June 29, 1954 D. W. GREEN 2,682,072

GOLF CLUB CLEANER

Filed July 2, 1951

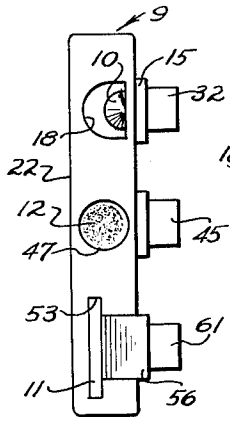


Fig. 3

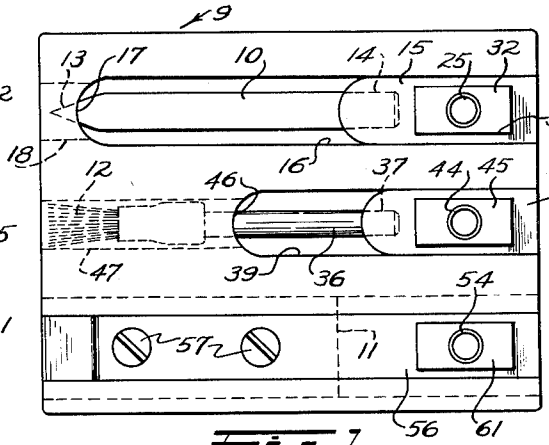


Fig. 1

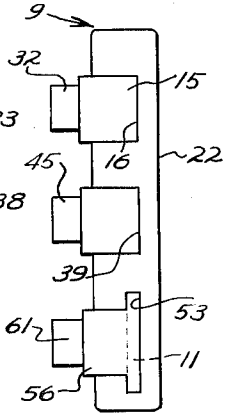


Fig. 2

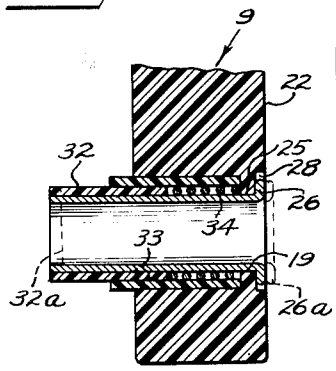


Fig. 6

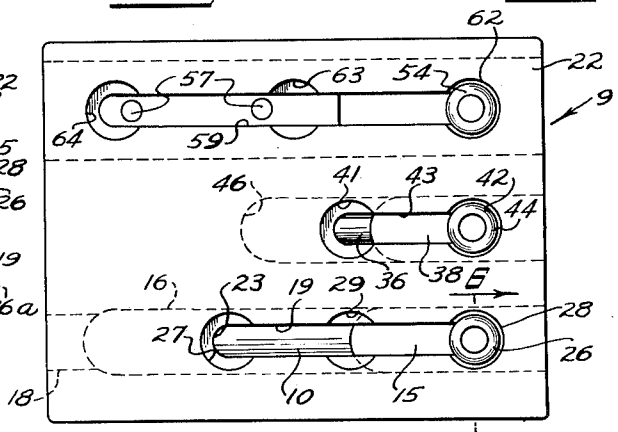


Fig. 4

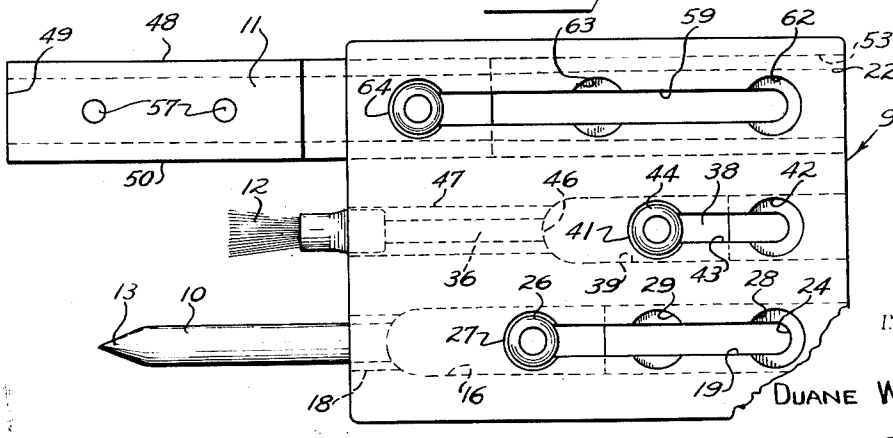


Fig. 5

INVENTOR

DUANE W. GREEN

BY Strauch, Nolan & Diggins

ATTORNEYS

Patented June 29, 1954

2,682,072

UNITED STATES PATENT OFFICE

2,682,072

GOLF CLUB CLEANER

Duane W. Green, Pipestone, Minn.

Application July 2, 1951, Serial No. 234,773

2 Claims. (Cl. 15—184)

1

This invention relates to cleaning devices, and in particular to a device or tool particularly adapted to removal of soft or caked dirt or the like from the face and grooves or pits in the head of a golf club or other instrument or tool.

Clubs used for playing golf frequently become caked with mud or sand etc. during the playing of even a few strokes. When they become coated in this manner it is not possible to obtain the intended results from them until they are cleaned to the point where their surfaces are back to their original configuration. Even the weight of the adhering coating will affect the power and accuracy of the blow imparted to the ball. Players resort to various expedients to clean the club head before using the club, the most obvious step being to wipe the club head upon the grass or upon a rag. Because of the various angles of the club face with respect to the handle, it is not ordinarily possible to completely clean the head upon the grass. If a rag is used, it soon becomes dirty and gritty to the point where it becomes a nuisance to carry around during a game.

Because of the above, as well as other reasons, this invention provides a new and improved cleaning device or tool that is of small size, simple in construction, and has retractible tools that are withdrawn into the frame or body of the device when not being used, so that they are not dangerous, and yet may be quickly placed in operating position for use in performing any desired cleaning operation upon a club head when needed. While the dimensions of the device may be varied, it is preferably so constructed that when the cleaning tools are in retracted position the device occupies substantially the same amount of space as a conventional book of matches.

Preferably the device comprises a frame or body having a plurality of cleaning devices slidably mounted therein, and movable between a retracted position and an extended position, wherein they may be used separately or in combination for the cleaning of a golf club head. While the illustrated embodiment shows a surface scraper, a groove scraper, and a brush, it is apparent that other cleaning tools may be used in place of these, and that the number and type of tools carried by the frame can be varied according to the wishes of the user.

It is accordingly a primary object of the invention to provide a novel device for the cleaning of tools such as a golf club head or the like.

Another important object is the provision of a

2

novel cleaning device having several cleaning tools mounted in a frame or body in such manner that they may be all or selectively retracted within the outlines of the frame.

It is another important object to provide a new and improved cleaning device wherein one or more cleaning tools are shiftably mounted in a common frame or body in such manner that they may be shifted therein from retracted position to one or more working positions where they may be used to clean a golf club head or the like.

Other objects will appear as the description proceeds in connection with the accompanying drawings, wherein:

Figure 1 is a top plan view of the cleaning device with all tool elements retracted into the frame or body to inoperative position.

Figure 2 is a view in side elevation as viewed from the right of Figure 1.

Figure 3 is a side elevation as viewed from the left of Figure 1.

Figure 4 is a bottom plan view of the device as viewed from the bottom of Figure 1.

Figure 5 is a bottom plan view similar to Figure 4, but with all three illustrated tool elements fully extended to their outermost positions.

Figure 6 is an enlarged partial sectional view, taken substantially along the line 6—6 of Figure 4 and looking in the direction of the arrows.

Referring to the drawings, the device includes a main frame or body 9 that may advantageously be of the rectangular configuration illustrated in Figures 1 to 4. The body is of any suitable material such as Bakelite, rust-proof metal such as aluminum, or of transparent plastic or the like. The last named material is advantageous because the particular tools are visible through the plastic even when wholly retracted into the body 9, as is apparent particularly from Figure 1.

In the illustrated embodiment the device includes three cleaning tools, namely a pointed-end groove or pit cleaner 10, a face-cleaner or scraper 11 and a brush 12. Each of these tools is so mounted that it can be fully withdrawn into the body 9, as seen in Figure 1, or may be extended outwardly from the body to an operable position, as viewed in Figure 5. As will be further explained, the tools may be selectively extended only partially out of the body 9, to an intermediate extended position, wherein they are securely held or locked just as they are in the fully extended or the fully retracted positions.

Taking first the groove or pit cleaner 10, it

comprises a metal blade terminating in a relatively sharp point 13. The other end of the blade 10 is received in a bore 14 in a sliding block element 15, the blade being secured in the bore by solder, cement, screw threads, or the like, depending upon the material of the block 15. This block 15 is slidably received in a slot or groove 16 in the body 9, this slot extending from the right end of the body, as viewed in Figure 1, to a point adjacent the left end, where it terminates in an abutment 17 (Figure 1) similar in shape to the left end of the sliding block 15, for mating engagement therewith. To the left of the abutment 17, the body 9 is provided with a bore 18 for the passage of the groove or pit cleaner blade 10.

As shown in Figure 4, the other side of the body 9 is provided with a slot or groove 19 that extends from the bottom of the slot 16 to and through the bottom surface 22 of the body 9. This slot 19 is narrower and not as long as the slot 16, but is instead only as long as the stroke of the blade 10 from extended to retracted position, having one terminus at 23 (Figure 4) and its other terminus at 24 (Figure 5). The width of the slot 19 is just slightly greater than the outer diameter of the tubular portion 25 of a tubular rivet having a conventional flanged head 26 (Figures 4–6). At the terminus 23 (Figure 4) of slot 19, the bottom surface 22 is countersunk at 27 to provide a recess for the head 26 of the rivet. At the other terminus 24 (Figures 4 and 5) the bottom surface is similarly countersunk at 28. Mid-way of the length of slot 19 the surface is similarly countersunk at 29.

As will be better understood from Figure 6, the rivet body has a sliding fit in the slot 19. The end of the rivet remote from its head 26 passes through and is rigidly secured to a rectangular button 32 (Figures 1, 2 and 6) that is received within a mating through slot 33 (Figures 1 and 6) in the sliding block 15. The button 32, and the tubular rivet secured thereto are normally pushed to the left as viewed in Figures 2 and 6 by a coil spring 34 (seen only in Figure 6) that surrounds the tubular portion 25 of the rivet and is confined between the bottom of the button 32 and the bottom of the slot 16 in the body 9. It is thus that the head 26 on the rivet resiliently retains the sliding block 15 within the slot 16, because the head 26 cannot pass through the slot 19 in the body 9. Still referring to Figure 6, when the button 32 is depressed in order to unseat the rivet head 26 from its particular counter-sink 27, 28 or 29 then the button is depressed to the dotted line position at 32*a* and the rivet head 26 is raised to the dotted line position shown at 26*a*.

Whenever the sliding block 15 is at either end of its stroke, if the button 32 is not manually depressed, the head 26 is received in either the counter-sink 27 or 28 and will thus lock the sliding block and its associated blade 10 against movement. Similarly, if the rivet head 26 is seated in the counter-sink 29 the blade will be locked in its mid-position with the point 13 protruding a shorter distance from the body 9.

The bristles of the brush 12 are mounted in one end of a shank 36, the other end of which is rigidly secured in a bore 37 in a central sliding block 38 mounted in a slot 39 in the body 9 in a manner similar to block 15. As shown in Figure 1, the slot 39 is not as long as the slot 16, and as seen in Figures 4 and 5, there are only two counter-sunk portions 41 and 42 at the ends of a slot 43 for the retaining and locking rivet 44 that is in all respect similar to the rivet on the previously described push button for the blade 10 and is secured to a button 45. When the brush 12 is extended, its sliding block 38, besides being limited in its movement by the rivet 44, is also stopped by a mating abutment 46. Thus the limit of the extended positions of both the brush 12 and the blade 10 are determined by both the abutments 46 and 17 as well as by the lengths of the slots 43 and 19. Beyond the abutment 46 the body 9 has a bore 47 for the passage of the brush 12 to extended position, the same bore receiving the brush when in retracted position, as will be apparent from Figure 1.

The face cleaner or scraper 11 is primarily a flat metal blade having three edges 48, 49 and 50 (Figure 5) that may be used for scraping the face to remove dirt or paint resulting from shank slots or any other large surface of a golf club head. If desired, this face cleaner blade may be mounted in the same manner as the blade 10 and the brush 12. However, it is sometimes subjected to rougher usage than the other elements and for that reason it is advantageously slidably mounted in a T slot 53 so that its tubular rivet 54 is not subjected to the larger forces required to hold it in its slot, and so that the action of the rivet 54 may be said to be more of a locking action than both a locking and retaining action. The entire sliding block that carries the face cleaning blade 11 may be homogeneous with the blade or the blade may be in the nature of an insert in the bottom of the sliding block 56, and secured thereto as by rivets 57, as in the illustrated embodiment or screws. As in the case of the brush 12 and the groove cleaner blade 10, the limits of the stroke of blade 11 are determined by the length of a slot or groove 59 for its tubular rivet 54 that coacts with its button 61 and counter-sunk recesses 62, 63 and 64 to lock the blade 11 in any of its three positions just as does the head on rivet 25 for the blade 10.

From the foregoing description, it will be apparent that when none of the tools are in use they may all be fully retracted into the body 9. However, when it is desired to clean a golf club head or the like, any one or more of the tools may be manually displaced from retracted to extended or partially extended position by depressing one of the rectangular buttons and simultaneously pushing it to the left, as viewed in Figure 1. Taking for example the groove or pit cleaner blade 10, it may be fully extended to the position shown in Figure 5, or it may be optionally only partly extended by pushing its button 32 to the left until the flanged head 26 on the tubular rivet falls into the countersunk depression 29.

Any two or more of the three illustrated tools may be used simultaneously. For example the face cleaner or scraper 11 may be used to remove a heavy deposit from one portion of the golf club head or the like while the brush 12 may be used simultaneously to clean an adjacent portion of the club head. In a similar manner brush 12 and the groove or pit cleaner blade 10 may be simultaneously used, or all three tools may be used at the same time.

When any one of the tools is withdrawn to retracted position, any debris adhering to it from a cleaning operation will be automatically scraped from it as the respective tool is moved to its retracted position within the main frame or body

9. Thus, when the tool is shifted to extended position again it is ready for immediate use, for whatever specific use it is designed, such as scraping or brushing.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What is claimed and desired to be secured by United States Letters Patent is:

1. In a cleaning device, a main frame comprising a body with opposed surfaces and having a groove extending from one surface toward an opposite surface of said body; an element in said groove and dimensioned so as to be slidable in said groove; a slot extending from said opposite surface of said body toward said groove, but narrower and shorter than said groove and intersecting said groove; and single means extending through said slot and groove and rigidly connected to said element to limit the movement

of said element in said groove; and a cleaning tool secured to said element for movement from a first position wherein it is fully retracted within said body to a second position wherein it protrudes from said body.

2. In the device described in claim 1, said single means comprising a rivet slidably mounted in and resiliently urged toward said element and having an enlarged flanged head larger than said slot on the opposite side of said slot from said slidable element, and said slot including spaced counter-sunk depressions in said opposite body surface to receive the enlarged flanged head of said rivet; and a depressible button on said rivet and protruding beyond said body on the opposite side thereof from said enlarged flanged head on said rivet.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
448,602	Butt	Mar. 17, 1891
1,048,868	Peardon	Dec. 31, 1912
1,230,660	Brice	June 19, 1917
1,960,130	Trubel	May 22, 1934
2,536,942	Kauter	Jan. 2, 1951
2,569,080	Trimble et al.	Sept. 25, 1951