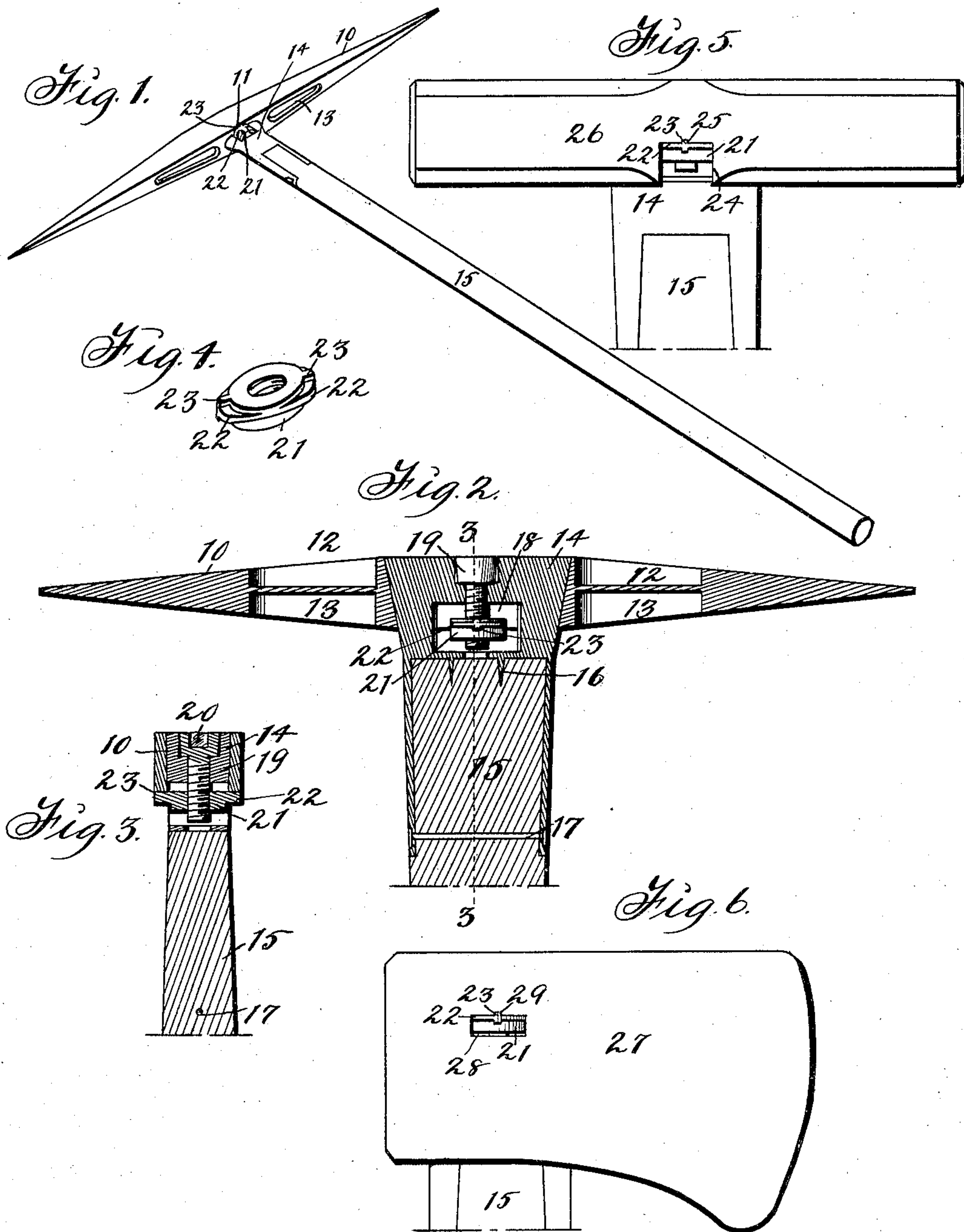


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W. ASHERT.  
DETACHABLE TOOL HANDLE.  
APPLICATION FILED JAN. 19, 1904.

NO MODEL.



Witnesses:  
R. H. Heibrock  
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# UNITED STATES PATENT OFFICE.

WILLIAM ASHERT, OF DES MOINES, IOWA.

## DETACHABLE TOOL-HANDLE.

SPECIFICATION forming part of Letters Patent No. 770,413, dated September 20, 1904.

Application filed January 19, 1904. Serial No. 189,763. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM ASHERT, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented certain new and useful Improvements in Detachable Tool-Handles, of which the following is a specification.

The objects of my invention are to provide a handle of simple, durable, and inexpensive construction designed to be accurately fitted to and securely held in position in various tools—such, for instance, as picks, hammers, axes, &c.—and, further, to provide a handle of this class that may be readily, quickly, and easily attached to and detached from the tool.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a perspective view of the handle applied to a pick. Fig. 2 shows an enlarged longitudinal sectional view of same. Fig. 3 shows a transverse sectional view on the indication of 3 3 of Fig. 2. Fig. 4 shows a detail perspective view of the nut detached. Fig. 5 shows a side elevation of a hammer and part of my improved handle in position therein, and Fig. 6 shows a like view of an ax having part of my improved handle therein.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the pick, which is provided with a handle-eye at its central portion tapered from its outer to its inner face, and the inner face of the pick is provided with notches 11, extending transversely of the pick from the eye outwardly. I have provided for reducing the weight of the central portion of the pick by forming the recesses 12 and 13 in the upper and lower faces, respectively, of the pick near the handle-eye.

The handle comprises a solid metal head 14, tapered to accurately fit the handle-eye of the pick. The lower end of the head is formed into a socket designed to receive the handle proper, (indicated by the numeral 15.) The upper end of this socket is of slightly

greater diameter than the lower end, and formed on the head and projecting downwardly into the socket are the wedges 16. By means of this arrangement a wooden handle may be driven into the socket, and when its upper end strikes the wedges the wedges will enter the handle and spread its upper end, so that its upper end will accurately fit the interior of the socket, and thus the handle is firmly united to the socket. I have also provided a rivet 17 to pass through the lower ends of the socket and through the handle in the socket. Near the center of the head 14 is a transverse opening 18, and this opening is intersected by a longitudinal screw-opening, the screw 19 being passed downwardly through the screw-opening into the transverse opening 18. The head of said screw is provided with an angular opening 20 to receive an angular key, by which the screw may be turned.

The reference-numeral 21 is used to indicate a round nut having a central screw-threaded opening to receive the screw 19. On two diametrically opposite edges of the nut 21 I have provided the eccentric rims 22. These rims are thinner than the nut itself and are placed nearer to one face of the nut than to the other, and at the central portion of each rim I have provided a lug 23 at the top of the rim and a similar lug at the bottom of the rim for purposes hereinafter made clear.

In assembling the parts I first unite the handle and head, as before described. I then pass the entire handle through the handle-eye of the tool until the tapered head rests in the tapered handle-eye of the tool. I then place the nut 21 in the opening 18 of the head, with the lugs 23 thereof resting in the notches 11 of the tool. I then pass the bolt 19 through the bolt-opening and through the nut, and then by turning the bolt the nut is firmly drawn against the under surface of the tool, thereby forcing the tapered head firmly into the tapered handle-eye. Obviously the lugs 23 prevent the nut from turning, and the handle and pick cannot become detached from each other unless the said nut is turned. The shape and size of the nut is such that, if desired, the nut and bolt may be placed in po-



sition in the head and the nut turned with its rims in line with the longitudinal axis of the head, and when in this position the handle may be inserted in the tool and then the nut  
 5 turned to position with the lugs 23 at right angles to the longitudinal axis of the head. By placing the rims 22 adjacent to one side of the nut I produce the following advantageous result: If the head 14 does not set down  
 10 into the handle-eye, so that the upper end of the head is flush with the upper end of the pick, then the nut is placed in position with the rim nearest the bottom of the nut, so that the rim may reach downwardly far enough  
 15 to engage the under surface of the pick, and, on the other hand, if the handle-head passes downwardly through the handle-eye, so that its upper end is below the upper face of the pick, then the nut is reversed with the rims  
 20 nearest the top of the nut, so that the rims may be easily made to engage the under face of the pick, and since the handle is intended for use in connection with implements of different kinds and the sizes of the handle-eyes  
 25 in these implements may possibly vary this feature is of great value.

In adapting the device for use in connection with a hammer or tool having a considerable size from the upper to the lower face I form  
 30 a deep notch 24 in the side of the hammer and a shallow notch at 25 at the upper central portion of the notch 24. In use the rims 23 project out through the notches 24 and the lugs 23 enter the notches 25.

35 The numeral 26 is used to indicate the hammer-head.

The ax-head shown in Fig. 6 is indicated by the numeral 27, and each side is provided with an opening 28 and a notch 29. The said rims  
 40 22 project through these openings, and the lugs 23 enter the openings 29. The handle is connected with either the hammer or the ax in the same manner as it is connected with the pick before described.

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

1. A handle-socket, a tapered head thereon having a transverse opening, a nut in the  
 50 tapered head, in one position contained wholly within the head and in another position having its sides projecting beyond the head and a screw rotatably mounted in the head and passed through said nut.

55 2. A handle-socket, a tapered head thereon having a transverse opening, a nut in the

tapered head in one position contained wholly within the head and in another position having its sides projecting beyond the head and a screw rotatably mounted in the head and  
 60 passed through said nut and means for locking the nut in position with its sides projecting beyond the head.

3. A tool having a tapered handle-eye, a handle-socket, a tapered head thereon having  
 65 a transverse opening, a nut in the tapered head in one position contained wholly within the head and in another position having its sides projecting beyond the head and a screw rotatably mounted in the head and passed  
 70 through said nut, said tool notched to receive the projecting portions of the nut.

4. A tool having a tapered oblong handle-eye, a handle-socket, a tapered head thereon having a transverse opening, a screw rotatably  
 75 mounted in the head and an oblong nut in the opening having the screw seated therein.

5. A tool having a tapered oblong handle-eye, a handle-socket, a tapered head thereon having a transverse opening, a screw rotatably  
 80 mounted in the head, a nut in the opening having rims on two diametrically opposite sides to project beyond the head and to engage the under surface of the tool, said nut seated on said screw.  
 85

6. A tool having a tapered oblong handle-eye, a socket, a handle in the socket, a tapered oblong head formed on the socket and having a transverse opening, a screw rotatably  
 90 mounted in the head and intersecting the said opening, said screw having an angular opening in its head, a nut on the screw in said opening and rims on two diametrically opposite sides of the nut nearer one face of the  
 95 nut than the other.

7. A tool having a tapered oblong handle-eye having notches in its sides, a socket, a handle in the socket, a tapered oblong head formed on the socket and having a transverse  
 100 opening, a screw rotatably mounted in the head and intersecting the said opening, said screw having an angular opening in its head, a nut on the screw in said opening and rims on two diametrically opposite sides of the nut nearer one face of the nut than the other and  
 105 lugs on the upper and lower faces of said rims to enter the notches in the tool.

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Witnesses:

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 W. R. LANE.