

(No Model.)

J. DES BRISAY.

AXLE BOX.

No. 389,691.

Patented Sept. 18, 1888.

Fig. 1

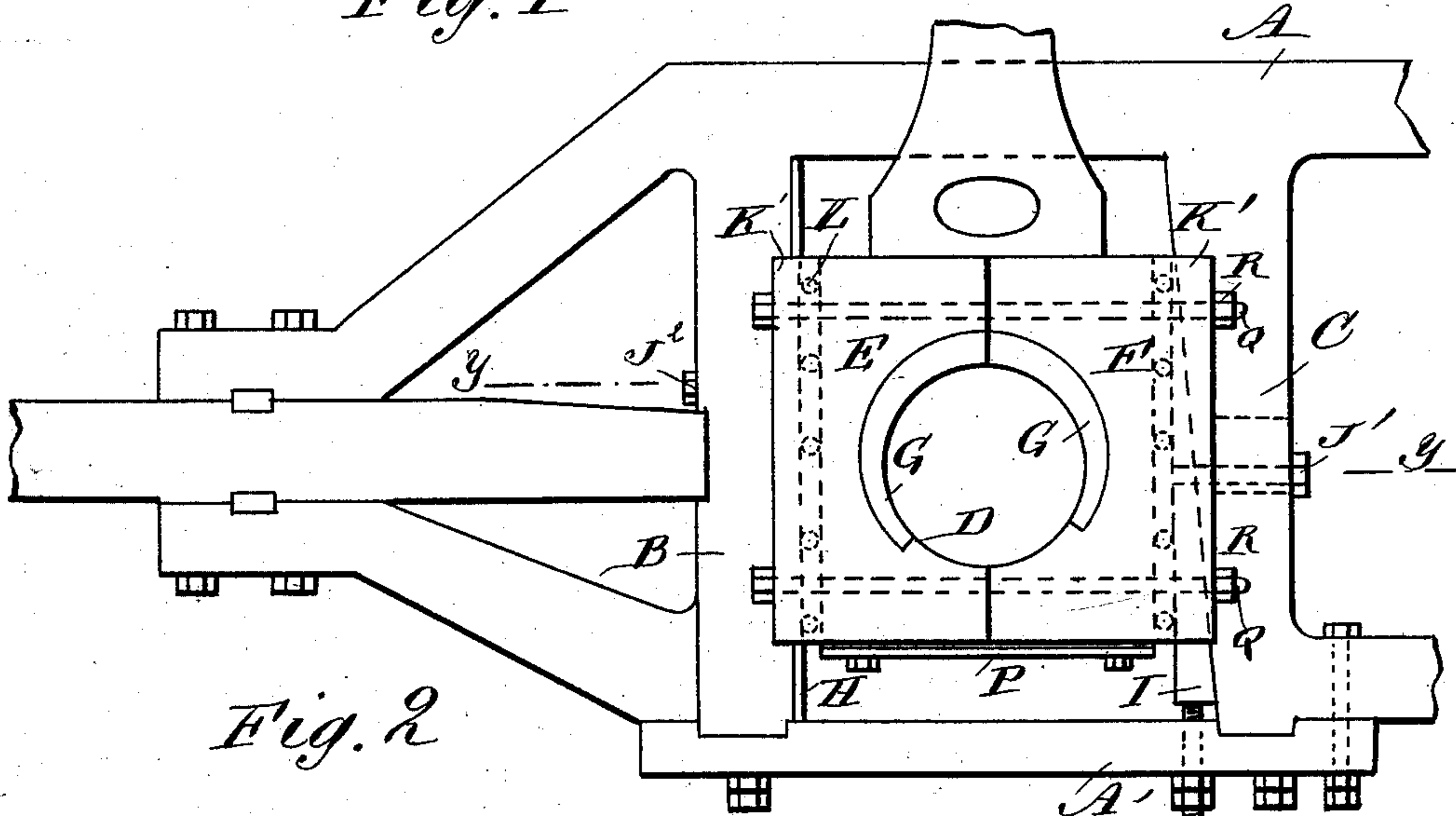


Fig. 2

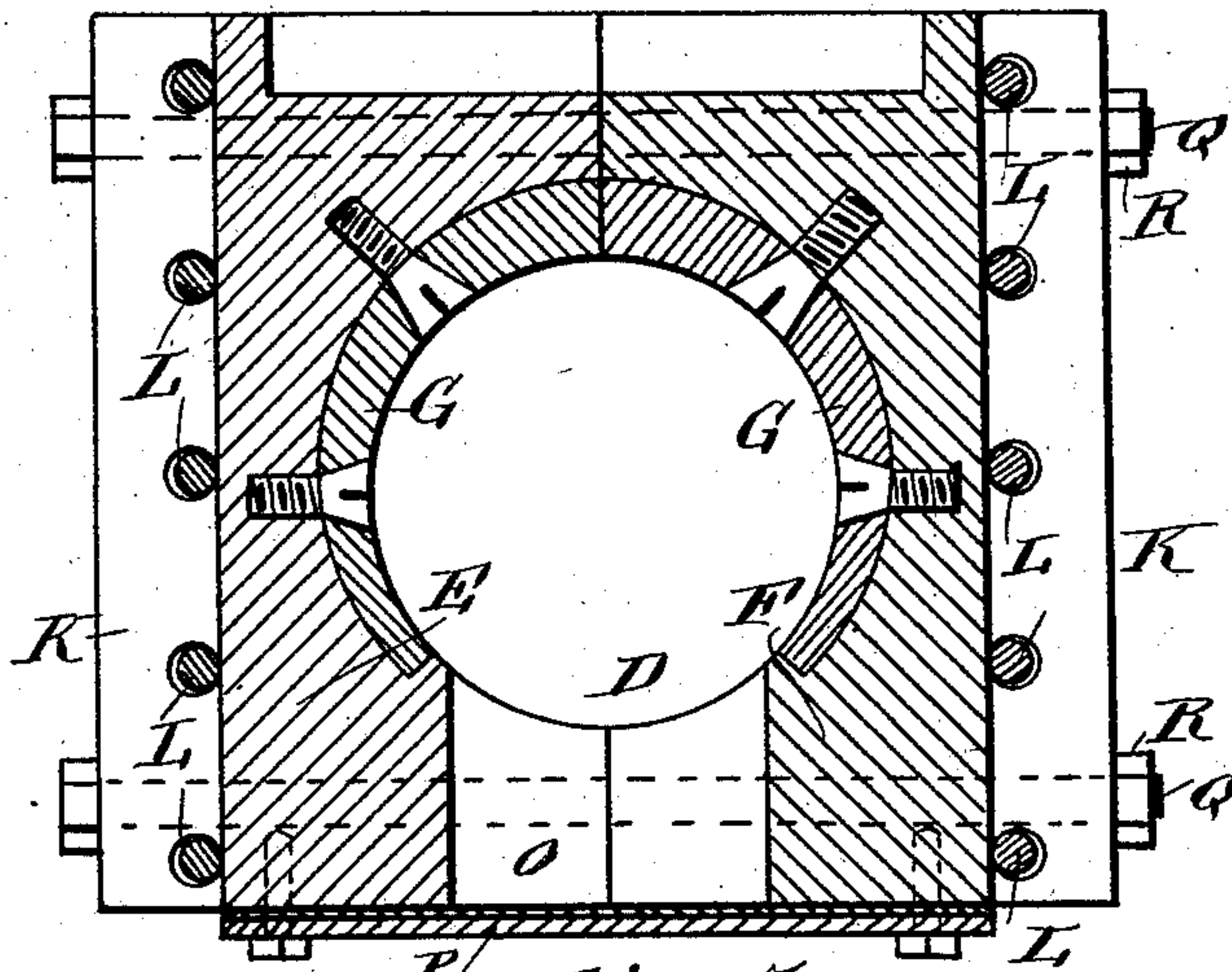
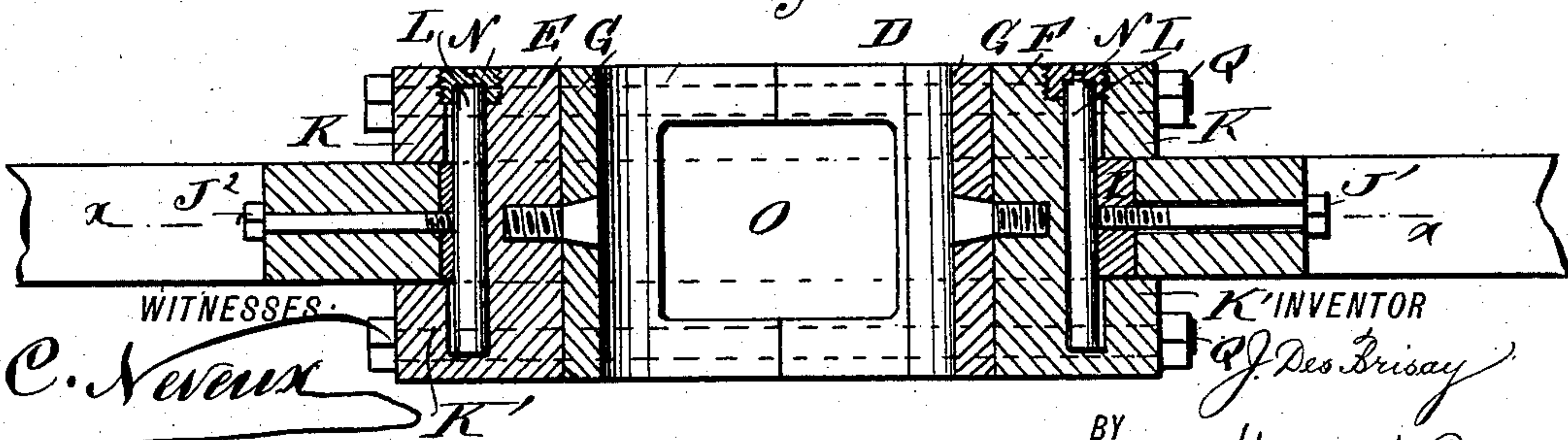


Fig. 3



WITNESSES.

C. Neveu

C. Sedgwick

BY

K'INVENTOR

J. Des Brisay

Munn & Co

ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES DES BRISAY, OF VANCOUVER, BRITISH COLUMBIA, CANADA.

AXLE-BOX.

SPECIFICATION forming part of Letters Patent No. 389,691, dated September 18, 1888.

Application filed March 29, 1888. Serial No. 268,794. (No model.)

To all whom it may concern:

Be it known that I, JAMES DES BRISAY, of Vancouver, in the Province of British Columbia and Dominion of Canada, have invented a new and Improved Axle-Box, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved axle-box specially adapted for locomotives, which is simple and durable in construction and automatic in taking up all lost motion while in use.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a locomotive-frame in part, showing my improved box applied thereto. Fig. 2 is an enlarged sectional elevation of the box on the line *xx* of Fig. 3, and Fig. 3 is an enlarged sectional plan view of the improvement on the line *yy* of Fig. 1.

The locomotive-frame A, of any approved construction, is provided with the usual arms, B and C, in which is held to slide the axle-box D, preferably made in the two parts E and F, each carrying one-half of the brass bearing G, secured by set-screws or other suitable means to the parts E and F of the box D.

On the inside of the arm B is secured a steel plate, H, and on the inside of the arm C is held a steel wedge, I, adapted to be moved up and down by a bolt, J, screwing in the bottom plate, A', and against the lower end of the said wedge I. The latter is held on the arm C by a bolt, J', passing through a slot in the arm C and screwing at one end into the said wedge I, as is plainly shown in Figs. 1 and 3. The plate H is held in a like manner by a bolt, J², to the arm B.

On each end of the parts E and F of the axle-box D are formed the flanges K and K', fitting on the arms B and C, respectively, and in the said flanges K and K' are mounted to rotate loosely the rollers or pins L, held in contact with the steel plate H and the wedge I. The rollers L are preferably placed in bear-

ings formed in the said flanges K and K', and each roller is prevented from slipping out of its bearings by a cap, N, plainly shown in Fig. 3.

In the lower part of the box D is formed a recess, O, covered at the bottom by a plate, P, secured to the under sides of the parts E and F of the box D. This recess O is filled with waste or other suitable material and is intended to absorb the oil used for lubricating the axle and box D. Longitudinal bolts Q pass through the box parts E and F and the flanges K, K', and nuts R screw on the outer threaded ends of the said bolts, so as to hold the parts E and F firmly together. When the axle is in place in the box D and the weight of the locomotive causes the frame A to move up and down in the box D, the friction is greatly reduced by the rollers L, traveling on the steel plate H and the wedge I. The wear occasioned by this up-and-down movement of the frame A on the box D is taken up by adjusting the wedge I by means of the plate J whenever it is necessary. The box D can easily be packed by removing the plate P, so as to get at the recess O and remove from the same the waste or packing and replace it by new whenever necessary.

It will be seen that the axle-box is very simple and durable in construction, and the friction is reduced to a minimum, and all wear can easily be taken up at any time.

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

1. In an axle-box, the combination, with vertical guideways, of a box provided with rollers traveling on the said guideways, substantially as shown and described.

2. The combination, with vertical guideways, of a box made in two parts and fitting on the said guideways, and of rollers mounted to rotate in the vertical sides of said box and travel on the said guideways, substantially as shown and described.

3. The combination, with the frame arms, of a steel plate held on one of the said arms, a wedge held adjustably on the other arm, a box mounted to slide on the said arms, and rollers mounted to turn in the said box and held against the said plate and wedge, substantially as shown and described.

4. The combination, with the box D, made in two parts and provided with a recess in its bottom, of a plate held on the bottom of the said box and closing the said recess, bolts for fastening the said two parts together, and rollers mounted to revolve in the vertical sides of said box and adapted to travel on the vertical guideways of the box, substantially as shown and described.

10 5. The combination, with the box made in two or more parts and provided with flanges on its ends, of rollers mounted to revolve in the said flanges and adapted to travel on the

guideways of the box, substantially as shown and described.

6. The combination, with the box provided with flanges at its ends, of rollers mounted to revolve in the said flanges, a steel plate on which travel the rollers on one end of the said box, and an adjustable wedge on which travel the rollers on the other end of the said box, substantially as shown and described.

JAMES DES BRISAY.

Witnesses:

J. P. BROPHY, Jr.,
JOHN BOULTBEE.