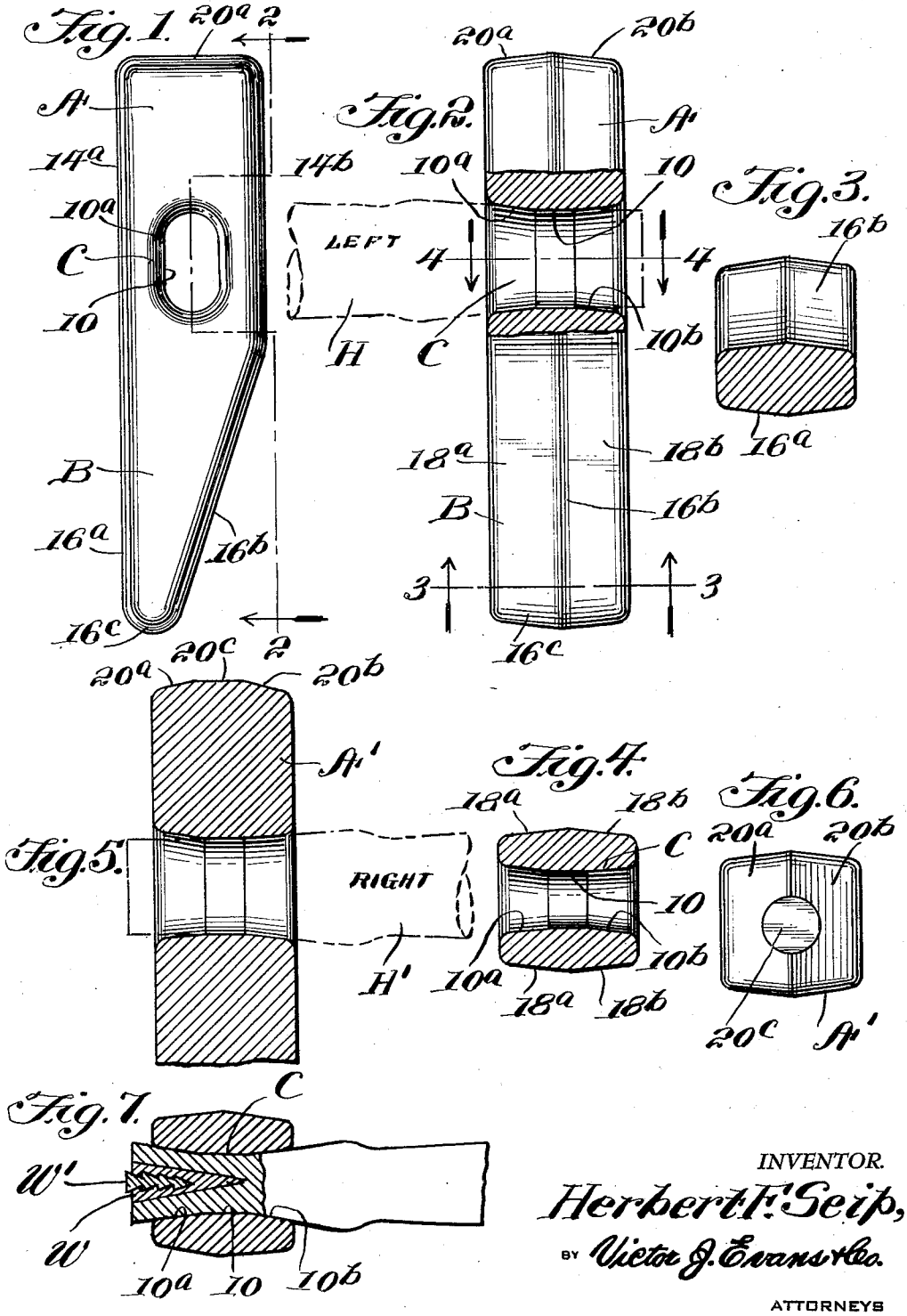
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TIRE REMOVING HAMMER

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TIRE REMOVING HAMMER

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3 Claims. (Cl. 145—29)

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This invention appertains to improvements in hammers generally, and more particularly to a type thereof especially designed to facilitate the removal and replacement of tire casings of the wheels of all classes of motor vehicles; it having for its primary object to provide a head made of drop forged steel and with a tire casing bead driving end and a bead loosening peen fashioned in a manner to efficiently perform their intended functions and to effectively reduce the chance for the upsetting, i. e., mushrooming, of the metal to a minimum.

Another object of the invention is to provide a hammer head as above characterized with an eye, shaped to receive a handle in a manner to adapt the head for either right or left handed use; a wedge fastening means being employed to assure of a tight and secure fit of the handle when it is engaged with the eye, either from the right or left hand side of the head.

Yet another object of the invention has to do with the provision of a hammer head as hereinbefore specified with a number of angular working surfaces, whereby the impact of blows struck with the driving end from different directions, to loosen a tire casing bead from a wheel rim and the associated lock or retaining ring, will be taken on plane surfaces, and, also, twisting pressures on the peen, as customarily employed to further loosen and free the bead from the rim, will likewise be taken on and distributed over like surfaces, thus effectively avoiding the aforesaid upsetting or mushrooming of the metal; these important results being abetted by the rounding off of all sharp edges, defined by the sides and ends of the head and by the adjacent of said plane surfaces.

With the foregoing and other objects and advantages of equal importance in view, the invention resides in the certain new and useful combination, construction, and arrangement of parts, as will be hereinafter more fully described, set forth in the appended claims, and illustrated in the accompanying drawings, wherein:

Figure 1 is a top plan view of one form of the improved hammer head, in accordance with the invention;

Figure 2 is a side view, partly in section, showing the eye formation having a handle engaged therein to adapt the head for left handed use, the section being taken through the line 2—2 on Figure 1, looking in the direction of the arrows, and the handle being shown in broken lines;

Figure 3 is a transverse section, taken through the line 3—3 on Figure 2, looking in the direction of the arrows;

Figure 4 is another transverse section, taken through the line 4—4 on Figure 2, looking in the direction of the arrows;

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Figure 5 is a fragmentary, longitudinal section, of a modified form of the hammer head; and,

Figure 6 is a plan view of the driving end of the hammer head of Figure 5.

Figure 7 is a sectional view of the handle attached to a head.

Referring to the drawings, the improved hammer head, as it is exemplified therein, is preferably made from drop forged steel, and is generally comprised in a substantially rectangular driving or anvil portion A of a rectangular cross-section and a substantially wedge-shaped end or peen B, merging with the anvil portion the length of these portions being substantially equal. An eye C is formed through the head, in the inner end of the portion A adjacent the merging point of the portion A and the peen B and, preferably, is substantially elliptical in form, with a central straight portion 10 and flared end portions 10*a* and 10*b*, substantially as shown in Figures 1, 2, 4, and 5.

The peen portion B of the head has one of its sides 16*a* in straight-line continuation with the same side 14*a*, of the portion A, while its opposite side 16*b* is formed angularly with respect to the complemental side 14*b*, of the driving portion A; the free end of the peen being rounded off, as at 16*c*, and of an appreciably less width than that of its connected end which is identical to the width of the driving portion. Also, all edges and corners of the head, preferably, are rounded off, for instance, on a one-eighth inch radius, in order to avoid any nicking or chipping thereof, or the cutting or scarring of the work by the same.

These sides of the head portions A and B are oppositely and equally angled to either side of a plane bisecting the heads A and B longitudinally thereof and this angled formation is continued across the ends of the driving and peen portions. By this arrangement, the opposite sides of the anvil and peen portions A and B free of handle openings are provided with oppositely angled plane surfaces 18*a* and 18*b* which effectively absorb pressures resulting from twisting motions imparted to the head in the loosening and freeing of a tire casing bead from a wheel rim, while plane surfaces 20*a* and 20*b* are likewise provided on the end of the anvil portion A which take the impact of blows struck at oblique angles to the work. Also, by rounding off the free end of the peen B, as indicated at 16*c*, the possibility of damaging a tire casing, as by cutting into the same, is substantially minimized.

In the modified form of the hammer head, shown in Figures 5 and 6, the end face of the anvil portion A' is provided with a centrally disposed flattened surface 20*c*, which is designed to take the impact of blows struck perpendic-

ular to the work, thus further minimizing a tendency to upset or mushroom the metal and to otherwise prevent disruption of the metal constituting the ridge, formed by the angular disposition of the impact surfaces **20***a* and **20***b*, at opposite sides of the surface **20***c*. By providing this central flattened surface **20***c*, any tendency of a second hammer, employed to strike the same to drive the peen B between the bead of a tire casing and a wheel rim, to skid will be minimized, if not entirely prevented. This surface **20***c* also permits of a non-skid impact of the hammer head on the striking surface of a tire-iron or other similar tool.

As shown in Figure 7, in fitting a handle to a head, its attaching end is forcibly passed through the eye C and is then spread by the driving into the same of a wedge W, made of a suitable wood, which is subsequently spread by the use of a smaller wedge W', preferably of metal.

In the marketing of hammers, constructed in accordance with the invention, they are preferably sold in pairs, for cooperative use in the removal and replacement of tire casings, one of each pair being fitted with a handle H, of one color, for instance, blue, for left handed use, and the other with a handle H', of a different color, for instance, red, for right handed use, the heads being secured on the handles with the peens B reversed, one with respect to the other. The heads will be made in different sizes and weights suitable for their intended uses.

Having thus fully described practical embodiments of my invention, it is believed to be obvious that I have provided an efficient hammer construction, which, while being of general utility, is especially valuable to mechanics engaged in servicing automobiles, motor trucks, and the like, particularly in removing and replacing tire casings from and on the wheels of such vehicles, and it is to be understood that the words which I have used are words of description rather than of limitation and that changes within the purview of the appended claims may be made, without departing from the true scope and spirit of my invention in its broader aspects.

I claim:

1. A hammer head, comprising an elongated body made from drop forged steel one end portion of the body forming an anvil portion substantially rectangular in cross-section, and the opposite end portion of the body being in the form of a substantially wedge-shaped peen merging with the anvil end, the two portions being substantially equal in length and the anvil portion being provided with a handle-receiving eye opening therethrough adjacent the point where the anvil portion merges with the peen, said eye extending from one of the side faces of the body to the opposite side face, the several edges and corners of the body being rounded off to minimize the possibility of the nicking and chipping thereof or the marring of the work during use, the side faces of the body free of the handle openings being provided with equally angled plane surfaces to either side of a plane bisecting the body longitudinally and like surfaces in continuation therewith across the ends of said anvil and peen portions, the plane surfaces on the end of said anvil portion acting to take the impact of blows struck at oblique angles to the work and those on the sides of both the anvil and peen portions acting to absorb pressures resulting from twisting motions of the body in the loosening and freeing of a tire casing from a wheel rim.

2. A hammer head, comprising an elongated body one end portion of the body forming an anvil portion substantially rectangular in cross-section, and the opposite end portion of the body being in the form of a substantially wedge-shaped peen merging with the anvil end, the anvil portion being provided with a handle-receiving eye opening therethrough adjacent the point where the anvil portion merges with the peen, said eye extending from one of the side faces of the body to the opposite side face, the several edges and corners of the body being rounded off to minimize the possibility of the nicking and chipping thereof or the marring of the work during use, the side faces of the body free of the handle openings being provided with equally angled plane surfaces to either side of a plane bisecting the body longitudinally and like surfaces in continuation therewith across the ends of said anvil and peen portions, the plane surfaces on the end of said anvil portion acting to take the impact of blows struck at oblique angles to the work and those on the sides of both the anvil and peen portions acting to absorb pressures resulting from twisting motions of the body in the loosening and freeing of a tire casing from a wheel rim.

3. A hammer head, comprising an elongated body one end portion of the body forming an anvil portion substantially rectangular in cross-section, and the opposite end portion of the body being in the form of a substantially wedge-shaped peen merging with anvil end, the anvil portion being provided with a handle-receiving eye opening therethrough, said eye extending from one of the side faces of the body to the opposite side face, the several edges and corners of the body being rounded off to minimize the possibility of the nicking and chipping thereof or the marring of the work during use, the side faces of the body free of the handle openings being provided with equally angled plane surfaces to either side of a plane bisecting the body longitudinally and like surfaces in continuation therewith across the ends of said anvil and peen portions, the plane surfaces on the end of said anvil portion acting to take the impact of blows struck at oblique angles to the work and those on the side of both the anvil and peen portions acting to absorb pressures resulting from twisting motions of the body in the loosening and freeing of a tire casing from a wheel rim.

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