May 29, 1945. E. N. KINDLAND 2,377,157

UTILITY HAMMER

Filed Nov. 13, 1941

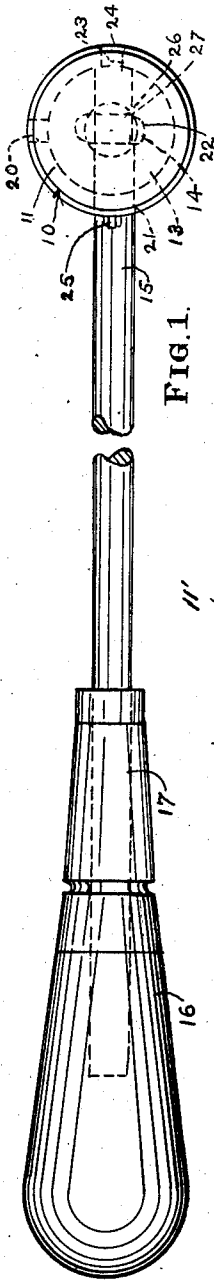


FIG. 1.

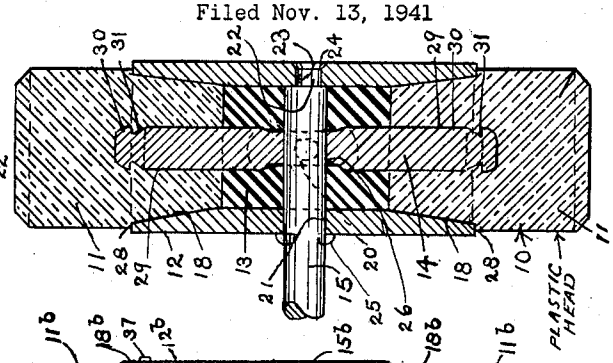


FIG. 2.

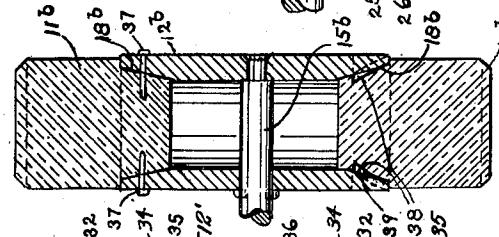


FIG. 7.

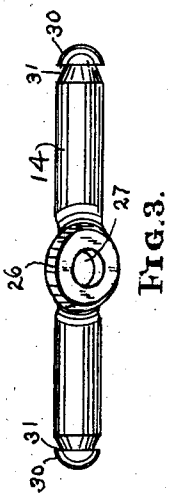


FIG. 3.

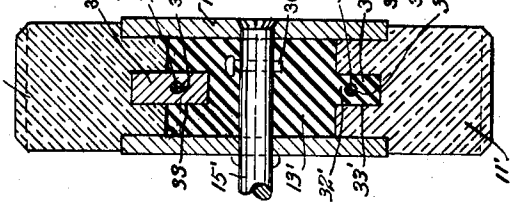


FIG. 4

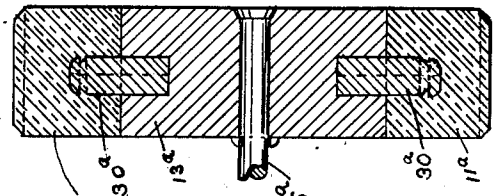


FIG. 5.

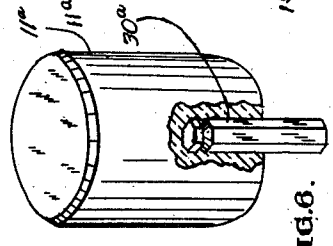


FIG. 6.

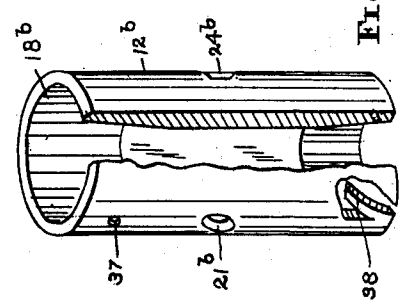


FIG. 8.

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2,377,157

UTILITY HAMMER

Erick N. Kindland, Jamestown, N. Y.

Application November 13, 1941, Serial No. 418,988

2 Claims. (Cl. 145—36)

This invention relates to a general utility hammer.

It is aimed to provide such a hammer having maximum serviceability and durability, which is well balanced and has a novel striking surface or surfaces of plastic material to provide great toughness and avoid stretching of the metal hammered thereby. While I mainly aim to provide plastic heads, I may in some instances use heads of wood, lead, rubber, copper or other materials which may be suitable for the particular work at hand. One special field of use for the hammer is in straightening or reshaping automobile bodies and fenders or any other sheet metal surface, this end being attained without stretching of the metal such as takes place when a metallic hammer head is used. The plastic surface or surfaces render the hammer a non-conductor of electricity.

A second object is to provide such a hammer having a solid or tubular body provided with a handle and mounting plastic heads at opposite ends of the tubular body.

Another object is to provide a hammer with the said heads wedged into the ends of the tubular body, in some forms having a core engaged by the heads, and novel interfitting means between the body and heads, and which may be interfitted with a handle shank.

A further object is to provide the tubular body of such construction as to enable the molding of the core therein.

The more specific objects and advantages will become obvious and in part will be pointed out in the description following taken in connection with accompanying drawing illustrating operative embodiments of several examples of the practice of the invention.

In said drawing:

Fig. 1 is a plan view, partly broken away, of one form of hammer carrying out the invention;

Fig. 2 is a view primarily in central vertical section through the hammer head;

Fig. 3 is a perspective view of the anchor rod used in the hammer of Figs. 1 and 2;

Fig. 4 is a view primarily in central vertical section through a modified form of hammer head;

Fig. 5 is a view primarily in central vertical section through a second modified form of hammer head;

Fig. 6 is a detail perspective emphasizing the connection between one of the anchor studs and heads as used in the last mentioned modified form;

Fig. 7 is a view primarily in central vertical section through a final modified form of hammer head, and

Fig. 8 is a perspective view of the body tube used in said final form of hammer head.

Referring specifically to the drawing and first to the form of Figs. 1 to 3, I provide a hammer head structure 10 consisting of striker heads 11, a mounting body therefor in the form of a tube 12 and a core 13 and an anchor rod 14. Said head structure is carried by a metallic handle shank or rod 15 in turn equipped with a wooden or other handle 16 fastened thereon with the aid of a ferrule 17.

Such body tube 12 is metallic or plastic but preferably of steel and of any desired configuration in cross-section, for instance round, as shown. The inner or bore wall of the tube at each end is accurately machined to provide outwardly flaring or tapered surfaces or sockets 18.

Said core 13 at its ends terminates in the same planes as the frustums of the sockets 18. This core 13 is preferably metallic, usually of lead, and is poured in a molten state through an opening 20 into the tube 12 whose open ends are temporarily plugged. Before pouring the core 13, handle shank 15 is driven through an opening 21 in tube 12 and its adjacent terminal 22, is driven through another opening 23 in such tube and then upset as at 24. Lugs or burrs 25 are struck integrally from shank 15 and tightly against tube 12. The anchor rod 14 has a flattened portion 26 to better secure it in the lead core and it is provided with an opening 27 through which shank 15 pasess.

After assembly of the tube 12, handle shank 15, anchor rod 14, and core 13 as just described, the striker heads 11 are applied to the tube 12. These striker heads 11 are of exceedingly hard and tough plastic material and are accurately machined so as to have end portions 28 in oversized conformity with sockets 18 and which are press-fitted or driven friction tight into the said sockets 18 and into adhesive contact with the walls thereof.

Said striker heads 11 have central longitudinal recesses 29 terminating short of their striking surfaces whereby the latter are solid and unbroken, and such recesses are of slightly undersized conformity to the shape and size of the extremities or studs 30 of the anchor rod 14 which may be of steel or other metal, onto which the adjacent striker heads 11 are press-fitted or driven at the same time such heads are press-fitted or driven into the sockets 18, so as to be in

adhesive contact therewith. Said extremities of the anchor rod 14 are preferably undercut or roughened as at 31 to enhance the bond or connection. The hammer thus produced will be well balanced and is of general utility, with the added advantages attributable to the plastic heads or striking members 11. Since such striker heads 11 are of plastic material, they particularly do not stretch or reduce the thickness of metal or other material which is struck thereby and which is a decided advantage in the straightening and reshaping of automobile bodies and fenders.

Various changes may be resorted to provided they fall within the spirit and scope of the invention. For instance, I may use the modified form of Fig. 4. In this form, the anchor rod 14 is omitted and the bore of the tube, which is here shown at 12' is of the same diameter throughout. An anchor stud 32 preferably of steel, is fastened in any suitable way to one of the striker heads 11' before the latter is applied to the tube and it occupies a recess 33 in the lead core 13'. Such lead core has an integral stud 32' occupying a recess 33' in the other head 11'. Said studs are fastened to the core and head by pins 34 of lead, steel or other metal passed through aligned openings 35 in the studs, core and tube. One or more anchor pins 36 disposed at any or various angles may be carried by the handle shank and at opposite ends extend into the core. It is to be understood that if desired, instead of using the different studs 32 and 32', both of them may be like stud 32 or stud 32' and associated parts.

Another modified form is shown in Figs. 5 and 6. This form has plastic striker heads 11^a like those at 11 which are attached to anchor studs 30^a of the same shape as studs 30 and in the same manner in which heads 11 are attached to anchor studs 30 except that the studs 30^a are shown as polygonal in cross-section, specifically hexagonal, rather than round. The studs 30^a, however, are separate and carried by and rigidly fastened to a solid body or core 13^a of iron, steel, lead or other metal to which a handle shank 15^a is suitably secured.

In the remaining modified form of Figs. 7 and 8, the structure has a body tube 12^b carried by a handle shank 15^b. The body has sockets 18^b like those at 18 in which plastic striker heads 11^b are press fitted or attached as in the first form of the invention. The core such as 13 may be omitted. At either or both sockets, pins 37 may be passed into the heads 11^b or if preferred, either or both sockets may have any desired number of lugs 38 struck therefrom and occupying recesses 39 in the heads. Such pin 37 or lugs 38 may similarly be employed in the forms of Figs. 1 to 3 and Fig. 4, if desired.

I claim as my invention:

1. A hammer head comprising a tubular wall providing a relatively deep taper socket with the larger end outermost, a central stud in the socket of approximately the length of the latter surrounded by said wall, a part extending transversely through said head and stud to prevent relative turning thereof, and a plastic striker head having a tapered portion wedged in said socket provided with a recess receiving and interfitted with said stud, said striker head thereby being jointly gripped between the socket wall and stud.

2. A hammer head comprising a body member having a tubular wall providing a relatively deep socket at one end, a core in the body member inwardly of the socket and immovable relatively thereto, a stud member stationary in the core extending into the socket and surrounded by the wall, a hard plastic striker head jointly gripped between the socket wall and stud, and handle means extending across the body, core and stud whereby the body, core and stud are immovable relatively to each other.

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