June 2, 1936. L. KUHNL 2,043,046

MAGAZINE FOR RAZOR BLADES

Filed Jan. 18, 1934

Fig. 1

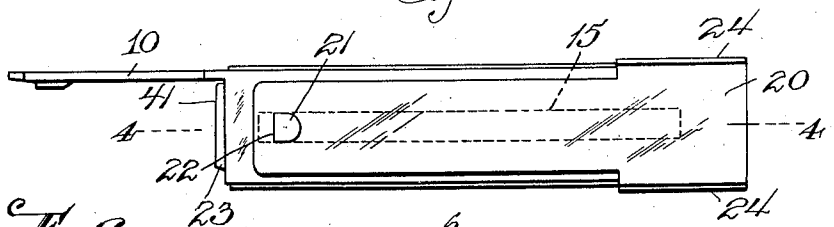


Fig. 2

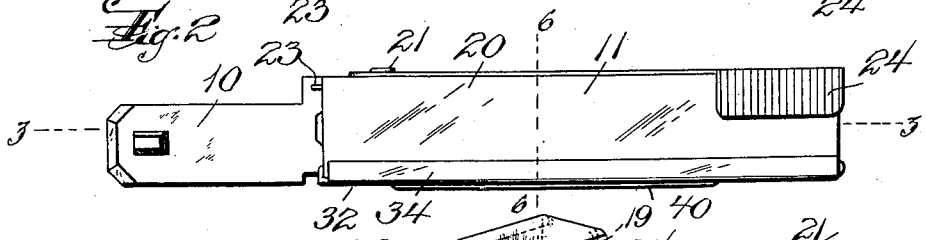


Fig. 8

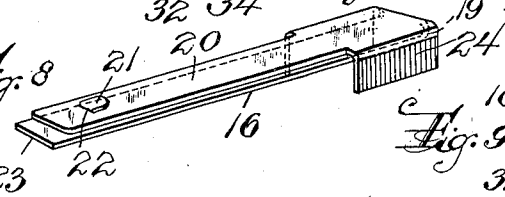
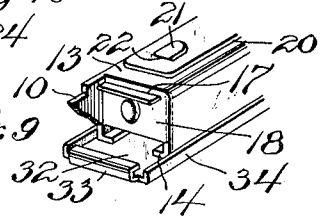


Fig. 9



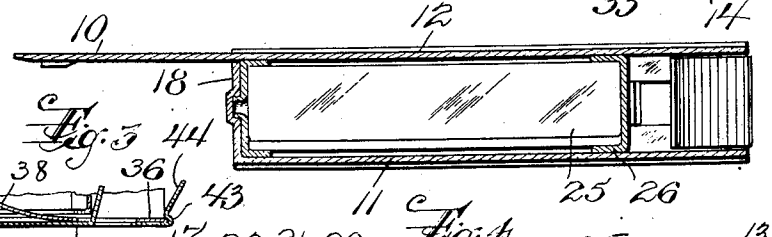
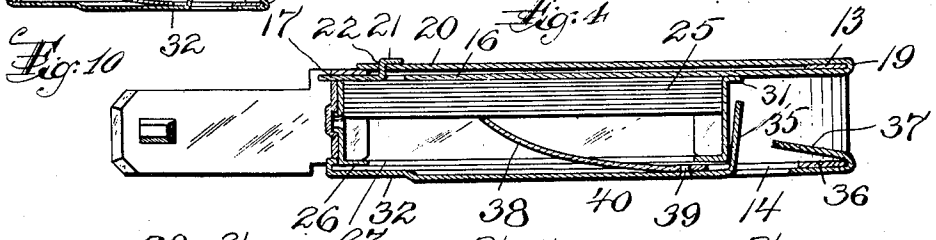


Fig. 3

Fig. 4

Fig. 10



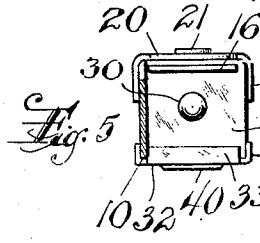


Fig. 5

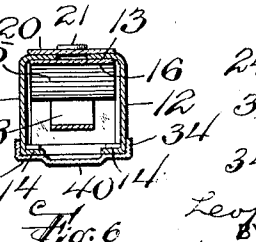


Fig. 6

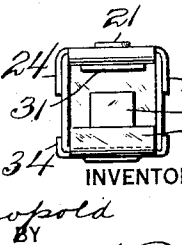


Fig. 7

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UNITED STATES PATENT OFFICE

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MAGAZINE FOR RAZOR BLADES

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Application January 18, 1934, Serial No. 707,067

7 Claims. (Cl. 206—16)

This invention relates to an improved magazine for razors which magazines are adapted for cooperation with the razor for supplying blades from the magazine to the razor. The invention is of the type illustrated and described in the application for Letters-Patent, Serial No. 681,259, filed July 20, 1933 and issued August 14, 1934, No. 1,969,945, and which type contemplates the edgewise feeding of blades from a stack into the razor and thus ejecting the used blade at the same time.

This present form of device includes a clip for a stack of blades which clip is enclosed in a magazine that supports the stack in a position to make the blades successively available for ejection from the magazine. The magazine is provided with a slide that not only serves to seal the top of the magazine but also acts as a means for propelling a blade completely from the magazine. The magazine also includes a closure in the form of a bottom which acts as a support for a spring which in turn supports the stack and which bottom seals the clip and its stack against removal.

This structure results in a non-refillable magazine that is so cheaply constructed that it is expendable, in other words, it is thrown away when empty. This enables a user to purchase a stack of blades sealed in the container which forms the magazine thus insuring blades that have not been handled, that need no handling by the purchaser and that carries an assurance that the blades are genuine.

The invention is illustrated in the accompanying drawing in which Figure 1 is a top view of the magazine. Figure 2 is a side view of Figure 1. Figure 3 is a section on line 3—3 in Figure 2. Figure 4 is a section on line 4—4 in Figure 1. Figure 5 is a front view of the magazine with the seating arm in section. Figure 6 is a cross-section on line 6—6 in Figure 2. Figure 7 is a rear view of the magazine. Figure 8 is a perspective view of the slide ejector. Figure 9 is a perspective view of the front part of the magazine with the bottom plate about to be attached. Figure 10 is a detail section of a modified form of the locking means of the device for demonstration purposes.

The magazine comprises a body portion or receiver which is provided with a suitable means for aligning the device to a razor. Such means is shown as a lip 10 which is projected into a space in a razor for positioning the magazine and razor relative to each other. This is no part of the invention and is fully described in its operation and functioning in the prior application referred to above and is subject to alteration to fit any other construction of razor.

The magazine comprises a tubular body portion having side walls 11 and 12 and a top wall 13 with inwardly turned flanges 14 at the bottom. The top is slotted as at 12 which slot terminates short of the ends of the top. The slide 16 for projecting blades fits against the top wall 13 and extends through a slot 17 in the front wall 18 of the magazine. The slide is folded over in a return bend 19 and then extends forwardly to form a cover part 20. The slide has a lip 21 near its front end and the cover 20 has a slot 22. The lip is passed up through the slot 22 and then bent over to form a fastening means and also acts to limit the rearward movement of the slide when it engages the top wall 13 at the rear end of the slot 15. The return bend 19 acts to limit the forward movement of the slide by engaging the back edge of the top 13. When so engaged the front or projecting end 23 of the slide 16 is slightly beyond the front wall 18 of the magazine. The slide and its cover therefore provide a tight weather proof closure for the upper part of the magazine. The cover 20 has depending flanges 24 on each side near the rear to form finger pieces for manipulating the slide. The finger pieces are preferably roughened.

The stack of blades is shown at 25 and is preferably supplied in a clip 26 which is a well known article of convenience and is of very light metal construction with an open top and a bottom provided with a central elongated opening 27. The front wall of the clip is prevented from moving upwardly by a teat 29 or similar projection fitting into a recess 30 in front wall 18 of the magazine. The clip fits snugly in the magazine and has an apron 31 that insures the holding down of the clip when the ejector 16 is brought back to pick up a blade. The clip is therefore fitted to the side walls of the magazine at the rear and against the slide to form a weather tight joint.

The bottom plate 32 of the magazine is provided at the front end with a return bend portion or hook 33 and with side flanges 34 that fit the outside of the sides of the magazine. The magazine has a space provided between the bottom flanges 14 and the front wall 18 for receiving the hook portion 33. The bottom plate has a stop 35 struck up to the inside of the magazine which stop bears tightly against the back of the clip 26 and binds the clip in place. The bottom of the casing preferably extends all the way across at the back as at 36 and the bottom plate 32 is made longer than the magazine to provide the

projecting end at the back which is folded over inside the magazine casing to form the locking fold **37**.

The bottom plate is provided with a leaf spring **38** fastened by suitable means such as a rivet **39**. By depressing the central portion **40** of the bottom plate the width of the spring it acts as a seat for the spring and holds it in alignment against swinging in case the rivet is slightly loose. The spring extends up through the open bottom of the clip and holds the stack of blades against the ejector slide **16**. The cutting edges of the blade are in contact only at their ends with the corners of the clip and are therefore kept sharp except where they engage corner stops present in safety razors. For the same reason the slot **17** in the magazine is slightly wider than the blades and the front edge **41** is oblique to engage each blade at its cutting edge and feed it forward with the dull edge of the blade bearing on the edge of the slot. In this way the blades are sharp when used as when they left the grinding machinery since the packing of the blades is done automatically by machinery.

When the stack of blades has been placed in the clip the clip is placed in the magazine, the slide having been previously inserted in the magazine. The bottom is then caught over the front edge of the flanges **14** as in Figure 9 and then swung upwardly to force the spring against the bottom of the stack. The stop **35** is then pushed in to lock the clip in place and the locking fold **37** is bent over to secure the bottom in place. The bottom is thus held against any longitudinal movement and is held against lateral movement by the flanges **34**.

The lock strip material and the lip **21** of the ejector are of thin metal and will break after a few bendings. The parts however are firmly held together after the initial assembly. The blades are sold in the magazine and the magazine is expected to be thrown away after it is empty. This prevents refilling and resale with inferior blades. The magazine is tight and preserves the blades against rust and other damage until used.

The magazine is made up of three main parts, the tubular magazine, the ejector and the bottom plate with the spring for holding the stack up. The parts are made of light metal, particularly the ejector and the bottom plate. The slide or ejector is doubled to give it rigidity for feeding the blades and to form a tight closure. The bottom plate **32** is also made of light material and preferably one that will withstand but little repeated bending. The lock bend or strip **37** is designed to fracture after bending and then straightening thus making the magazine useless for refilling. The device is so cheap that it can be sold as the sales package of the goods and thrown away when empty.

The modification shown in Figure 10 is a form that adapts the bottom plate for permanent closure or for opening when required. This is solely for the demonstration or display requirements when it is desirable to have a structure that can be opened for repeated explanation and demonstration to customers. This opening of the device makes it possible to feed blades or dummy blades successively from the magazine and then to put them back for further demonstration.

In this form the front end of the bottom plate **32** is formed into a hinge knuckle **42** folded over and engaging the front of the magazine casing and formed with a free end crimped slightly as at **43** to engage the back edge of the cross strip **36** and then extended to form the lock strip **44**. With this form the strip **44** serves as a handle for opening the bottom plate in a demonstration device but when the strip **44** is turned down it forms a lock similar to the strip **37**.

I claim:—

1. A separate magazine to be used with razors of the magazine type, said magazine comprising a casing, of tubular form, a holder for a stack of blades, an ejector slide for successively removing blades from the stack and ejecting them from the casing and a bottom plate having a spring on its inner face for engagement with the stack, the bottom plate and the casing having co-acting means for securing the bottom plate in position and requiring distortion of the bottom plate to accomplish its removal.

2. A separate magagine to be used with razors of the magazine type, said magazine comprising a casing, a stack of blades in the casing, an ejector slide for successively feeding blades from the stack, said magazine having its parts secured in place in a manner to prevent opening of the magazine without destruction.

3. A magazine for razor blades comprising a tubular casing having its top wall slotted and its front wall provided with a slit, a sheet metal ejector slide extending under the top wall and bent over at the back and extending over the top wall, means for fastening the two reaches of ejector together, said means extending through the slot to form a stop, and a bottom plate on said casing for supporting a stack of blades against the ejector.

4. A magazine for razor blades comprising a tubular casing having its top wall slotted and its front wall provided with a slit, a sheet metal ejector slide extending under the top wall and bent over at the back and extending over the top wall, a lip extending from one reach of the ejector through the slot and through the other reach and bent over and to act as a stop in the slot, and a bottom plate for supporting a stack of blades against the ejector.

5. A magazine for razor blades comprising a casing, means at the top of the casing for ejecting blades from the casing, the casing having an open bottom with a connecting strip at the back, a bottom plate hooked into the casing at the front, said bottom plate including a stop plate extending upwardly through the bottom of the casing, and also including an end bent over the rear strip and inside the casing to form a locking strip.

6. A magazine for use with razors of the magazine type, said magazine comprising a casing having a lip projecting from one end for engagement with a razor, a stack of blades inside the casing, a slide for ejecting blades from the stack, and a bottom plate on the casing for confining the blades and secured in position against removal without distortion whereby the casing is insured against refilling.

7. A magazine for use with razors of the magazine type, said magazine comprising a casing having a lip projecting from one end for engagement with a razor, a clip fitting in the casing, a stack of blades in the clip, an ejector slide movable along the top of the clip for ejecting blades from the stack, a bottom plate supporting the clip and secured permanently in place whereby the supply of blades can not be renewed.

LEOPOLD KUHNL.