G. WILKES & A. PORT.

ANTI-FRICTION JOURNAL-BOX.

No. 185,711. Patented Dec. 26, 1876.

Fig. 1

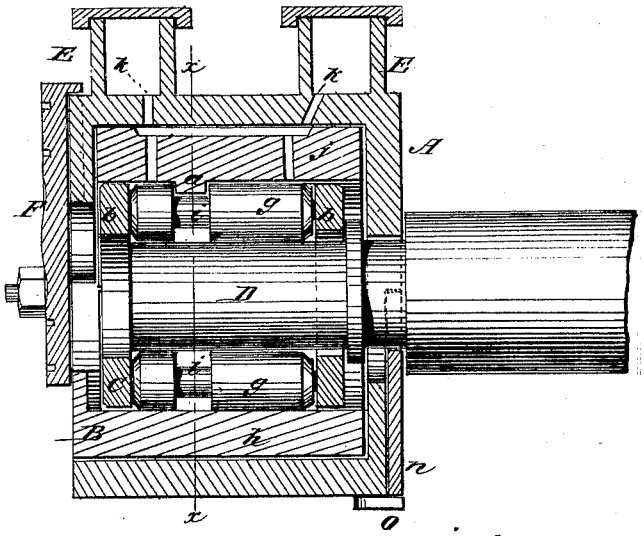


Fig. 2.

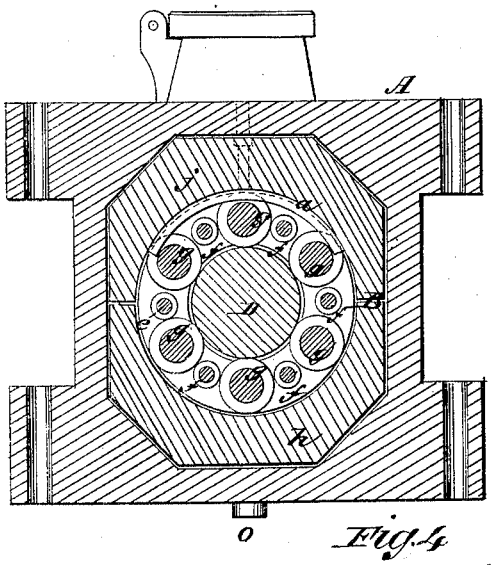


Fig. 3.

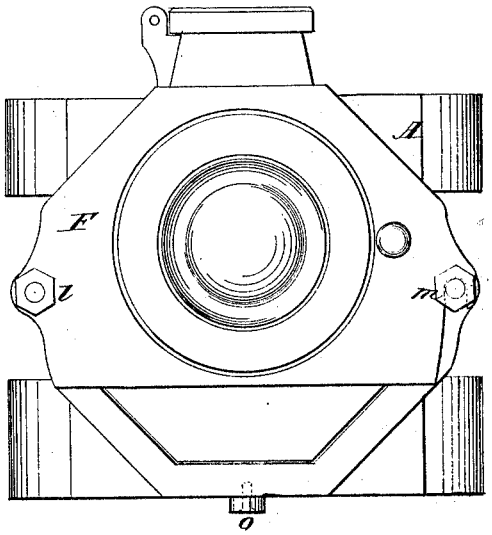
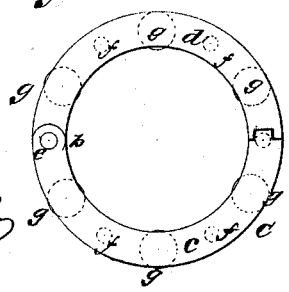


Fig. 4



WITNESSES:

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GEORGE WILKES AND ALEXANDER PORT, OF MONROE, IOWA.

IMPROVEMENT IN ANTI-FRICTION JOURNAL-BOXES.

Specification forming part of Letters Patent No. **185,711**, dated December 26, 1876; application filed October 7, 1876.

To all whom it may concern:

Be it known that we, GEORGE WILKES and ALEXANDER PORT, of Monroe, in the county of Jasper and State of Iowa, have invented a new and Improved Anti-Friction Journal-Box, of which the following is a specification:

Figure 1 is a central longitudinal section. Fig. 2 is a transverse section on line *x x* in Fig. 1. Fig. 3 is an end elevation. Fig. 4 is a detail view of the frame for containing the rollers.

Similar letters of reference indicate corresponding parts.

It further consists in the arrangement in the journal-box of passages for oiling the rollers, and of a receptacle for oil into which the rollers dip at every revolution around the journal.

The object of the invention is to provide a journal-box that is adapted to journals of car-axles, and to other heavy journals, that will be as nearly frictionless as possible, and which may be readily taken apart for repairs.

Referring to the drawing, A is the external casing of the journal-box, which, in the present case, is adapted to a car-truck. B is the inside lining or filling of the box, which is truly bored and provided with a narrow rib, *a*, in its upper half. C is a frame, consisting of two circular end pieces, *b b*, which are each composed of semicircular pieces *c d* hinged together upon a rod, *e*. The end pieces *b b* are attached to the ends of the rods *f*. Rollers *g* are journaled equally distant from each other in the end pieces *b*, and are grooved at *i* to engage with the rib *a* in the box-lining. The lining B is bored to fit the series of rollers contained in the frame C, and the lower half *h* is closed up at each end for a short distance, forming a trough for containing oil. The journal D runs inside of the series of rollers, and when the weight of the car is upon the box, the bearing of the axle is upon the rollers *g*, and they in turn bear upon the upper half *j* of the box-lining. E E are oil cups placed on the top of the journal-box, and communicating by channels *k* with the interior of the box. The front cap F of the box is pivoted at *l* and hooks over a bolt, *m*, when closed. A slide, *n*, closes the aperture at the back of the box, through which the collar of the axle is introduced, and is retained in place by a button, *o*. The number of the rollers should be six, or more. It is found in practice that a less number will not answer the purpose.

It will be seen that by interposing the rollers between the journal and the box the friction will be reduced to a minimum. The rollers and the journal are constantly lubricated by the action of the rollers as they dip into the oil in the lower half of the box. The end motion of the rollers is limited or altogether prevented by the rib in the upper portion of the box-lining.

When it it desired to get at the parts of the journal-box for repairs or to inspect the journal, the lower half of the box-lining is removed, when the frame containing the rollers may be opened, or the free half of it may be removed if occasion requires.

This journal-box is applicable to journals of other descriptions by modifying the form to suit the requirements.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The arrangement, in a roller journal-box, of the circular end pieces C, consisting of the hinged parts *c* and *d*, connected by the rods *f*, and in which the rollers *g* are journaled, substantially as herein shown and described.

2. The combination of case A, having oil-cups E thereon, the ribbed lining B, and the grooved frame C having rollers *g*, all arranged substantially as and for the purpose set forth.

3. The combination, with a journal-box, of the front cap F, pivoted at *l*, and hooking over the bolt *m*, as shown and described.

GEORGE WILKES.
ALEXANDER PORT.

Witnesses:
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