No. 827,135. PATENTED JULY 31, 1906.

F. WOLFSJAGER.

METHOD OF MAKING ADJUSTABLE BEARINGS.

APPLICATION FILED JULY 26, 1905.

Fig. 1.

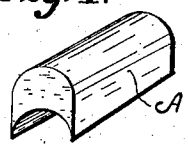


Fig. 2.

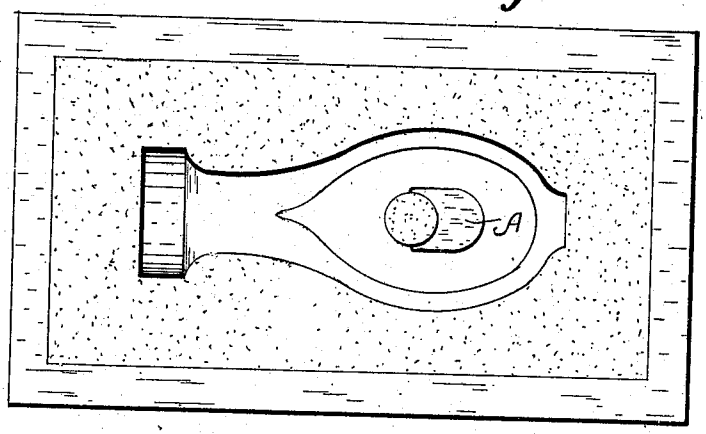


Fig. 3.

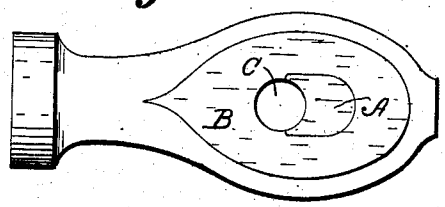
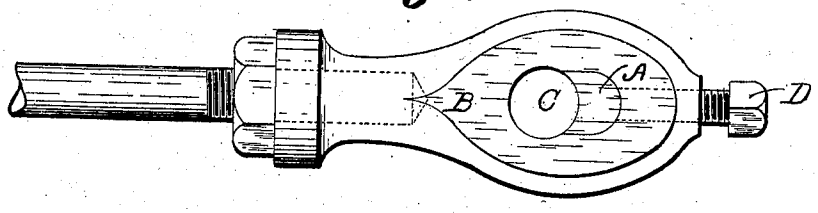


Fig. 4.



WITNESSES:

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METHOD OF MAKING ADJUSTABLE BEARINGS.

No. 827,135. Specification of Letters Patent. Patented July 31, 1906.

Application filed July 26, 1905. Serial No. 271,280.

To all whom it may concern:

Be it known that I, FRANK WOLFSJAGER, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Methods of Making Adjustable Bearings, of which the following is a specification.

My invention relates to improvements in methods of making adjustable bearings. Heretofore the bearing-heads of this kind have been cast and the shaft or crank-pin apertures completed by machine-work and the walls thereof cut out on one side to form a recess for the adjustable block, which was separately formed and fitted to such recess. The walls of the recess and of the adjustable block had to be carefully finished and the block nicely fitted in position.

The object of the present invention is to provide means whereby the adjustable block is fitted to the bearing-head in the process of casting and the aperture for the shaft or crank-pin is formed with an ordinary drill, no other finishing-work being required.

In the following description reference is had to the accompanying drawings, in which—

Figure 1 is a view of the adjustable bearing-block as it is formed preparatory to the casting operation. Fig. 2 is a plan view of one part of the mold with the block in position therein. Fig. 3 is a side view of a bearing-head as taken from the mold and designed for use on a pitman-rod. Fig. 4 is a view of the same completed and ready for use.

Like parts are identified by the same reference characters throughout the several views.

In the practice of my method the adjustable blocks A are cast separately. A mold is then prepared for casting the bearing-head, and one of the blocks A is inserted at the side of the core which forms the shaft or crank-pin aperture, as illustrated in Fig. 2. Molten metal is then flowed into the mold and around the outer wall of the part A, the bearing-head being thus cast with the adjustable block A in position. The block A, especially where large castings are to be made, should be coated with graphite or other suitable material to prevent the molten metal from fusing with the surface of the adjustable block. As the molten metal cools it shrinks and binds upon the adjustable block with considerable force, thus holding the block in position with great stability, so that it will not be loosened by operation of the drill and will not vibrate when the bearing is in use.

When the casting B is removed from the mold, the crank-pin or shaft-aperture C is drilled out cylindrically, and as the concave face of the block A forms a portion of this aperture it is obvious that the drill will finish this surface of the block and the opposing wall of the casting simultaneously. A hole is then drilled in the end of the casting for an adjusting-screw D, the inner end of which bears against the block A, whereby the block may be pushed inwardly from time to time by turning the screw to take up the wear of the shaft in the bearing.

It will of course be understood that the side walls of the block A should be parallel and should be separated from each other at a distance equal to the diameter of the shaft or crank-pin aperture in order that the block will not become loosened when moved inwardly to take up the wear. The drill not only forms the aperture for the shaft or crank-pin, but releases the block by enlarging the aperture to a diameter equal to that of the block, all the finishing required for the block being performed by the drill in the operation of boring out the aperture.

While I have shown and described my invention as practiced in making and fitting adjustable blocks to the heads of connecting-rods, it will be understood that the same process may be employed in any case where similar adjustable blocks are used without departing from the scope of my invention.

It will of course be understood that in small castings it is not necessary to use a core to facilitate forming the shaft-aperture. If desired, the shaft-aperture may be drilled from a solid casting, in which case the drill will be so adjusted as to form the aperture along one face of the block A.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The method of forming adjustable bearings, consisting first, in forming a metallic block having parallel side walls; second, adjusting said block in a mold and casting a bearing-head thereon; and third, drilling an aperture along one wall of said block between the parallel side walls of sufficient size to release the block and permit its adjustment in the direction of said aperture.

2. The method of forming adjustable bear-

ings, consisting, first, in forming a bearing-block; second, coating said block with material adapted to prevent fusion with molten metal; third, adjusting said block in a mold with one wall abutting a core adapted to provide an aperture in the casting of less diameter than the block; fourth, casting a body of molten metal around the core and block without fusing such metal to the block; fifth, removing the casting, with the block thereon, and then removing the core and drilling out said aperture to the diameter of the block to simultaneously finish the surface of the casting and block, and also to release the block on the side of the opening.

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

FRANK WOLFSJAGER.

Witnesses:
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