

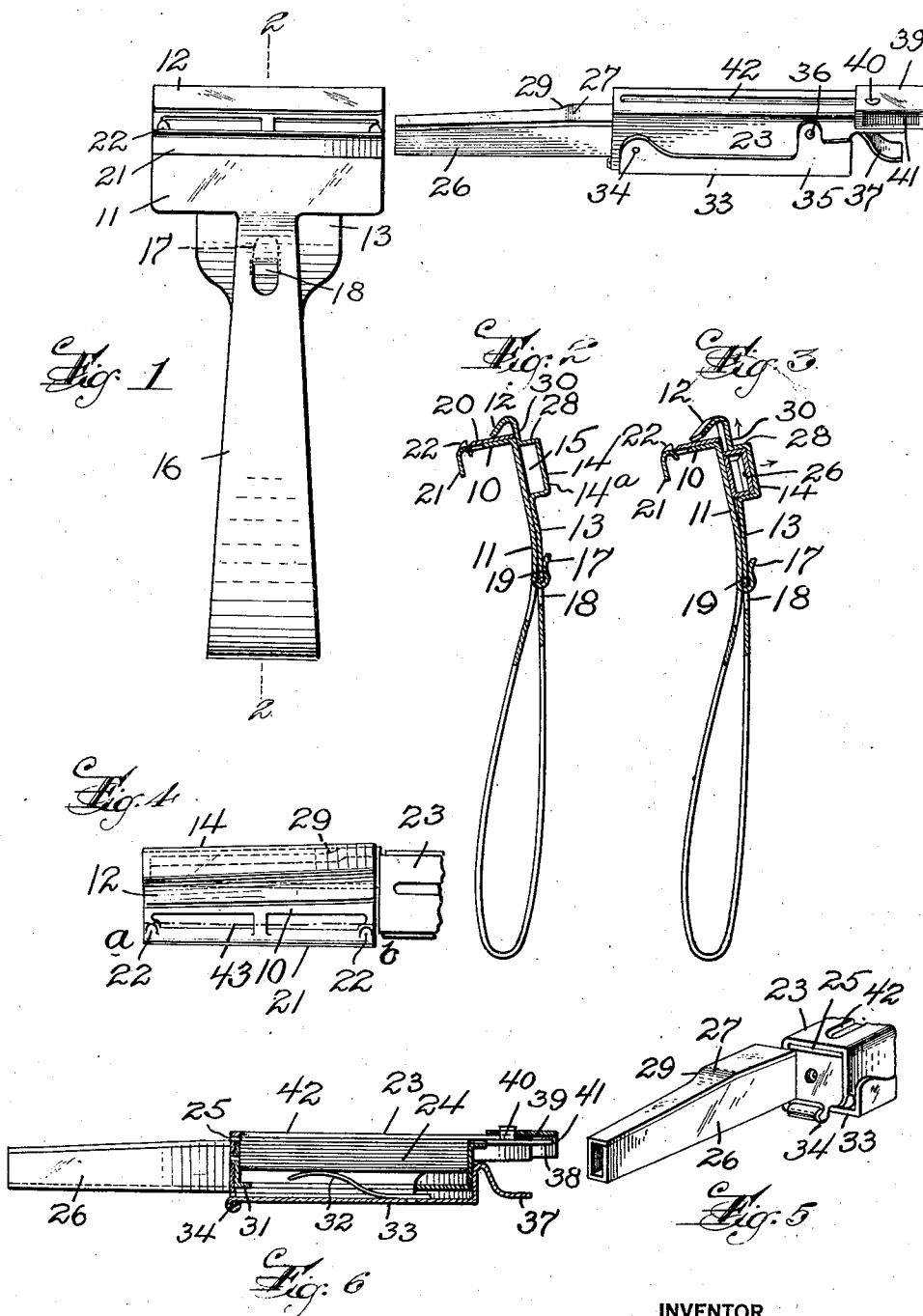
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RAZOR AND BLADE MAGAZINE THEREFOR

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RAZOR AND BLADE MAGAZINE THEREFOR

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5 Claims. (Cl. 30—40)

This invention relates to an improved safety razor and also a loading device therefor, the two members being adapted to fit together for temporary co-operation for the transfer of a blade from the magazine to the razor. The type of article is shown in my patent issued August 14, 1934, Number 1,969,945.

The improvement resides in a razor adaptable for spreading of the blade channel in two directions for the easy transfer of a blade and also in a magazine which effectively spreads the shaving head of the razor in the two directions.

The invention also comprises certain details of construction which will be more fully described hereinafter and finally embodied in the claims.

The invention is illustrated in the accompanying drawing in which Figure 1 is a face view of my improved razor and the magazine or loading device therefor. Figure 2 is a section on line 2—2 in Figure 1 with the razor head in blade clamping position. Figure 3 is a view similar to Figure 2 showing the parts of the shaving head separated by the magazine. Figure 4 is a top view showing the razor and one end of the magazine when the parts are assembled. Figure 5 is a perspective of the attaching end of the magazine. Figure 6 is a longitudinal central section through the magazine.

The razor is of the type that is provided with a recess for the reception of a tongue of the magazine and which tongue not only is held by the razor for maintaining the razor head and magazine in alignment but also acts to spread the razor head for readily receiving a blade. For this reason the razor head is made of metal having considerable resiliency, yet stiff enough to hold the blade firmly and to prevent any chattering of the razor when used in shaving. The form shown comprises a front member having a blade platform 10 and a plate 11 and a rear member comprising a top plate 12 somewhat hook-shaped and a plate 13.

The plate 13 is bent outwardly at 14 to form a longitudinal passage 15, one wall of which is provided by the rear face of the plate 11. These two parts, the front part and the rear part are held together near the bottom of the plates 11 and 13. I find that an economical way of forming the razor and providing a comfortable handle is to make the razor out of one piece of spring metal integral with the front and rear members and bent at the bottom into a loop 16 which forms a handle. The spring tendency of the metal is to force

the blade platform 10 and the top plate 12 together. I provide a latch, preferably by forming a spring hook 17 on the front plate, this hook extending upwardly which hook is adapted to enter a slot 18 in the back plate 13 and hold on the top edge 19 of the slot 18. When the shaving head is opened all that is necessary is to push down firmly on the part 10 or the front bend of the loop 16. This disengages the hook 17 from the plate 13 and it can be swung forward and the two parts of razor are free at their ends, as the natural spring tendency of the metal is to separate the parts 10 and 12 slightly. When the parts are to be reassembled the front bend of the loop 16 is pressed down and back to catch the hook 17 into the slot 18 and the spring action of the metal forces the hook 17 into place and brings the parts 10 and 12 together.

This spring pressure acts to hold a blade by pressure of the top plate 12 on the top side of the blade and of the blade platform 10 on the bottom side of the blade. The blade is held at its back edge by the rear wall 30 of the top plate 12 and is thus held in proper shaving position relative to the guard 21 fashioned at the front edge of the blade platform. The front edge of the blade may be positioned by the stops 22 at the corners of the front edge of the blade platform.

The magazine is designed to feed blades endwise into the shaving head, to be held in alignment for proper feeding of the blade by co-operating means on the shaving head and the magazine, and said means acts to separate the two spring members of the shaving head by both lateral and vertical movement.

The body portion 23 of the magazine, is in the form of a box which receives the stack of blades 24, from which stack the blades are propelled, one by one, through a slit 25 in the end of the box. The magazine is provided with a finger 26 which fits into the passage 15 in the razor head and bears on the walls of the outwardly bent portion 14 to press the top plate 12 upwardly and also rearwardly. In the case of a rectangular passage, as shown, the finger 26 is preferably rectangular. The finger is tapered both laterally and vertically, having the inclined part 27 to engage the top wall 28 of the part 14 and force it upwardly when the finger is placed in the passage. The inclined part 29 engages the rear wall 14^a of the part 14 when the parts are assembled and this part presses the wall 29 rearwardly. These

two forces act to raise the top plate 12 from the top face of the blade 20 and to move the heel 30 of the top plate rearwardly from the blade and out of the path of the blade that is to be injected into the razor.

The magazine may receive blades in a stack and the preferred way is to place the blades in a clip 31 which clip has an opening in the bottom. A spring 32 projects up through the opening and keeps the stack pressed upwardly. The spring is fastened to the bottom 33 of the box 23. The bottom 33 may be hinged as at 34 and held in place by spring ears 35 which have depressions 36 that snap into recesses in the side walls of the box and hold the bottom in place. The lip 37 acts to hold the clip 31 in place and also as a means for swinging the bottom to open and close it.

The blades are ejected, one by one, by a plunger 38 which extends along the top of the clip against the under side of the top of the box. The rear end of the plunger is fastened to a finger piece 39 by a lip 40. The finger piece is preferably U-shaped and rests on the top of the box and has roughened side flanges 41 extending part way down the sides of the box. The lip 40 which connects the ejector slide 38 and the handle or finger piece 40 passes through the top wall of the box and rides in a slot 42 in the top wall of the box. The slot 42 limits the movement of the slide when the lip 42 engages the ends of the slot. It will be noted that in normal position the finger piece is at the outer end of the magazine and its direction of feeding movement is the same as the direction of insertion of the magazine finger 26 into the razor. Therefore, the movement of the hand in inserting the magazine finger and in feeding a blade can be a single continuous one toward the razor, and in the same manner, the withdrawal of the slide by its handle 39 is in the same direction as the withdrawal of the magazine from the razor and when continued separates the magazine from the razor. Thus a single motion may be used to insert the magazine and inject a blade, and a second single motion retires the ejector slide and then withdraws the magazine from the razor. This latter operation leaves the handle of the injector slide at its rear-most position ready for insertion of the magazine into the razor and subsequent injection of a blade.

The handle loop 16 is curved forwardly relative to the shaving head and the plates 11 and 13. This disposition of the parts gives to the two members of the shaving head a tendency to press toward each other and to hold the hook 17 in place on the edge 19. It also assists in seating the hook 17 when it is passed into the slot 18, from the front.

The tapered parts 27 and 29 of the finger 26 are located preferably near the magazine which disposition spreads the end of the shaving head that is nearest the magazine to a greater extent than the farther end. This is clearly shown in Figure 4. The advantage of this is to retire the wall or heel 30 and raise the top plate 12 a greater distance at the end of the razor where the blade enters. The parts are moved but little at the far end and the stop 22 at a in Figure 4 acts as a brake which prevents a blade from riding beyond its proper position if too forcibly injected into the razor and the friction between the blade, the blade platform and the top plate assist at this point in slowing up the incoming blade. At the same time the wall 30 and stop 22

at the end nearest the magazine are well separated to present no resistance to a blade passing into the razor.

In operating the razor to insert a blade, the razor is held in one hand by its handle 16. With the other hand, the user holds the magazine and inserts the finger 26 into the passage as far as it will go. This causes the tapered part of the finger to raise the top plate 12 except at its farthest end where it might rise slightly. This also causes the heel 30 to ride to the rear to make room for the incoming blade. The handle 39 of the injector slide 38 is now pushed in by a continuation of the motion that inserted the finger 26. The blade is pushed endwise by the plunger and passes into the shaving head with its shaving edge, as at 43, out of contact with the stop 22 at b and out of contact with the nearer end of the heel or wall 30. At the completion of the injecting stroke the blade is halted as the injector is stopped by the engagement of the lip 40 with the end of the slot 42. The injector slide is now withdrawn by the handle 41 and the engagement of the lip 40 with the other end of the slot 42 carries the magazine along and the finger 26 is drawn from the passage 30. The top plate 12 now being released, the spring in the metal forces the wall 30 to push the blade forwardly to shaving position relative to the guard 21 and causes the top plate to bear down on the top face of the blade.

In case a blade is already in the razor, the new blade pushes the old blade out, and as the pushed blade is to be discarded it does no harm to have its cutting edge press lightly along the stop 22 at a.

The razor, as illustrated, may be made of one piece of metal which is of the proper resiliency and weight to maintain its form under shaving pressure but which is adapted for easy separation by the finger of the magazine. The hook 17 is located at a point where it is held in place by the spring action of the loop 16 and any pressure on the loop 16 due to squeezing by the hand is localized in the loop, the hook 17 preventing any appreciable effect on the parts of the shaving head.

Various changes may be made in the proportion and shape of the parts without departing from the scope of my invention as set forth in 50 the claims.

I claim:

1. The combination of a safety razor including a blade platform and top plate, spring means for resiliently holding the top plate in place, said means including a bent portion forming a passage, with a magazine of blades including a blade projecting mechanism, and a finger in the magazine adapted to enter the passage, said finger being tapered in two directions to engage the walls of the passage whereby the top plate is both raised and moved rearwardly.

2. A safety razor consisting of a sheet of metal bent into an elongated loop to form a handle, plates extending upwardly from the loop, a blade platform extending forwardly from one plate, a top plate extending forwardly from the other plate and bent over the blade platform to hold a blade on the platform and means on plates for detachably holding the ends of the looped part together.

3. A safety razor consisting of a sheet of metal bent into an elongated loop to form a handle, plates extending upwardly from the loop, a blade platform extending forwardly from one plate, 75

a top plate extending forwardly from the other plate and bent over the blade platform to hold a blade on the platform, the rear plate being slotted, and an upwardly extending hook to catch over the top edge of the slot, the loop being extended forwardly toward the bottom to cause a spring action with a tendency to move the blade platform and the top plate toward each other.

4. The combination of a razor having spring members forming a shaving head to hold a blade, the head having a passage therethrough between the members, with a magazine, a finger on the magazine to enter the passage for holding the magazine and razor head in alignment and for spreading the spring members, the finger extending longitudinally from one end of the magazine, an injector slide reciprocable from one end of the magazine, a handle at the rear of the slide and limited in its movement to the dimensions of the magazine, whereby the injecting movement of the slide is in continuation of and in the same direction as the movement of inserting the magazine.

5. A razor comprising a shaving head of two sheet metal members, one member including a blade platform and a plate from which the platform extends, the second member including a plate lying in rear of the plate of the first member and having a rectangular bent portion to form a passage along the rear face of the plate from which the blade platform extends, said second plate extending beyond the blade platform to form a wall and bent over at the top plate for engaging a blade on the blade platform in combination with magazine for blades, said magazine having an injector mechanism and a finger extending from the magazine and adapted to enter the passage of the razor, said finger, at a point near the magazine being larger than said passage whereby its rear edge and top edge move the top plate and the upper part of the second plate rearwardly and upwardly to move the said wall and the top plate out of the path of a blade in transit into the razor.

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