Oct. 4, 1949. V. IAVARONE 2,483,906

RETAINING MEANS FOR TOOLHEADS

Filed April 8, 1946

FIG. 1.

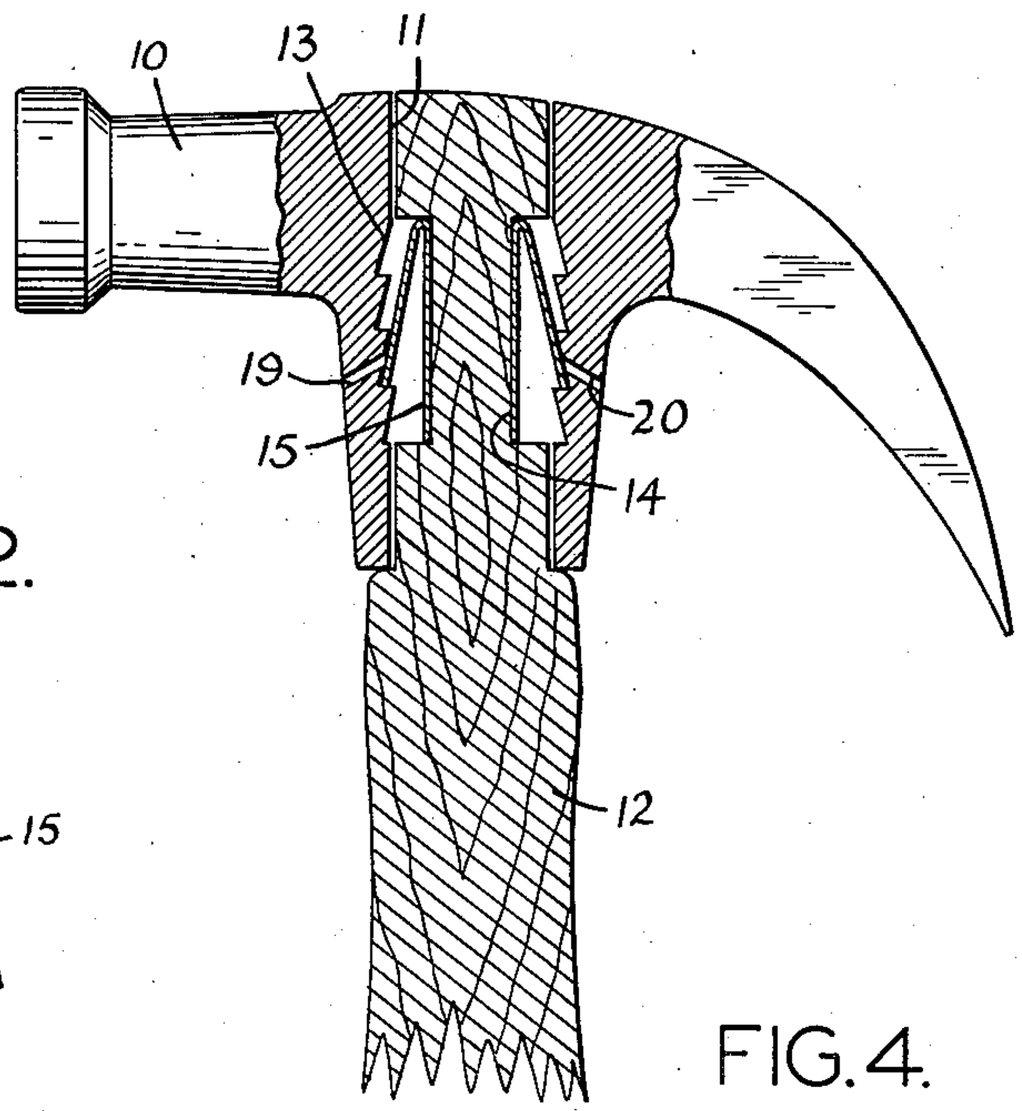


FIG. 2.

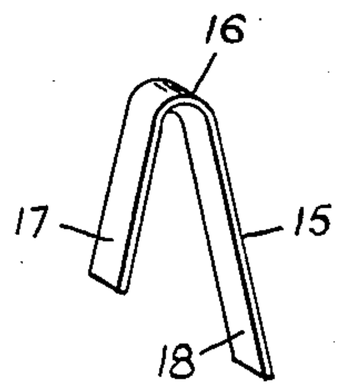


FIG. 3.

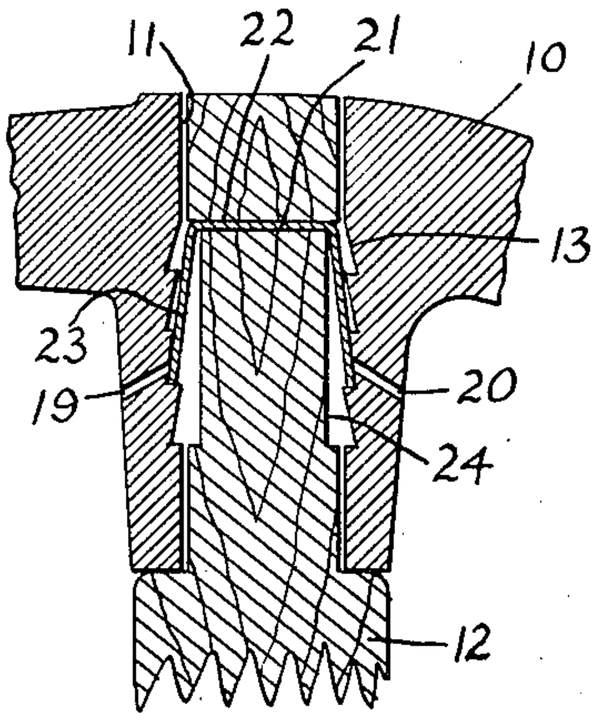
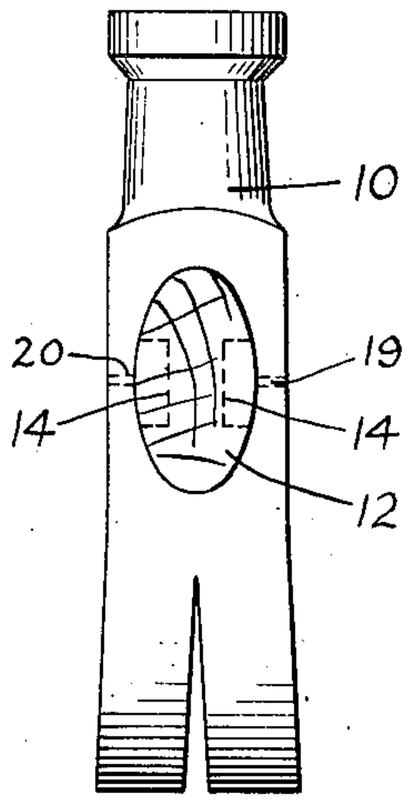


FIG. 4.



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RETAINING MEANS FOR TOOLHEADS

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2 Claims. (Cl. 306—32)

1

This invention relates to hammer and handle assemblies, such as are used on axes, picks, hammers, and similar tools.

The broad object of this invention is to provide a locking device which may be adapted to any type of tool in which a handle is inserted in a socket for the manipulation thereof.

Another object of this invention is to provide a hammer assembly which will remain safe despite prolonged use and which will not come apart while being swung.

Another object of this invention is to provide a means for quickly disassembling the work member from the handle to facilitate storage or handle replacement.

The invention consists of the construction, combination and arrangement of parts, as herein illustrated, described and claimed.

In the accompanying drawings, forming part hereof, are illustrated two forms of embodiment of the invention, in which drawings similar reference characters designate corresponding parts, and in which:

Figure 1 is a sectional view of a complete embodiment of this invention, with certain portions shown in elevation.

Figure 2 is a view in perspective of the spring lock.

Figure 3 is a vertical section illustrating another form of spring lock mounted in a handle.

Figure 4 is a plan view of another form of handle with its internal structure shown in dotted lines.

Referring to the drawings, and particularly to Figure 1, 10 represents a claw hammer head having the well known socket 11 therein to receive the handle 12. The central portion of the walls of the socket 11 are provided with opposed teeth 13 which are buttressed in a direction away from the handle grip. The showing of the teeth 13 in Figure 1 is exaggerated to more clearly illustrate the invention. In actual practice a larger number of smaller teeth are utilized so that there is no possibility of the arm 17 coming to rest between two teeth 13 when the handle 12 is forced through the throat 11. The same thing applies to the showing of the teeth in Figure 3.

The hammer handle 12 is provided with one or more recesses 14 spaced from the tool head end thereof. These recesses 14 line up with the teeth 13 when the handle 12 is inserted in the socket 11.

A spring member 15, shown in detail in Figure 2, is inserted in each of the handle recesses

2

14. Said spring member 15 is bent at 16 so that the arms 17, 18 extend in the general direction of the handle grip. When inserted in the handle recess 14 the arm 17 of the spring member 15 extends beyond the hammer handle 12.

When the handle 12 is forced into the socket 11 of the hammer head 10, the springs 15 having been placed as described above, the arm 18 of the spring member will be urged against the socket wall and engage the teeth 13 thereon. The result is a locking device which prevents the hammer head from flying off.

Two holes 19, 20, shown in Figure 1, are provided in the hammer head for releasing the lock in the event that handle replacement is desired. These holes 19, 20 are drilled from the under side of the hammer head and enter the socket 11 at a point just above the tooth upon which the spring arm 17 rests. When the hammer head 10 is to be removed it is only necessary to insert two thin rods or nails into the holes 19, 20 and force them against the spring 15. This will compress the spring arms 17, 18 and release the lock mechanism.

The shape of the handle 12 of some implements such as picks, small hammers, etc. makes it unwise to cut recesses 14 in the front and rear edge thereof, as shown in Figure 1. It is therefore within the contemplation of this invention to cut said recesses 14 in the sides of the handle, as indicated by the dotted lines in Figure 4. Moreover, it is conceivable that only one recess and one spring member may be used in certain instances.

An alternative form of spring 21 is shown in Figure 3. This construction includes a narrow transverse slot 22 cut in the upper part of the hammer handle 12. The spring 21 is then inserted in the slot 22 and the projecting arms 23 bent downward in the direction of the handle grip. Recesses 24 are provided in the handle 12 to receive the spring arms 23 so that the assembled handle 12 and spring 21 may be forced into the hammer socket 11. The construction of the hammer head in this variation of the invention remains the same and incorporates the above-mentioned teeth 13, socket 11 and release holes 19, 20.

While the embodiment of this invention shown in the drawings illustrates its application to a claw hammer, it is within the purview of this invention to apply it to any tool in which a handle is inserted in a socket for the manipulation thereof. In this category are to be included shovels, pitchforks, trowels, etc.

Having thus fully described the invention, what is claimed as new and desired to be secured by Letters Patent of the United States, is:

1. In a work implement having a socket and a handle insertable therein, a plurality of buttress teeth formed in said socket, a spring member retained by said handle and adapted to engage in at least one of said teeth to prevent removal of said handle from said implement and means comprising a plurality of bores in the work implement to admit a pin into each of the said sockets whereby the said spring may be compressed to release said locked handle.

2. In a work implement having a socket and a handle insertable therein, opposed buttressed teeth formed in said socket, a plurality of spring members retained by said handle within recesses therein and adapted to engage at least one of said teeth to prevent removal of said handle from said implement and means comprising a plurality of bores in the work implement to admit a pin into each of the said sockets whereby the said springs may be compressed to release said locked handle.

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