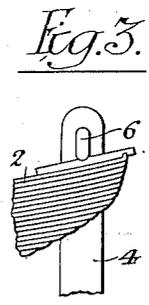
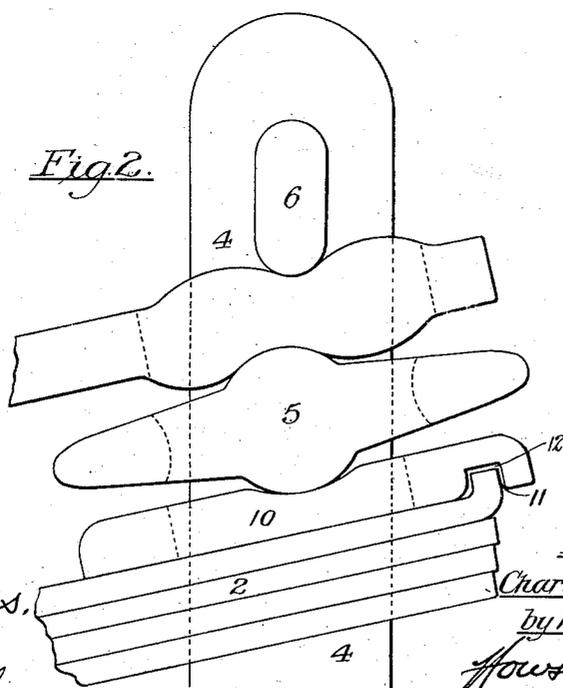
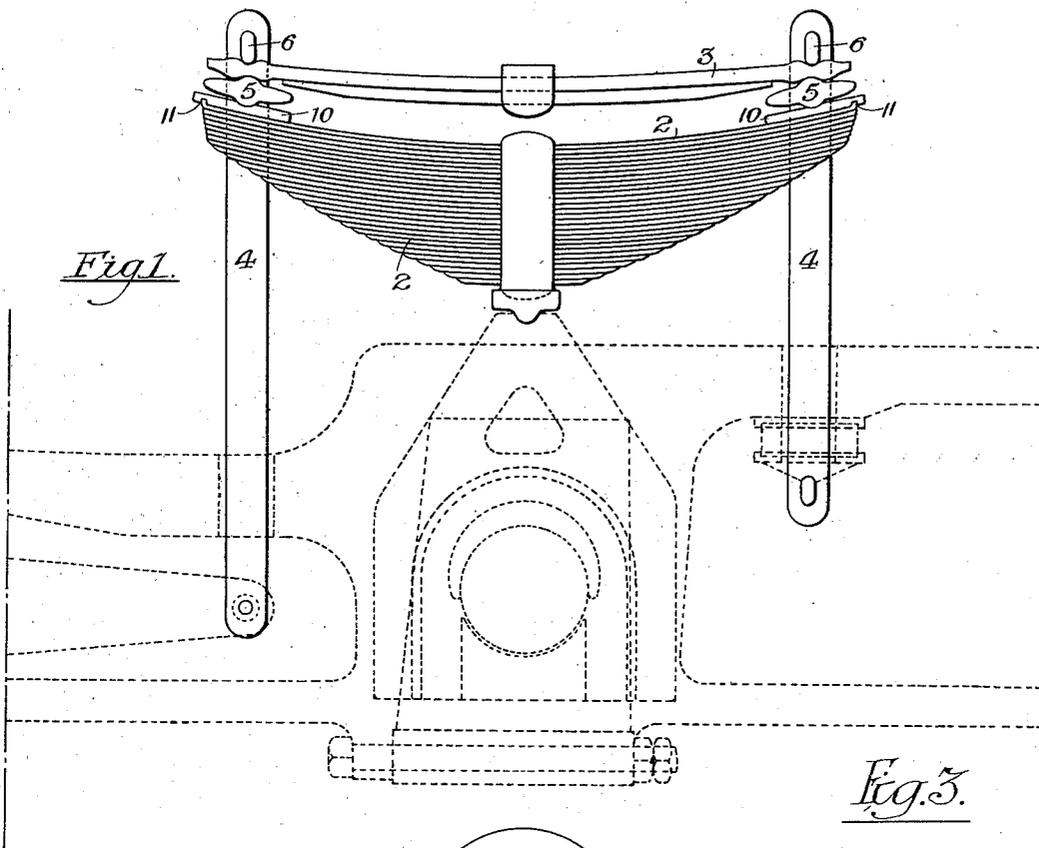


No. 748,512.

PATENTED DEC. 29, 1903.

C. A. LINDSTRÖM.  
BEARING PLATE FOR SPRINGS.  
APPLICATION FILED OCT. 11, 1902.

NO MODEL.



*Witnesses:*  
*Titus H. Jones,*  
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*by his Attorneys,*  
*Houston & Houston*

# UNITED STATES PATENT OFFICE.

CHARLES A. LINDSTRÖM, OF ALLEGHENY, PENNSYLVANIA.

## BEARING-PLATE FOR SPRINGS.

SPECIFICATION forming part of Letters Patent No. 748,512, dated December 29, 1903.

Application filed October 11, 1902. Serial No. 126,937. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. LINDSTRÖM, a citizen of the United States, and a resident of Allegheny, Allegheny county, Pennsylvania, have invented certain Improvements in Bearing-Plates for Springs, of which the following is a specification.

The object of my invention is to provide semi-elliptic springs—such as are used upon locomotives, tenders, railway-cars, and other heavy vehicles—with means whereby the strains exerted upon the ends of the springs which sustain the load are prevented from breaking the springs. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a view illustrating my invention as applied to a reinforcing-spring of the character shown in my Letters Patent No. 687,692, dated November 26, 1901. Fig. 2 is an enlarged view of part of the end of the spring and of the hanger with its key and interposed bearing devices, and Fig. 3 is a view illustrating the application of my invention to the ordinary form of spring-hanger.

In Fig. 1 of the drawings part of the frame of a locomotive, one of the axles, and one of the axle-boxes are shown in dotted lines in connection with a semi-elliptic spring 2, reinforcing-spring 3, and hangers 4, as in my previous patent, before alluded to, the keys 6 of the hangers bearing upon the ends of the supplementary or reinforcing spring 3, which in turn bear upon rockers 5, as in said patented structure. If these rockers bear directly upon the upper leaf of the spring 2, the strain is so concentrated upon a limited area of the spring that breakage of the latter frequently results even if the end portion of the spring is reinforced by turning the upper leaf back upon itself or swaging a thickened seat thereon, and such breakage renders the spring useless. In order to overcome this objection, I interpose between the rocker 5 and the upper leaf of the spring a shoe 10, preferably recessed in its upper face for the reception

of the rounded lower bearing of the rocker and having a lower face which provides an extended bearing upon the upper leaf of the spring, thereby distributing the strain throughout the entire end portion of the spring and preventing the breaking of the latter under heavy loads.

In order to longitudinally lock the shoe to the upper leaf of the spring, the end of said leaf is bent upwardly, so as to form a lip 11, which enters a slot 12, formed in the under side of the shoe, as shown in Fig. 2, and thus prevents any longitudinal movement of the shoe in respect to the spring.

In Fig. 3 I have illustrated the application of my invention to an ordinary form of spring construction, the key 6 of the hanger in this case bearing directly upon the shoe and the supplementary reinforcing-spring and its rocker being dispensed with.

In case of breakage of the shoe or injury to the same said shoe can be readily replaced, the spring itself not being impaired.

When the end portion of the spring is slotted for the passage of the hanger-bar 4, the shoe 10 will be likewise slotted, as indicated by dotted lines in Fig. 2.

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

The combination of the semi-elliptic spring provided with vertical slots through its end portions and having the ends of its long leaf formed with a vertical offset extending across the leaf, bearing-plates placed on the end portions of said leaf and provided with transverse grooves extending through the sides of the plates and with slots coinciding with the slots in the leaf, and hangers passing through said slots, as set forth and shown.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES A. LINDSTRÖM.

Witnesses:

A. STUCKI,  
J. C. LANGFITT.