R. BREWER.

Car-Axle Box.

No. 210,490. Patented Dec. 3, 1878.

Fig. 1.

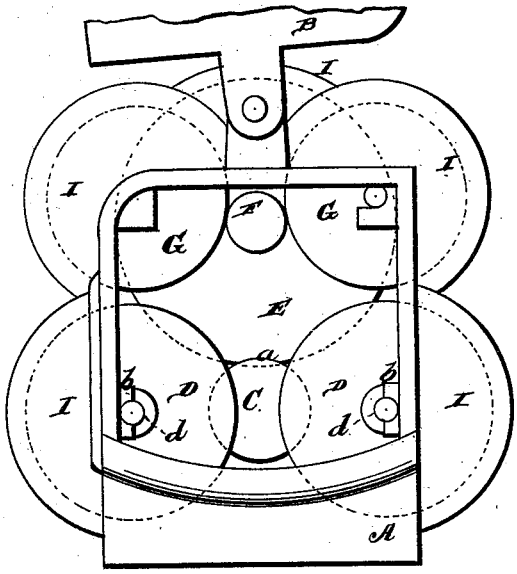
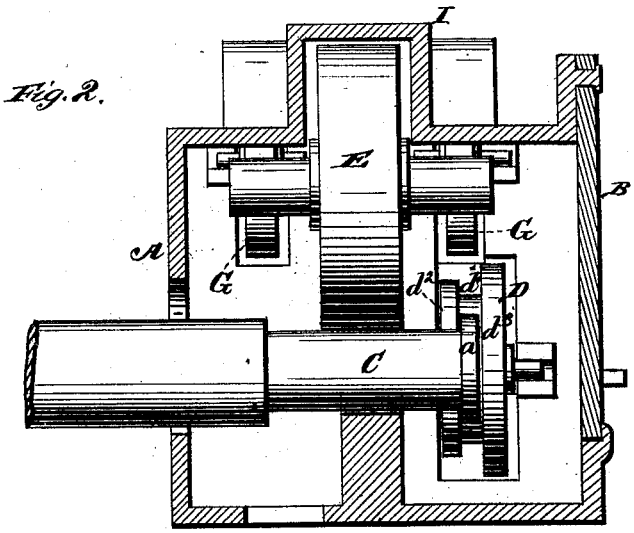


Fig. 2.



WITNESSES

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IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **210,490**, dated December 3, 1878; application filed August 10, 1878.

To all whom it may concern:

Be it known that I, RUSSELL BREWER, of New York, in the county of New York, and State of New York, have invented a new and valuable Improvement in Anti-Friction Journal-Boxes for Railway-Cars and Machinery; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of an end of my journal-box, and Fig. 2 is a vertical central sectional view of the same.

The nature of my invention consists in the construction and arrangement of a journal-box for car-axle journals, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates my invention.

A represents the journal-box proper, provided at its outer end with a door, B, which, when opened, allows the oil or other lubricant to be put into the box, and when closed retains the same in place. C represents the ordinary car-axle, which is, on its outer end, provided with a disk, wheel, or circumferential flange, *a*, as shown.

On each side of the axle C, at the outer end, is a guide-wheel, D, having its journals *d d* placed in open bearings *b b*, inside of the box. The wheel D is formed with a groove, d^1, into which the disk or flange *a* works. The groove d^1 is formed by two flanges, d^2 and d^3, of unequal diameter, the flange d^3, against the outside of the disk *a*, being larger, so as to form a sufficient bearing or stop to prevent any lateral motion of the main axle C, and thereby keep the car on the track.

The wheels D D are located in the lower portion of the box, and take up the lubricant placed therein, and deliver the same to the axle.

Above the axle C, and resting directly on top thereof, is a wheel, E, which takes all of the weight and transfers the friction from the axle or journal C to the journals F F of the direct wheel E, said wheel being of such dimensions as to travel one-fourth as fast, more or less, as the axle.

G G represent four top guide-wheels, arranged two in front and two in rear of the wheel E, and working against the journals F to hold the same in place. The journals of the guide-wheels G are placed in suitable bearings in the box.

The box A is constructed with semicircular chambers I I, projecting from the same, as shown, for the wheels D and G to work in. By this construction I obtain a compound anti-friction journal-box which is self-lubricating, and causes the axle to run with ease and freedom.

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

The guide-wheels D D, formed with the grooves d^1 and flanges d^2 d^3, of unequal diameter, in combination with the journal C, having disk or flange *a* on its end, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

RUSSELL BREWER.

Witnesses:
JNO. F. BLACKMAR,
JAMES J. SHEEHY.