J. W. MILLER.

HAMMER.

APPLICATION FILED SEPT. 30, 1911.

1,037,289. Patented Sept. 3, 1912.

Fig. 1.

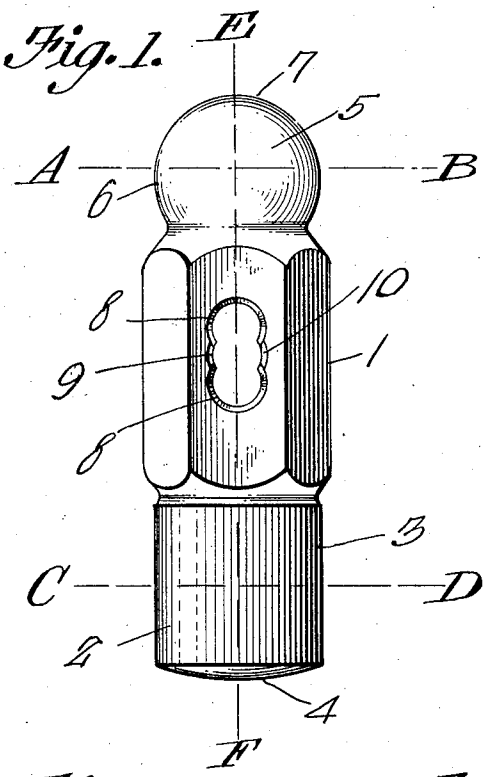


Fig. 4.

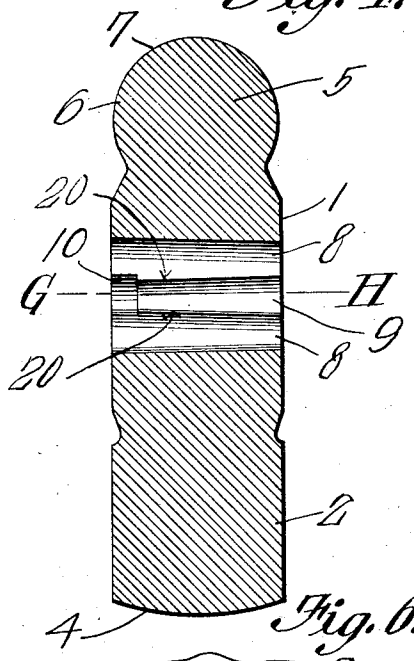


Fig. 6.

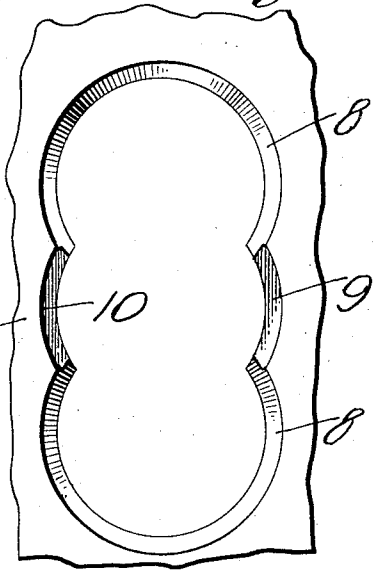


Fig. 2.

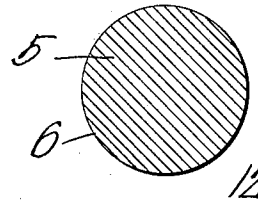
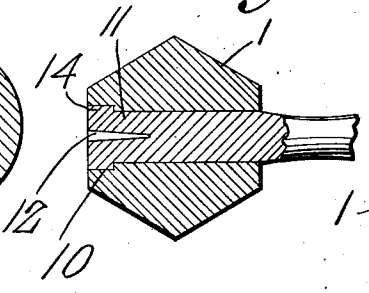


Fig. 5.



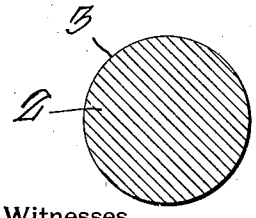


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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HAMMER.

1,037,289. Specification of Letters Patent. Patented Sept. 3, 1912.

Application filed September 30, 1911. Serial No. 652,045.

To all whom it may concern:

Be it known that I, JOHN W. MILLER, a citizen of the United States, residing at Bernharts post-office, in the county of Berks and State of Pennsylvania, have invented a new and useful Hammer, of which the following is a specification.

One object of the present invention is to provide a hammer head which may be fashioned, cold, in a lathe from a bar of commercial, hexagonal steel or like material.

A further object of the invention is to provide a novel form of eye for a tool head, which eye will operate in a novel manner to hold the handle of the tool in the tool head.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings,—Figure 1 shows the invention in top plan; Fig. 2 is a transverse section upon the line A—B of Fig. 1; Fig. 3 is a transverse section on the line C—D of Fig. 1; Fig. 4 is a longitudinal section upon the line E—F of Fig. 1; Fig. 5 is a transverse section upon the line G—H of Fig. 4, the handle of the hammer being shown as an added detail; and Fig. 6 is a detail enlarged from Fig. 1.

The hammer head herein disclosed is fashioned from hexagonal material, and comprises an intermediate portion 1, retaining the hexagonal contour of the material from which the head is fashioned. One end portion 2 of the head is circular in transverse section, as indicated at 3, the outer end face of the portion 2 being convexed slightly, if desired, as shown at 4. The opposite end 5 of the head is circular in transverse section, as shown at 6, and is rounded longitudinally, as shown at 7, so as to fashion a ball peen.

From the foregoing it will be seen that a section of hexagonal bar steel or like material may be placed in a lathe, the portions 2 and 5 being readily turned into the desired form. The hammer head, therefore, as an entity, may be formed without forging or otherwise manipulating the original material, saving for the simple machine operation necessary to fashion the circular end portions 2 and 5.

The invention further aims to provide a novel form of eye for a tool head, which eye will operate effectively, to retain the handle within the tool head.

The eye is fashioned in the hexagonal, intermediate portion 1 of the head, and consists of end portions 8 which, as clearly shown, are conical or tapered. The end portions 8 are united by a central portion 9 which is cylindrical throughout its entire length. That extremity of the cylindrical portion 9 of the eye, which is adjacent the wider extremities of the end portions 8 of the eye, is enlarged in diameter, as shown at 10. The handle 11 is driven into the eye, through the smaller extremities of the end portions 8 of the eye. A wedge 12 is driven into the end face of the handle 11, and this wedge 12 will cause the handle to expand, and fill the wider extremities of the end portions 8 of the eye, thereby, obviously, preventing a withdrawal of the handle 11 from the head. The insertion of the wedge 12 will, at the same time, cause the outer end 11 of the handle to spread, as shown at 14, and to fill the enlarged extremity 10 of the central, cylindrical portion 9 of the eye. The construction of the eye, therefore, is such that the handle 11 will be securely retained within the head, the cylindrical portion 9 coöperating with the conical end portions 8, in effecting this result.

Referring particularly to Fig. 4, it will be seen that where the walls of the cylindrical portion 9 of the eye are intersected by the conical end portions 8, inwardly projecting edges 20 are formed, which edges converge toward the wider extremities of the conical end portions 8. These edges 20 engage the handle and tend to hold the head upon the handle against movement toward the free end of the handle. Recalling that when the wedge 12 is inserted into the handle, the handle is held against movement in a direction away from the free end of the handle, it will be seen that the head of the hammer is held upon the handle, against movement in either direction. The shape of the eye is such that an ordinary oval handle may be mounted in the head, no specific form of handle being required. Moreover, owing to the fact that the cylindrical portion 9 is enlarged abruptly, as shown at 10, a seat is

formed, into which the handle is expanded by the wedge, with positive locking engagement.

Having thus described the invention, what is claimed is:

A tool head having an eye, the end portions of which are conical, said end portions being connected by a central, cylindrical portion, that extremity of the cylindrical portion which is adjacent the wider extremities of the end portions, being enlarged abruptly in diameter to form a seat into which the handle is expanded by the wedge, with positive locking engagement, the end and central portions at their lines of intersection defining inwardly projecting edges which converge toward the wider extremities of the end portions.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN W. MILLER.

Witnesses:
ADAM H. SCHMECK,
J. HENRY MILLER.