Jan. 11, 1927. 1,613,729

E. R. SHEARWOOD

COMBINATION IMPLEMENT

Filed Oct. 24, 1923

Fig. 1.

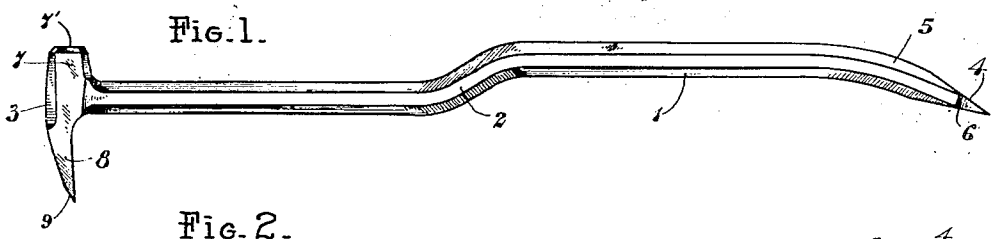


Fig. 2.



Fig. 3.

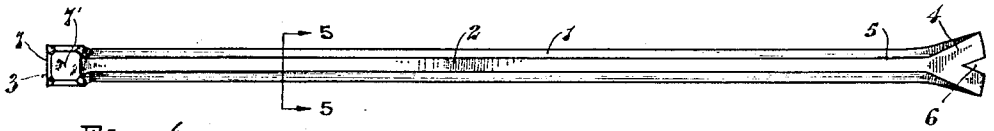


Fig. 4.

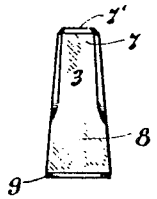


Fig. 5.

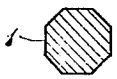


Fig. 6.

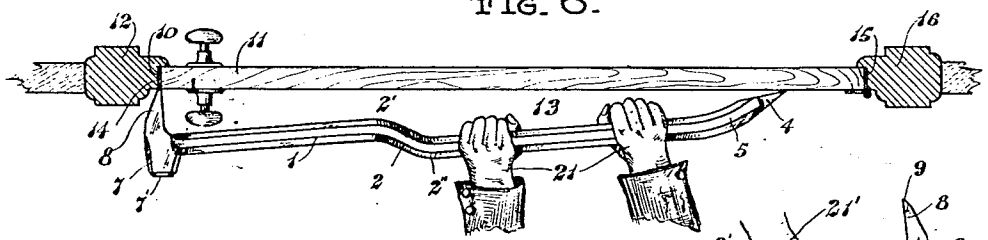
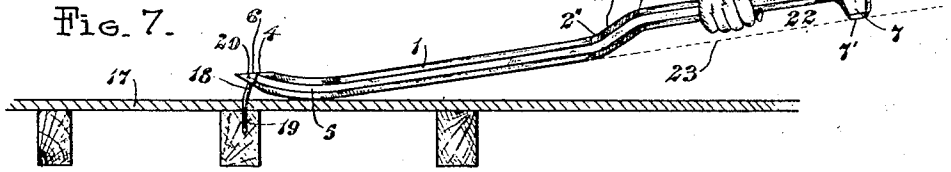


Fig. 7.



INVENTOR

EDWARD R. SHEARWOOD

BY James N. Ramsey

ATTORNEY

Patented Jan. 11, 1927. 1,613,729

UNITED STATES PATENT OFFICE.

EDWARD R. SHEARWOOD, OF CINCINNATI, OHIO.

COMBINATION IMPLEMENT.

Application filed October 24, 1923. Serial No. 670,613.

My invention relates to a combination tool and more particularly to a device which is adapted for use by firemen or other persons for the purpose of opening locked doors, as well as to pull spikes, chop, pry, and hammer.

The objects of my invention are to provide a combination implement adapted to open a locked door without injury thereto or to the door frame when the door opens toward the user of the implement, and having a handle so constructed that the hands of the user are safeguarded against accidental injury of being crushed between the handle and the door; and to provide a combination tool by the use of which chopping, prying, wedging, hammering, pulling spikes, and other desired purposes may be conveniently and efficiently accomplished.

My invention consists in providing an offset handle having a head at one end comprising a hammer and a wedge oppositely disposed; in providing at the other end of said handle a curved portion extending in a direction relatively opposite to the bend forming said offset; and in providing adjacent said curved end a tapered bifurcated portion having a V-shaped notch.

My invention also consists in the combination and arrangement of parts as herein set forth and claimed.

In the drawings:

Fig. 1 is a side elevation of my novel implement;

Fig. 2 is a plan view;

Fig. 3 is a bottom view;

Fig. 4 is a front elevation of the head;

Fig. 5 is a section taken on a line corresponding to 5—5 of Fig. 3;

Fig. 6 is a section of a door and door frame showing my device positioned for use in opening a locked door; and

Fig. 7 is a section of a floor showing my device in position for extracting a spike, nail, or other similar object from the flooring.

In the embodiment of my invention as illustrated and which shows a preferred construction, I provide handle 1 having an intermediate offset 2 and head 3 integral therewith at one end thereof and at the other end I provide a beveled bifurcated end 4 adjacent curved fulcrum 5 of the handle. The bifurcated wedge and curved fulcrum are advantageous in pulling spikes, nails, hasps, or other similar objects from timber and the like, when as shown in Fig. 7, V-notch 6 is in engagement with the object being extracted. The fulcrum 5 may also be used to advantage for prying with end 4 of the handle. The head 3 comprises a hammer 7 for use in driving spikes, nails, or other similar objects, and wedge 8 integral therewith for use in chopping, prying, or for other desired purposes.

The surface of wedge 8 adjacent the handle is formed perpendicular thereto and the opposite face is disposed at an angle thereto in order that when the wedge is forced between the frame and door it will not injure the door and to permit said face to rest flatly and firmly against the edge of the door so that when the handle is pulled outwardly it will immediately come into operative action against the edge of the door to force the door by reason of the fulcrum action of the inclined face of the wedge against the door frame. This construction also prevents the wedge from working out after being inserted between the door and frame while pulling pressure is being applied to the handle.

An advantage of this construction in the use of this implement is that the wedge 8 may be driven beneath concrete upon a floor and the latter pried upwardly and broken off in pieces to remove the same. This is a great advantage to firemen in case of fire in removing a concrete furnace base or mosaic floors in bathrooms.

My invention is especially efficient for use in opening doors without material injury to the door and the framework surrounding the door. In operation it is simply necessary to place edge 9 of wedge 8 in space 10 between door 11 and frame 12, and having handle 1 extending parallel with the door. Then tap the hammer 7 with any suitable object so that wedge 8 will be forced into space 10. Handle 1 is then grasped between end 4 and offset 2, as shown in Fig. 6, and pulled outwardly, causing wedge 8 to exert lateral or edgewise pressure on edge 14 of the door whereby edge 15 of the door is forced into close contact with frame 16 and is moved a sufficient distance to permit the lock bolt on the door to disengage and clear its seat in frame 12. By continuing outward movement of handle 1 door 11 is wedged outwardly on its hinges and thereby opened without injury to the lock, door, or frame. The curve 5 and offset 2 form space

13 between door 11 and handle 1, whereby the hands 21 are safeguarded against accidental injury by contacting the surface of the door or crushing the hands between the handle and door.

In pulling spikes, nails, or other similar objects from flooring 17, as shown in Fig. 7, curved fulcrum 5 rests on the floor and shank 18 of nail 19 is forced in V-notch 6 of bifurcated end 4 whereby head 20 of the nail engages the metal adjacent V-notch 6. The handle 1 is then grasped between head 3 and offset 2 and pushed downwardly whereby the upward pull of end 4 is substantially equal to the distance from hand 21′ to fulcrum 5 divided by the distance from V-notch 6 to fulcrum 5 multiplied by the downward pressure of hand 21′.

It is noted that when, as shown in Fig. 7, hammer face 7′ is downward, offset 2 from bend 2′ to bend 2″ extends downwardly at an angle and toward end 4 and the portion of handle 1 between offset 2 and curved fulcrum 5 is substantially straight and in a relative parallel relation with the portion of handle 1 between offset 2 and head 3. Curved fulcrum 5 extends at an angle to the handle and, as shown in Fig. 6, space 13 is provided between said curved fulcrum and offset 2 for the purpose of allowing the hands of an individual actuating the tool to be safeguarded against injury by contact with the door or by pressure between the handle and door. As shown in Fig. 7 space 22 is formed by offset 2 and hammer 7 for the purpose of permitting the hand 21′ of an individual to push head 3 in contact with floor 17 when extracting nail 18 without contacting the hand against the floor (then in position represented by dotted line 23) and to prevent it from being crushed between the handle and floor.

It is, therefore, apparent that I have invented a simple, efficient, convenient, and economical device for the purposes intended.

While I have set forth a particular embodiment of my invention it will be understood that it may be varied in construction and arrangement without departing from the scope or spirit thereof as defined in the claims.

What I claim as new and desire to secure by Letters Patent is:

1. An article of manufacture comprising in one implement a handle having an intermediate offset to form said handle into parallel portions and having upon one end a head comprising a laterally projecting hammer and a laterally projecting wedge and having the other end thereof formed at an angle to said handle whereby a hand protecting space is formed adjacent said handle both between said hammer and said offset and between said offset and the angular end of said handle, for the purposes set forth.

2. An article of manufacture comprising in one implement a handle having an intermediate offset therein, a head on one end of said handle and comprising a hammer and wedge oppositely disposed, said wedge having its side adjacent the handle substantially perpendicular thereto and having its opposite side angularly inclined relative to said handle, said offset being adapted to provide spaces wherein the hands of a user when applying either end of said implement are safeguarded against accidental injury.

3. An article of manufacture comprising in one implement a handle having an intermediate offset therein, a head on one end of said handle and comprising a wedge having one side substantially perpendicular to said handle and having its opposite side angularly inclined relative to said handle, said offset being adapted to provide spaces wherein the hands of a user are safeguarded against accidental contact with a foreign surface when applying either end of said implement.

EDWARD R. SHEARWOOD.