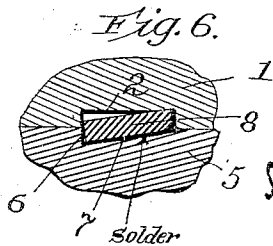
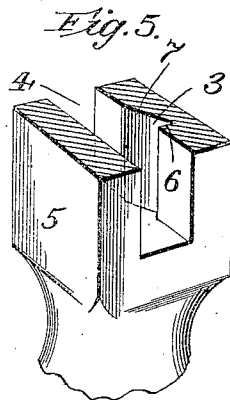
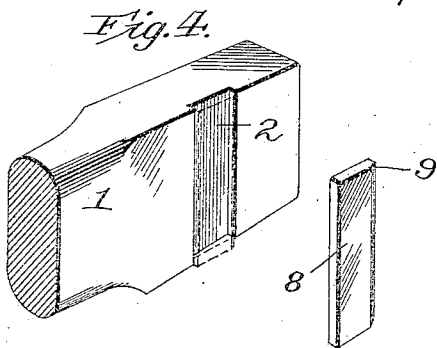
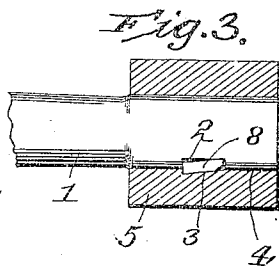
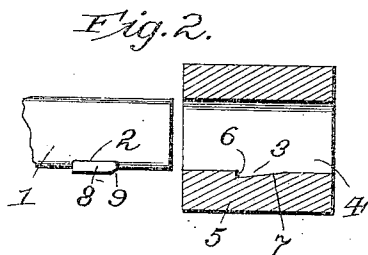
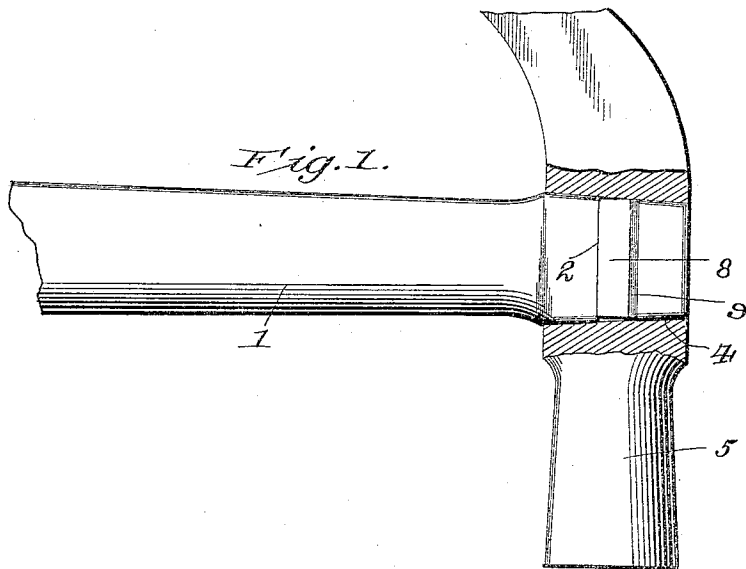


A. W. COCHRAN.
 SECURING MEANS FOR SOCKETED MEMBERS.
 APPLICATION FILED SEPT. 8, 1909.

948,294.

Patented Feb. 1, 1910.



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SECURING MEANS FOR SOCKETED MEMBERS.

948,294.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed September 8, 1909. Serial No. 516,761.

To all whom it may concern:

Be it known that I, ALFRED W. COCHRAN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Securing Means for Socketed Members, of which the following is a specification.

My present invention pertains to an improved means for fastening the component parts of an article together, the structure being designed more particularly for attaching a hammer-head (or the like) to a handle, and in the accompanying illustration the invention is so shown.

In the drawings: Figure 1 is a sectional elevation of a portion of a hammer-head and handle; Fig. 2 a sectional plan of the socket portion of the hammer body, a portion of the handle and the locking-key; Fig. 3 a similar view, showing the end of the handle seated and locked in the head; Fig. 4 an enlarged perspective view of a section of the hammer-handle and the key; Fig. 5 a similar view of the hammer body; and Fig. 6 a detail sectional view of a portion of the hammer-head, the handle and the interposed locking key or member.

Broadly stated, the object of the invention is to produce a locking connection between a handle and tool, and the means employed comprises a member or locking key interposed between the handle and tool (or tool head) and seated in oppositely-disposed grooves therein, the key and grooves being so formed that the key tends to compress the wood as the parts are positioned, whereby the key will be firmly held in locking position in the groove or recess in the tool-head. The arrangement is such that endwise movement of the handle in either direction is prevented.

In the drawings, 1 denotes the hammer-handle, of wood, provided at its outer end with a tapering section, substantially rectangular in cross-section. A groove or depression 2 is formed in the side face of the handle, designed when the handle is positioned to stand opposite a groove 3 formed in one wall of the tapering socket 4 of the hammer-head 5.

As will be noted upon reference to Fig. 1, socket 4 is tapered in a direction the reverse

of the tapering rectangular section of the handle, and this assists in preventing the handle from moving too far into the socket. The groove or depression 3 is formed by a wall 6 extending inwardly into the body of the hammer at right angles to the axis of the socket, and by a second wall 7, which lies at an angle to such axis, said second wall extending upwardly toward the outer end of the socket. The pocket formed by the grooves 2 and 3, when they lie opposite each other, is, therefore, narrower at its outer end than at the base or bottom thereof.

The locking key or plate is designated by 8, and comprises a bar or strip of metal, preferably beveled, as at 9, along one edge. Said key when the parts are to be assembled, is seated in groove 2, as in Fig. 2, with the beveled edge lying toward the outer end of the handle. The handle and wedge are then forced into the socket 4, the wood of the handle being highly compressed beneath the wedge. When the key comes opposite the groove 3, it passes into the same and, when fully positioned, as in Fig. 6, the lower edge of the key passes over the face or wall 6, forming a locking contact therewith and preventing withdrawal of the handle from the socket. This outward movement of the lower portion of the key would, in all probability, take place by reason of the expansion of the wood, but by employing the inclined face 7 the key is tipped or canted and then forcibly moved into position.

As will be seen upon reference to Fig. 6, the lower flat edge of the key has a bearing on the flat or straight walls of the two slots, thus bringing the joint between the two, and effectively preventing retrograde movement of the handle. Furthermore, it is to be noted that the handle cannot be moved inwardly beyond the proper point, this by reason of the taper given the handle and socket, and also by reason of the fact that the lower square face of the recess 2 engages the key and prevents further movement without considerable compression of the wood. If desired, the outer face of the key may be coated with solder which, after the handle is in place, may be fused to the head by the application of heat to the latter.

While in Fig. 6 a space has been left be-

tween the key and the bottom face of socket 2, it is probable that in practice this space is absent, as the wood of the handle would expand sufficiently to fill the same. It is shown merely for the purpose of illustration.

Having thus described my invention, what I claim is:

1. In combination with a tool having a handle-receiving socket, said socket having a groove formed in one face thereof; a handle of compressible material having a groove in one face thereof; and a locking member adapted to occupy a position within said grooves when the parts are assembled, the proportions and relations being such that the handle may be forced into the socket with the locking member in the groove of the handle, and when the handle is in place the locking member will be urged into the groove in the socket by the action of the compressed portion of the handle, said material being compressed by the locking member as the handle is forced to place.

2. In combination with a socketed member having a groove formed in one face thereof; a compressible member adapted to enter the socket, said member having a groove formed in its outer face; and a locking key of a thickness greater than the depth of the groove in the compressible member and adapted to be seated therein and to be forced with said member into the socket, whereby when the key coincides with the groove in the socket it will be moved outwardly into the same and effect a union between the parts.

3. In combination with a tool having a handle-receiving socket, said socket having a groove formed in one face thereof, the groove being provided with a wall inclining upwardly toward the socket; a handle of compressible material of a size to fit said socket, said handle having a groove in one face thereof; and a locking key of a thickness greater than said groove, said key forming an interlocking connection between the parts as it becomes seated in the grooves

when the handle is forced to place in the socket.

4. In combination with a tool having a handle-receiving socket, said socket having a groove formed in one face thereof, the groove being provided with a wall inclining upwardly toward the socket; a handle of compressible material of a size to fit said socket, said handle having a groove in one face thereof; and a locking key having a beveled edge, said key being of a thickness greater than the groove in the handle, and adapted to form an interlocking connection between the parts when the handle with the key seated in its groove is forced to place.

5. In combination with a socketed metallic tool-head having a groove formed in one face of the socket; a handle adapted to make a close fit with the socket and likewise having a groove in its face; and a metallic key provided with solder on that face which contacts with the groove in the head, when the handle and key are forced to place, whereby by heating the head the key may become soldered thereto.

6. In combination with a member having a tapering socket and a tapering groove formed in one face of the socket, said socket and groove tapering in the same direction; a handle adapted to enter the socket, said handle being likewise provided with a groove; and a locking key adapted to be seated in said groove and to be carried into the socket with the handle and to move bodily to throw its rear edge into the tapering groove in the socket when the key comes into alinement therewith, whereby endwise movement of the handle with reference to the socketed member will be prevented.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALFRED W. COCHRAN.

Witnesses:

HAROLD A. OLSEN,
ADAM RAINEY.