July 19, 1932. C. A. MELKA 1,867,980

SHAVING CREAM DISPENSING SAFETY RAZOR

Filed March 13, 1931

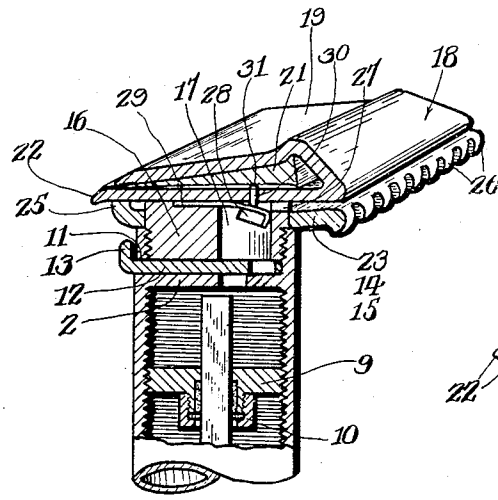
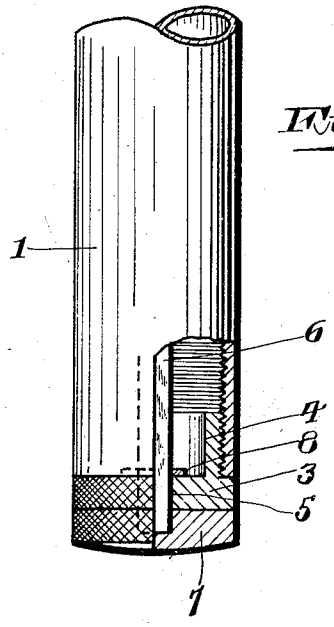


Fig. 2.



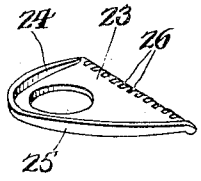


Fig. 3.

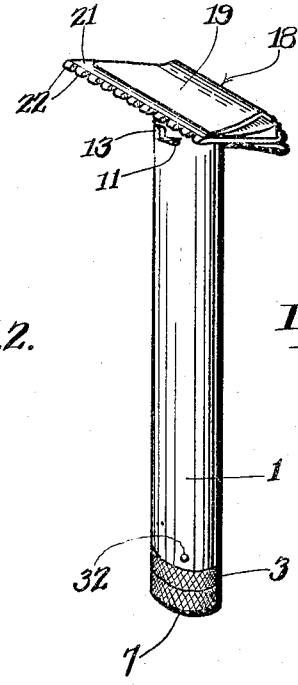


Fig. 1.

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UNITED STATES PATENT OFFICE

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SHAVING CREAM DISPENSING SAFETY RAZOR

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This invention relates to a shaving cream dispensing safety razor and has for its primary object to provide, in a manner as hereinafter set forth, a safety razor adapted to contain in the handle thereof a supply of shaving cream under pressure which will be automatically discharged for application to the face upon the insertion of a blade into the blade holder for the razor.

A further object of the invention is to provide a safety razor of the character aforesaid which includes manually operable means for preventing the discharge of the shaving cream by the pressure thereon when desired, and which further includes means operating automatically to prevent any discharge of cream when the blade and holder are disassembled, irrespective of any pressure on the cream.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts as hereinafter more particularly described, and as illustrated in the accompanying drawing wherein is shown an embodiment of the invention, but it is to be understood that the description and drawing are to be taken as illustrative and that the invention is intended to be limited only by the scope of the claims hereunto appended.

In the accompanying drawing in which like numerals are employed to designate like parts throughout the several views:

Figure 1 is a perspective view of a razor in accordance with this invention.

Figure 2 is an enlarged sectional perspective view thereof.

Figure 3 is a perspective view of the lather spreading element forming a part of the razor.

Referring to the drawing in detail, the numeral 1 indicates the handle of the razor, such handle being of hollow tubular construction provided in spaced relation to its inner end with a partition 2 and having its inner face internally threaded throughout its entire length on both sides of the partition 2. At the outer end thereof, the handle 1 is provided with a closure cap 3 having an externally threaded annular flange 4 in threaded engagement with the threaded inner face of the handle. The cap 3 is provided centrally thereof with an opening 5 through which a rod 6 rotatably extends. The rod 6 is of polygonal formation in cross section and is provided at its outer end with a head 7 which is fixedly secured to the rod in any suitable manner. Inwardly of the cap 3, the rod 6 is provided with a radially projecting shoulder 8 to prevent withdrawal of the rod through the cap 3.

Disposed within the handle 1, in threaded engagement with the inner face thereof, is a piston 9 through which the rod 6 slidably and non-rotatably extends. The piston 9 is provided with a suitable stuffing box 10 to provide a fluid tight joint between the piston and rod 6.

Adjacent the partition 2, inwardly thereof, the handle 1 is formed with a slot 11 through which extends a slide valve 12 having an upturned grip portion 13 at its outer end. The slide valve 12 is provided with an opening 14 which is out of registry with an opening 15 in the partition 2 when the grip member 13 is pressed against the outer face of the handle 1, and which is brought into registry with the opening 15 upon an outward sliding movement of the valve 12.

Seated against the partition 2 is a carrier element 16 which is in the form of a plug in threaded engagement with the handle 1 and having an opening 17 extending longitudinally thereof and in registry with the opening 15. The element 16 is suitably grooved in its inner face for slidably receiving the slide valve 12. Formed with or secured to the carrier element 16 is a blade holder 18 which includes a pair of resiliently connected plates 19 and 20 which converge towards the free edges thereof and which are adapted to yieldingly grip therebetween a blade, such as 21. The plate 20 projects beyond the plate 19 and is provided with a serrated edge 22 which provides a guard for the cutting edge of the blade 21.

Interposed between the holder 18 and handle 1 is a lather spreading element 23 having an opening 24 through which the carrier element 16 extends. The lather spread-

ing element 23 is constructed of flexible material, such as semi-hard rubber, and is provided at its edge with an arcuate flange 25 which extends upwardly into abutting relation with the lower plate 20 of the holder 18. The lather spreading element 23 is formed at one edge thereof, between the ends of the flange 25, with a series of massaging nipples 26.

Adjacent the holder 18, the carrier element 16 is formed with a transversely extending opening 27 which communicates with the opening 17 and which opens through the outer face of the carrier element 16 just above the portion of the lather spreading element 23 adjacent the massaging nipples 26. The opening 27 is normally closed by means of a resilient valve member 28 disposed within the opening 17 and having a resilient shank 29 fixedly secured to the carrier element 16. Slidably and non-rotatably extending through the lower plate 20 of the holder 18, above the valve member 28, is a pin 30 having an inclined upper face 31 for engagement by the blade 21 when the latter is inserted between the plates 19 and 20. Upon the insertion of the blade 21, the pin 30 is depressed as shown in Figure 2, whereby the valve member 28 is forced downwardly from its normal closure position with respect to the opening 27.

When it is desired to fill the handle 1 with cream, the carrier element 16 is removed from the handle and a tube of shaving cream is threadedly connected with the handle at the inner end of the latter. The head 7 is then rotated in a manner to withdraw the piston 9 towards the outer end of the handle. If desired the handle 1 may be provided adjacent its outer end with an opening 32 to permit the ready escape of air during the withdrawal of the piston towards the outer end of the handle. After the piston 9 has been moved to the outer end of the handle, the cream is squeezed out of its container into the handle, after which the tube is removed and the handle is again connected with the carrier element 16. The head 7 is then rotated in a reverse direction to move the piston 9 toward the partition 2 whereby the cream within the handle is compressed between the piston and partition.

In the use of the razor, a blade, such as 21, is inserted between the plates 19 and 20, causing the valve member 28 to be opened by the action of the pin 30. The slide valve 12 is manually moved to a position to bring the opening 14 into registry with the opening 15 which permits the cream to escape through the openings 17 and 27 to the lather spreading element 23 to be spread in the desired manner by moving the massaging nipples 26 over the face. When sufficient lather has been discharged onto the face, the slide valve 12 is closed by pressing inwardly on the grip member 13 with the thumb in order to prevent any further escape of the cream into the opening 17. After shaving, the blade 21 is removed which causes the valve element 28 to close by means of its own tension whereby any likelihood of the cream within the opening 17 leaking through the opening 27 is prevented. Any cream adhering to the lather spreading element 23 then may be rinsed off by holding the latter under a faucet or the like.

It is thought that the many advantages of a razor in accordance with this invention will be readily apparent, and although the preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the size, shape and arrangement of parts may be resorted to, so long as such changes fall within the scope of the invention as defined in the appended claims.

What I claim is:—

1. A safety razor comprising, a hollow handle adapted to contain a supply of shaving cream, a blade holder detachably connected with the inner end of the handle and including a pair of resiliently connected plates, a lather spreading element interposed between the blade holder and handle and having a portion thereof spaced from the holder, means to provide a cream passageway from the handle to the space between the holder and lather spreading element, means normally exerting pressure on the cream to force the same through said passageway, an automatically closable valve for said passageway normally preventing discharge of the cream, and means operable by the insertion of a blade between the plates of the holder for opening said valve.

2. A safety razor comprising, a hollow handle adapted to contain a supply of shaving cream, a blade holder detachably connected with the inner end of the handle and including a pair of resiliently connected plates, a lather spreading element interposed between the blade holder and handle and having a portion thereof spaced from the holder, means to provide a cream passageway from the handle to the space between the holder and lather spreading element, means normally exerting pressure on the cream to force the same through said passageway, an automatically closable valve for said passageway normally preventing discharge of the cream, means operable by the insertion of a blade between the plates of the holder for opening said valve, and a manually controlled valve for said passageway to prevent discharge of the cream when said automatically closable valve is open.

3. A safety razor comprising, a hollow handle formed adjacent its inner end with a partition having an opening, a carrier element detachably secured to the inner end of

the handle and having an opening in registry with the opening in the partition, a blade holder carried by the carrier element and including a pair of resiliently connected plates, a lather spreading element interposed between the blade holder and handle and having a portion thereof spaced from the holder, said carrier element having a passage leading from the opening therein to the space between the lather spreading element and holder, means normally exerting pressure on the cream to force the same through said opening and passage, an automatically closable valve for said passage normally preventing the passage of cream therethrough, and means operable by the insertion of a blade between the plates of the holder for opening said valve.

4. A safety razor comprising, a hollow handle formed adjacent its inner end with a partition having an opening, a carrier element detachably secured to the inner end of the handle and having an opening in registry with the opening in the partition, a blade holder carried by the carrier element and including a pair of resiliently connected plates, a lather spreading element interposed between the blade holder and handle and having a portion thereof spaced from the holder, said carrier element having a passage leading from the opening therein to the space between the lather spreading element and holder, means normally exerting pressure on the cream to force the same through said opening and passage, an automatically closable valve for said passage normally preventing the passage of cream therethrough, means operable by the insertion of a blade between the plates of the holder for opening said valve, and a manually controlled slide valve for closing the opening in said partition to prevent the discharge of cream therethrough when said automatically closable valve is open.

5. A safety razor comprising, an internally threaded tubular handle adapted to contain a supply of shaving cream, a blade holder detachably connected with the inner end of the handle and including a pair of resiliently connected plates, a lather spreading element interposed between the blade holder and handle and having a portion thereof spaced from the holder, means to provide a cream passageway from the handle to the space between the holder and lather spreading element, a piston in threaded engagement with the handle, means for moving the piston longitudinally of the handle to compress the cream therein for normally forcing the same through said passageway, an automatically closable valve for said passageway normally preventing discharge of the cream, and means operable by the insertion of a blade between the plates of the holder for opening said valve.

6. A safety razor comprising, an internally threaded tubular handle adapted to contain a supply of shaving cream, a blade holder detachably connected with the inner end of the handle and including a pair of resiliently connected plates, a lather spreading element interposed between the blade holder and handle and having a portion thereof spaced from the holder, means to provide a cream passageway from the handle to the space between the holder and lather spreading element, a piston in threaded engagement with the handle, means for moving the piston longitudinally of the handle to compress the cream therein for normally forcing the same through said passageway, an automatically closable valve for said passageway normally preventing discharge of the cream, means operable by the insertion of a blade between the plates of the holder for opening said valve, and a manually controlled valve for said passageway to prevent discharge of the cream when said automatically closable valve is open.

7. A safety razor comprising, a hollow handle adapted to contain a supply of shaving cream, a carrier element detachably secured to the inner end of the handle and having an opening extending therethrough and in communication with the interior of the handle, a blade holder carrier by the carrier element and including a pair of resiliently connected plates, a lather spreading element interposed between said holder and handle and having a portion thereof spaced from the holder, said carrier element having a passage leading from the opening therein to the space between the lather spreading element and holder, means normally exerting pressure on the cream to force the same through said opening and passage, an automatically closable valve for said passage normally preventing the discharge of cream therethrough, and a pin slidably extending through one of said plates into abutment with said valve, said pin having a beveled face projecting between said plates for engagement by a blade inserted therebetween for opening said valve.

8. A safety razor comprising, a hollow handle adapted to contain a supply of shaving cream, a blade holder detachably connected with the inner end of the handle, a lather spreading element interposed between the blade holder and handle and having a portion thereof spaced from the handle, means to provide a cream passageway from the handle to the space between the holder and lather spreading element, means normally exerting pressure on the cream to force the same through said passageway, an automatically closable valve for said passageway normally preventing discharge of the cream, and means operable by the insertion of a blade into the hollow for opening said valve.

In testimony whereof, I affix my signature hereto.

CHARLES A. MELKA.