

Jan. 7, 1964

B. GERBER

3,116,502

COMBINATION SCRAPER WITH HAND PROTECTING MEANS

Filed July 16, 1962

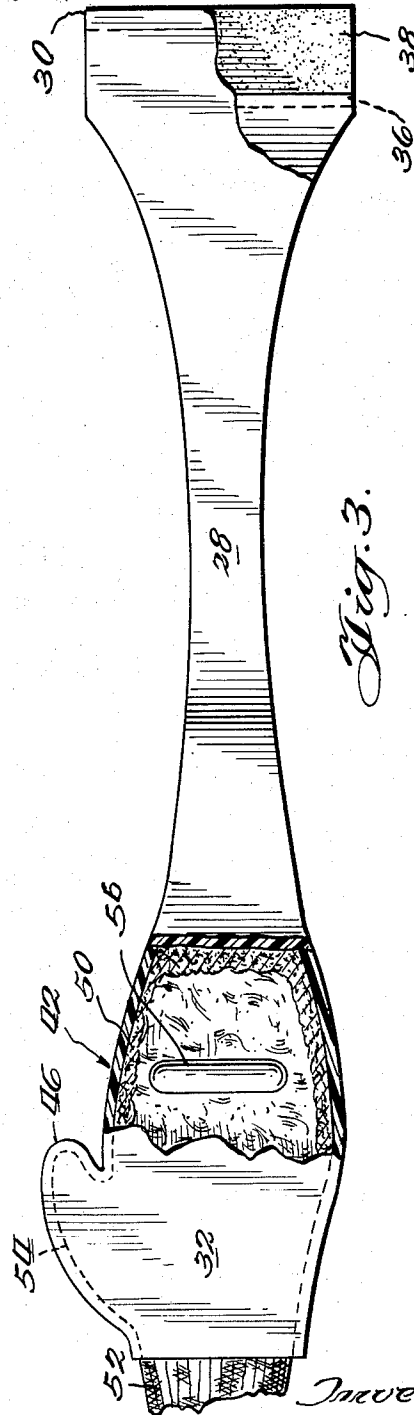
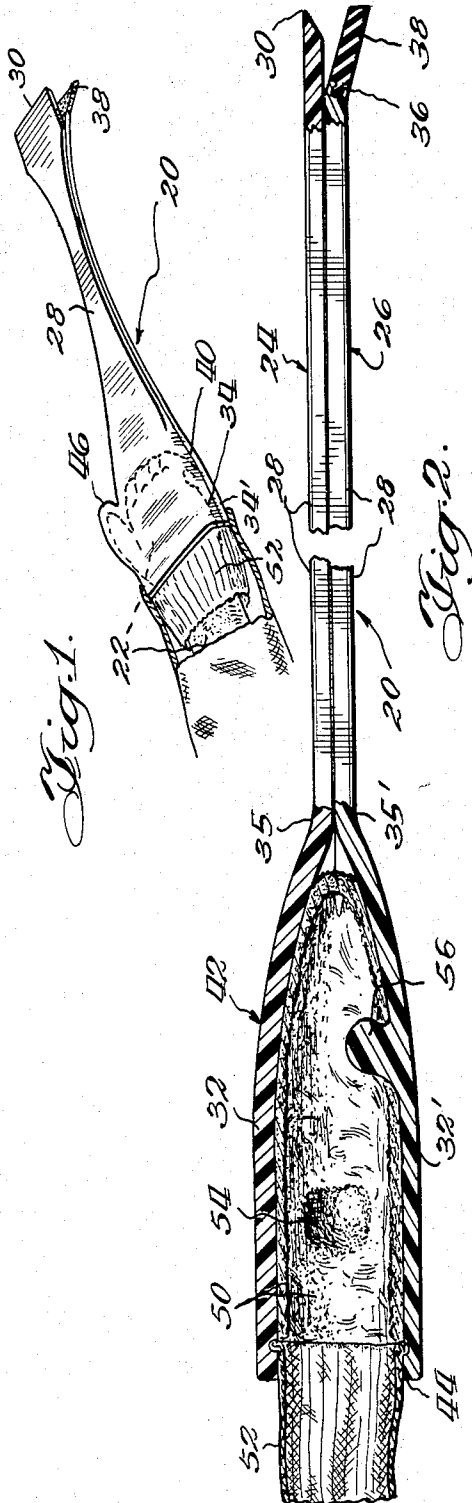


Fig. 3.

Inventor
Boris Gerber
By Silverman, Mullin & Cass
Attorneys

1

3,116,502 COMBINATION SCRAPER WITH HAND PROTECTING MEANS

Boris Gerber, 3807 W. Keeney, Skokie, Ill.

Filed July 16, 1962, Ser. No. 210,155

9 Claims. (Cl. 15-105)

This invention relates generally to implements or tools for manually removing snow, ice, or the like from windows and more particularly, relates to a combination tool of the character described which provides a scraper and/or a squeegee device at one end of the tool and a hand-protecting handle formation including a glove, at the opposite end of the tool.

Although there are many window scraper and/or squeegee devices available for clearing ice, snow and moisture or the like from window glass such as automobile windshields, insofar as I am aware, there has been no such single device which includes means formed as a part of the gripping end thereof for protecting the hand of the user. Thus, when used for clearing snow and ice accumulated on the windshields of automobiles, the user will prefer to wear a glove or mitt to protect his hand from the cold temperature and the ice or snow, which is to be removed. Very frequently, the user may not have his gloves with him when he desires to use the scraper and/or squeegee device and consequently his hand frequently is dirtied and exposed to the cold temperatures with resulting discomfort. Also, where the user's hand is mittied or gloved, the glove may be wetted and dirtied during the snow and ice removal. Aside from such damage to good gloves or mittens, there actually is an element of danger involved in driving an automobile with wet gloves or mitts since the steering wheel has a tendency to slip because of the resulting slippery surface of the glove or mitt especially where made of leather. Where the glove or mitt is made of a woven fabric, the wetting of the glove results in seepage through the fabric onto the hand of the wearer with resulting discomfort and possible chafing. Consequently, it is highly desirable to have a scraper and/or squeegee device which already is provided with means at the gripping end thereof for protecting the hand of the wearer during use of the device.

Accordingly, it is a major object of this invention to provide a scraper and squeegee device for clearing window glass of snow and ice which includes hand protecting means integrally formed with the gripping end of the device.

Another important object of the invention is to provide a combination device of the character described which includes a hollow or shell formation at the gripping end of the device having an excess opening in said end adapted to have a glove secured on the interior of said hollow formation for receiving the hand of the wearer during use of the device or to receive a gloved hand therein.

Another object of the invention is to provide a combination device of the character described which is comprised of a pair of substantially similar molded members of plastic material secured together face-to-face, said device having scraper and/or squeegee means at one end thereof, and a hand protecting sheath including a glove or mitt at the opposite or gripping end thereof, and finger gripping means on the interior of said hollow formation for stabilizing the device during use thereof.

Other important objects of the invention comprise the provision of a combination device of the character described which is very economical to manufacture, which is sturdy and durable, and which is easy to manipulate, said device also capable of eliminating the need for the user to wear a separate glove or mitten during use of the device.

2

The foregoing and other objects of the invention will become apparent as the description thereof evolves. A preferred embodiment of the invention has been described in detail in the specification and illustrated in the accompanying drawing. It is contemplated that minor variations in the size, proportion, arrangement and construction of the parts thereof may occur to the skilled artisan without departing from the scope or sacrificing any of the advantages of the invention.

In the drawing:

FIG. 1 is a perspective view of the combination device embodying the invention shown on the hand of a user.

FIG. 2 is a fragmentary medial sectional view taken along a vertical plane through the combination device as shown in FIG. 1.

FIG. 3 is a plan view of said combination device with portions broken away to show structural details thereof.

Referring now to the drawing, the reference character 20 designates generally the combination scraper and/or squeegee device with hand protecting means embodying the invention. As seen in FIG. 1, the device 20 is worn on the hand 22 of a user in an extended position ready to be used and it can be seen that the fingers and hand are completely protected. As seen in FIG. 2, the device 20 is comprised of a pair of elongate plate members 24 and 26 secured together in face-to-face relationship to provide the complete device. The plate members 24 and 26 preferably are formed of a suitable rigid plastic material, although other materials such as wood or metal also may be used. Each plate 24 and 26 has an elongate medial body portion 28, the contour of which as viewed in plan may vary within a wide range. At one end of the plate member 24 is formed a tapered or sharpened scraping edge 30. At the opposite end of the plate member 24 is formed an enlarged dish shaped portion 32 having inwardly turned lateral edges 34, one which is seen in FIG. 1. The enlarged formation 32 is offset from the body portion 28 of the plate member 24 by the bend 35 at the juncture of said portion 32 and portion 28.

The plate member 26 has a similar end formation designated 32', likewise offset from the medial body portion 28 of the plate 26 and having intumed lateral flanges, such as flange 34'. At its opposite end, the plate 26 is formed with a groove or channel 36 in which is secured a squeegee member 38 formed of a suitable flexible material, such as rubber, for instance. The plate members 24 and 26 are secured together face to face with the flanges 34 and 34' respectively abutting along facing edges thereof along the line of juncture indicated at 40 in FIG. 1. Although not seen in FIG. 1, a similar line of juncture is formed on the opposite side of the device. Any suitable cement or adhesive may be employed although it is contemplated that an epoxy type resin will perform desirably for holding the members 24 and 26 tightly in their conjoined condition shown in FIG. 2.

Thus secured together, the end formations 32 and 32' of the plate members 24 and 26 respectively form an elongate, somewhat flattened shell or hollow formation designated generally 42 in FIG. 2. The hollow formation 42 is open at the extremity 44 of the device opposite the operating end thereof provided by the scraper edge 30 and squeegee 38. As seen in FIG. 3, the end portion 32 is formed with a lateral curved projection or extension 46 having a general thumblike configuration. Of course, the end portion 32' likewise is formed with such a thumb-like lateral extension. The thumb-like extensions 46 also are conjoined along edges thereof to form a hollow thumb-like formation which communicates with the interior of the formation 42 between the portions 32 and 32'. Secured in said formation 42 is a mitt 50 which substantially conforms to the interior configuration of the hollow formation 42, said mitt having a cuff 52 ex-

tending outwardly through the open end 44. The mitt 50 preferably is formed of an inexpensive sheepskin or other untreated material which is warm and soft to touch. As seen in broken outline in FIG. 3, the mitt 50 has a thumb portion 54 which extends into the hollow thumb-like extension of said formation 42.

Referring to FIG. 2, the portion 26 has an upstanding, elongate ridge 56 thereon between the end 44 and the bend 34' and transverse to body 28 of plate 26. However, the formation 56 is located closer to the bend 34. The mitt 50 extends over said formation 56 approximately to the juncture of the bends 35 and 35' as seen in FIG. 2.

The device is easily manipulated by inserting the hand 22 past the cuff 52 into the mitt 50 secured in the interior of the hollow formation 42. The fingers of the hand can be engaged behind the upstanding formation 56 for better and more stable gripping of the device. In this condition, the knuckles of the hand, not shown, may bear against the plate portion 32 with the fingers gripping the upstanding formation 56. Thus, the formation 56 provides finger gripping means which cooperate with the flat portion 32 during use of the device.

It thus will be seen that the device can be held stable and will not flop on the hand during use thereof to remove ice and snow from a windshield. The hollow formation 42 provided by the conjoined ends 32 and 32' protect the hand against snow and ice and scuffing as result of possible contact with portions of the windshield or windshield frame. The mitt 50 along with the cuff 52 keep the hand warm during use of the device. It should be noted, that the hollow formation 42 prevents the mitt 50 from being wetted or dirtied during use of the device. Of course, the mitt may be permanently secured in the hollow formation 42 by a suitable adhesive or may be removable, the user employing one of his own mitts already on the hand which is inserted into the hollow formation 42. In either event, the mitt or glove is protected from dirt and ice and snow during use of the device by the hollow formation 42 which substantially encases the glove therein.

Although the plate member 24 and plate member 26 have been shown to be of substantially uniform thickness throughout the length thereof, it is possible to form the flattened end portions 32 and 32' of lesser thickness so that a limited degree of flexibility is imparted thereto. However, sufficient rigidity of the end portions 32 and 32' respectively is desirable in order to obtain a degree of strength and rigidity for the medial body portion 28 so that the scraper edge 30 and squeegee end 38 can be properly manipulated.

Although only the end portion 32' has been shown formed with an upstanding finger grip formation 56, it is feasible also to provide such a formation on the end portion 32 of plate 24. The device is capable of being used on either the right or left hand of the user. As shown in FIG. 1, it is the right hand of the user which is inserted into the device 20. Likewise, the finger grip means 56 may take some other form such as a peg secured transversely across the hollow formation 42 on the interior thereof. This is possible because of the abutting flanges 34 and 34' which when conjoined along the edge 40 as seen in FIG. 1, provide a lateral surface on each side of

the hollow formation 42, to which a peg or bar can be secured. It should be noted, that the hollow end formation 42 is entirely closed except for the opening 44 thereinto at one extremity of the device 20. As seen in FIG. 3, the sheath 42 has a mitt-like appearance in plan view.

What it is desired to secure by Letters Patent of the United States is:

1. A tool for removing ice and snow from window glass comprising, an elongate, rigid body member having means for removing said ice and snow from said glass integral with one end thereof and an opposite end for gripping said tool, said opposite end including a flat hollow plastic sheath formation integral therewith having an opening thereinto, adapted to receive the hand of a user and protectively surround the same during use of the tool, said sheath formation having limited resilience suitable for operating said means.

2. A tool as described in claim 1 in which said sheath formation has finger gripping means in the interior thereof of substantially spaced inwardly from said opening.

3. A tool as described in claim 1 in which a glove member is secured in the interior of said formation accessible through said opening.

4. A tool as described in claim 1 in which said body member is formed of a pair of plate members of substantially similar configuration, secured together in face to face relationship, each of said members having said means at one end thereof and cooperating mating halves of said formation at the opposite ends thereof respectively.

5. A tool as described in claim 4 in which said sheath formation has a lateral extension thereof providing a thumb-like formation integral therewith.

6. An implement for removing ice, snow or the like from an automobile windshield comprising, a pair of elongate, flat members secured together along the length thereof in face to face relationship, removal means on one end of said conjoined pair of members and combined gripping and hand protecting means integral with the opposite ends of said pair of members comprising, an elongated shell formation having an opening of sufficient size to accommodate a hand therethrough, said shell formation adapted to enclose said hand therein during use of the tool and having a glove member secured therein, said conjoined pair of members being substantially non-flexible in a direction transverse to the length thereof.

7. An implement as described in claim 6 in which said formation has a hollow extension of thumb-like configuration having the thumb of said glove therein.

8. An implement as described in claim 7 in which finger gripping means are provided on the interior of said shell formation.

9. An implement as described in claim 7 in which finger gripping means are provided on the interior of said shell formation, comprising, an upstanding ridge on an interior surface of said shell formation.

References Cited in the file of this patent

UNITED STATES PATENTS

617,755	Martin	Jan. 17, 1899
2,904,807	Obergfell	Sept. 22, 1959