclosed and substantially concealed by the walls of the recesses, substantially as described.

3. The combination with the stationary and movable comb plates and handles of a clipper, the body portions of the stationary and movable handles being provided with circular grooves, lying one above the other when the parts are assembled one inclosing a hub and the other a sleeve, of a coiled operating spring for the movable handle in said grooves, and a cap resting on the handles and holding the handles on the stationary plate, substantially as described.

4. The combination with the stationary and movable comb plates of a clipper, of a stationary handle separate from the stationary plate, a movable handle, and a cap separate from the handles and secured to the stationary plate for holding the handles on the stationary plate, substantially as described.

5. The combination with the stationary and movable handles of a clipper, the body portions of the stationary and movable handles being provided respectively on their upper and under sides with a circular groove one inclosing a hub and the other a sleeve, of a coiled operating spring for the movable handle in said grooves, and a cap, the rear part of which rests on the hub of the stationary handle and holds the latter on the stationary plate substantially as described.

6. The combination with the stationary and movable comb plates and the stationary and movable handles of a clipper, the stationary handle being provided with studs entering holes in the stationary plate and the body portions of the stationary and movable handles being provided respectively on their upper and under sides with circular grooves one inclosing a hub and the other a sleeve, of a coiled operating spring for the movable handle in said grooves, a screw entering the hub and securing the movable handle to the fixed handle, a cap resting upon said screw, and one or more pressure bolts connecting said cap to the stationary plate, substantially as described.

7. The combination with the stationary and movable comb plates of a clipper, of a stationary handle separate from the stationary plate, a movable handle mounted on the stationary handle, and a pressure cap secured to the stationary plate and holding the stationary handle thereon, substantially as described.

8. The combination with the stationary and movable comb plates of a clipper, of a stationary handle separate from the stationary plate, one of said members having studs entering holes in the other member, a movable handle mounted on the stationary handle, and a pressure cap secured to the stationary plate and pressing the stationary handle against said plate, substantially as described.

9. The combination with the stationary and movable comb plates of a clipper, of a stationary handle separate from the stationary plate, a movable handle mounted on the stationary handle, a pressure cap holding the stationary handle on the stationary plate, and one or more pressure bolts securing the cap to the stationary plate on a line between the pivot of the movable handle and the connection of the latter with the movable plate, substantially as described.

10. The combination with the stationary and movable comb plates of a clipper, of a stationary handle separate from the stationary plate, one of said members having studs en-

tering holes in the other member, whereby  
the swinging of the handles on the plate is  
prevented, a movable handle mounted above  
and upon the stationary handle, and means  
5 for pressing the stationary handle against  
the stationary plate and securing the parts to-  
gether, substantially as described.

In testimony whereof I have hereunto set  
my hand in the presence of two subscribing  
witnesses.

EDWARD S. HOTCHKISS.

Witnesses:

E. W. GENUNG,  
J. B. DEUCH.