June 24, 1930. J. N. SANTHONY 1,768,375

BOOT AND SHOE SCRAPER

Filed Oct. 24, 1929

Fig. 1.

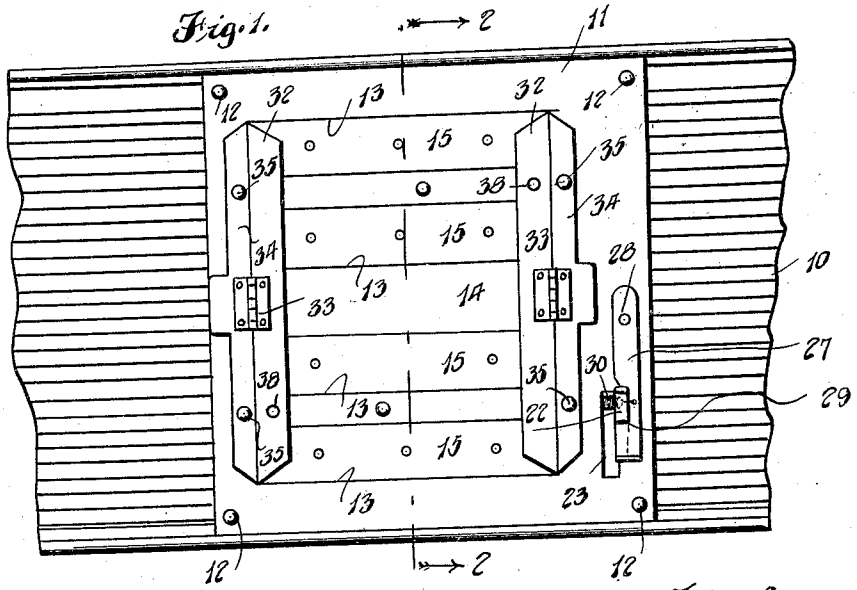


Fig. 2.

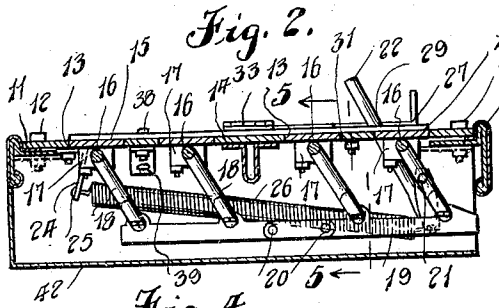


Fig. 3.

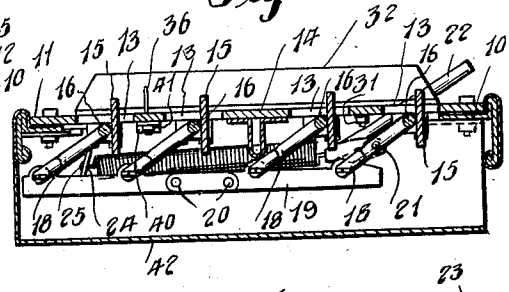


Fig. 4.

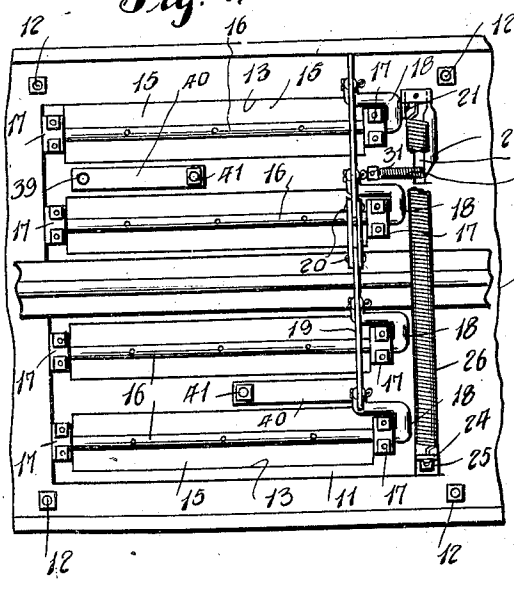
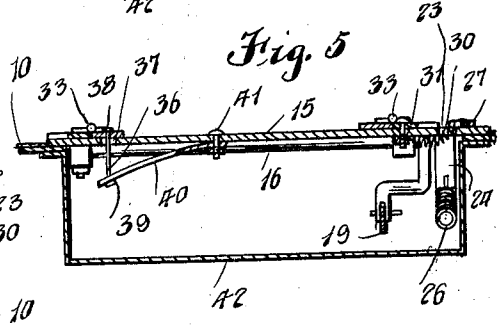


Fig. 5



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UNITED STATES PATENT OFFICE

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BOOT AND SHOE SCRAPER

Application filed October 24, 1929. Serial No. 402,288.

This invention relates to a boot and shoe scraper primarily adapted for use on the running board of automobiles although capable of use generally.

It is aimed to provide a novel construction which is of a disappearing character so as to be normally folded and not unduly obstructing the running board surface.

Another object is to provide a novel construction wherein an element is engageable by the foot in order to automatically cause unfolding movement and another element is engageable by the foot in order to cause automatic folding movement.

A further object is to provide a novel construction wherein said members or guards are employed with a view to preventing removed dirt from falling onto the running board proper.

Various additional objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawings illustrating an operative embodiment and wherein:—

Figure 1 is fragmentary plan view of a running board equipped with the improved scraper, the parts being shown in folded position;

Figure 2 is a cross sectional view taken on the line 2—2 of Figure 1;

Figure 3 is a view taken on the same plane as Figure 2 but showing the parts in open position;

Figure 4 is a bottom plan view of the parts of Figure 1, and

Figure 5 is a detail sectional view taken on the line 5—5 of Figure 2.

Referring specifically to the drawings, 10 designates a conventional running board of an automobile or self-propelled vehicle on which a mounting plate 11 for the parts constituting my invention, is fastened as by bolts 12. Said plate 11 has portions cut out to provide rectangular openings 13 therethrough and a series of slats 14 bordering the same. Normally occupying the openings 13 are rectangular scraper members or blades 15.

Rigidly fastened to the blades 15 are mounting rods 16 which are journaled in suitable bearings 17 secured to the under surface of the plate 11. The rods 16 have cranks 18 at one end thereof whose terminals are loosely connected to an actuating link 19. Such loose connection may be effected by cotter keys 20 or the like, passed through openings in the cranks 18 and in the links 19. Such links 19 may be in a series of sections as best shown in Figure 2 flexibly or pivotally connected together as at 20 to better accommodate the movement involved.

Rigidly fastened as at 21 to one of the end cranks 18 is an operating lever member 22 which extends through and is movable in a transverse slot 23 provided in the plate 11 and in the running board beneath the same. Attached to the lower end of the element 22 and to a lug 24 bolted or otherwise fastened at 25 to the plate 11 is a contractile coil spring 26. Such spring 26 in the closed position of the blade 15 is under tension, such closed position being shown in Figures 1, 2 and 4, such member 22 being held against movement under the action of spring, by means of a detent or latch 27 pivoted at 28 on the plate 11. Such detent has a potch at 29 in which the lever 22 is held and lever 27 is urged to and normally maintained in position engaging lever 22, as shown in Figures 1 and 4, by a contractile coil spring 30 fastened to detent 27 and at 31 to a bolt or the like fastened to the plate 11.

Thus it will be seen that with the parts in the closed position shown in Figure 1 the user, by means of the foot may swing the detent 27 to the right in Figure 1 freeing operating member 22 from the notch 29 whereupon the spring 26 will contract and move the parts to the position shown in Figure 3 where the blades 15 are vertical and in scraping position. The boots or shoes may then be scraped upon the upper edges of the blades 15, the dirt falling through openings 13. In order to close the blades 15, that is restore them to the position shown in Figure 2, member 22 is engaged by the foot and moved inwardly from the position of Figure 3 to that of Figure 2 whereupon the spring 30 causes

the detent 27 to move inwardly and engage and hold the element 22 in the notch 29. Thus it will be seen that the opening and closing movement of the scraper is automatic upon engagement of a single member.

Guard plates 32 are provided adjacent the ends of the blades 15 and normally are folded against such ends. Plates 32 are secured by hinges 33 to strips 34 fastened at 35 to the plate 11. Such guards 32 are normally held closed or folded flat upon the links 19 and blades 15 by flexible elements such as metallic wires of the braided type at 36 which pass through openings 37 in adjacent slats 14 which are fastened at one end as at 38 to the guards and at the other end at 39 to leaf springs 40 fastened at 41 to the adjacent slats 14. The free ends of the leaf springs 40 are tensioned to move downwardly and hence the opening movement of the blades 15 is against the under surface of the guards 32, moving the same upwardly to the position shown in Figure 3 and against the tension of the springs 40.

Such guards 32 prevent dirt from passing from the device onto the running board. The guards 32 automatically fold and unfold with the slats and other parts as understood.

A suitable open casing or protecting housing 42 may be provided about the parts and secured to the under surface of the running board, if desired.

Various changes may be resorted to provided they fall within the spirit and scope of the invention.

I claim as my invention:—

1. A scraper device of the class described comprising a scraping blade, means mounting said blade for projecting movement, a normally folded guard hingedly secured and associated with said blade, and spring means to fold said guard, said blade being mounted so as to engage the guard and move it automatically as the blade is projected.

2. A scraper device of the class described comprising a scraping blade, means mounting said blade for projecting movement, a normally folded guard hingedly secured and associated with said blade, and spring means to fold said guard, said blade being mounted so as to engage the guard and move it automatically as the blade is projected, and means to urge the guard to closed position.

3. A scraper device of the class described comprising a plate provided with openings, blades normally closing said openings and means pivotally mounting the blades and provided with cranks, a link device connected to the cranks, an operating member extending from one of the cranks, a contractile spring coacting with the operating device to normally move the blades to operative position, a detent lever having a notch engageable with the operating member to maintain the parts folded, and means urging the detent member to the last mentioned position.

4. A scraper device of the class described comprising a plate provided with openings, blades normally closing said openings and means pivotally mounting the blades and provided with cranks, a link device connected to the cranks, an operating member extending from one of the cranks, a contractile spring coacting with the operating device to normally move the blades to operative position, a detent lever having a notch engageable with the operating member to maintain the parts folded, means urging the detent member to the last mentioned position, guard members on the plate adjacent to the ends of said blades and mounted to be raised through the opening movement of the blades.

5. A scraper device of the class described comprising a plate provided with openings, blades normally closing said openings and means pivotally mounting the blades and provided with cranks, a link device connected to the cranks, an operating member extending from one of the cranks, a contractile spring coacting with the operating device to normally move the blades to operative position, a detent lever having a notch engageable with the operating member to maintain the parts folded, means urging the detent member to the last mentioned position, guard members on the plate adjacent the ends of said blades and mounted to be raised through the opening movement of the blades, spring controlled means urging the guards to folded position including parts passing through the plate.

In testimony whereof I affix my signature.

JOSEPH N. SANTHONY.