Sept. 30, 1941. C. P. SHINN, JR 2,257,314

SCRAPER

Filed April 29, 1939

FIG. 1.

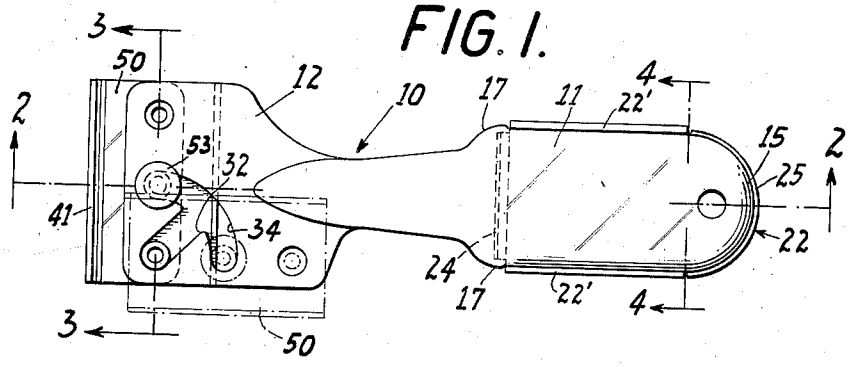


FIG. 2.

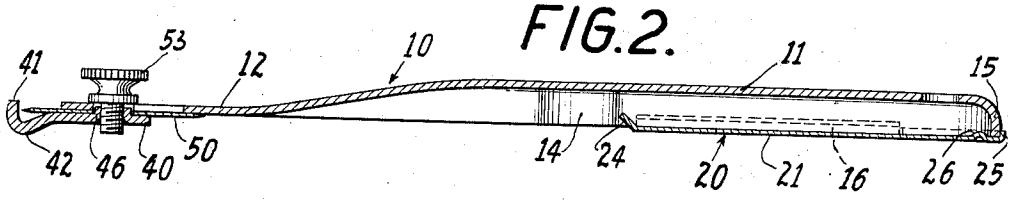


FIG. 3.

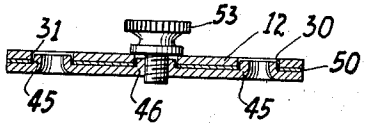


FIG. 4.

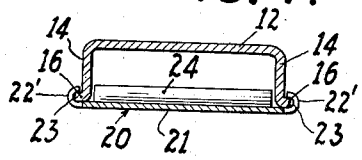


FIG. 5.

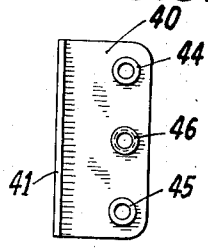


FIG. 6.

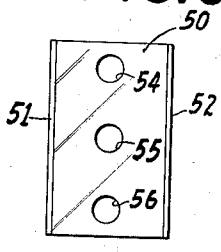


FIG. 7.

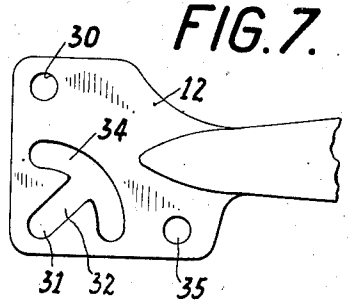
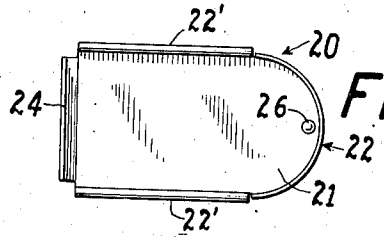


FIG. 8.



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2,257,314

SCRAPER

Charles P. Shinn, Jr., Brooklyn, N. Y.

Application April 29, 1939, Serial No. 270,817

4 Claims. (Cl. 30—320)

This invention relates to improvements in scrapers and more particularly to improvements in scrapers of the type utilizing as an element thereof a blade member similar in construction to a safety razor blade.

An object of the invention is to provide a new scraper construction wherein a storage space for spare blades is formed in the handle thereof.

Another object of the invention is to provide a scraper construction in which the handle has a sliding cover over a chamber therein, which chamber serves as a receptacle for spare blades.

Another object of the invention is to provide a scraper construction wherein it is possible to rotate or change position of the blade element and its guard to a limited degree without separating the blade element and its guard from the handle.

A further object of the invention is to provide an improved keeper or guard member to be associated with a blade and with a handle.

In carrying out the foregoing and other objects of the invention, a frame for a scraper construction is so formed that the handle part of the frame has a channel or chamber formed therein. Associated with said handle part is a cover member attached thereto for sliding movement so that the chamber serves as a receptacle for spare blades. The sliding movement of the cover relative to the handle is accomplished by the provision of flanges extending outwardly from opposite edges of the handle to fit in channels formed in the cover by rolling over the edges thereof. The flanges are of limited length so that the cover can be disengaged from the handle when so desired and in addition locking means are provided for resisting disengagement of the cover member from the handle.

The blade holding end of the frame is provided with a pair of spaced openings disposed adjacent the respective side edges of the frame, and a third opening disposed along one edge of the frame and spaced from one of the pair of openings a distance approximately equal to the distance between the first mentioned openings. Also, this end part of the frame is provided with an arcuate shaped opening extending from midway between the first two openings to midway between one of the first two openings and the third opening. This arcuate shaped opening has a connecting channel extending midway therefrom to one of the first mentioned openings.

The guard member utilized with the frame is made up of a substantially flat metallic plate having a rib formed in one edge portion thereof and connected to the flat part by a bend in the metal. This guard is provided with three apertures and the walls of these apertures are extended beyond one surface of the guard in the form of burrs. The central aperture has the wall of the burr threaded for the reception of a thumb screw. The two end burrs are positioned apart a distance permitting them to register with the first mentioned two openings in the frame and also to permit one of them to register with one of such openings and with the third opening. The central burr is so located as to register with the arcuate slot in the frame. Such registry of the parts permits the guard and a blade positioned between the guard and the frame to be rotated to a limited extent with one of the openings in the frame as a pivotal point without removing the thumb screw which holds the parts in assembly.

Other features, objects, and advantages of the invention will be apparent by referring to the following detailed description of the accompanying drawing wherein

Fig. 1 is a plan view of a device embodying the invention;

Fig. 2 is an enlarged section taken substantially on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged section taken substantially on the line 3—3 of Fig. 1;

Fig. 4 is a section taken substantially on the line 4—4 of Fig. 1;

Fig. 5 is a plan view of the guard member used in this construction;

Fig. 6 is a plan view of a blade used therein;

Fig. 7 is a fragmentary plan view of the blade holding end of the handle, and

Fig. 8 is a plan view of the cover member associated with the handle.

Referring now to the drawing, 10 indicates generally the frame of the device made up in part of a handle or chamber portion 11 and a head or blade attachment portion 12. The handle part 11 is formed in the operation wherein this member 10 is stamped from sheet metal in such fashion that the flat back part thereof has side walls 14 and a curved-in wall 15. The side walls 14 have short flanges 16 extending substantially from the end of the curved wall 15 to a point 17 at which the walls are arranged in converging relation.

Associated with the handle is a cover or lead member indicated generally at 20 stamped or formed from sheet metal in such fashion as to have a substantially flat part 21 with the end thereof curved as at 22 to correspond to the

curvature of the wall 15. The edges of the flat part 21 are rolled as indicated at 22' to form channels 23 of such width as to be capable of frictionally receiving the flanges 16. The end of the plate 20 opposite the curved part 22 has a tongue 24 extending therefrom at an angle of substantially 45°. The curved end 22 of the member 20 has a narrow flange 25 extending therefrom and also has a button or indentation 26 formed therein.

Due to this arrangement of the handle and the cover, it is possible to engage the cover with the handle 11 by registering the channels 23 with the flanges 16 at the ends of these flanges nearest the end wall 15. The cover member may then be moved in sliding fashion to partially close the chamber formed by the walls 14 and 15. When the sliding movement has been completed the edge of the end wall 15 is positioned between the flange 25 and the button or indentation 26. At the same time, the finger 24 extends into the chamber of the handle to a limited extent serving to retain spare blades in the handle chamber.

Due to the provision of the flange 25 and the button 26 undesired sliding movement of the cover 20 is prevented but such sliding movement as to permit access to blades in the chamber can be accomplished by applying pressure to the tongue 24, which pressure is of a degree only sufficient to spring the cover member an amount to permit the button 26 to ride over the edge of the end wall 15.

The blade attachment end or head 12 of the frame has two openings 30 and 31 therein which openings are in alignment crosswise of the head. The opening 30 is circular in shape while the opening 31 has a part thereof rounded and leads into an opening 32 extending into an arcuate shaped opening 34. This opening 34 extends from a point midway between the openings 30 and 31 to a point midway between the opening 31 and another opening 35 spaced from the opening 31 a distance equal to that between the openings 30 and 31. The openings 30 and 35 are disposed substantially at 90° to each other.

The guard member is stamped from suitable sheet metal and comprises a plate 40, one edge of which has a longitudinal rib 41 joined to the plate 40 by a bent portion 42. The plate 40 is provided with three apertures 44, 45, and 46, respectively, the walls of which apertures are extended, by burrs formed in the metal, a slight distance beyond one surface of the plate 40. The apertures 44 and 45 are spaced apart a distance sufficient to permit them to register either with the apertures 30 and 31 of the part 12 of the handle or with the apertures 31 and 35 of this part. The aperture 46 has the wall thereof including its burr threaded to receive a thumb screw 53 which passes through the arcuate shaped opening 34 in part 12 into engagement with the threads in the wall of aperture 46.

The blade 50 is constructed along conventional safety razor design having two cutting edges 51 and 52 and having, in the form shown, three apertures 54, 55 and 56. The apertures 54 and 56 are located to receive the burrs of the apertures 44 and 45 of the guard member while the aperture 55 receives a threaded burr of aperture 46.

The parts can be assembled in the manner shown in Figs. 1 and 2 wherein it will be seen that in one position of these parts, one cutting edge of the blade is guarded by the rib 41 of the guard member. It should be noted that the row of openings in the guard member is positioned closer to the blank or free edge of the guard member than to the ribbed edge thereof. When it is desired to have an edge of the blade available for scraping purposes and to have this edge in substantial parallelism to the line of the openings 30, 31, the thumb screw 53 can be turned to loosen the assembly of parts sufficiently for the burrs of apertures 44 and 45 to clear the under surface of the head 12; still retaining the parts in assembly. When this condition prevails, the guard and blade can be rotated through 180° until the burrs of the apertures 44 and 45 are in reversed position relative to the openings 30 and 31 of the head. When these burrs and openings are properly in register, the blade can be tightened by tightening thumb screw 53. Since the rib 41 extends slightly beyond the top surface of the blade, tightening of the thumb screw 30 causes the rib to contact the under surface of head 12 and causes the guard to spring to a slight degree, thereby assuring that the blade will be tightly held against the head. Since the free edge of the guard is located some distance from the cutting edge of the blade, it will lie rearwardly of the end edge of head 12 so that the blade is permitted to spring more readily than if the free edge of the guard were in alignment with the end edge of the head 12.

Again assuming the parts are in the Fig. 1 position, the unguarded cutting edge of the blade can be moved into cutting position in which its edge is substantially parallel to a side edge of the head 12. To accomplish this movement, the thumb screw 53 is again turned to loosen the assembly until the burr of aperture 44 is clear of the lower surface of head 12. With the burr of aperture 45 remaining in the opening 31, the guard and blade can be swung through an angle of 90° during which movement the burr of aperture 46 remains in the arcuate opening 34. When the 90° turn has been completed, the burr of aperture 44 is brought into alignment with the opening 35 in the head and the parts then can be tightened by turning the thumb screw. It should be noted also that other positions of the guard and blade can be obtained by removing the thumb screw from the assembly and registering one or more of the burrs of the guard with the desired openings in the head.

From the foregoing, it will be seen that the present invention provides a new and improved scraper device combining features which increase the utility thereof. The provision of the lockable cover for the chamber in the handle makes possible the storing of spare blades in the handle. The arrangement of the openings in the head of the frame makes possible rapid adjustment of the unguarded edge of the blade to any desired position. It is to be understood that the invention is capable of modifications other than those illustrated herein; in view of which any limitations imposed thereupon are to be only those set forth in the following claims.

What I claim is:

1. A scraper comprising a frame made from sheet metal, said frame having a handle part and having a head part provided with a plurality of through openings to be brought selectively into register with the openings of a blade, a guard member having formations for registry with the openings in a blade and for registry selectively with openings in said head, and a locking member for securing said guard and said blade to

said head, said head being provided with a rearwardly curved slot through which said locking member passes, said slot extending from near the end of the head to near one side edge thereof, whereby said guard and blade can be adjusted from one position to another position at a desired angle thereto.

2. A scraper comprising a frame made from sheet metal, said frame having a handle part and having a head part provided with a plurality of through openings in triangular disposition to be brought selectively into register with openings of a blade, said head part having a rearwardly curved opening extending from midway between the openings in one side of the triangle to midway between the openings in another side of the triangle, a guard member having formations for registry with the openings in a blade and for registry selectively with the openings in said head, and a locking member for securing said guard and said blade to said head, said locking member passing through said rearwardly curved opening whereby said guard and blade can be adjusted from one position to another position at a desired angle thereto.

3. A scraper comprising a frame made from sheet metal, said frame having a handle part and having a head part provided with a plurality of through openings to be brought selectively into register with the openings of a blade, two of said openings being spaced from the end edge of said head part and the other being spaced from a side edge thereof, a rearwardly curved opening extending from near the end edge of the head part to near the side edge thereof and terminating midway between the openings adjacent such edges, a guard member having formations for registry with the openings in a blade and for registry selectively with the openings in said head, and a locking member for securing said guard and said blade to said head, said locking member passing through said curved opening whereby said guard and blade can be adjusted from one position to another position at a desired angle thereto.

4. A scraper comprising a frame made from sheet metal, said frame having a handle part and having a head part provided with a plurality of through openings to be brought selectively into register with the openings of a blade, a guard member having formations for registry with the openings in a blade and for registry selectively with the openings in said head, said guard member having a rib extending longitudinally along one edge thereof and joined to the body thereof by a bend, the opposite edge of the guard member terminating further from an unguarded edge of a blade than the end edge of said head part whereby the blade is free for substantially flexing, and means for securing said guard member and a blade to said head in any of a plurality of positions.

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