

T. F. ALLYN.

Car Spring.

No. 98,732.

Patented Jan. 11, 1870.

Fig. 1.

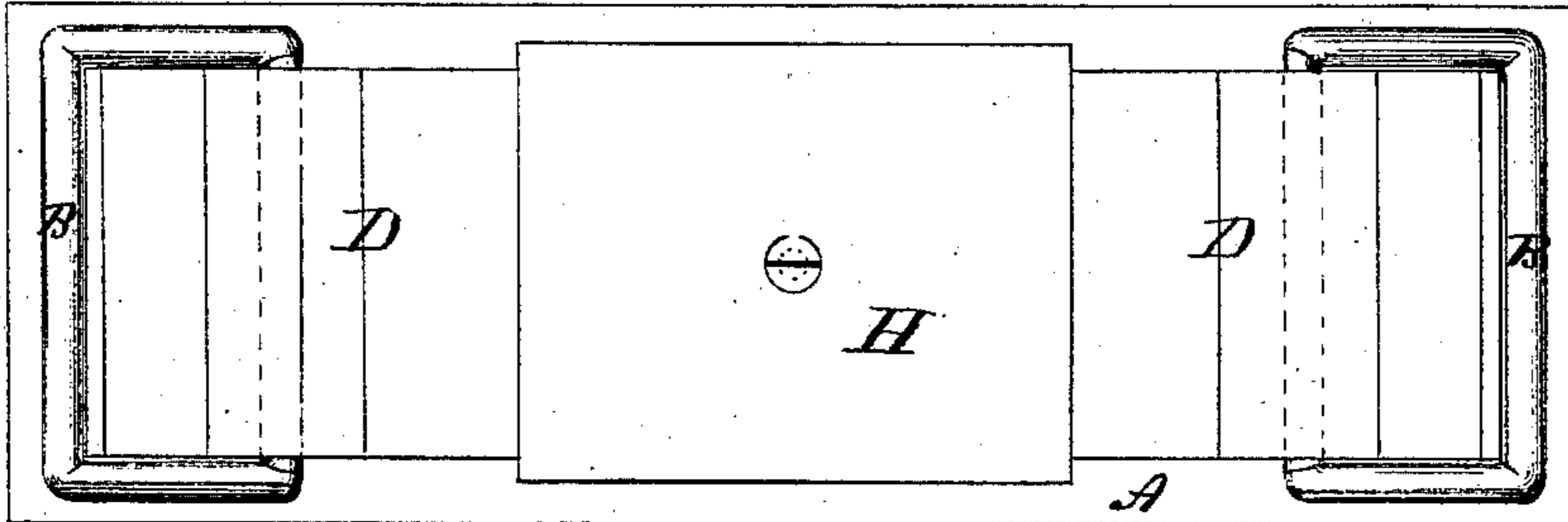
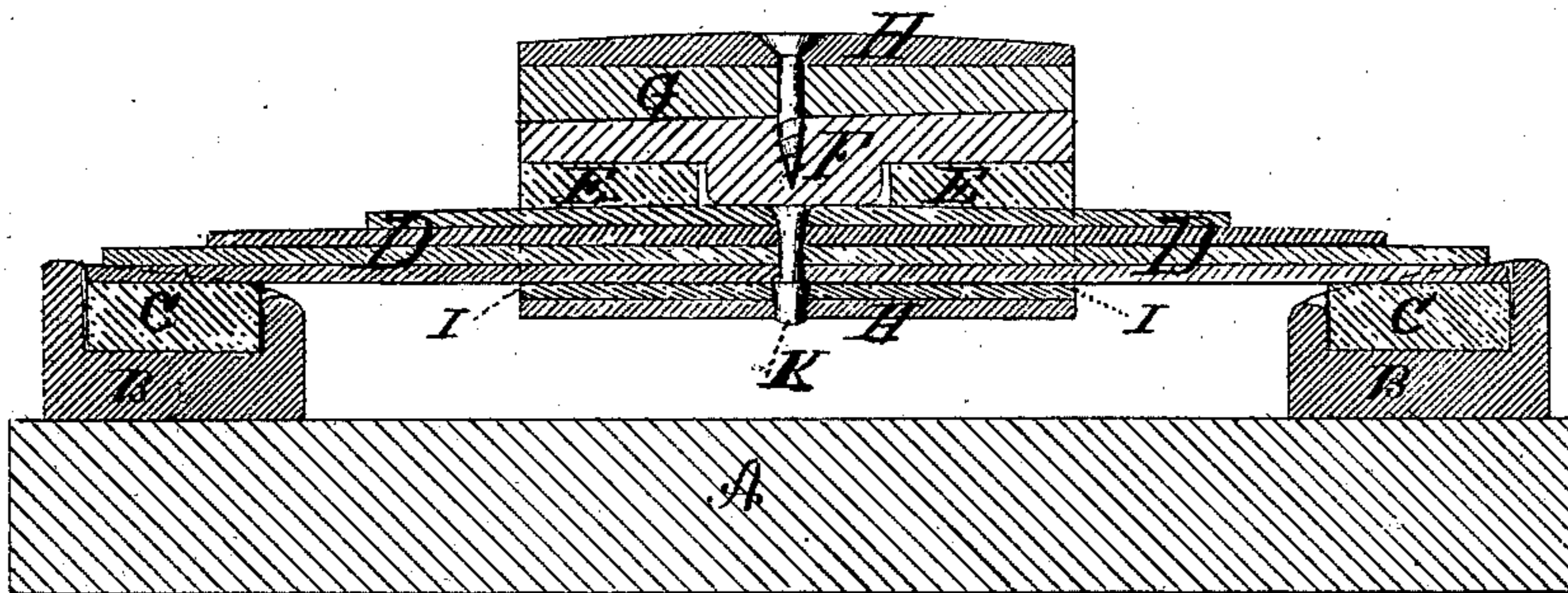


Fig. 2.



Witnesses:

B. F. James
G. Mathys

Inventor

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United States Patent Office.

TIMOTHY F. ALLYN, OF NYACK, NEW YORK.

Letters Patent No. 98,732, dated January 11, 1870.

IMPROVED RAILROAD-CAR SPRING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, TIMOTHY F. ALLYN, of the town of Nyack, county of Rockland, and State of New York, have invented a new and useful Improvement in "Railway-Car Springs;" and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification—

Figure 1 representing a top view, and

Figure 2, a sectional view of my invention.

The same letters in each refer to the same parts thereof.

My invention consists in the application to steel spring-plates, of double fulcra of rubber, or other elastic substances, for the central parts of said plates to rest upon and freely vibrate, while said plates and rubbers are held firmly in position by means of a metallic band, that covers and encloses about one-third of the length of the spring-plates, said rubber and plates being held firmly and securely in position within said band by means of wooden or other wedges, the plates being also riveted together centrally, the rivet having a projecting head that enters a hole of corresponding size on the under side of said band. On the top side of said band a hole is made for the reception of a screw, that fastens firmly the wedges, band, and plates together. This double elastic fulcrum may be applied to the spring in various ways, but I prefer the mode described herein, and shown in the drawings. By the aforesaid construction, I add largely to the sustaining-power of the spring-plate, rendering it much more durable; and cheaper in production and manufacture, to the plate-springs generally used. By lengthening or shortening this band, the sustaining-power of the spring can be graduated to the various forms of construction of the cars, and their varied weights.

My invention further consists in the construction and arrangement upon the ends of a bolster, or other suitable part of the truck-frame, a series of cups, made of metal, so constructed that they shall receive within them, rubber or other elastic material, conforming nearly to the shape of such cups, and of width sufficient to receive the end of the spring-plates, thus relieving the latter from wear and abrasion consequent upon contact with a metallic surface, and which also adds to the sustaining-power of the spring.

In the drawings—

A represents the bolster or frame of a railroad-car.

B are the metallic cups, fastened in any secure or desirable way to the same.

C are pieces of rubber, fitting into and approximating in form to the cups B.

D represents the spring-plates, of graduated lengths, and of width corresponding to and with the cups B, and resting upon the rubber C within said cups.

E E are two pieces of rubber, or other elastic material, each being, in width, about one-third of the length of the band H.

The space between these pieces of rubber is filled, or nearly so, by a projection formed on the lower side of the wedge F, which wedge may be either of wood or metal.

G is a wedge, driven in between the top of the band H and wedge F.

On the under side of the spring-plates D is placed the rubber I, or other elastic substance, and all of the above spring-plates, rubber, and wedges are enclosed or surrounded by the metallic band H.

A rivet, K, holds the spring-plates firmly together, and projects downward, through the rubber I, into and through the lower side of the band H.

A screw, L, is applied to the upper portion of the band, running into the two wedges F and G, holding them firmly in position.

When this spring is thus adjusted, it is set in and rests upon the rubber contained in the cups aforesaid, and is ready for use.

This spring may be made of plates of any desired length, breadth, or thickness, but for freight-cars I should prefer them of twenty-four to thirty-six inches in length, made of steel, six inches wide, and one-quarter inch in thickness, graduating the length of said plates from the point where the upper one projects from the band to the outer ends of the spring.

This spring should be made nearly straight, as shown in the drawings, so that when it is working, or in operation, it will be contracted and expanded as little as possible.

I do not claim a plate-spring broadly; but

What I do claim, and desire to secure by Letters Patent, is—

1. The construction and arrangement of a plate "car-spring," having fulcra of rubber, or other elastic material, contained within and surrounded by a metallic band, in the manner and for the purpose herein described.

2. The combination of the band H with the plate-spring D, rubber E E, and wedges F and G, and rubber I, in the manner and for the purposes herein described.

3. The combination of the spring, as above constructed, with the cups B B and rubber C C, or other elastic material, in the manner and for the purpose herein described.

4. The within-described method of fastening the spring-plates together, by means of the rivet K, when the same projects downward into the band H, thereby preventing lateral displacement, as herein specified.

T. F. ALLYN.

Witnesses:

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