(No Model.)

E. CLIFF.

SIDE BEARING FOR CAR TRUCKS.

No. 577,007. Patented Feb. 16, 1897.

Fig. 1.

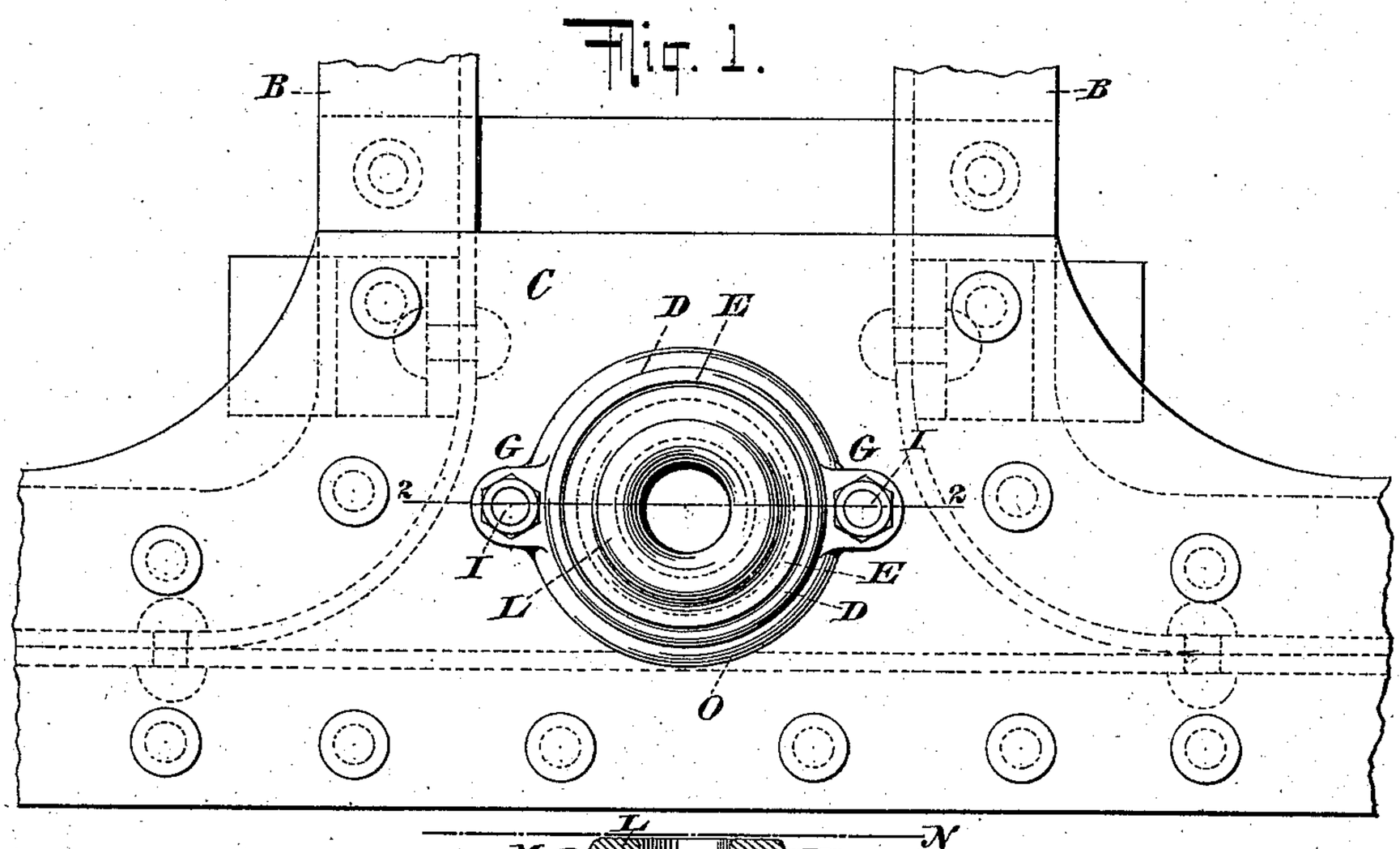
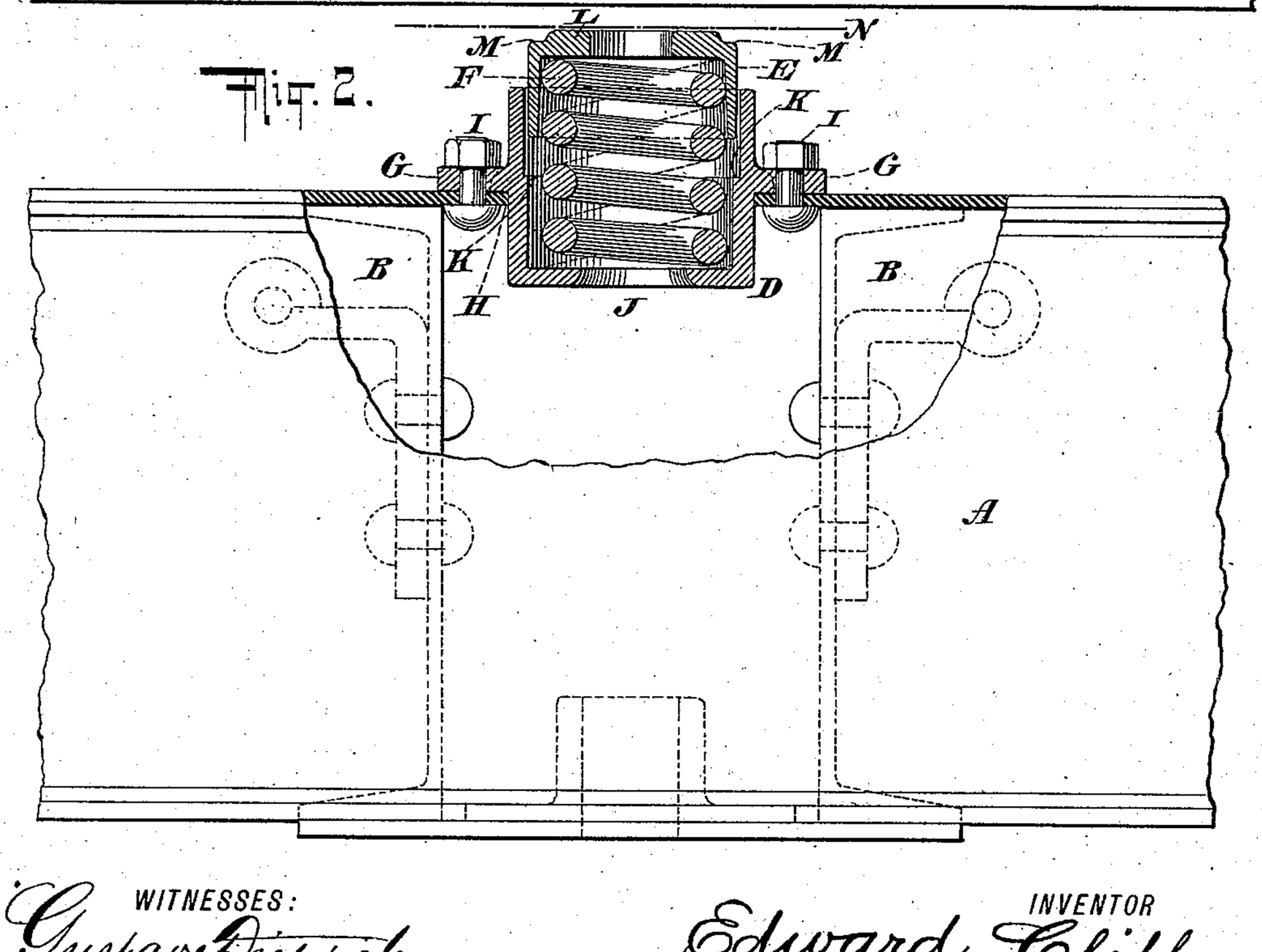


Fig. 2.



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SIDE BEARING FOR CAR-TRUCKS.

SPECIFICATION forming part of Letters Patent No. 577,007, dated February 16, 1897.

Application filed November 3, 1896. Serial No. 610,909. (No model.)

To all whom it may concern:

Be it known that I, EDWARD CLIFF, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Side Bearings for Car-Trucks, of which the following is a specification.

The invention relates to improvements in side bearings for car-trucks; and it consists in the novel features hereinafter described and claimed and by which many important advantages are secured.

The side bearing embodying my invention comprises a casing having upper and lower sections, which telescope one within the other, a coiled spring or springs within said casing, means for suspending from above its lower edge the lower section of said casing, a shoulder within the said lower section to act as an abutment for the lower edge of the upper section when the latter is sufficiently depressed, and an elevated bearing-surface upon the top of said upper section and set or formed within the vertical plane of the exterior surfaces of said upper section.

While the side bearing constructed as described embodies various novel features, above enumerated, the invention is not confined to the employment in every instance of all these features.

The advantages of the novel features of construction above referred to will be understood from the description hereinafter presented. It may be mentioned here, however, that among other objects accomplished by my invention I am enabled to employ longer coils or springs than have been capable of use in the side bearings heretofore constructed and bolted upon the truck-frame and also to suspend from above its lower edge the lower section of the bearing-casing, whereby one portion of the side bearing is, in use, below the upper surface of the truck-frame and securely held, while the upper portion of said bearing is above the upper surface of the truck-frame. Thus the action, lurching, and jarring of the car-body against the side bearings are confined mainly to the integral upper section thereof, which is not only sustained against breakage by the upper portion of the lower section, but also by the means surrounding and supporting said lower section.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of the central portion of one of the two corresponding sides of a truck-frame provided with a side bearing embodying my invention; and Fig. 2 is a side elevation, partly broken away, of same, the side bearing and a portion of the top plate supporting the same being in vertical section on the dotted line 2 2 of Fig. 1.

The two sides of the truck-frame correspond with one another, and each side will be furnished with the side bearing, and hence but one side of the truck-frame is illustrated.

In the drawings, A designates the side frame or beams. B B denote the transverse beams connecting the side frames or beams, and C represents the top plate formed on or secured to the side frame and extending inward upon the transverse beams, to which it may be secured.

Upon the top plate C is applied the side bearing, which, as shown, comprises the lower casing D and upper casing E, the latter being adapted to slide or telescope within the former, and both said casings forming a receptacle to inclose the coiled spring F. The casing D has the exterior horizontal lugs or portions G, which are substantially above the bottom of the casing and serve as a means for suspending said casing through the hole H, formed in the top plate C, and also as a means enabling said casing to be securely fastened to said top plate by bolts I or equivalent fastening devices. The casing D has an opening J in its bottom and an annular interior shoulder K formed within it about in line with said lugs G, said shoulder serving as an abutment for the lower edges of the upper casing E when the latter is sufficiently depressed.

The upper casing E has an interior bore corresponding with the interior bore of that portion of the casing D located below the annular shoulder K, and the top of said casing E has a central opening and a raised annular

seat L, which is wholly within the vertical plane of the sides of said casing and above the horizontal plane of the corner edges M, and the purpose of which is to receive the rubbing-plate (indicated by the line N) on the car-body and prevent said plate during any tilting of the car-body from ever pressing wholly against the extreme outer corner edges of the casing E on lines which would prevent the downward movement of the casing. The seat L thus insures efficient operation in the side bearing as a whole and avoids danger of breakage of the parts thereof. The height of the casing E is greater than the height of that portion of the casing D above the shoulder K, and hence should the casing E be driven entirely down upon the said shoulder the seat L would remain above the upper edges of the casing D to protect the same from the impact of the rubbing-plate on the car-body.

By having a part of the side bearing below the top plate C, I am enabled to use a much longer bar for the spring F, which avoids breakages in the latter and affords better and more satisfactory action to the car-body. The casing D, being suspended at points a substantial distance above the bottom of same, is rendered more durable and more capable of resisting the thrusts from the car-body, and since the upper part of said casing D is surrounded by the top plate C the latter serves to back and strengthen said casing at points at which the car-body acts strongly against the same. In the construction presented the lurching of the car-body against the side bearing may be effectually resisted, owing to the increased strength given to said bearing, from the fact that it is held rigid at the lugs G substantially above its lower end instead of at its lower end. The casing D is encompassed by the annular external shoulder O, which connects the lugs G G and seats itself upon the top plate C around the hole H therein. The side bearing as a whole is entirely efficient and durable and capable of performing the duties required of it.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The yielding side bearing consisting of the upper and lower telescopic sections inclosing the spring, the lower section at a substantial distance above its lower end being provided, for its support, with the integral annular external shoulder and oppositely-arranged lugs; substantially as shown and described.

2. The yielding side bearing consisting of the upper and lower telescopic sections inclosing the spring, the lower section receiving the upper section and having at a substantial distance above its lower end the interior annular shoulder to receive the lower edge of said upper section when the latter is depressed, and the bore of the upper section corresponding with the bore of that portion of the lower section below said shoulder; substantially as shown and described.

3. The yielding side bearing consisting of the upper and lower telescopic sections inclosing the spring, the upper section resting on the spring and having integral with its top the elevated seat located above and entirely within and following the contour of the corner edges of said top; substantially as and for the purposes shown and described.

4. The yielding side bearing consisting of the upper and lower telescopic sections inclosing the spring, the upper section resting on the spring, and having on its top the elevated seat located above and entirely within and following the contour of the corner edges of said top, and the lower section having at a substantial distance above its lower end the interior annular shoulder to receive the lower edges of the upper section and the exterior securing-lugs, which are also at a substantial distance above the lower end of said lower section; substantially as shown and described.

Signed at New York, in the county of New York and State of New York, this 2d day of November, A. D. 1896.

EDWARD CLIFF.

Witnesses:
CHAS. C. GILL,
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