April 28, 1964 H. K. KERR 3,130,762

HAMMER WITH DETACHABLE STRIKING HEAD FACES

Filed June 21, 1961

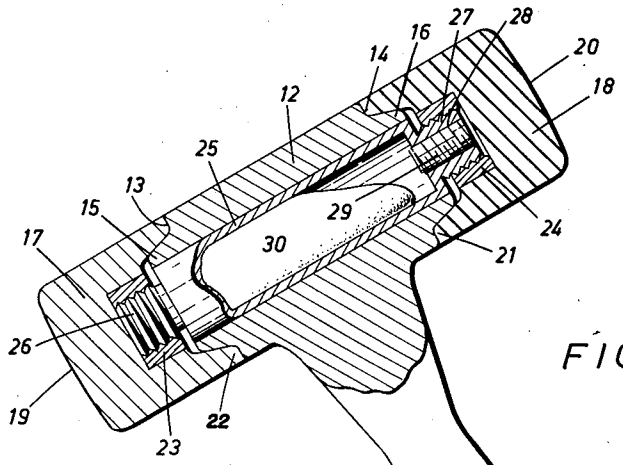


FIG. 1

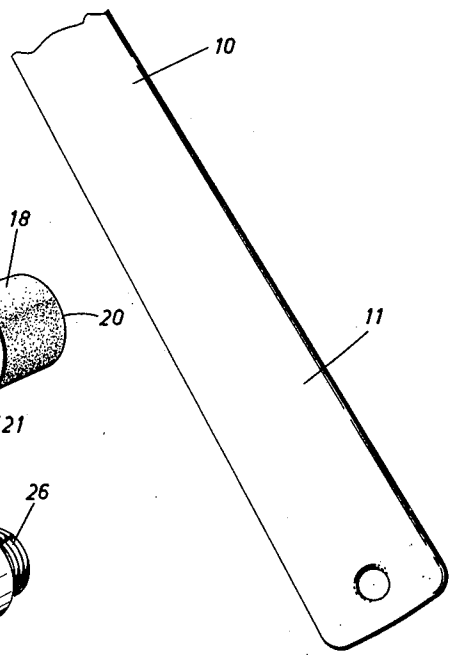


FIG. 2

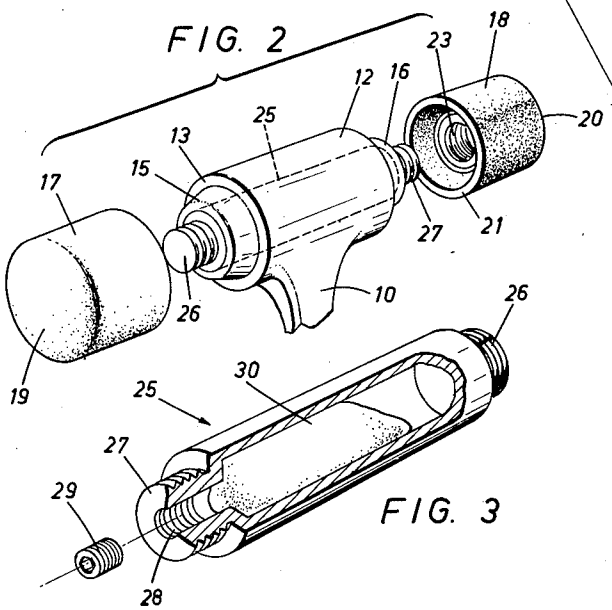


FIG. 3

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3,130,762

Patented Apr. 28, 1964

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HAMMER WITH DETACHABLE STRIKING HEAD FACES

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Filed June 21, 1961, Ser. No. 118,738

1 Claim. (Cl. 145—29)

This invention relates to hand tools. It is directed to a hammer having detachable and renewable striking faces, particularly of the type composed of a relatively soft metal, plastic, or other suitable material, whereby operations can be performed on articles, parts of machinery, sheet metal parts, such as automobile bodies, aircraft and the like, or in driving studs, bolts or shafts which have threaded portions, without marring the surface and without impact damage to the parts.

Hammers having soft, detachable face or striking surfaces formed of rubber or soft metals or other materials are known in the tool art. A difficulty with such hammers is that usually they are of relatively light weight and are not capable of delivering heavy blows against the surface being struck except by increasing the length of the strokes which tends to detract from desired accuracy in the use of the tool.

An important object of this invention is to provide a hammer having detachable striking faces formed of soft material, such as rubber, plastic, soft metal or the like, spaced at opposite ends of the head and separated by and secured to a cylinder which contains a predetermined amount of heavy, weight imparting material.

An understanding of the construction of the hammer which forms the subject matter of this invention can be obtained from the following description, reference being made to the accompanying drawing, in which:

FIGURE 1 is a perspective view in section of a hammer having detachable striking faces which incorporates the improvement of this invention;

FIGURE 2 is an exploded view of the head and handle assembly; and

FIGURE 3 is an enlarged view in section of the chamber which contains a predetermined amount of weight imparting material.

Like reference characters refer to like parts through the following description and attached drawing.

Referring to FIGURE 1, the numeral **10** indicates the handle **11** which is integral with the head portion **12**. It may be formed of metal or plastic material. Preferably, it is formed of a light metal such as aluminum or an aluminum alloy. The handle is formed with a hand gripping end **11** and a hollow head portion **12** at the opposite end which extends at right angles to the long axis of the handle. Preferably, this head portion **12** is cylindrical in shape and terminates, at each end **13—14**, in outwardly extending lips or flanges **15—16** adapted to provide seats and alignment for the detachable striking faces **17—18** described hereinafter.

The striking faces are similar in design and formed of the same or similar materials although in modifications of the device, one or both of the faces may be formed of a relatively soft, non-surface marring material such as rubber, plastic or soft metal or of harder conventional hammer head material such as steel. Each striking face is circular in shape and formed with a striking surface **19—20** carried by a wall **21—22** which is formed to overlie the flange **15—16** and seat against the opposing face of the hammer head.

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Each striking face is formed or provided with an internally threaded bore **23—24**. Striking faces, if made from material other than metal, may have a threaded insert cast or moulded within the face material to avoid having the threds tear out under usage. The outer surface of the insert is preferably knurled or flanged to ensure retention of the insert within the striking face.

A hollow cylinder **25** is shaped to fit snugly within the hollow handle head **12** between the exterior ends thereof. This cylinder is formed or provided at its ends with outwardly extending threaded studs **26—27** which are adapted to be threaded into the internally threaded bores **23—24** of the striking heads.

Provision is made to fill the cylinder **25** with a predetermined amount of weight imparting material **30**. Mercury and lead shot are suitable weight imparting materials but it will be understood that other material can be used if desired. In the modification illustrated in the drawing, the stud **27** is formed with a passageway **28** which extends to the body of the cylinder to permit the entry of loading material thereinto. This passage **28** is closed, at its exterior end, by a removable plug **29**.

The improved hammer of this invention possesses several important advantages. It can be manufactured with detachable striking faces of conventional material, such as steel, or striking faces formed of non-surface marring or damaging materials. Weight is provided adjacent to the striking tip or head thereby permitting heavy blows of short stroke and maximum accuracy. The cylinder **25** can be filled completely with a weight imparting material **30** such as mercury or lead shot thus to produce maximum hammer weight adjacent to the striking head with minimum external dimensions. Alternatively, the cylinder can be only partially filled with weight imparting material thus to obtain optimum striking force with minimum hammer rebound.

It will be understood, of course, that modifications can be made in the embodiment of the invention described herein without departing from the scope of the invention defined by the appended claim.

What I claim as new and desire to protect by Letters Patent of the United States is:

A hand tool which comprises a handle, a hollow head terminating in open ends extending transversely of one end of said handle and integral therewith, a hollow cylinder fittable in snug fitting relationship in said hollow head having closable means for admitting weight imparting material into said cylinder, a threaded stud extending from each end of said cylinder beyond the open ends of said hollow head, a pair of striking faces, and threaded means carried internally by each of said striking faces securable in tight fitting relationship to said threaded studs.

References Cited in the file of this patent

UNITED STATES PATENTS

2,604,914	Kahlen	July 29, 1952
2,808,861	Hughes	Oct. 8, 1957
2,989,101	Carmien	June 20, 1961

FOREIGN PATENTS

582,877	Great Britain	Nov. 29, 1946