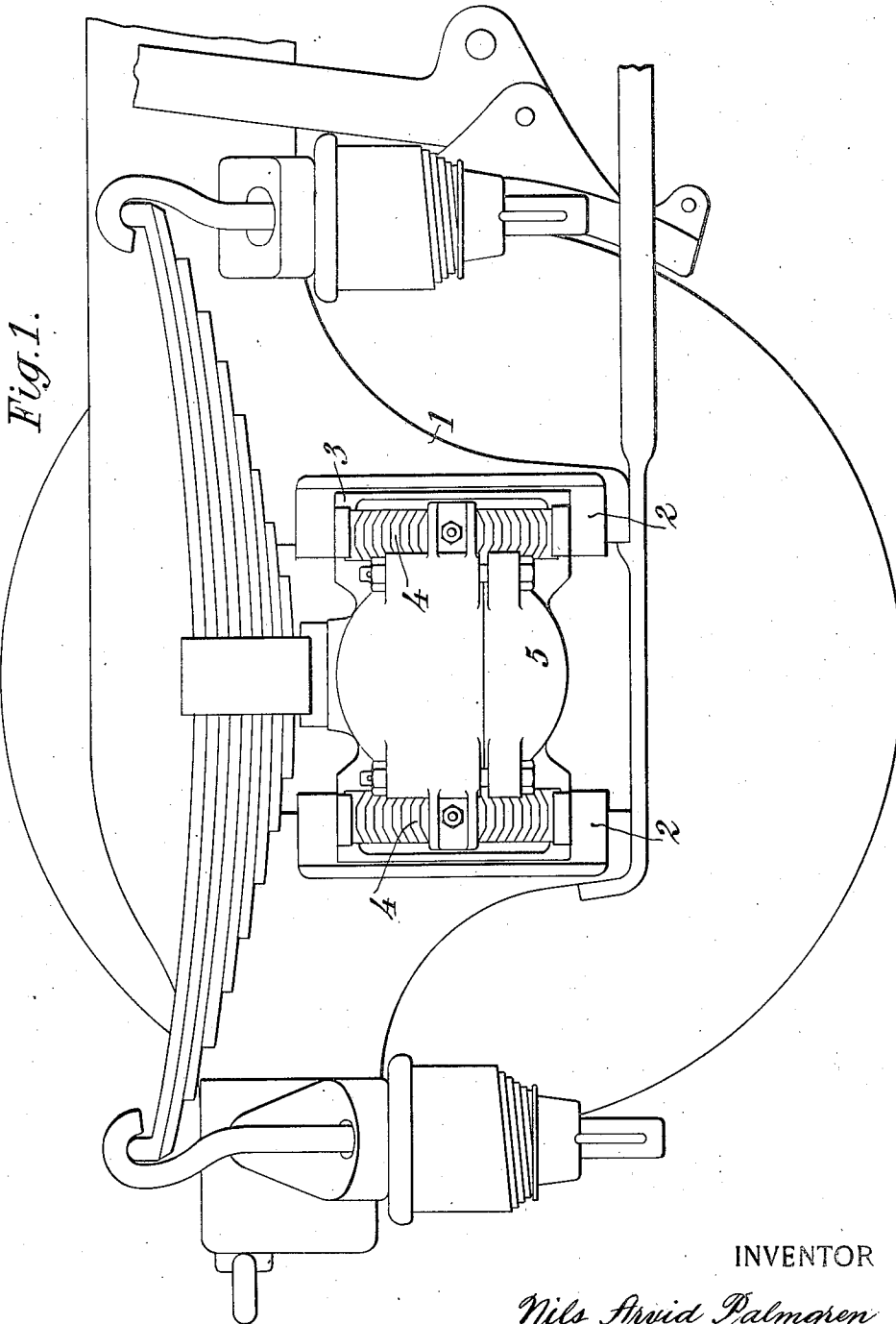


N. A. PALMGREN.
JOURNAL BOX FOR RAILWAY CARRIAGES AND THE LIKE.
APPLICATION FILED MAY 23, 1919.

1,353,489.

Patented Sept. 21, 1920.

2 SHEETS—SHEET 1.



INVENTOR :

Nils Arvid Palmgren

By Attorneys,

Fraser, Duke & Myers

N. A. PALMGREN.
JOURNAL BOX FOR RAILWAY CARRIAGES AND THE LIKE.
APPLICATION FILED MAY 23, 1919.

1,353,489.

Patented Sept. 21, 1920.
2 SHEETS—SHEET 2.

Fig. 2.

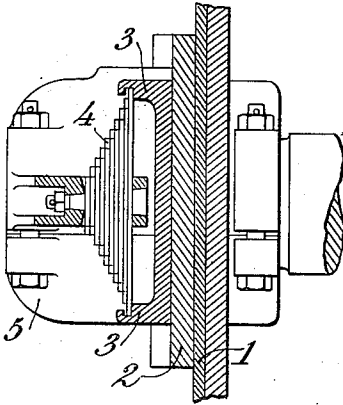


Fig. 5.

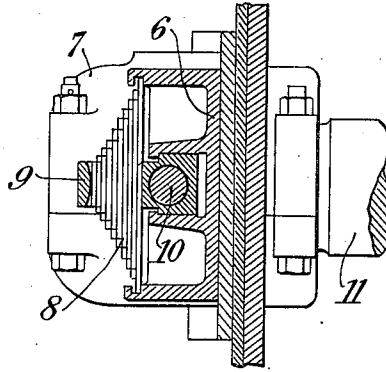


Fig. 3.

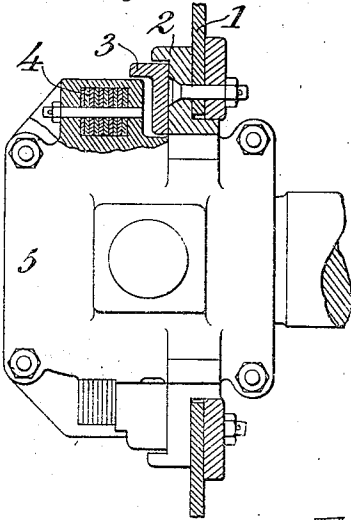


Fig. 6.

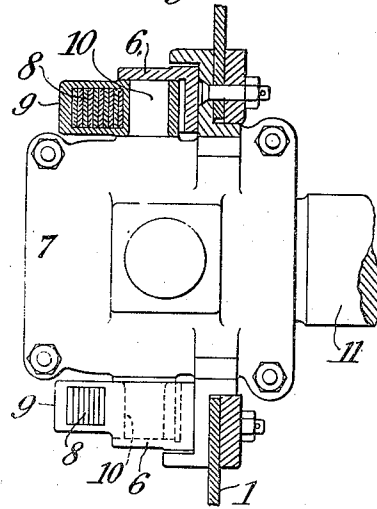
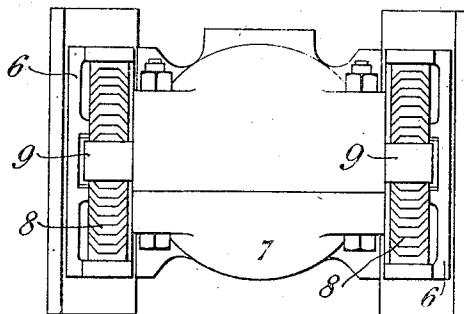


Fig. 4.



INVENTOR :

Nils Arvid Palmgren
By Attorneys,
Draper, Dunlop & Myers

UNITED STATES PATENT OFFICE.

NILS ARVID PALMGREN, OF GOTTENBORG, SWEDEN, ASSIGNOR TO AKTIEBOLAGET SVENSKA KULLAGERFABRIKEN, OF GOTTENBORG, SWEDEN, A CORPORATION OF SWEDEN.

JOURNAL-BOX FOR RAILWAY-CARRIAGES AND THE LIKE.

1,353,489.

Specification of Letters Patent. Patented Sept. 21, 1920.

Application filed May 23, 1919. Serial No. 299,343.

To all whom it may concern:

Be it known that I, NILS ARVID PALMGREN, a subject of the King of Sweden, residing at Gottenborg, in the Kingdom of Sweden, have invented a new and useful Improvement in Journal-Boxes for Railway-Carriages and the like, of which the following is a specification.

In such journal boxes for railway carriages and the like in which the journal is pivoted by means of ball bearings it is very important to limit as much as possible the maximum values of the forces acting on the box. In the constructions of such journal boxes as heretofore used, however, the axial forces arising for instance when the carriage is running in a curve, will be transmitted directly from the frame of the carriage to flanges rigidly connected with the box and thus to the box itself. When axial shocks occur the forces momentarily acting will therefore become very great, on account whereof the ball bearings of the box will easily be subjected to large overloads.

The present invention relates to an improvement in journal boxes of the said kind by means of which said disadvantage is avoided. The improvement consists principally in this that the journal box is elastically connected with the frame of the carriage in axial direction. By this means the advantage is attained that the maximum values of the momentary forces acting on the box on the occurrence of axial shocks are materially decreased, and the axial forces are also more evenly distributed on both sides of the box.

In the accompanying drawings a few embodiments of the invention are shown by way of example. Figure 1 shows an end view of a journal box according to the invention, Fig. 2 shows a side view of the box, partly in vertical section, and Fig. 3 shows a plan view of the box, partly in horizontal section. Fig. 4 shows an end view of a second slightly modified construction of which Fig. 5 shows a side view, partly in section, and Fig. 6 a plan view, partly in section.

In the construction illustrated in Figs. 1 to 3 incl. the guides 2, which are rigidly secured to the frame 1, bear against the slides 3 which are connected with the journal box 5 by means of the laminated plate

55
middle portion in a corresponding aperture in the box, its two ends being introduced into grooves in the upper and lower ends of the corresponding slide 3 which ends are bent outward. In this manner the box will 60 obviously attain a certain mobility in axial direction relatively to the frame to the extent allowed by the springs 4, so that the axial shocks will become moderated.

The construction illustrated in Figs. 4 65 to 6 incl. differs from the one above described mainly by this that each of the laminated plate springs 8 connecting the slides 6 with the box 7 is clamped at its middle in a yoke 9 rotatable on a stud 10 projecting from the box. Said two studs are in 70 alinement, and their common horizontal center line intersects the mathematical axis of the journal 11. In this manner the journal box becomes not only elastically but also 75 pivotally connected with the frame of the carriage, on account whereof the axial forces acting on the box will act in a horizontal plane through the center line of the studs 10 also with an uneven load on the 80 carriage.

I claim:

1. The combination with a journal box for railway carriages and the like, of springs attached to the sides of the box, and 85 slides attached to said springs and bearing against the frame of the carriage.

2. The combination with a journal box for railway carriages and the like, of springs, means for attaching said springs 90 to the sides of the journal box so as to be rotatable on a common horizontal axis, and slides attached to said springs and bearing against the frame of the carriage.

3. The combination with a journal box 95 for railway carriages and the like, of studs secured horizontally in alinement to the sides of said journal box, yokes pivoted on said studs, springs secured in said yokes, and slides attached to said springs and 100 bearing against the frame of the carriage.

4. The combination with a journal box for railway carriages and the like, of laminated plate springs attached to the sides of the box, and slides attached to said springs 105 and bearing against the frame of the carriage.

5. The combination with a journal box

for railway carriages and the like, of laminated plate springs, means for attaching said springs to the sides of the journal box so as to be rotatable on a common horizontal axis, and slides attached to said springs and bearing against the frame of the carriage.

6. The combination with a journal box for railway carriages and the like, of studs

secured horizontally in alinement to the sides of said journal box, yokes pivoted on said studs, laminated plate springs secured in said yokes, and slides attached to said springs and bearing against the frame of the carriage.

NILS ARVID PALMGREN.