

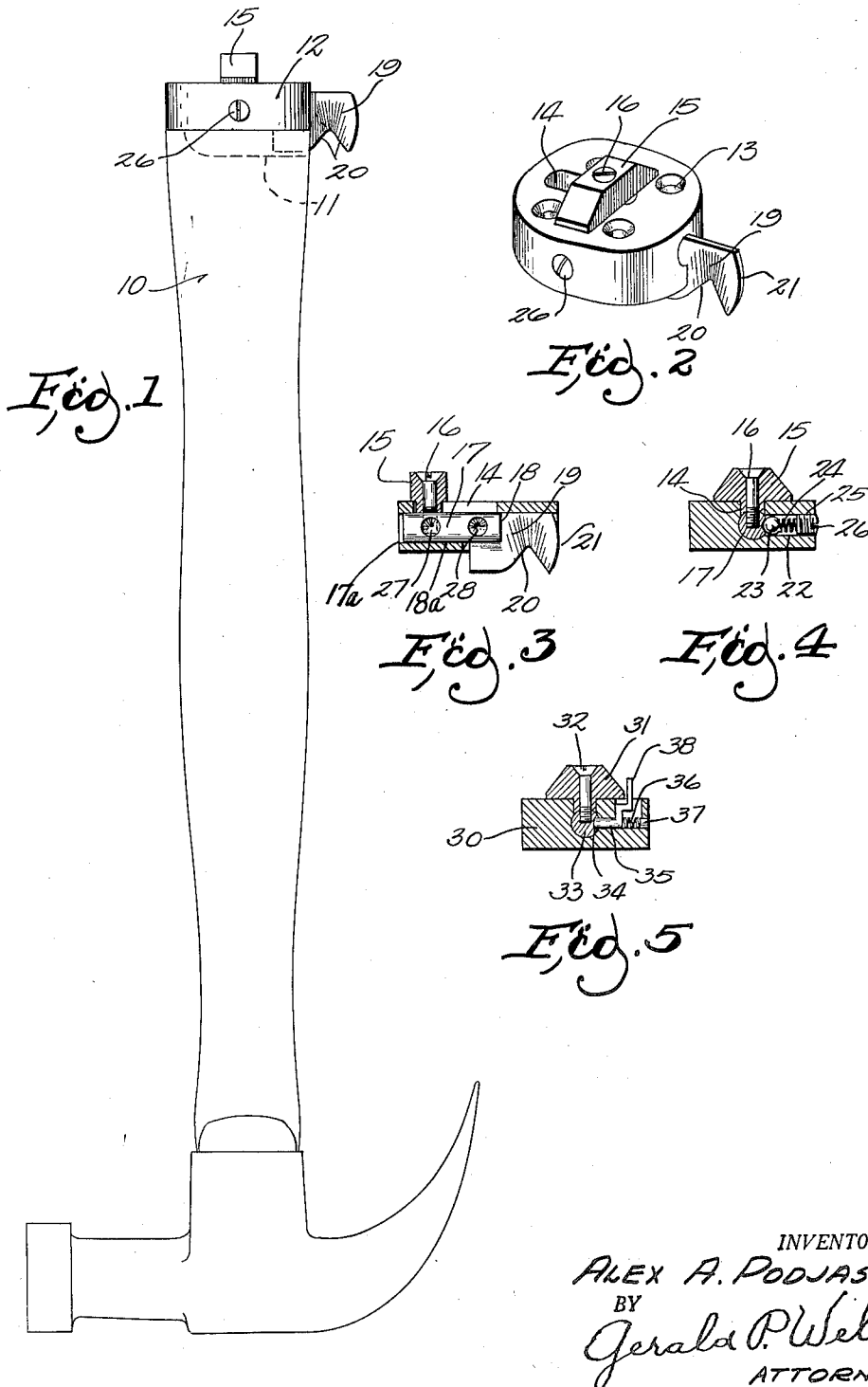
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ROOFING KNIFE

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## UNITED STATES PATENT OFFICE

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## ROOFING KNIFE

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1 Claim. (Cl. 30-162)

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This invention relates to improvements in roofing knife attachments for claw hammers, and particularly to a roofing knife attachment of the disappearing type for a claw hammer.

An object of the invention is to provide a device of the type which will be attached to the end of a claw hammer handle, and which will normally be enclosed within the handle for safety, but which may readily be projected in a position for use.

Another object of the invention is to provide a device of the type which may be manually fixed while in its extended or retracted position.

Other and further objects of the invention will appear as the description proceeds, reference being had to the accompanying drawing, in which:

Fig. 1 is a side view in elevation of a roofing knife attachment for claw hammers embodying my invention.

Fig. 2 is a view in perspective of the device.

Fig. 3 is a fragmentary side view partly in sections and partly in elevation.

Fig. 4 is a detailed view of one form of lock.

Fig. 5 is a fragmentary view partly in elevation and partly in sections of another form of lock.

Referring more particularly to the drawing, the numeral 10 refers to the handle of a claw hammer, having a transverse slit at 11 and the end cap 12 secured thereto by threaded means as at 13. The cap 12 has a slot at 14 for a portion of its length to accommodate the actuator member 15 and the threaded means 16 securing said actuator to the bolt 17. The bolt 17 is slotted at one end 18 to receive the knife blade 19, which latter has the V-shaped cutting edge 20 and the dull end edge 21. The cap 12 has a bore 17a thru its largest diameter centrally thereof to accommodate the bolt 17, and the cap 12 also has a slit 18a underlying and communicating with the bore 17a to accommodate the blade 19. The slit at 11 of the handle 10 is complementary to the slit 18a, is aligned therewith and accommodates that portion of blade 19 which protrudes below the cap 12. The end cap 12 is laterally bored at 22 to accommodate the ball 23 and spring 24 and is interiorly threaded at 25 adjacent its outer end to accommodate the set screw 26. The bolt 17 has a rotund indentation at 27 and 28 to cooperate with the ball 23 which thus functions as a detent.

In the form of the invention shown in Fig. 5 the cap 30 has an actuator member 31 secured by threaded means 32 to the bolt 33. The bolt 33 has a pair of cylindrical recesses as at 34 to re-

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ceive the keeper 35, pressed therein by the expansion spring 36 held in place by threaded or other means 37. The keeper 35 has a handle member extending upwardly therefrom, 38, whereby the user may withdraw the keeper to permit movement of the bolt 33 by means of the actuator member 31.

In use, a pressure by the user of the actuator member 15 in one direction or the other will extend the knife blade 19 for use or will retract it within the handle as may be desired. When extended, it will be seen that the blade may be used in conjunction with the hammer handle for cutting shingles for roofing or the like. After use, 15 an appropriate pressure on the actuator 15 will retract the blade 19 within the handle in a position as to be out of danger to the user, whereupon he can safely place the hammer handle in his pocket. In the form of the invention shown in 20 Fig. 5, it is necessary to withdraw the keeper 35 by a manual outward pressure against the handle member 38 before the actuator 31 may be used to retract or extend the blade.

In the structure herein disclosed, the cap element 12 which is secured to the butt end of a tool handle is formed with upper and lower substantially planar opposing faces, the contour of the intervening body portion being substantially oval and conforming to the cross sectional contour of the tool handle 10 to which it conforms and to which it is secured. The cap 12 is provided with an axial bore extending therethrough in the direction of the longer diameter of the body, the upper rear portion being formed with the slot 14 of predetermined length and in open communication with the corresponding bore length, while the forward lower portion of the cap is slitted in the forward direction with the slit extending into the bore and extending to the lower face of the cap, the slotted and the slitted portions having lengths such as to be in overlapping relation within the axial zone of the cap.

The rear portion of the bore receives the elongated bolt 18 in underlying relation to slot 14, the bolt being movable lengthwise of the bore by actuator 15 which is mounted on the upper surface of the element and has a depending portion extending through slot 14 into engagement with the bolt to which the actuator 15 is secured by screw 16, preferably in the rear portion of the bolt as indicated in Fig. 3 which presents the bolt assembly in its rear or retracted position. The actuator 15 is movable lengthwise of slot 14 toward the axis of the element when the bolt assem-

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bly is being projected from such retracted position.

The forward end of the elongated bolt carries the knife blade 19, the blade being secured in a slit in the forward end of the bolt, the upper forward end of the blade being thus housed in the forward zone of the bore when the bolt assembly, formed of the bolt and blade, is in retracted position. Blade 19 is located within the forward slitted lower zone of the cap and has a width sufficient to project beyond the lower face of the cap (Figs. 1 and 3), the butt end of the handle being slitted, as at 11, to permit the excess width of the blade to pass to retracted position. The forward end of the blade is preferably curved convexly, while the lower edge of the blade, in the immediate vicinity of the forward edge is provided with V-shaped recess 20, extending upward in Fig. 3, the edges of the recess being sharpened.

In the retracted position of the assembly, the blade is unexposed and all parts are within the contour of the cap with the lower zone of the knife in slit 11. Hence, in such position, the tool handle presents no material variation from the usual tool handle, other than the presence of the cap at the butt end and with the actuator 15 exposed at the end. When, however, it is desired to place the assembly into use in the particular service for which it has been devised, the actuator is shifted, thus placing the knife blade in exposed position with the projection laterally from the handle, the V-shaped recess being exposed on the lower or inner side of the blade and thus facing in a direction opening away from the butt end of the handle, a position essential for carrying out the purpose of the invention efficiently.

The assembly thus practically requires that the blade be held in the exposed position only during actual service in the cutting or removal of the shingles, and requires retraction at other times. This result is obtained by means for temporarily holding the bolt assembly fixedly in either position, with the shift in position made possible by spring actuated retaining means cooperative with either of a pair of indentations spaced longitudinally of the bolt 18, as indicated in the drawings.

It will be understood that the device is capable of many modifications in structure and design, without departing from the spirit of the invention, within the scope of the appended claim.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States, is:

In the claims:

A roofing tool comprising a handle having an

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oval butt end, a cap mounted on the free butt end of the handle, said cap having a contour corresponding with the oval contour of the handle butt end, said cap having a bore extending there-through axially in the direction of the longer diameter of the cap, the rear upper portion of the cap being slotted in alinement with the bore axis and in communication with the bore, the forward lower portion of the cap being slitted in alinement with the bore axis and in communication with the bore, said slotted and slitted portions being in overlying alinement in the axial zone of the cap with the outer end of the upper slotted portion spaced from the periphery of the cap to thereby limit the length of such upper slotted portion, a bolt of less length than and substantially fitting said bore and movable axially thereof, said bolt carrying an actuator secured in the rear end portion thereof and projecting through the upper slot of the cap for bodily moving the bolt longitudinally of the bore within the limits of such slot length, said bolt also carrying a knife-blade projecting forwardly from and secured to the forward end portion of the bolt, said blade having its forward end of convex curvature, the combined length of the bolt and the blade member approximately equalling the longest diameter of the cap member, said blade having a width to project into the tool handle with the tool handle slotted to permit movement of the blade between a retracted position within the cap and an exposed position laterally of the tool handle by movement of the bolt actuator, the lower edge of the blade in the immediate vicinity of and in the rear of the forward convex face being formed with an inwardly extending V-shaped recess, the opposite side edges of the recess being sharpened, and spring actuated retaining means for holding the blade in either retracted or exposed position.

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