

No. 766,102.

PATENTED JULY 26, 1904.

E. DENEGRÉ.
FRICTIONAL SPRING DAMPENER.

APPLICATION FILED DEC. 5, 1903.

NO MODEL.

Fig. 1.

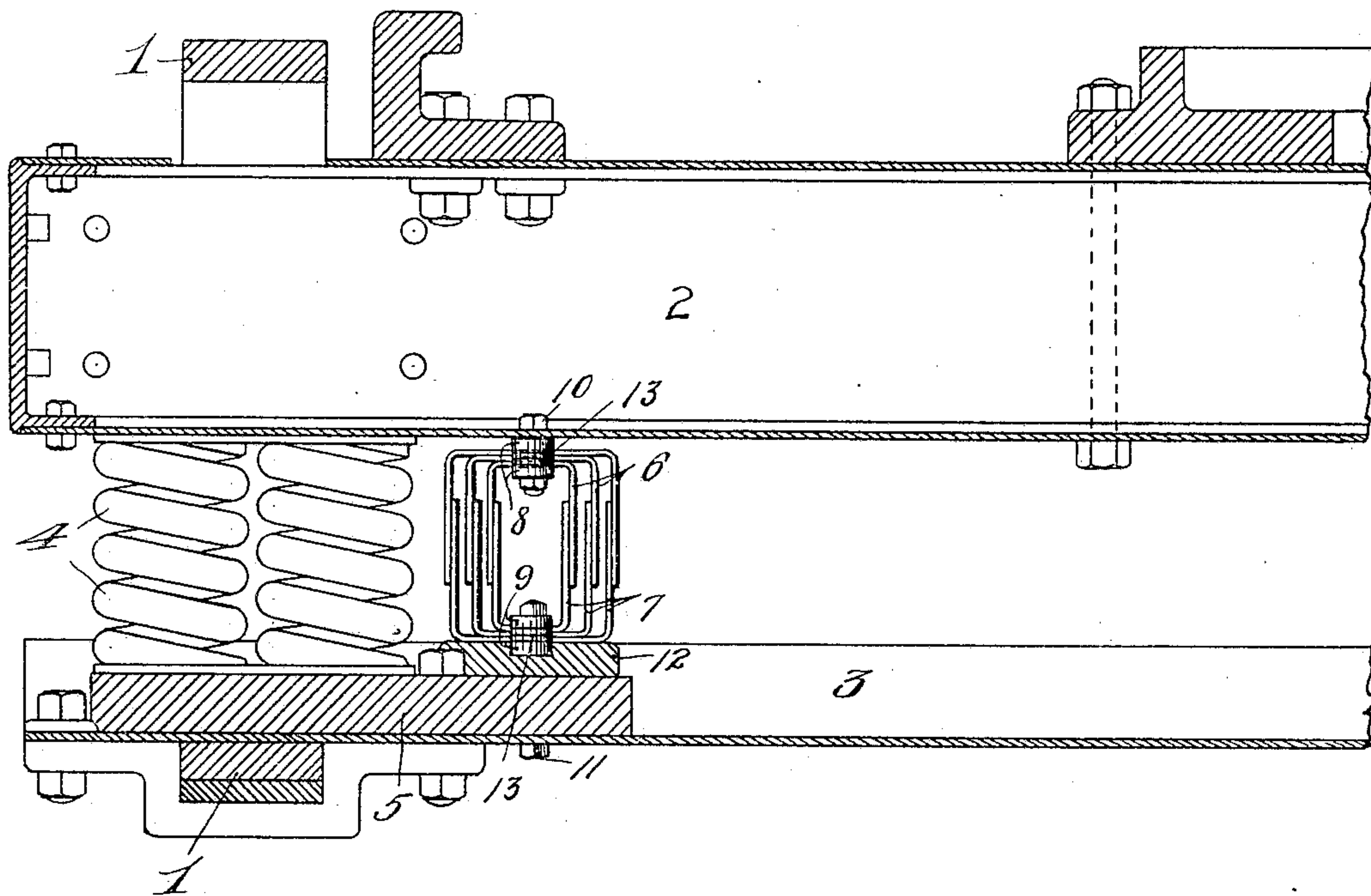


Fig. 2.

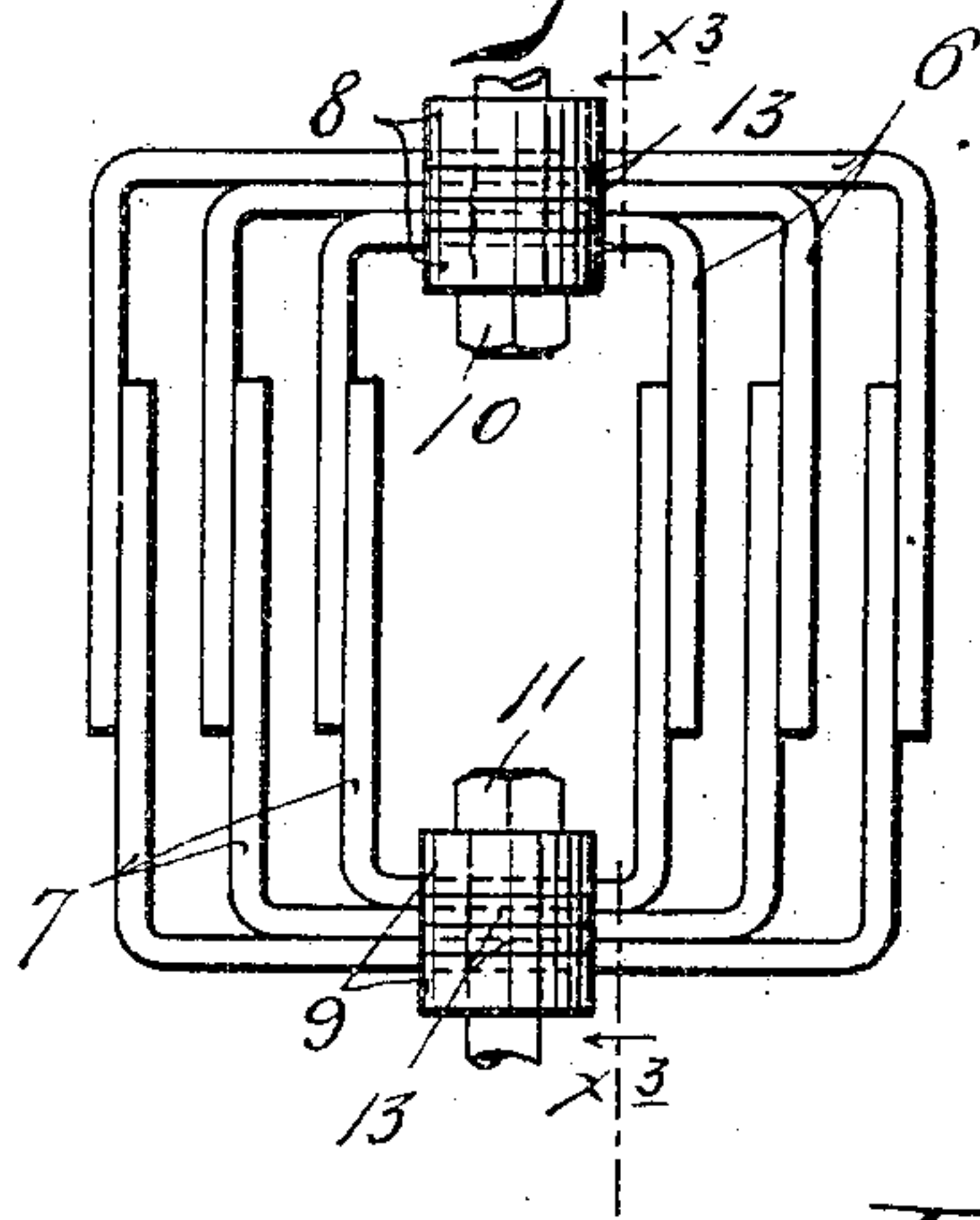


Fig. 3.

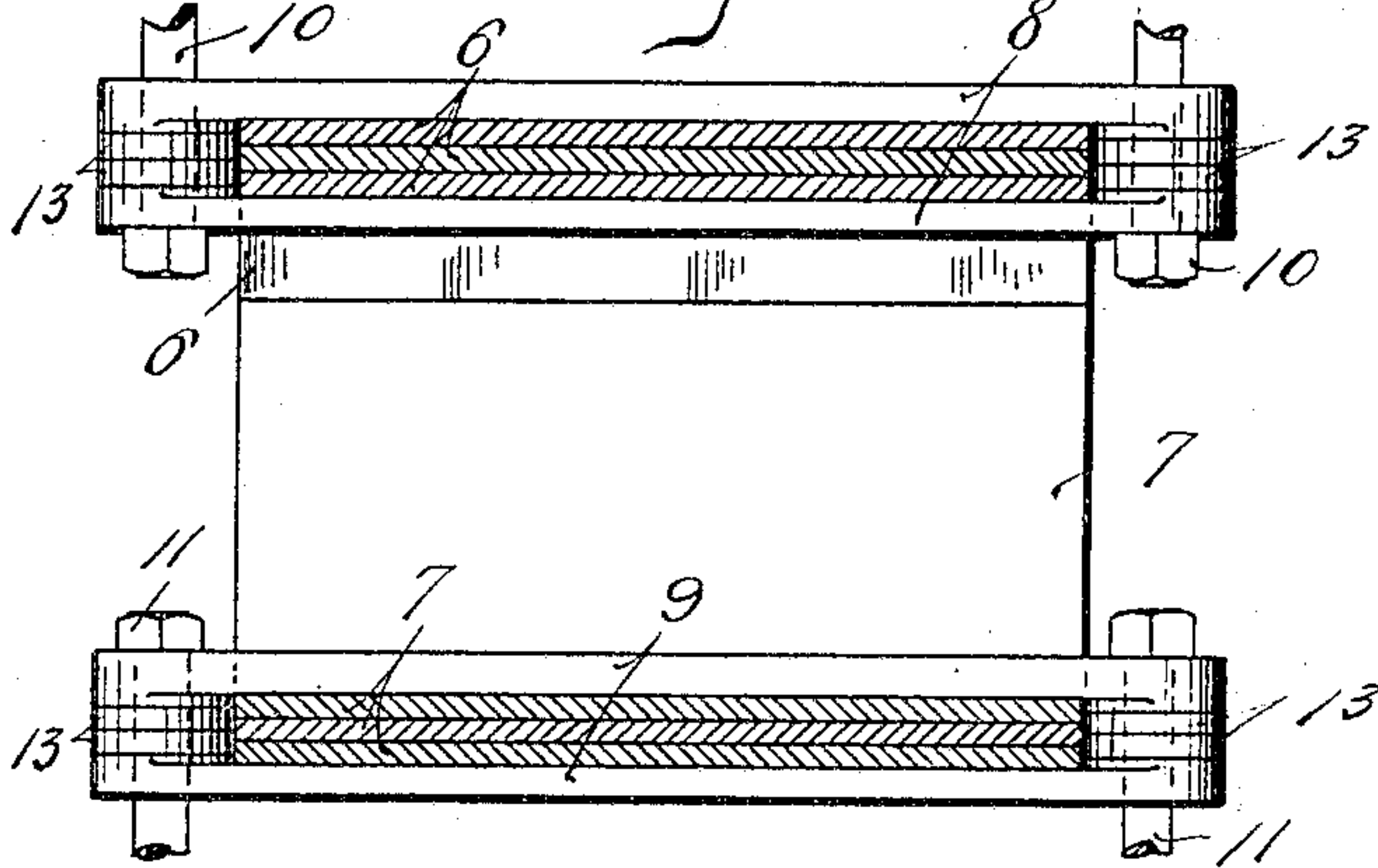
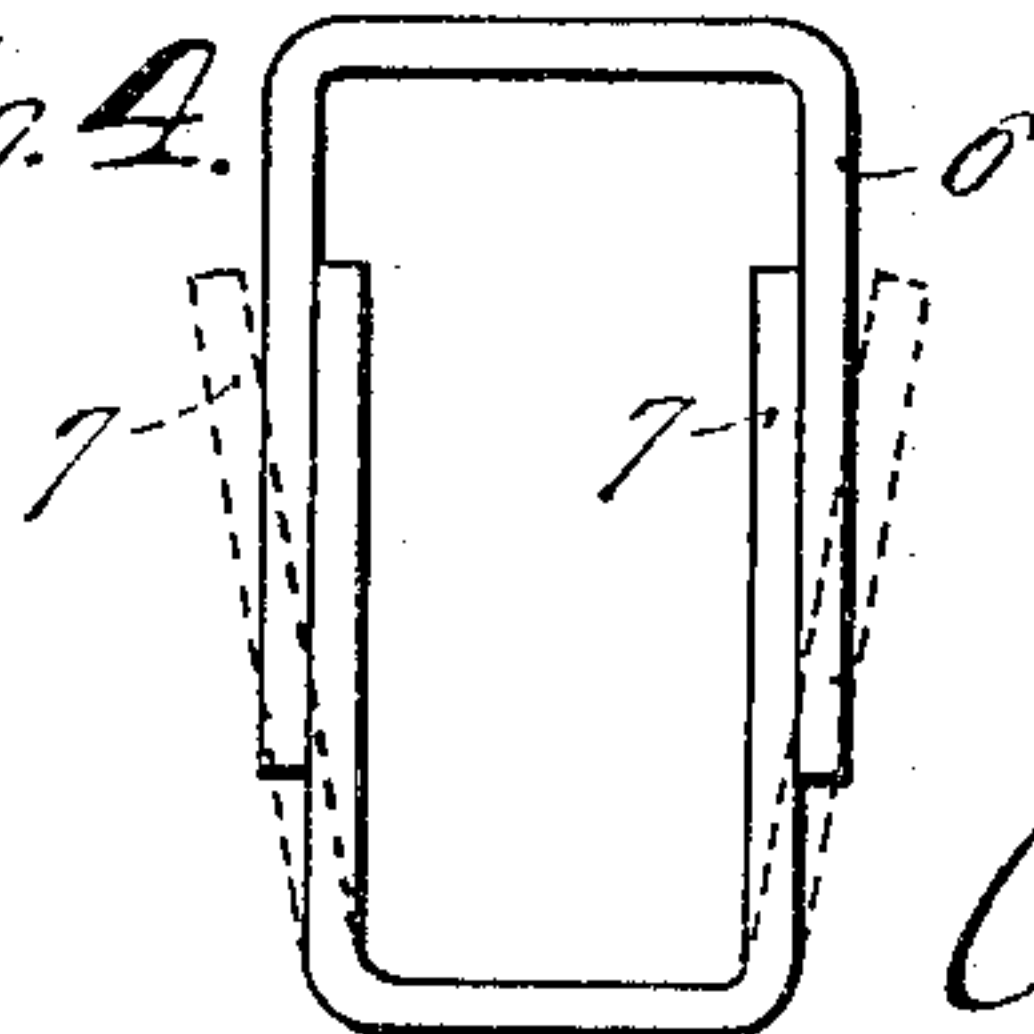


Fig. 4.



Witnesses,

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UNITED STATES PATENT OFFICE.

EDWARD DENEGRÉ, OF CHICAGO, ILLINOIS, ASSIGNOR TO McCORD & COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF NEW JERSEY.

FRICTIONAL SPRING-DAMPENER.

SPECIFICATION forming part of Letters Patent No. 766,102, dated July 26, 1904.

Application filed December 5, 1903. Serial No. 183,848. (No model.)

To all whom it may concern:

Be it known that I, EDWARD DENEGRÉ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Frictional Spring-Dampeners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to so-called "spring-dampeners" or "vibration-retarders," and has for its object to improve the same in the several particulars hereinafter noted.

To the above ends the invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The tendency of coiled springs to vibrate when unrestrained is well known, and to prevent such springs from vibrating excessively so-called "spring dampeners or retarders" have been incorporated in the spring devices. Such an arrangement is disclosed and claimed in my own prior patent, No. 709,969, of date September 30, 1902, entitled "Spring-cushion."

My present invention is in a sense an improvement on the form of spring-dampener disclosed and claimed in my said prior patent.

As a radical point of departure, however, my present invention provides a frictional spring-dampener which while arranged to cooperate with is independent of and disassociated from the springs themselves.

As another feature of improvement my invention provides means for removing or replacing the dampener or retarder and for increasing or decreasing the capacity thereof without interference with the springs themselves.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a transverse vertical section taken through a portion of one side frame through the truck-bolster and through the

spring-plank or transom of an ordinary car-truck and showing one of my improved spring-dampeners applied between the said bolster and spring-plank. Fig. 2 is a front elevation of the spring-dampener shown in Fig. 1. Fig. 3 is a section on the line $x^3 x^3$ of Fig. 2, and Fig. 4 is a front elevation of one of the cooperating pairs of frictionally-engaging members of the spring-dampener.

The numeral 1 indicates the side frame, the numeral 2 the truck-bolster, and the numeral 3 the spring-plank or transom of a car-truck of ordinary or standard construction. The truck-bolster is supported in the usual way by coiled springs 4, which rest upon a spring-base 5, rigidly secured to the spring-plank 3.

A frictional spring-retarding device is made up of a plurality of upper and lower approximately U-shaped friction-plates 6 and 7, respectively. The upper spring-plates 6 have their transverse portions rigidly clamped together by a split clamping-bar 9. The prongs of each lower spring-plate 7 telescope or slide within the prongs of the corresponding spring-plate 6. The prongs of the lower members 7 when released tend to spring into diverging positions, as indicated by dotted lines in Fig. 4, and this spring tension normally keeps the said prongs pressed into frictional engagement with the embracing-prong of the corresponding upper plate 6. Of course it might be either the upper or the lower members that require to be sprung into position, as above stated.

The sections of the clamping-bars 8 and 9 are held together and securely anchored, the former to the truck-bolster 2 and the latter to the spring-plank 3, by means of nutted bolts 10 and 11. As shown, the bottom member of the lower spring-plates 7 rests on a filling-block 12, which in turn rests upon the spring-base 5 of the so-called "spring-plank" 3.

It is evident that the spring dampener or retarding device described can be applied in working position or removed therefrom without disturbing the springs 4. It is also evident that the greater the number of pairs of pronged friction-plates employed in the dampener the greater will be its frictional resist-

ance, and consequently the stronger the dampening or retarding action. The converse is also true. It is therefore evident that a spring-dampener of the above character is capable of being readily adjusted or readjusted to the particular work required of it after the supporting-springs have been applied in working position and without interference with the springs. The device described is of extremely small cost, has no parts which are liable to be broken or get out of order, and is efficient for the purposes had in view.

While I consider it patentably novel to apply between a truck-bolster and a part of the truck-frame a frictional spring-dampener which is independent of and disassociated from the bolster-supporting springs, I do not, however, limit myself to this particular use, but on the contrary would have it understood that the device may be generally used where such device is desired. All of the features above noted I desire to herein claim.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with parts to be cushioned and springs applied between them, of a frictional spring-dampener also applied between the said parts, which dampener is disassociated from and independent of said springs, and involves a plurality of frictional members

engaging under the spring tension of certain of said members.

2. A spring-dampener made up of a plurality of approximately U-shaped friction-plates 6 placed one within the other and rigidly tied together, and a plurality of cooperating approximately U-shaped frictionally-engaging plates 7 also rigidly tied together.

3. The combination with a pair of parts to be cushioned, and springs applied between them, of a spring-dampener disassociated from and independent of said springs, said dampener involving a plurality of pairs of inter-lapping approximately U-shaped friction-plates, and means whereby the number of pairs of plates may be increased or decreased, substantially as described.

4. In a car-truck, the combination with a truck-bolster, and springs supporting the same, of a frictional spring-dampener applied between said bolster and a part of the truck-frame, which spring-dampener is disassociated from and is independent of said springs, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD DENE GRE.

Witnesses:

JAMES D. DENE GRE,
MORRILL DUNN.