No. 780,548. PATENTED JAN. 24, 1905.

C. W. H. BLOOD.

JOURNAL BOX.

APPLICATION FILED FEB. 11, 1904.

Fig. 1.

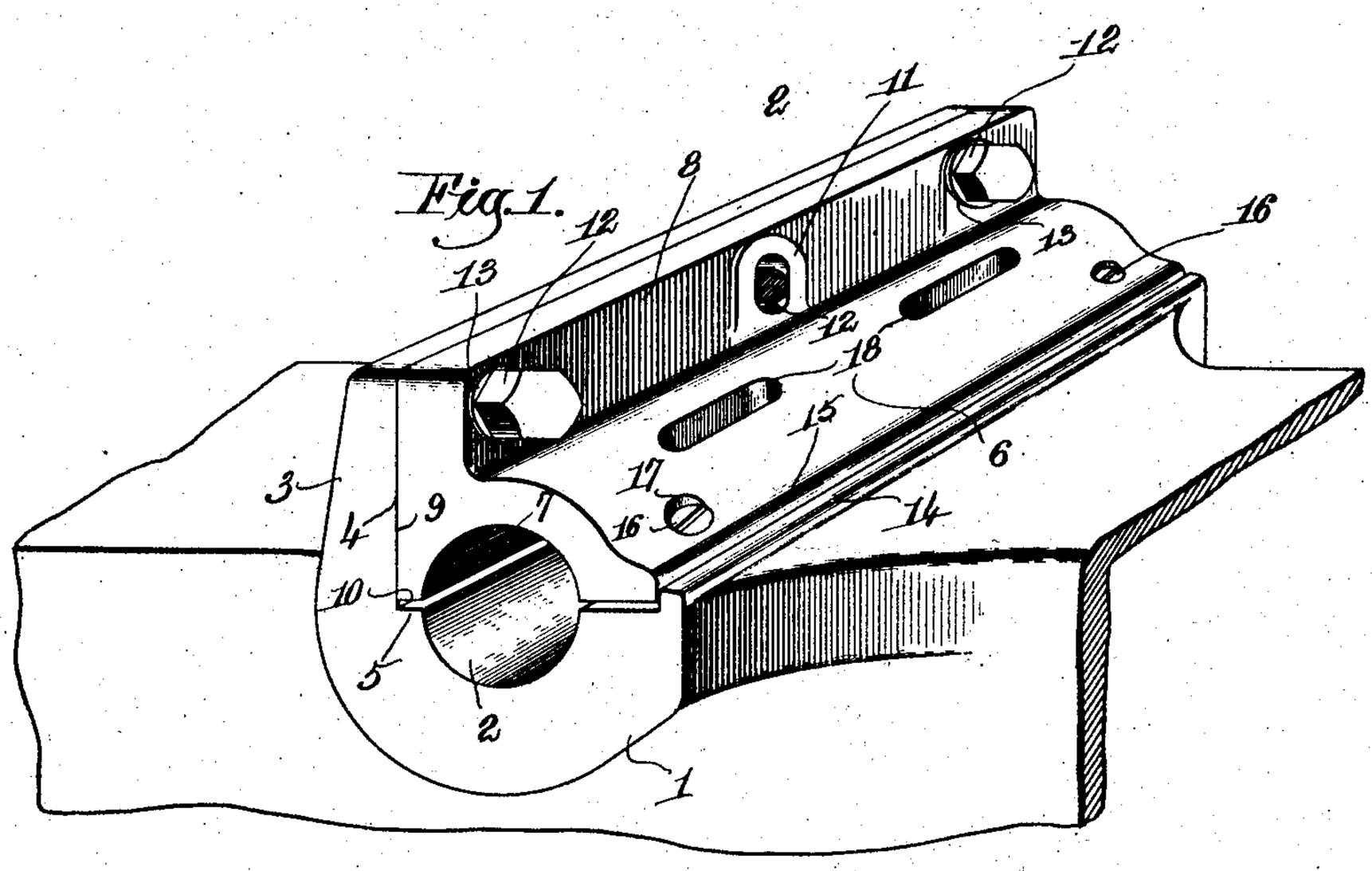


Fig. 2.

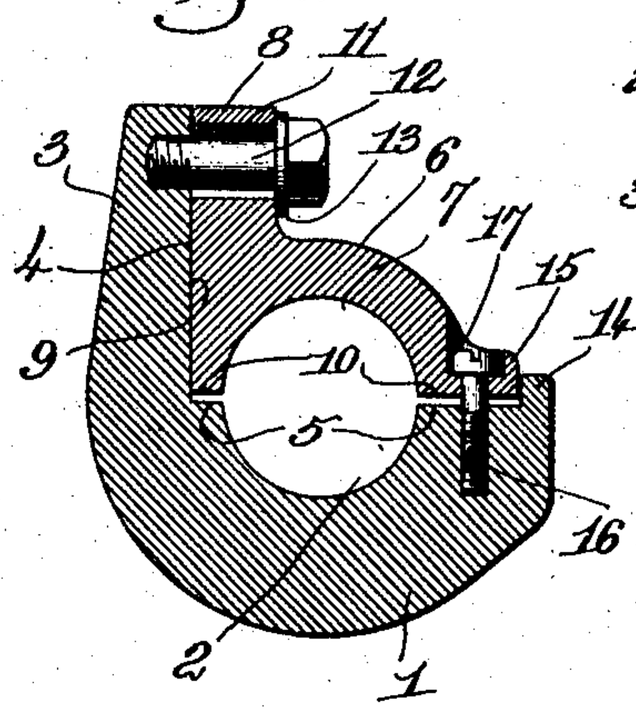


Fig. 3.

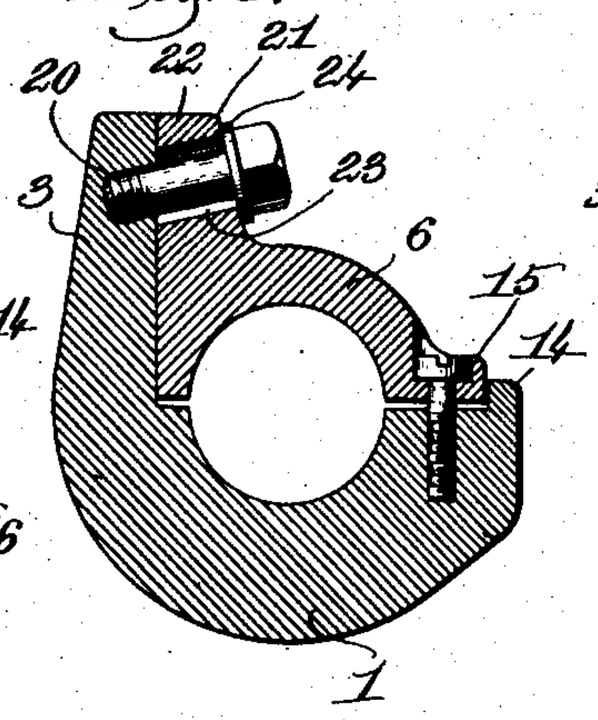
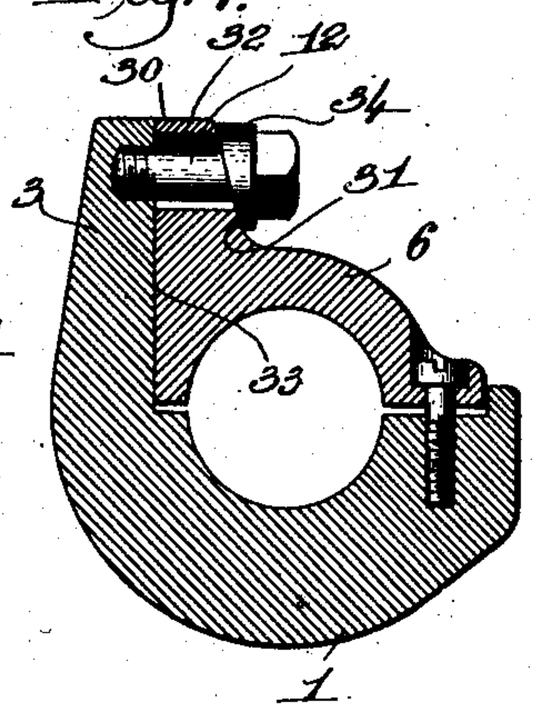


Fig. 4.



Witnesses.
Thomas J. Drummond.
Warren B. Owen

Inventor,
Charles W. H. Blood,
by Morsby Gregory.
Atty's.

No. 780,548. Patented January 24, 1905.

UNITED STATES PATENT OFFICE.

CHARLES W. H. BLOOD, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO S. A. WOODS MACHINE COMPANY, OF BOSTON, MASSACHUSETTS.

JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 780,548, dated January 24, 1905.

Application filed February 11, 1904. Serial No. 193,122.

To all whom it may concern:

Be it known that I, CHARLES W. H. BLOOD, a citizen of the United States, and a resident of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Journal-Boxes, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

This invention has for its object the production of a novel two-part journal-box of simple but very strong construction requiring a minimum of machining in its manufacture and being very easily and quickly adjusted.

The novel features of my invention will be fully described in the subjoined specification, and particularly pointed out in the following claims.

Figure 1 is a perspective view of a journal-box embodying one form of my invention, the head of one of the clamping-bolts being omitted and the bolt shown in section. Fig. 2 is a transverse section thereof in the line 2, Fig. 1; and Figs. 3 and 4 are transverse sectional views of modified forms of my invention.

The journal-box in accordance with my invention comprises a fixed member, a removable member or cap, and simple but effective means for clamping said members together in adjusted position.

In the drawings I have shown the fixed member 1 having the semicylindrical bearing-seat 2 for the shaft and with a heavy rigid upturned clamping-abutment 3 at one side of the seat and extending, preferably, the length of the bearing, the abutment having a plane inner face 4. The abutment 3 is preferably made integral with the box, its face 4 being machined or planed and preferably at right angles to the top face 5 of the member 1, said face 4 being in a plane parallel to the direction of adjustment of the movable member or cap.

The movable member or cap 6 of the journal-box is provided with the half-seat 7 for the shaft and with a heavy integral abutment 8, extending, preferably, the length of the cap at one side of the seat 7, the outer face 9 of the abutment being preferably machined true and plane, said face being at right angles to the joint-face 10. Upright slots 11 are made in one abutment, three being shown in Fig. 1 in the abutment 8, although the number may be more or less, according to the size of the journal-box, to receive the shanks of clamping-bolts 12, tapped into the other abutment, herein shown as the fixed abutment 3, a washer 13 being interposed between the bolt-head and the adjacent face of the abutment 8.

To adjust the cap 6 upon the shaft, (not shown), the latter is well oiled at the portion entering the member 1 to form a film of oil, and the cap is allowed to slide down to position, seating itself upon the oil-film on the shaft, the adjacent faces of the abutments sliding one over the other in a plane parallel to such direction of adjustment, whereupon the clamping-bolts 12 are at once set up, clamping the two members of the journal-box securely together in properly-adjusted position. When thus setting the cap, the faces 4 and 9 act as guides, the bolts being slackened sufficiently to permit the cap to be lowered into place. It will be seen that a very rigid, strong, and firm connection is thus obtained between the members 1 and 6, the clamping-abutments being made heavy and unyielding to keep the members in true and accurate coöperative relation. The movable member or cap is suspended by or through its abutment and clamping-bolts from the abutment of the fixed member of the journal-box.

There is usually a slight clearance between the transverse or parting faces 5 and 10 of the box members, and the member 1 is provided with an upturned flange 14 on the side opposite the abutment to form a dust-guard at that side, the foot 15 of the cap coöperating therewith, as shown.

In order to prevent any chattering or vibration of the foot of the cap, I tap steadying-bolts 16 into the member 1, said bolts passing through holes in the foot of the cap, the holes

being countersunk, as shown at 17, to receive the bolt-heads. When the cap is clamped in adjusted position, the steadying-bolts are set up just enough to prevent vibration of the unclamped side of the cap without cramping or crowding it down upon the shaft, the bolts being in parallelism with the plane of the contact-faces of the abutments.

It is preferable to machine the contacting faces of the clamping-abutments to insure a perfect contact and adjustment; but such machining is readily effected, and if the castings are very true it may be omitted.

Oil slots or inlets 18 are shown in the cap, Fig. 1, through which oil can be introduced to the bearing when in use.

In the modification shown in Fig. 3 the members of the journal-box are constructed in general substantially as herein described; but the clamping-bolts 20 are tapped into the abutment 3 at an angle thereto, and the outer face 21 of the cap-abutment 22 is inclined and at right angles to the bolts, the slots 23 being correspondingly shaped to coöperate with the bolts, the abutment 22 being thus given a wedge-like shape in cross-section. Plain flat washers may be used, as shown, and similar to those shown in Figs. 1 and 2.

In Fig. 4 the member 1, its abutment 3, and the bolts 12 are all as in Figs. 1 and 2; but the cap 6 has its abutment 30 with an inclined outer face 31, while the slots 32 for the bolts 12 are at right angles to the contact-face 33 of the abutment, this abutment 30 being also wedge-like in cross-section. With this arrangement wedge-shaped washers 34 are interposed between the cap-abutment and the heads of the clamping-bolts 12 to equally distribute the strain when the bolts are set up. The construction in Fig. 4 is thus in a measure a combination of the structures shown in Figs. 2 and 3, having the fixed member of the former with the clamping-bolts at right angles to the clamping-face of its abutment, with a cap and its abutment similar to that illustrated in Fig. 3. By giving the abutment the wedge-like form any movement of the cap away from the fixed member of the journal-box tends to effect a tightening of the bolts, thereby preventing any accidental opening or separation of the box members.

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

1. A journal-box having a rigid, upturned abutment at one side thereof with a plane inner face, a parallel upturned flange opposite the abutment to form a dust-guard, a removable cover having a rigid abutment with an outer plane face, and an elongated foot on the opposite side of the cap, and clamping-bolts to rigidly and adjustably clamp the two abutments together with their plane faces in contact, the dust-guard and foot of the cover cooperating to prevent entrance of dust at the adjacent side of the bearing.

2. A journal-box comprising a fixed member and a removable member or cap, each having a rigid, upturned clamping-abutment extended along one side, upright slots being formed in the abutment of one member, there being a lateral foot on the opposite side of the cap, clamping-bolts extended through the slots and into the abutment of the other member, to clamp the two abutments tightly together, steadying-bolts parallel to the adjacent abutment-faces and loosely extended through holes in the foot of the cap and tapped into the upper face of the fixed member of the journal-box, to prevent vibration of the unclamped side of the cap, and an upturned flange on the fixed member parallel to and opposite the abutments thereof, to form a dust-guard adapted to coöperate with the foot of the cap.

3. A journal-box comprising a fixed member and a removable member or cap, each having a rigid, upturned clamping-abutment extended along one side, upright slots being formed in the abutment of one member, and clamping-bolts extended through the slots and tapped into the abutment of the other member, the slotted abutment being wedge-like in cross-section, whereby movement of the movable member away from the fixed member tends to produce a tightening of the clamping-bolts.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES W. H. BLOOD.

Witnesses:

JOHN C. EDWARDS,

ELIZABETH R. MORRISON.