

No. 658,390.

Patented Sept. 25, 1900.

E. G. NICEWANER.
CAR TRUCK.

(Application filed Jan. 8, 1900.)

(No Model.)

2 Sheets—Sheet 1.

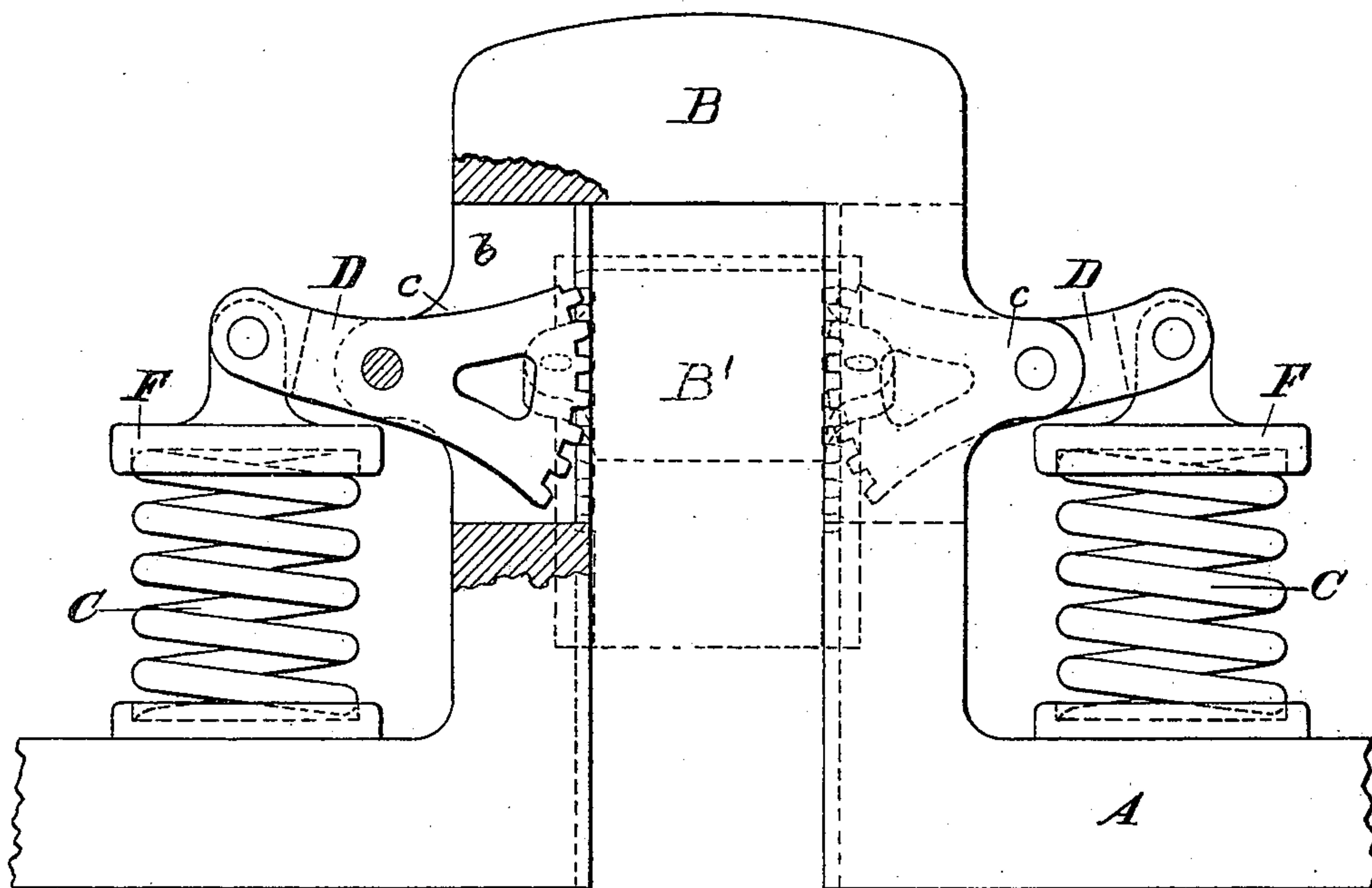


Fig. 1.

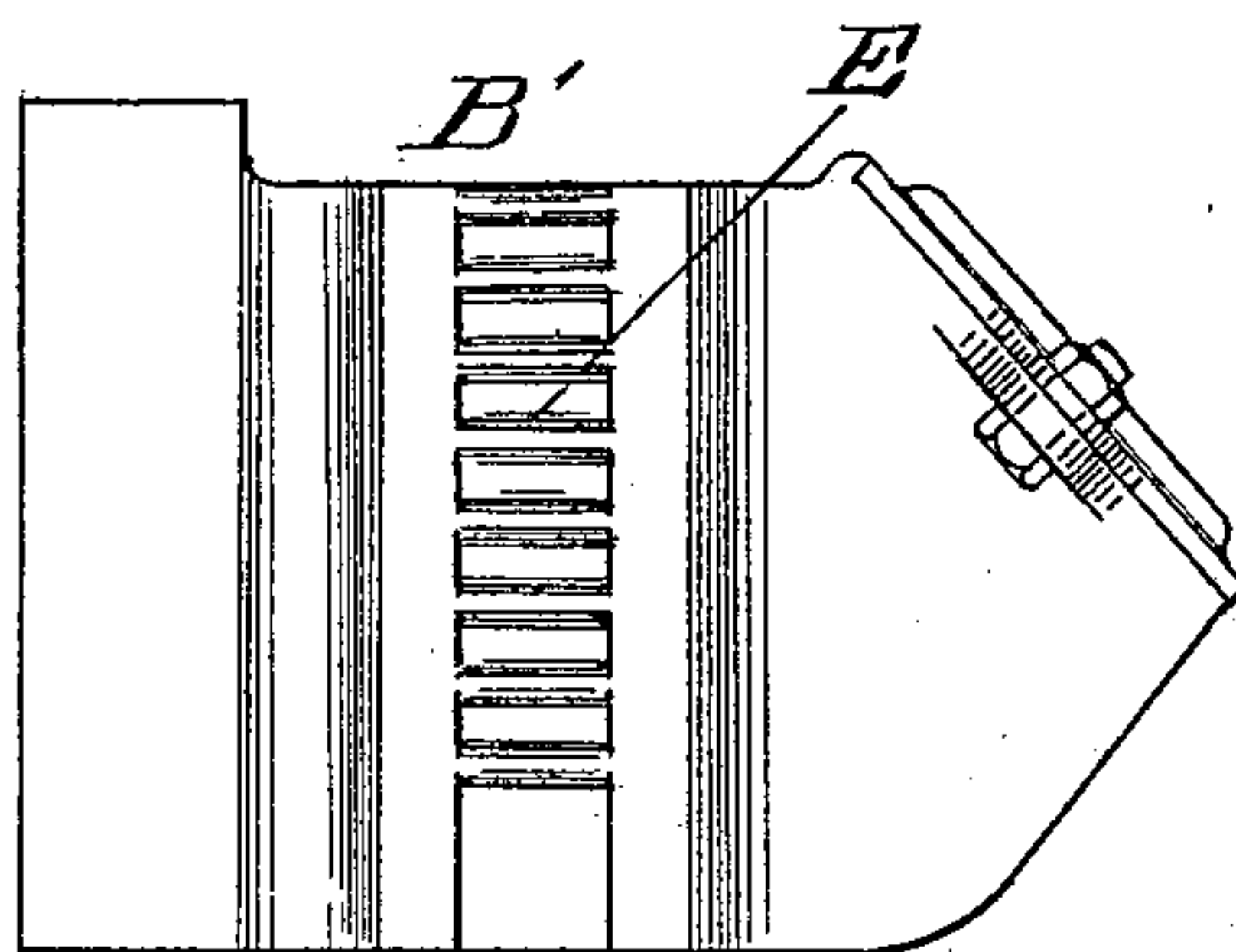


Fig. 2.

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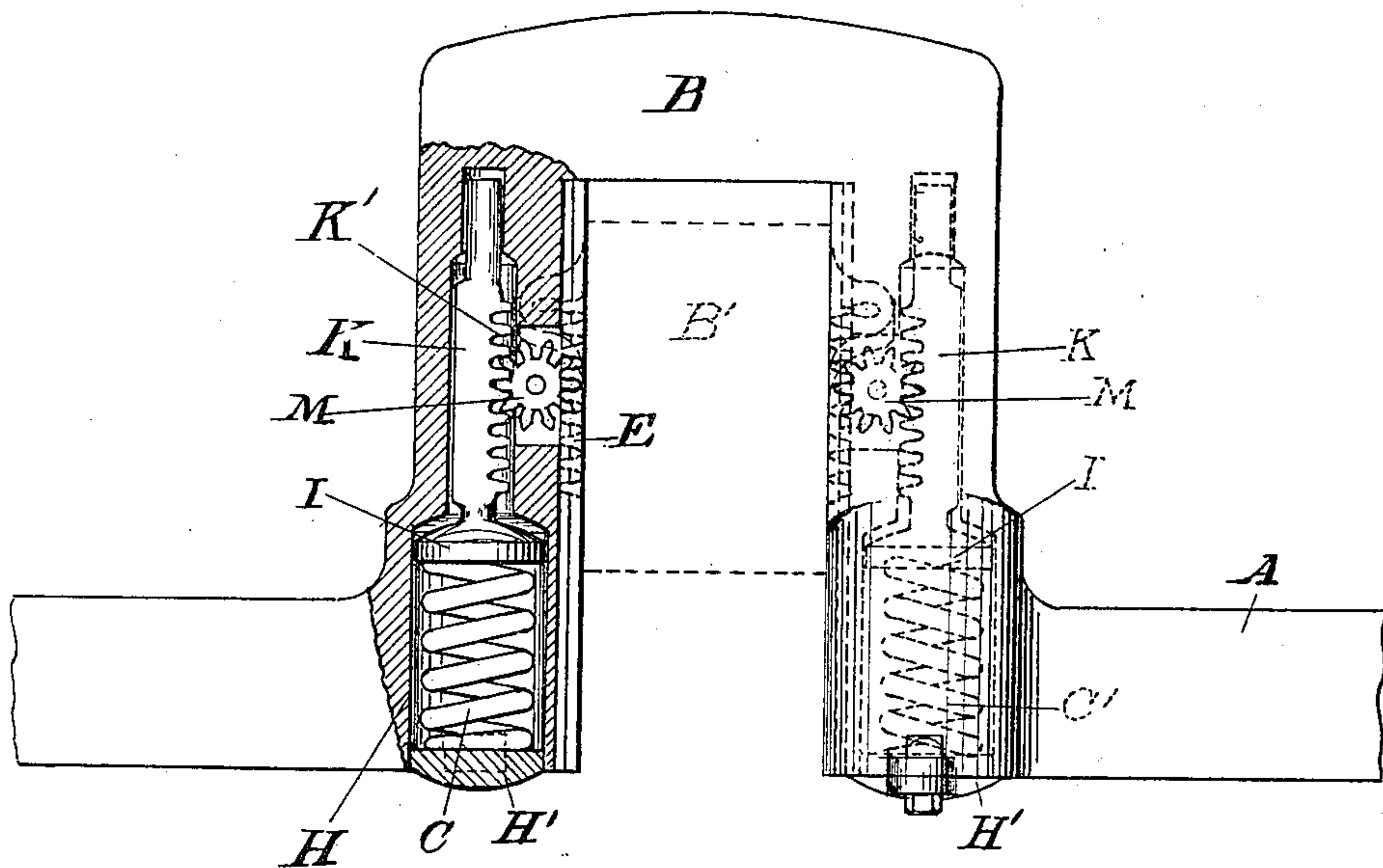


Fig. 3.

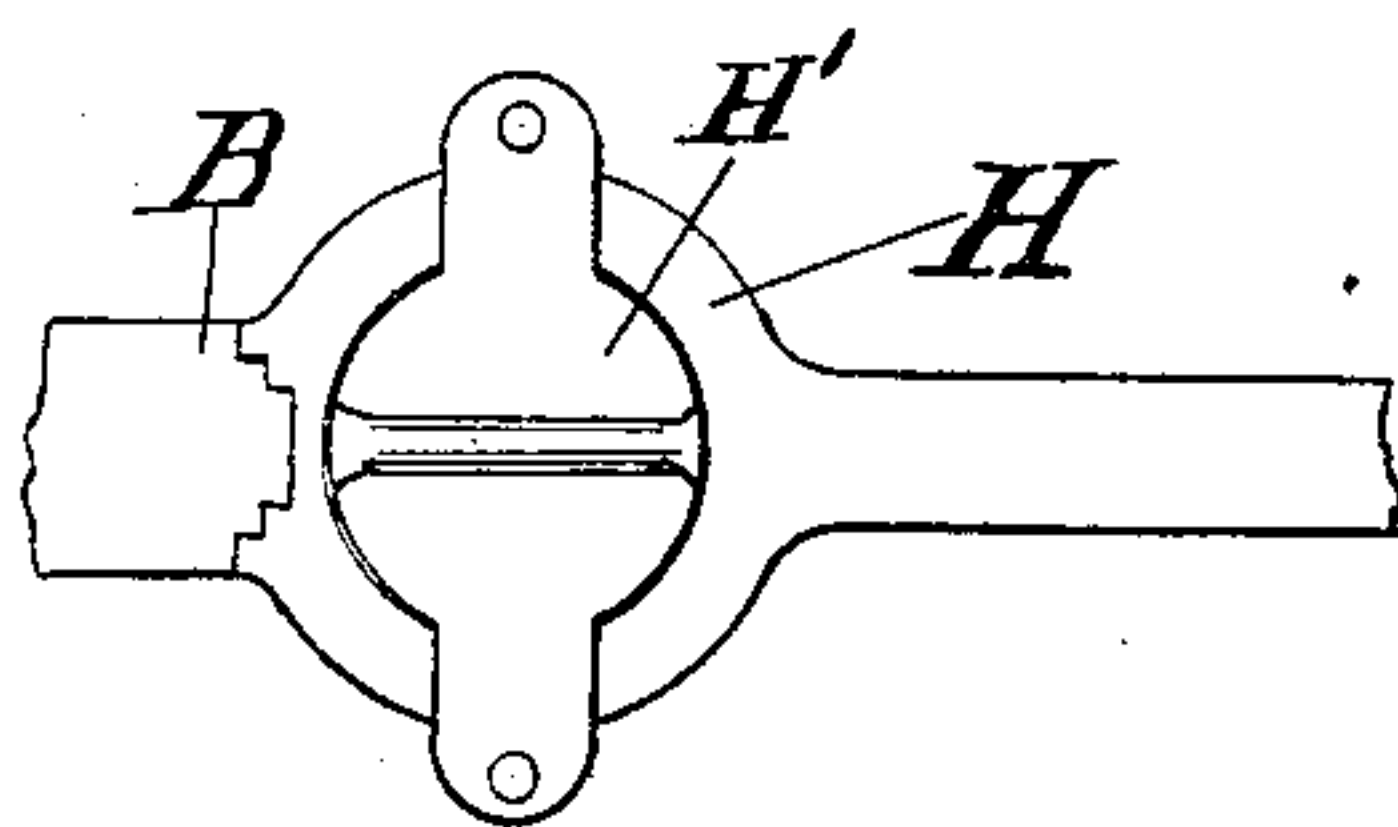


Fig. 4.

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UNITED STATES PATENT OFFICE.

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CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 658,390, dated September 25, 1900.

Application filed January 8, 1900. Serial No. 701. (No model.)

To all whom it may concern:

Be it known that I, EDWIN G. NICEWANER, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented new and useful Improvements in Car-Trucks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

10 My invention has relation to certain new and useful improvements in car-trucks, and more particularly to the arrangement of the axle or journal box springs.

It is often desirable in car construction to reduce to a minimum the vertical distance between the under side of the car-body or its sills and track or road-bed, and in such cases it is a matter of some difficulty to provide sufficient space for the journal-box springs, which are usually seated upon the journal-boxes and between the same and suitable bearings on the vehicle-body or on the truck-frame for the purpose of cushioning or relieving upthrusts of the axles due to track irregularities, obstructions, &c.

25 The object of my invention is therefore to provide for seating these springs in a manner which will enable them to be utilized to their full extent without using therefor any of the space between the journal-boxes and the bottom of the car-body, so that said car-body and sills may be brought nearer to the tops of said boxes.

30 With this object in view my invention consists in seating the journal-box springs laterally of the journal-boxes and in so connecting them with the said boxes that they receive by compression upward thrusts or movements of the boxes and also the weight of the load, and thus relieve or cushion the effects thereof.

40 The invention also consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of a car-truck, partly broken away, having my invention applied thereto. Fig. 2 is a side view of one of the journal-boxes. Fig. 3 is a

side view similar to Fig. 1, but showing a modified form of the invention; and Fig. 4 is a detail view.

The letter A designates the side frame of a car-truck, and B one of the pedestals or journal-box guides. B' is a journal-box mounted in said guides. C C are two helical springs, seated one at each side of the said guides.

D D are two levers, one of which is pivoted to a lug c of each of the guides, its inner arm being formed into a toothed segment whose teeth mesh with rack-teeth E, formed on the side of the journal-box B'. The outer arm of each lever is pivoted to a cap F, resting on the adjacent spring C. The toothed arm of the lever extends through an opening b in the side of the journal-box guide.

The operation will be readily seen. The load of the car, transmitted to the side frames through the usual car-springs, (not shown,) is carried onto the journal-boxes and axles through the levers D, which are moved under the load to compress the springs C, which thereby relieve the teeth of the dead-weight of the load. Any upthrust on the journal-boxes, due to high rail-joints or other causes, is relieved by the springs C by compressive action thereon.

In the modification shown in Fig. 3 springs C' are seated in pockets H, cored in the bottom of pedestals or guides B, and instead of employing the segment-levers D, I provide the spring-caps I with upward bar extensions K within the said guides. These extensions are formed with rack-teeth K', which are engaged by the teeth of the pinions M, journaled in the guide and meshing at its opposite side into the rack-teeth E of the journal-box. The lower ends of the spring-pockets H are closed by removable caps H', bolted thereto and seating the springs. The operation is substantially the same as in the form first described, rotation of the pinions M, under either downward movement of the car-frame or upward thrust of the journal-boxes, effecting a compression of the springs C'.

I do not wish to limit myself to the particular embodiments of my invention which I have herein shown and described, as other modifications, together with various changes

in details, are clearly within the scope of my invention as pointed out in the appended claims.

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

1. In a car-truck, the combination with a truck-frame having journal-box guides, journal-boxes mounted in said guides, journal-box springs seated in their lower ends on the said frame laterally of the boxes, and connections between said boxes and the upper ends of said springs whereby the latter are compressed by up thrusts or movements of the said boxes.

2. In a car-truck, the combination of a truck-frame having journal-box guides, and journal-boxes mounted in said guides, of springs seated on said frame laterally of said boxes, and gear connections between the upper bearings of the said springs and the said boxes.

3. In a car-truck, the combination with a truck-frame and a journal-box mounted therein, of springs seated laterally of said box, and connections between the box and the upper bearings of springs whereby the latter are compressed by the load on said frame and also by up thrusts or movements of said box.

4. In a car-truck, the combination with a truck-frame, having journal-box guides, and journal-boxes mounted in said guides, of helical journal-box springs seated on said frame laterally of the boxes, and having movable upper bearings or caps, and gear connections

between the said bearings and caps and the journal-boxes.

5. In a car-truck, the combination with a truck-frame having journal-box guides, and a journal-box in said guides, of a spring seated on said frame at each side of the said box, and having movable upper bearings or caps, and gear connections between the said box and the respective springs.

6. In a car-truck, the combination with a truck-frame having journal-box guides and a journal-box therein, provided with rack-teeth at opposite sides, of a helical spring seated on the frame at each side of said guides, movable upper bearings or caps for said springs, and levers pivoted to the said guides and each having one arm pivoted to the adjacent upper bearing or cap, and the other arm provided with a toothed segment which engages the rack-teeth on said box, substantially as described.

7. In a car-truck, a journal-box having rack-teeth formed at opposite sides thereof, journal-box springs seated on the truck-frame laterally of said box, and devices engaging said rack-teeth and arranged to compress said springs under the load on the truck and also under up thrusts of said box.

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

EDWIN G. NICEWANER.

Witnesses:

MYRTLE E. SHARPE,
H. W. SMITH.