

Atwood & Bodwell.

Lubricating Journal Box.

N^o 86,489.

Patented Feb. 2, 1869.

Fig. 1.

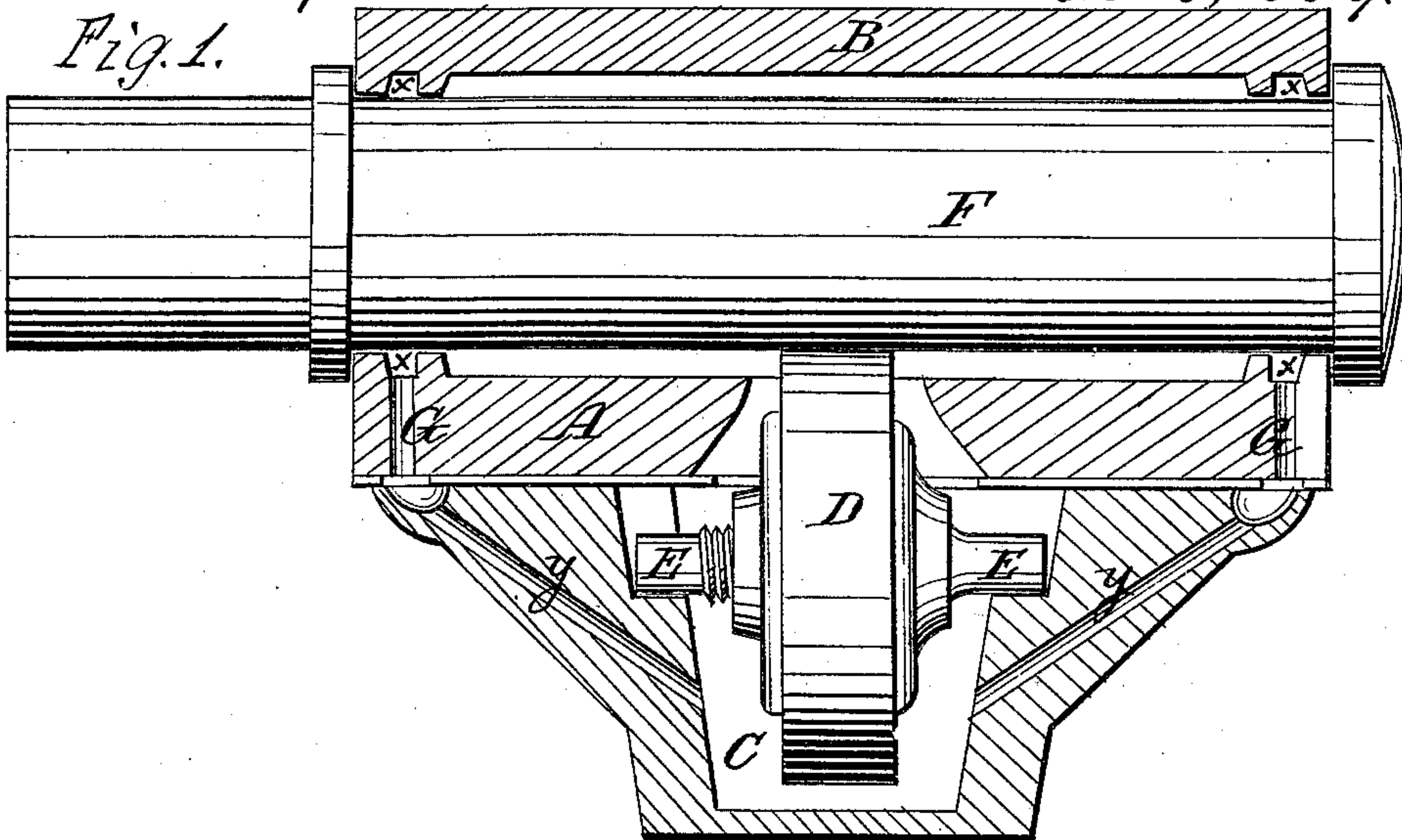
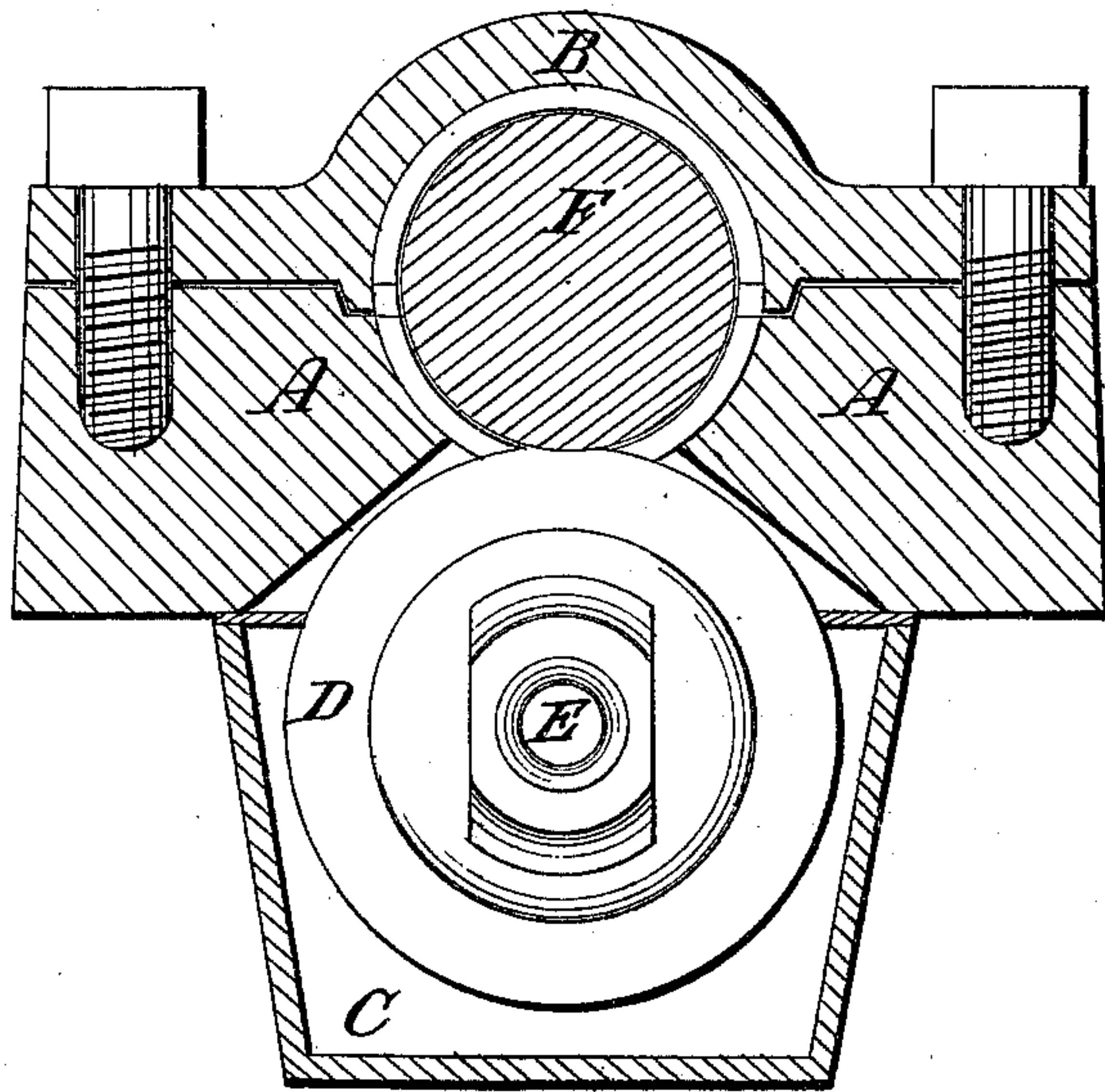


Fig. 2.



Witnesses.
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EPHRAIM A. ATWOOD AND HARRY H. BODWELL, OF SAN FRANCISCO, CALIFORNIA.

Letters Patent No. 86,489, dated February 2, 1869; antedated January 25, 1869.

IMPROVEMENT IN LUBRICATING JOURNAL-BOXES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, EPHRAIM A. ATWOOD and HARRY H. BODWELL, of the city and county of San Francisco, State of California, have invented an Improved Self-Lubricating Journal-Box; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and use our said invention or improvements without further invention or experiment.

The nature of our invention is the construction of an improved self-lubricating journal, in which the lubricant is contained in a cup or receptacle below the shaft, and is supplied to the shaft by means of an elastic friction-roller, turning in the cup, and having its upper edge pressing against the shaft, by which it receives motion, thus carrying the oil up to the shaft in sufficient quantities; and more particularly the combining therewith of a return-passage, by which any surplus oil is carried back into the cup, and not allowed to overflow and foul the surrounding parts, and run to waste.

To more fully explain our invention, reference is had to the accompanying drawings, forming a part of this specification, of which—

Figure 1 is a side sectional elevation taken through $x x$, fig. 2.

Figure 2 is an end sectional view taken through $y y$, fig. 1.

Similar letters of reference in each of the figures indicate like parts.

A is the bottom or bearing of a box, and

B, the cup, which has the ordinary spaces $a a$, for soft-metal linings.

Below the bearing A is placed the oil-cup C.

Within this cup is placed the roller D, having its axis E parallel with the shaft F which it is intended to lubricate.

This roller is constructed so that the circumference, or the entire roller, shall be of rubber, or other elastic material, and supported at such a distance below the shaft that it presses against it with sufficient force to be revolved by the friction with said shaft when it turns.

The oil, or other lubricant, is placed in the cup C, and is carried up by the roller in quantities sufficient to thoroughly lubricate the shaft, and keep it in good running condition.

Near each end of the box A are made two small holes, G G, leading downward, and connecting with the interior of the cup C, so that any surplus oil which would otherwise be discharged at the ends of the journal, and foul the surrounding parts, will, by this device, be carried directly back into the cup.

At each end of the box, formed by the parts A and B, are circumferential grooves, $x x$, from the bottom of which the oil-passages G G are formed, and from said passages G diagonally extend the tubes $y y$, which carry the oil to the cup C, on each side of the wheel D. The grooves $x x$ catch the overflowing oil and carry it directly back to the reservoir.

In this way we are enabled to construct a self-lubricating journal, in which there is a certainty of a sufficient supply of oil at all times, without the danger of gumming the passages, that occurs when capillary attraction is depended upon, while, by the return-passages G G, the overflow of oil is prevented, and much labor in cleaning up is consequently avoided.

A roller made of wood or iron might answer in place of the one above described, but we prefer to construct it of some elastic material.

Having thus described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

The box A B, having a reservoir, C, hung below the shaft F, said box being provided with circumferential grooves $x x$, passages G G and $y y$, and with an elastic-surfaced wheel, D, all as herein shown and described.

In witness whereof, we have hereunto set our hands and seals.

EPHRAIM A. ATWOOD. [L. s.]
HARRY H. BODWELL. [L. s.]

Witnesses:

C. W. M. SMITH,
J. L. BOONE.