

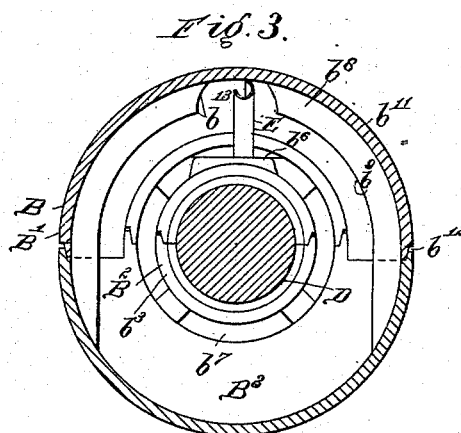
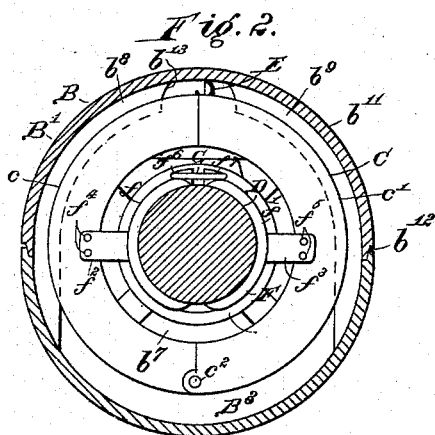
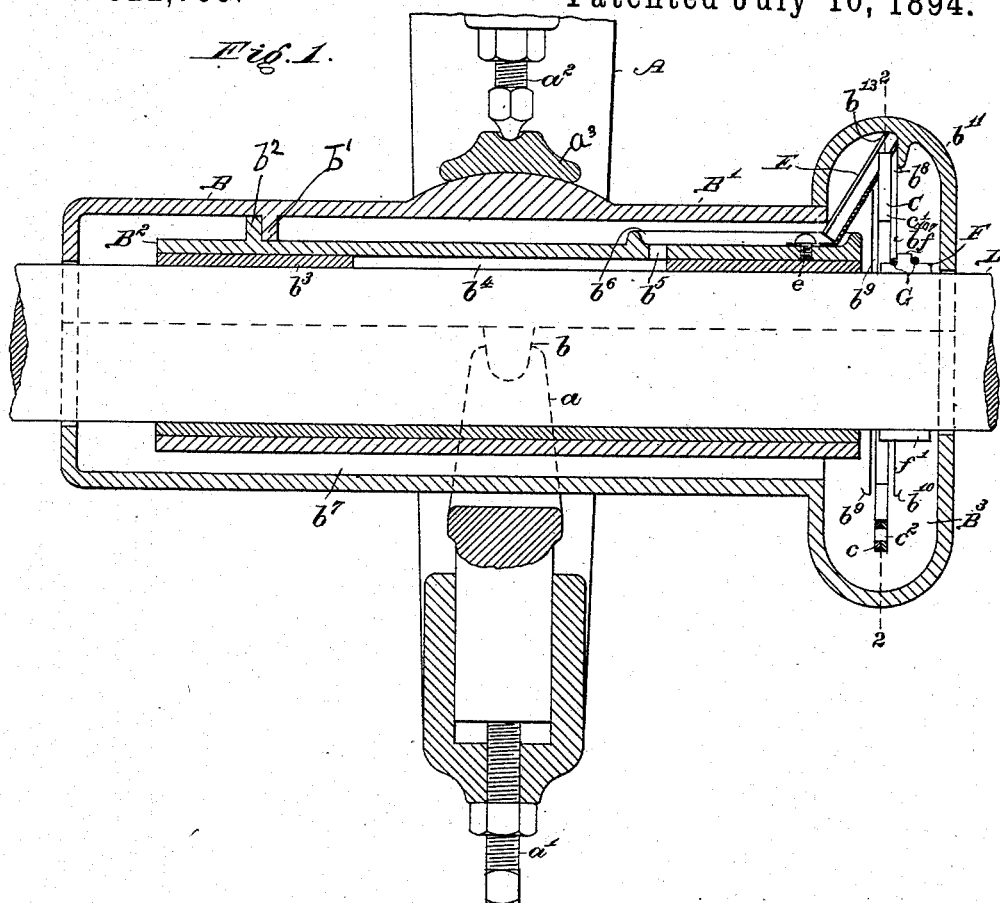
(No Model.)

G. H. COLE.

MECHANICAL OILER FOR JOURNAL BEARINGS.

No. 522,706.

Patented July 10, 1894.



Witnesses.

Kirkley Hyde.

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UNITED STATES PATENT OFFICE.

GEORGE H. COLE, OF LOWELL, MASSACHUSETTS.

MECHANICAL OILER FOR JOURNAL-BEARINGS.

SPECIFICATION forming part of Letters Patent No. 522,706, dated July 10, 1894.

Application filed October 10, 1891. Serial No. 408,322. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. COLE, a citizen of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Mechanical Oilers for Journal-Bearings, of which the following is a specification.

My invention relates to mechanical oilers for journal-bearings and consists in the combinations and devices hereinafter described and claimed which have for their object to cause by inexpensive means a continuous flow of oil through the journal-box and a perfect lubrication of the journal without waste of the oil.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of a journal-box provided with my improvement, and a hanger and a side elevation of a piece of shafting arranged in said journal-box; Fig. 2, a vertical cross section on the line 2 2 in Fig. 1 of the reservoir and shaft and a side elevation of the collar and clamp; Fig. 3, a section on the line 2 2 in Fig. 1, omitting the collar and clamp.

A represents a hanger of ordinary construction, provided with a fork *a*, which receives ears *b* on the outside of the journal-box *B* and is adjustable by means of a screw *a'*, and provided also with another screw *a''* adapted to be turned down against a cap *a'''* which rests upon the top of the journal-box, all in the usual manner.

The journal-box *B* consists of an outer *B'* and an inner *B''* shell, arranged concentrically with each other, the outer shell *B'* being provided with internal projections *b'* and the inner shell being provided with external projections *b''* which maintain the proper distance between the shells and prevent the movement of the inner shell in the outer, in a well known manner. The inner shell *B''* is lined with Babbitt metal or other anti-friction alloy *b'''*, a space *b''''* at the top of said inner shell, from which the lining is omitted, serving as an accumulator to collect the oil which runs through the oil-hole *b'''''*, in the usual manner. The oil-hole *b'''''* is provided at its upper end with an enlargement or cup *b''''''* into which oil may be poured. The outer shell *B'* of the journal-box is provided with a

reservoir *B'''* of the form shown, being circular in cross-section and receives the oil which drips from the ends of the inner shell *B''*, the oil dripping from the end of the inner shell farthest from the reservoir flowing below said inner shell in the space *b''''* back to the reservoir.

A collar *C* is secured to the shaft *D* within the reservoir *B'''* concentrically with said shaft and is of a sufficient diameter to reach below the level of the oil in said reservoir, so that it continually lifts the oil to an inclined conductor or trough *E* which runs from the top of the reservoir into the cup or enlargement *b''''*, the lower end of said conductor being secured within said cup by a rivet or screw *e* and the lower inclined edge of said conductor running close to the outer edge of said collar *C*, said conductor being a trough with its concavity on the side from which the collar advances, the upper end of the conductor removing the oil from the collar.

To supply the oil faster to the conductor the reservoir is provided with a groove *b'''* or narrow space between two connected ribs *b''''* *b'''''* which are arranged within said reservoir in vertical planes at right angles to the axis of said journal-box and extend from points near the bottom of said reservoir and below the level of the oil nearly to the top of the reservoir, these ribs being cast with or secured to the cover *b''''''* of the reservoir and the collar running between said ribs, so that, when the shaft is revolved rapidly, the oil is thrown by the collar into the groove or space between said ribs to the top of the reservoir and keeps the conductor *E* constantly full, so that a steady stream of oil is poured into the journal-box and running out of the ends of the inner shell returns to the reservoir, as above-stated, thus securing a rapid circulation of the oil and keeping the journal cool and constantly lubricated. The cover *b''''''* is separable from the lower part of the reservoir and also from the upper half of the outer shell *B'*, at *b''''''''*, to enable the supply of oil in the reservoir to be renewed at any time.

For convenience of attachment and removal, the collar *C* is made in two parts or halves *c* *c'*, hinged to each other, at *c''*, and, in order that the same size of collar may be used on shafts of different sizes, is preferably

made considerably larger in its internal diameter than any shaft to which it is likely to be applied. The collar is not in direct contact with the shaft but is attached thereto by a clamp F, also formed in two parts $f f'$, each part $f f'$ being nearly the half of a ring and provided with an outwardly-extending arm $f^2 f^3$, pivoted at $f^4 f^5$ to one half or part $c c'$ of the collar C, each part of the clamp F being provided with a hook or projection $f^6 f^7$ which hooks may be connected to each other by a link or loop G, as of wire, passing around them and twisted together to close the parts of said clamp firmly on the shaft.

I claim as my invention—

1. The combination of a journal-box, provided with an oil-hole, a reservoir, provided with a groove arranged within said reservoir at right angles to the axis of said journal-box and extending from near the bottom of said reservoir nearly to the top of said reservoir and to the upper end of the conductor hereinafter-named, a collar, adapted to be secured to a shaft, supported in said journal-box, said collar being arranged partly within said groove, and a conductor, adapted to lead oil from said collar and said groove to said oil-hole, as and for the purpose specified.

2. The combination of a journal-box, provided with a reservoir, a collar, formed in two

parts hinged to each other, a clamp, formed in two parts, each attached to one of the parts of said collar and provided with hooks or projections, a link, adapted to connect said hooks or projections to each other, to secure said clamp upon a shaft running in said journal-box, and a conductor, arranged to lead oil from said collar to an oil-hole, with which said journal-box is provided, as and for the purpose specified.

3. The combination of a journal-box, provided with a reservoir, a collar, formed in two parts hinged to each other, a clamp, formed in two parts, each pivoted to one of the parts of said collar and provided with hooks or projections, a link, adapted to connect said hooks or projections to each other and to secure said clamp upon a shaft running in said journal-box, and a conductor, arranged to lead oil from said collar to an oil-hole, with which said journal-box is provided, as and for the purpose specified.

In witness whereof I have signed this specification, in the presence of two attesting witnesses, this 21st day of September, A. D. 1891.

GEORGE H. COLE.

Witnesses:

ALBERT M. MOORE,
MYRTIE C. BEALS.