

May 20, 1941.

G. T. DEVOR
WINDSHIELD CLEANER
Filed Dec. 4, 1940

2,242,992

Fig. 1.

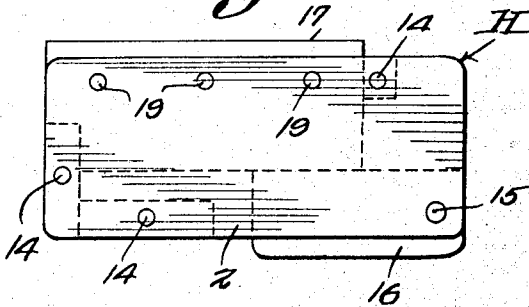


Fig. 3.

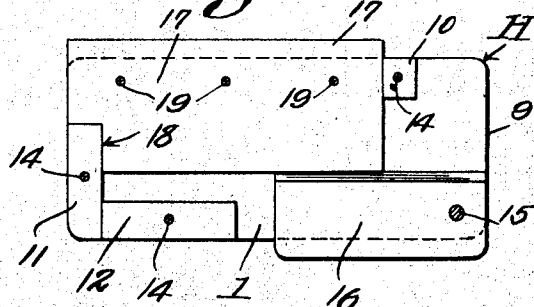


Fig. 2.

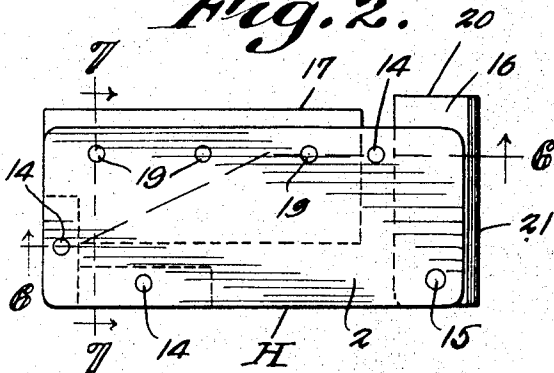


Fig. 7.

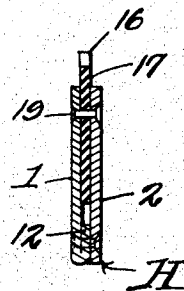


Fig. 6.

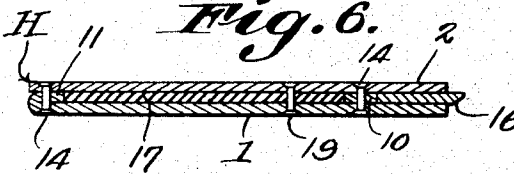


Fig. 5.

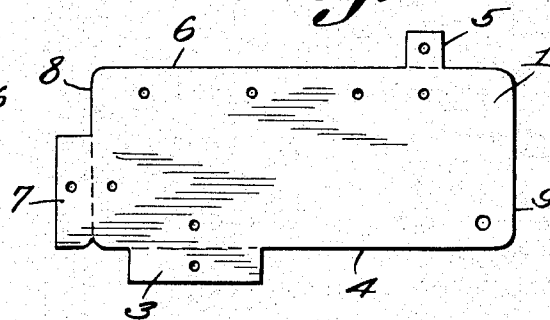
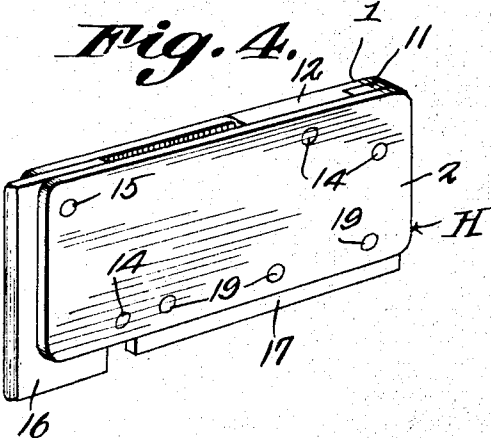


Fig. 4.



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2,242,992

WINDSHIELD CLEANER

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Application December 4, 1940, Serial No. 368,543

3 Claims. (Cl. 30-169)

This invention aims to provide a simple but efficient tool for scraping snow or sleet from the windshield of a motor car, and for wiping the windshield, the device being small, portable and cheap, many parts having more than one function.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawing:

Fig. 1 shows, in side elevation, a device constructed in accordance with the invention, the scraper blade being folded;

Fig. 2 is a view similar to Fig. 1, the scraper blade being in working position;

Fig. 3 is an elevation similar to Fig. 1, one of the side plates of the handle having been removed;

Fig. 4 is a perspective view showing the device in the condition depicted in Fig. 2;

Fig. 5 is a plan showing a blank out of which one side member of the handle is made;

Fig. 6 is a longitudinal section on the line 6-6 of Fig. 2;

Fig. 7 is a transverse section on the line 7-7 of Fig. 2.

In carrying out the invention, there is provided a handle designated generally by the letter H, and the handle may be made of metal. The handle H includes, as side members, a first oblong plate 1 and a second oblong plate 2, disposed in parallel relation. The plates 1 and 2 are of the same outline, aside from the fact that the plate 1 (Fig. 5) has a side tongue 3 on one longitudinal edge 4, a side tongue 5 on the opposite longitudinal edge 6, and an end tongue 7 on one transverse edge 8, the opposite transverse edge being marked by the numeral 9.

The tongues 3, 5 and 7 are turned inwardly, to overlap the inner surface of the side plate 1. Thus the tongue 5 becomes a plate spacer, blade stop and wiper abutment 10; the tongue 7 becomes a plate spacer and wiper support 11; and the tongue 3 becomes a plate spacer 12. In the interest of strength, the outer end of the spacer

12 abuts against the inner edge of the spacer 11 (Fig. 3), to form an L-shaped spacing and reinforcing means at one corner of the handle H. The spacer 10 is set in somewhat with respect to the transverse edge 9 of the plate 1, so that, under circumstances to be pointed out hereinafter, a pivoted blade may enter between the plates 1 and 2. The spacer 11 terminates short of the longitudinal edge 6 of the plate 1, to leave room for the introduction of a wiper, as will be explained hereinafter.

Securing devices 14, which may be rivets, pass through the plates 1 and 2, and, respectively, through the spacers 10, 11 and 12, and hold the handle H rigidly assembled.

Near one corner of the handle H, the plates 1 and 2 carry a pivot element 15. A scraper blade 16, of approximately rectangular outline, is disposed between the handle plates 1 and 2 and is mounted to swing on the pivot element 15. The scraper blade 16 is made of metal which is soft enough so that it will not scratch glass, and the blade preferably is not sharpened.

A wiper 17, made of rubber or the like, extends between the handle plates 1 and 2, and extends out of the handle a little way, as shown in Fig. 4. The inner end of the wiper 17 abuts against the spacer 10. The outer end of the wiper 17 has a recess 18 (Fig. 3) receiving one end of the spacer 11. The wiper, thus, is properly located between the plates 1 and 2, and after having been so located, the wiper is held in place by securing elements 19, such as rivets, engaging the wiper and the handle plates 1 and 2.

The blade 16 may be folded into the handle H, as in Fig. 1. Under such circumstances, the wiper 17 forms a stop for the blade, as Fig. 3 shows. When in working position, the scraper blade 16 extends crosswise of the handle, at one end thereof, as shown in Fig. 2, and finds an abutment against the spacer 10.

Referring to Fig. 2, when the scraper blade 16 is disposed transversely of the handle, an operator may use one end edge 20 for scraping purposes, if he desires. In order that such an operation can be carried out conveniently, the scraper blade 16 is long enough so that, when in the position of Fig. 2, it will extend outwardly beyond the working edge of the wiper 17. In addition to the function which its name implies, the wiper 17 serves as a resilient cushion, adapted to engage the palm of the hand of the user, whilst the scraping operation is being carried on at the working edge 21 of the scraper blade 16.

Figure 1 shows that the tool may be folded into

small compass, to be carried in the pocket or to be put away in some minor space in an automobile.

Having thus described the invention, what is claimed is:

1. In a windshield cleaner, a handle comprising side members, a spacer between the side members, a hand cushion extended between the side members and abutting against one edge of the spacer, a scraper pivoted between the side members, for opening and closing movement, the cushion forming a stop for the scraper, when the scraper is in closed position, the spacer being set inwardly far enough from one end of the handle so that the scraper can be opened through an arc of more than 180°, to a position crosswise of the handle, the opposite edge of the spacer then forming a stop for the scraper.

2. In a windshield cleaner, a handle comprising side members, a first spacer between the side members, a second spacer between the side members, a hand cushion extended between the side members, and a scraper pivotally mounted between the side members, the cushion forming a stop for the scraper when the scraper is closed, the first spacer being located far enough from one end of the handle so that the scraper can be

opened through an arc of more than 180°, to a position crosswise of the handle, the outer edge of the first spacer then forming a stop for the scraper, the inner edge of the first spacer engaging the cushion to prevent it from moving lengthwise of the handle, the second spacer engaging the cushion to prevent it from moving transversely of the handle and parallel to the plane in which the scraper moves as it is opened and closed.

3. In a windshield cleaner, a handle comprising side members, a spacer between the side members, a hand cushion extended between the side members, and a scraper pivotally mounted between the side members, the cushion forming a stop for the scraper when the scraper is closed, the spacer being located far enough from one end of the handle so that the scraper can be opened through an arc of more than 180°, to a position crosswise of the handle, the spacer then forming a stop for the scraper, the scraper being long enough so that when it is opened to the position specified, one end edge of the scraper will extend outwardly farther than does the cushion, thereby enabling said end edge to be used as a scraping edge.

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