J. W. COCHRAN.

Car-Axle Box.

No. 21,652. Patented Oct. 5, 1858.

Fig. 2

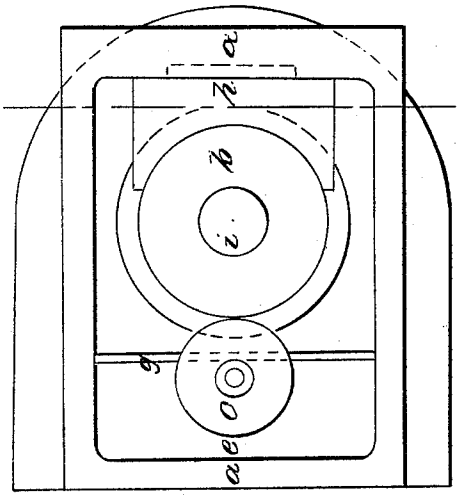


Fig. 1

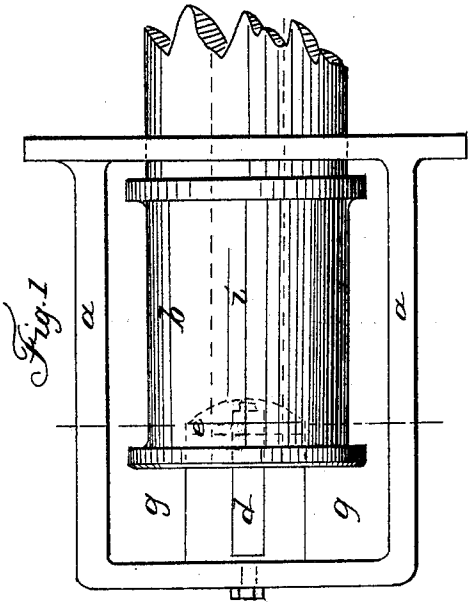
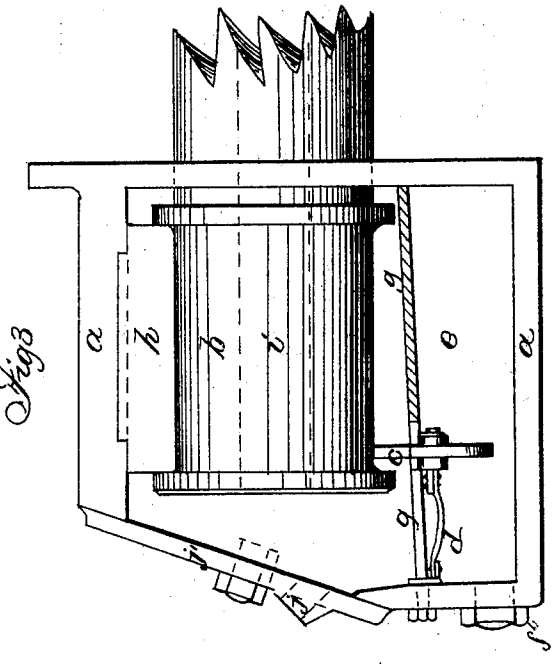


Fig 3



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

J. W. COCHRAN, OF NEW YORK, N. Y.

LUBRICATING CAR-AXLES.

Specification of Letters Patent No. 21,652, dated October 5, 1858.

To all whom it may concern:

Be it known that I JOHN W. COCHRAN, of the city, county, and State of New York, have invented a certain new and useful Improvement in Lubricating Car-Axles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the marks and letters thereon, like letters and marks referring to like parts in all the figures thereof.

Of the drawings Figure 1, is a longitudinal section taken as indicated by the dotted lines in Fig. 2. Fig. 2, is an end cross section taken as indicated by the red dotted lines in Fig. 1, and Fig. 3, is a vertical section, taken at one side of the axle, showing the interior of the box when in working condition.

(*a*, *a*) marks the car box; (*b*, *b*) the axle; (*c*, *c*) the lubricating wheel or rotary feeder, which, it will be seen very nearly touches the sides of the opening in the diaphragm, thus controlling or limiting the quantity of fluid fed by the wheel from the well or chamber to the axle; (*d*, *d*) flat spring to support the lubricating wheel or rotary feeder and keep it up to the axle; (*e*, *e*,) the well or chamber to contain the lubricating matter, either oil, water or whatever may be used in a liquid form. In the construction of this well or chamber full provision is made for retaining the lubricating liquid and preventing wastage by the swashing caused by the motion of the cars.

(*g*, *g*) marks the diaphragm, which forms the upper part of the well or chamber, and is so constructed and arranged as to be easily removed and adjusted at any angle to suit the size of the axle. It is made with the outer end lower than the inner or wheel end, and any surplus liquid carried up by the feeder will flow back to the well, passing through the opening for the spring and wheel at the front end; thus wastage is prevented at the opening where the end of the axle is passed into the box, which joint it is impossible to keep tight, perfectly, for any length of time. This plan will, in a great measure, do away with the necessity of making the box very tight.

(*h*, *h*,) marks brass or Babbitt metal. The red lines (*i*, *i*) indicate the hole made through the entire length of the axle, which should be filled with some good non-conducting material to assist in keeping the bearings cool. The boxes can be made with cells which can, also, be filled with like material and thus aid in preventing excessive heat. (*f*) screw-cock closing the opening for cleaning out the well; (*j*) spout for supplying the well with lubricating material; (*j'*) cover or door to the front of the box.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is—

In connection with the spring and wheel, the inclined diaphragm (*g*), having the space for the play of the wheel and access to the wheel and spring, as herein described.

Signed and witnessed at the city of New York this 9th day of July 1858.

J. W. COCHRAN.

Witnesses:
JOHN BISSELL,
W. J. CLARK.