No. 649,885. Patented May 15, 1900.

F. C. BREAKSPEAR.

THROWING HAMMER.

(Application filed Nov. 6, 1899.)

(No Model.)

Fig. 1.

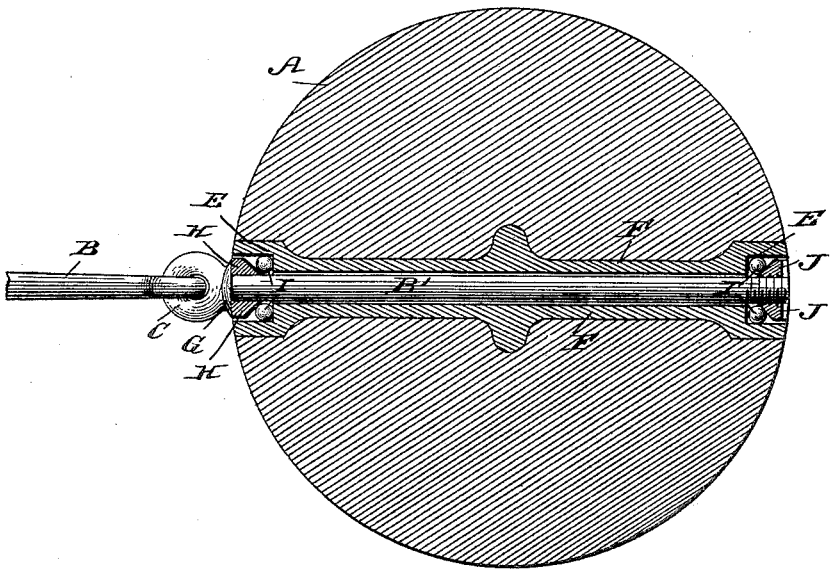
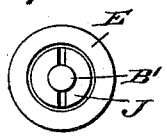


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERICK C. BREAKSPEAR, OF CHICOPEE FALLS, MASSACHUSETTS, ASSIGNOR TO THE A. G. SPALDING & BROTHERS, OF SAME PLACE.

THROWING-HAMMER.

SPECIFICATION forming part of Letters Patent No. 649,885, dated May 15, 1900.

Application filed November 6, 1899. Serial No. 736,042. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK C. BREAKSPEAR, a citizen of the United States, residing at Chicopee Falls, in the county of Hampden, State of Massachusetts, have invented certain new and useful Improvements in Throwing-Hammers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to hammers such as are used in the well-known form of althletic exercise called "throwing the hammer." Ordinarily the hammers used are spheres provided with a long more or less flexible handle of wood or metal so connected with the head that it must rotate with the latter. Consequently the handle following the head in its flight makes conoidal movements or "whips the air."

The object of this invention is to eliminate such annoying and energy-destroying movements of the handle and cause it to follow the head throughout its course without apparent lateral movement. This end is attained by constructions which permit the handle to freely swing independently of the movement of the head into position in or parallel to the line of the head's advance and which also permit the head to rotate in a direction transverse to its line of flight without rotating the handle.

In the accompanying drawings, Figure 1 is a sectional view showing a hammer with the handle extending diametrically from the head, the plane of section passing through the handle's axis. Fig. 2 is a detail view of parts seen in looking from the right in Fig. 1.

In the views, A represents a spherical hammer-head provided with a handle made up of two approximately-rigid segments B B', connected at C by a universal joint. The segment B' passes diametrically through the head and is supported therein in ball-bearings. As shown, the bearing cups or races E E are rigidly connected by a sleeve F and are so disposed that their outer faces form parts of the surface of the head A. The handle-segment B is provided with a shoulder G, and a bearing-cone H is slipped upon the segment and pressed against this shoulder. The segment is then inserted in the sleeve, and balls I having been placed in each cup a second cone J is screwed upon the free threaded end of the segment until both bearings are properly adjusted. The universal joint between the two segments may be the link-like engagement of two eyes, as shown. The structure being thus formed and assembled the head will rotate upon the handle almost without friction, and at the same time the handle will swing freely in any direction and in the flight of the hammer always lie nearly without motion in a position in or approximately parallel to the line of the head's advance. Broadly, the novelty lies in providing for the rotation of the head without corresponding rotation of the handle and in providing for the swinging of the handle in any direction without corresponding turning of the head.

Obviously either or both the novel features may be secured by many other constructions, and as evidently all such constructions are within my invention.

What I claim is—

1. A throwing-hammer having a hinged connection between its head and handle.

2. A throwing-hammer having its head arranged to rotate without rotating any material portion of that part of the handle which lies without the head.

3. A throwing-hammer having its head and handle independently revoluble and connected by a universal joint.

4. A throwing-hammer having a handle made up of two hinge-connected segments and having its head revolubly mounted upon one of the segments.

5. A throwing-hammer having its handle revolubly mounted in ball-bearings in its head.

6. In a throwing-hammer, the combination with a handle made up of hinge-connected segments, of a diametrically-perforated head passed over one of the segments, and ball-bearings at each end of the perforation in the head revolubly holding the head in place upon its segment.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK C. BREAKSPEAR.

Witnesses:
C. J. WETSEL,
W. M. ALDEN.