April 8, 1930. O. ROLFSEN 1,753,970

HAMMER HEAD FOR ROTATING ROCK CUTTING TOOLS

Filed July 26, 1929

Fig. 1.

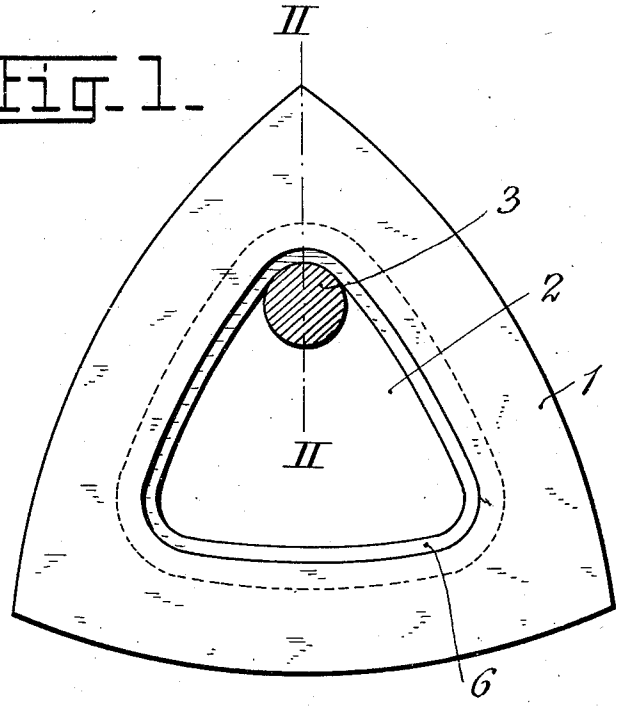
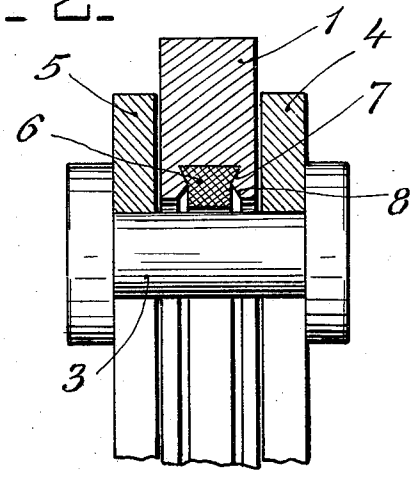


Fig. 2.



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HAMMER HEAD FOR ROTATING ROCK-CUTTING TOOLS

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The present invention relates to hammer heads for rock cutting tools of the kind in which a number of rotating hammer heads are mounted on pins secured to a rotating hammer head carrying frame, and particularly to hammer heads of the general type described and illustrated in the United States Patents Nos. 1,653,663 and 1,687,093, as well as U. S. Patent applications Nos. 75,986/25 and 251,208/28.

The object of the present invention is to reduce the strains to which the material of the hammer heads and their pins or trunnions are exposed owing to the jerky movements of the hammer heads and the shocks caused by the hammer heads striking the rock or the like on which they are working.

This object in accordance with the present invention is attained by providing the hole by means of which the hammer head is connected with its pin or trunnion, with an interior rubber lining, the inner surface of which bears directly against the pin on which the hammer head is supported.

The said rubber lining may be in the form of a strip of rubber secured in a convenient manner, such as by means of vulcanizing, to the inside surface of the hammer hole, or it may consist in an annular rubber member fitted into a circumferential groove formed in the material of the hammer head securing the said hole.

On the drawing Fig. 1 is a side-view of a hammer head in accordance with one embodiment of the invention, and Fig. 2 is a cross section on a larger scale on the line II—II on Fig. 1.

1 is the hammer head which has a substantially triangular shape and has a hole 2 of substantially the same shape, by means of which it is mounted with loose play on pin 3, which is secured to disks or arms 4, 5, forming part of the rotating hammer head carrier.

An annular rubber member 6 is fitted into a circumferential groove 7, so as to form a projecting rib, which bears against the supporting pin or trunnion 3. The annular rubber member 6 may be secured in groove 7 in any suitable manner, such as for instance by making the inner part of the groove with a swallow-tail cross section, so as to hold the rubber member in place after it has been pressed in. The part of the groove which opens into the circumference of hole 2 is preferably given a wedge shaped cross section, as indicated at 8, so as to permit the rubber member to expand sideways without being exposed to shearing strains.

Although it is preferred to use a rubber element of the kind illustrated, it is also possible to provide the inside surface of the hole with an ordinary plain or reinforced rubber lining extending across the whole width of the bearing surface, and being vulcanized to the bearing surface or secured to the same in some other convenient manner.

Claims:

1. In rotating rock cutting tools a hammer head provided with a hole for supporting the hammer head with loose play on a pin or trunnion, the interior surface of said hole being provided with a rubber lining the inner surface of which bears directly against the pin or trunnion on which the hammer head is supported.

2. A hammer head as claimed in claim 1, characterized by that an annular rubber member is fitted into a groove along the inner circumference of the hammer hole, the inner part of said rubber member forming an inwardly projecting rib bearing directly against the pin or trunnion on which the hammer head is supported.

3. A hammer head for rotating rock cutting tools having a hole for supporting the hammer head with loose play on a pin or trunnion attached to the rotating tool frame, the inner circumference of said hole having a circumferential groove and an annular rubber member fitted into the said circumferential groove and extending beyond the inner surface of the hole so as to form an elastic rib bearing against the pin on which the hammer head is supported.

4. A hammer head for rotating rock cutting tools having a hole for supporting the hammer head with loose play on a pin or trunnion attached to the rotating tool frame, the inner circumference of said hole having a circumferential groove and an annular rub-

ber member fitted into the said circumferential groove and extending beyond the inner surface of the hole so as to form an elastic rib bearing against the pin on which the hammer head is supported, the part of the groove opening into the inner surface of the hammer hole being wedge shaped so as to allow for sideways expansion of the rubber.

In testimony whereof I affix my signature.

OLE ROLFSEN.