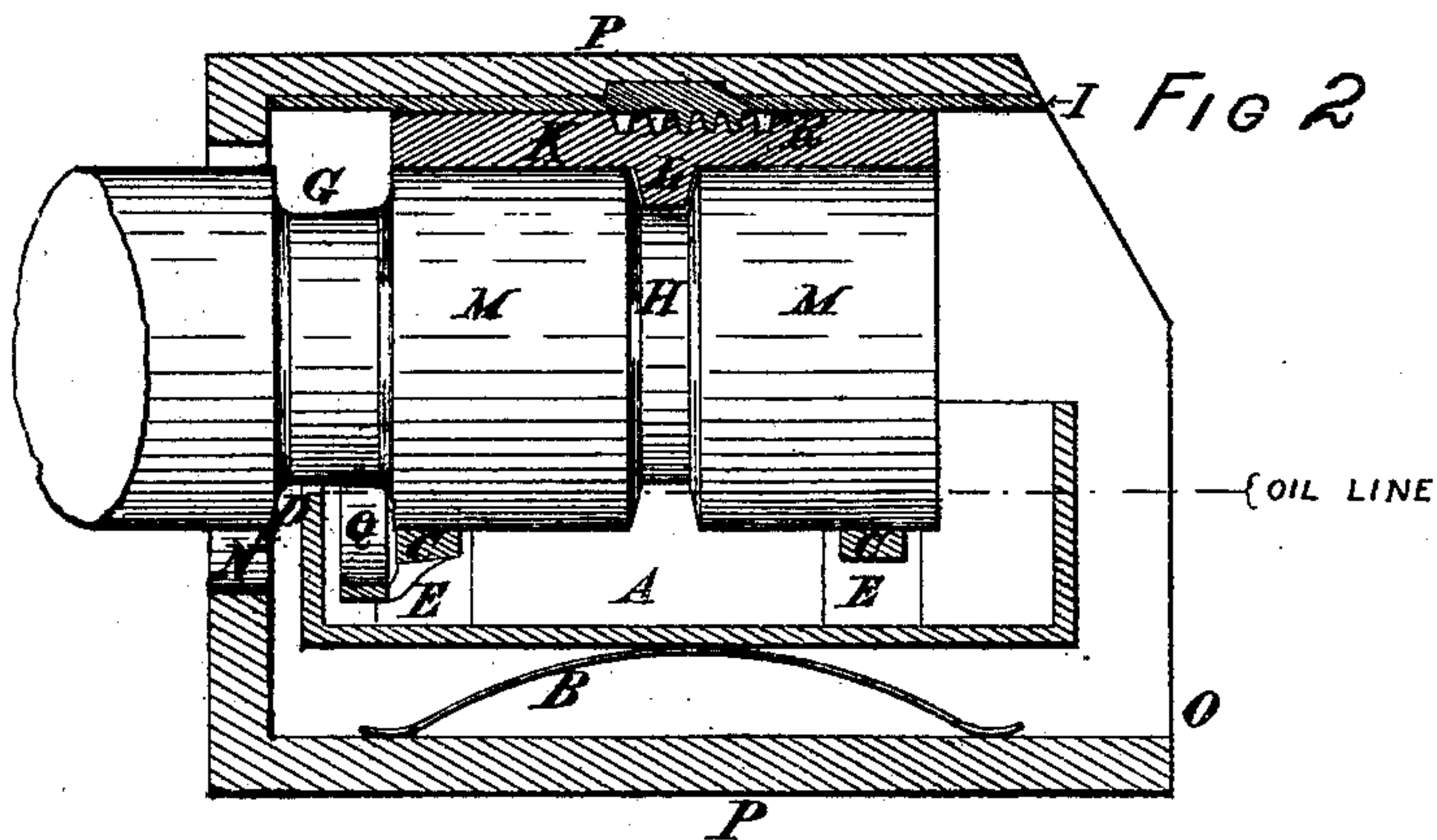
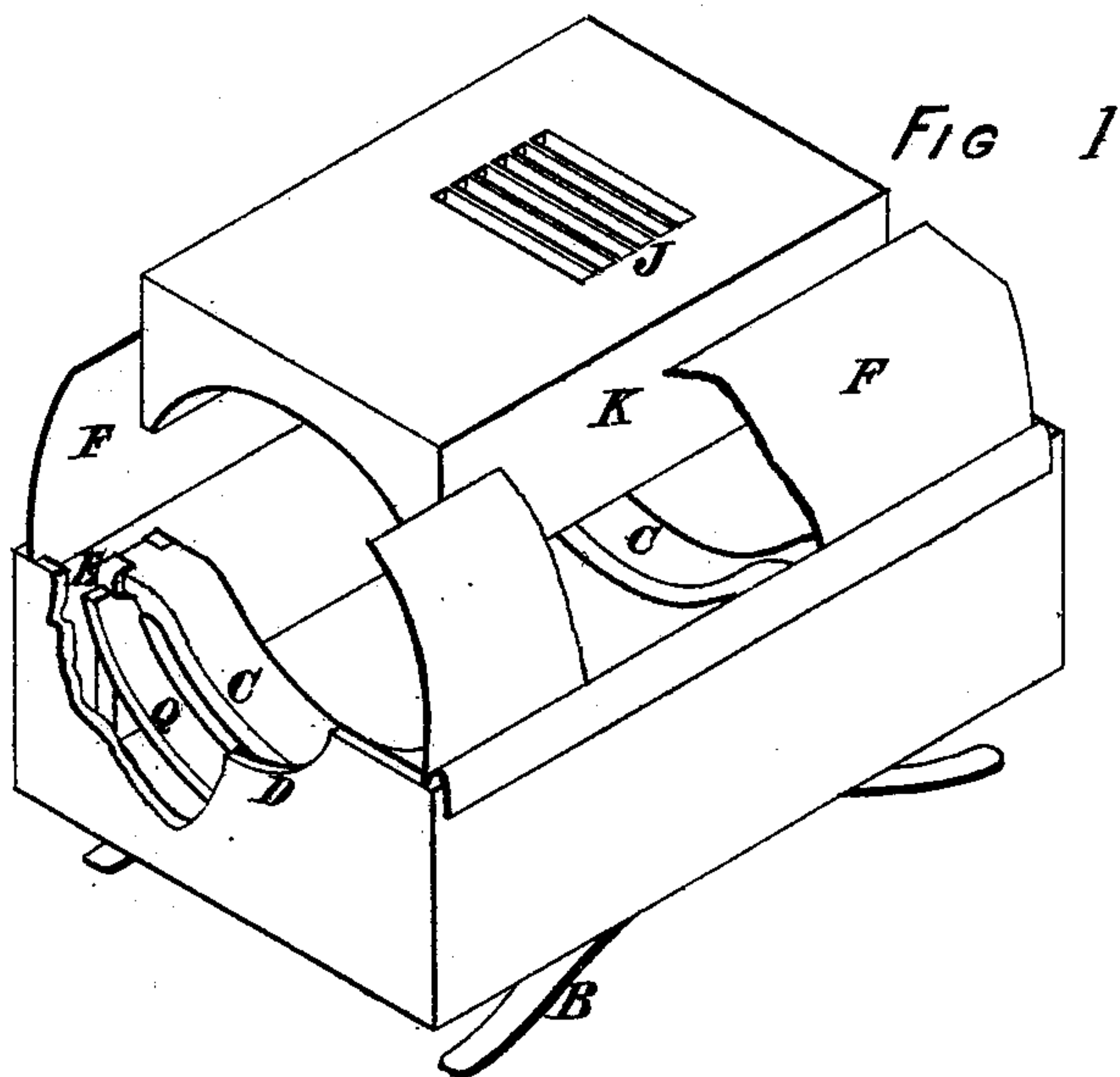


M. W. WOODRUFF.

Improvement in Car-Axle Lubricators.

No. 126,508.

Patented May 7, 1872.



Lo Markham
John E. Smith MD

WITNESSES

Morris W. Woodruff

INVENTOR

UNITED STATES PATENT OFFICE.

MORRIS W. WOODRUFF, OF CAMILLUS, ASSIGNOR TO HIMSELF AND CHRISTOPHER C. BRADLEY, JR., OF SYRACUSE, NEW YORK.

IMPROVEMENT IN CAR-AXLE LUBRICATORS.

Specification forming part of Letters Patent No. 126,508, dated May 7, 1872.

To all whom it may concern:

Be it known that I, MORRIS W. WOODRUFF, of the town of Camillus, in the county of Onondaga and State of New York, assignor to myself and CHRISTOPHER C. BRADLEY, Jr., have invented certain new and useful Improvements in Oil-Boxes for Lubricating Car-Axles; and I do hereby declare that the following is a full, clear, and exact description of the same and the form thereof when complete and ready for use, reference being had to the annexed drawing forming a part of this specification, in which—

Figure 1 is a perspective view, the inner end facing the observer, and a portion carried away to show inside parts. Fig. 2 is a sectional side view.

Letters of reference indicate corresponding parts in the several figures.

P represents the ordinary oil-box now in general use for a car-axle, in the form of a case surrounding the axle-bearing, in which the waste (as it is called) is placed for lubricating the axle, and in such case the oil box or case is cut away on the inner end next to the wheel about one and one-fourth of an inch below the bottom of the axle-bearing, thereby being wholly dependent upon the waste to carry the oil up to the axle; thus causing a loss of a certain part of the oil and preventing its rising in the waste so effectually as it otherwise should, thereby incurring the tendency to heat the axle; whereas in my device I produce an oil-box which has the capacity of holding the oil just up to the bottom of the common axle now in use without running out or wasting. This oil-box is placed beneath the axle-bearing and inside of the case P, and mounted upon springs so as to make it adjustable.

I also have invented an axle-bearing in combination with the oil-box, so arranged as to be capable of submerging itself one-half of an inch, more or less, as the case may require, in construction; reference being had to the accompanying drawing, in which (see Figs. 1 and 2) A is the adjustable oil box or reservoir, mounted upon spiral or elliptic springs B B'' placed under the box A, and fastened thereto in any desired manner, and resting upon the bottom and inside of the case P. The

box A has also supports C C'', one at the rear end and one near the front, resting up against the bottom of the axle-bearing M to counteract the pressure of the springs B B'' upon the axle A, and to relieve the wearing of the semi-circle D or thin part of the oil-box A where it comes in contact with the common axle or the recess G. The ends of the supports C C'' are let into side pieces E E E E (cast into the sides of the oil-box A) in such a manner as to be taken out easily and replaced new, the rear support C, facing the observer in Fig. 1, having a guard, Q, attached for keeping the waste from coming in contact with the recess G and endangering the breaking of the oil-box A by the lateral motion of the axle M. The oil-box A has also side guards F F'' mounted in any suitable manner to the sides of box A for catching the oil inside of the box A, should there be a tendency to fly off or spatter from the axle. The rear end of box A next to the wheel has a part of a circle cut out corresponding with that of the common axle or the recess G, thus preventing the oil from running out in that direction. The axle M (see Fig. 2) I construct with a recess, G, one-half an inch deep, or more or less, as the case may require, at the terminus of the axle-bearing M, thus leaving the bearing portion of the axle A larger than that of the recess G, which allows it to be submerged the depth of the recess G. The axle M has also another recess or groove, H, in or near its center, of sufficient depth to form a shoulder for the metal box K, to prevent lateral movement of the axle M while in motion. The metal box K has an inside flange, L, corresponding and fitting into the groove H, to prevent lateral movement of the axle M. The box K has a series of grooves or serrations, J, cast in the top, which engages with the teeth R of the cap I, the cap I having less teeth than that of the holes in the box K, thereby allowing the box K to be adjusted in conformity with the groove H. The diameter of that part of the axle called the recess G is larger toward the front end or inside of the oil-box A, so that when the axle is in motion the centrifugal force of the oil has a tendency to find the highest point which is inside of oil-box A, where it can be used over again. The springs B B'' act upon the oil-box A to follow

it up to the common axle or into the recess G, as the axle and box K become worn by friction. The front end of the case P should be cut away at O to allow the oil-box A to be drawn out in case of repairs, &c., which is done by bearing down the rear end of oil-box A until it is thrown out of the recess G; then it can be drawn out without difficulty. In taking out the metal box K the case P is raised so that the axle M and oil-box A all drop down to where the case P is cut away, at N, without any injury to the box A. Then a new one can be inserted and the axle take its former position.

Claims.

Having thus described my invention, what I

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

1. The pieces E E for the removable supports C C, in combination with the oil-box A, substantially as described.

2. The combination of the semicircular support C and guard Q, substantially as described.

3. The flanged and serrated adjustable plate K L, in combination with the toothed plate I, grooved journal M H, and a casing, P, substantially as described.

MORRIS W. WOODRUFF.

Witnesses:

STANLEY BAGG,
F. W. EVERS.