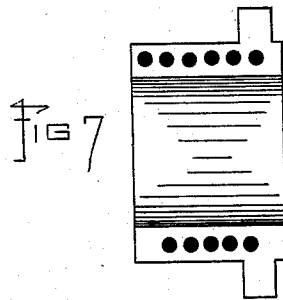
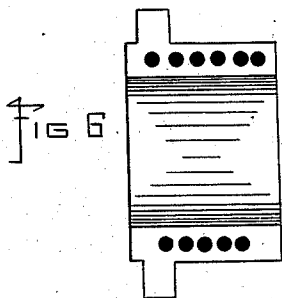
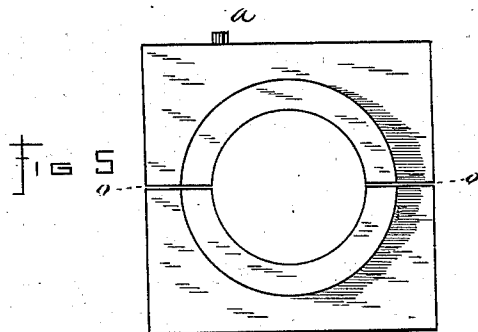
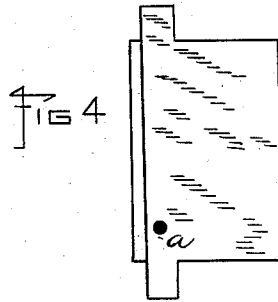
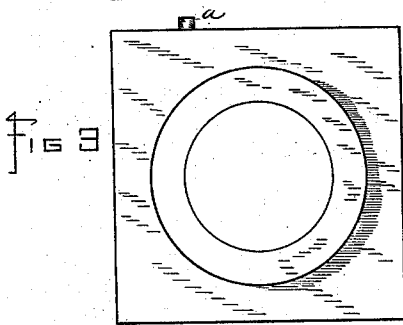
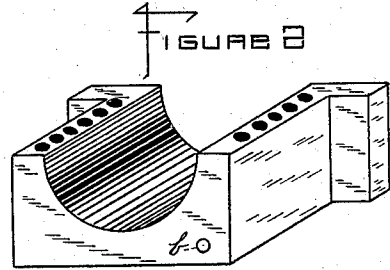
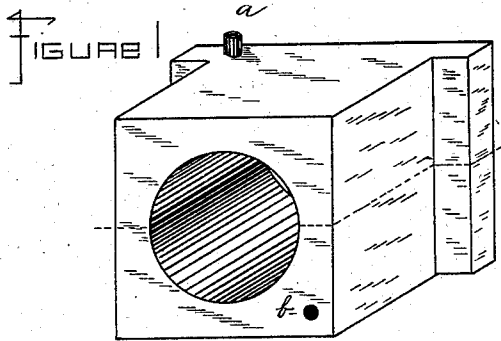


(No Model.)

J. REESE.  
JOURNAL BEARING.

No. 258,317.

Patented May 23, 1882.



Witnesses  
Walter Reese,  
Chas. C. Reese

Inventor  
Jacob Reese

# UNITED STATES PATENT OFFICE.

JACOB REESE, OF PITTSBURG, PENNSYLVANIA.

## JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 258,317, dated May 23, 1882.

Application filed February 18, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB REESE, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Journal-Bearings; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part thereof.

It is a well-known fact that the journals of machinery used for rolling hot metals and those running at high velocities become heated, which increases the friction and causes the journals to cut. This invention is designed to obviate this difficulty by carrying away the heat by means of a water-brass or journal-bearing.

Figure 1 of drawings shows a solid journal-box with my improvement. Fig. 2 is a section of the same through line *o*. Fig. 3 is an end view, and Fig. 4 is a ground plan, of same. Fig. 5 is an end view of a sectional journal-box cast in one piece and then planed into two sections through the line *o o*. Figs. 6 and 7 are plan views of the sections planed.

The ends of the coil of pipe should be so bent as to project outward beyond the brass, as shown at *a* and *b* in Figs. 1, 2, 3, 4, and 5, so that the water may be caused to flow in at *a* and out at *b*, and as the internal arrangement of the pipe is spiral, the water entering *a* is caused to flow around the journal a number of times, according to the length of the bearing, before it escapes at *b*, and thus the heat caused by friction is carried away and the journals are kept cool.

In the construction of my improved journal boxes or bearings I take a coil of wrought-iron pipe having an internal diameter one-half of an inch greater than the diameter of the journal. This coil is placed in a suitable mold and the box or brass is cast in one piece with the internal coil, as shown in Fig. 1, and when the box or brass is to be used in pinion-housings they may be placed on the necks and then let down in the housings from the top; but when they are designed for roll-brasses to be used in closed top housing then the brasses must be put in place from the inside of the housing, and consequently must be sectional. In this case the box is cast solid, as before described. It is then planed or sawed into two sections at line *o o*, Fig. 5. A gum, leather, or

paper gasket is placed on the section planed, the gasket having holes in it corresponding to the pipe-openings, and the top put on and the two sections screwed down to their place. When the boxes, brasses, or journal-bearings are placed in position a pipe leading from a water-supply is connected with the projecting end of the spiral next to the roll and the water let on. The water is thus caused to pass around the journal in a spiral form and out at *b*.

By this method the brasses or journal-boxes are kept cool and the heat is carried away by the water. No water is required on the journals, and the oil put thereon is not washed off, as is the case where water is used, and thus a more perfect lubrication is had. The journals being inclosed in a closed box, dust, dirt, and scale are excluded and the cutting of the journals avoided.

These water-jacketed journal-bearings may be made of any suitable material and of any internal arrangement which will enable the water to carry away the heat; but I prefer the method set forth in the drawings as a simple and economical plan of doing it.

Having described my invention, what I desire to secure by Letters Patent is—

1. The method of manufacturing water-jacketed brasses or journal-bearings which consists in placing a spiral tube within a suitable mold, then casting the metal around the tube, then cutting the bearing so made into two sections, substantially as and for the purpose set forth.

2. As a step in the manufacture of water-jacketed brasses or journal-bearings, placing a spiral tube within a suitable mold, and then casting the metal around the tube, substantially as and for the purpose set forth.

3. The method herein described of securing a circular flow of water through a sectional water-jacketed brass or journal-bearing, which consists in forming the bearing in one piece and having an internal spiral tube, then cutting the bearing into two sections and placing the sections together, with an intervening gasket, substantially as and for the purpose set forth.

JACOB REESE.

Witnesses:

JAMES H. PORTE,  
WALTER REESE.