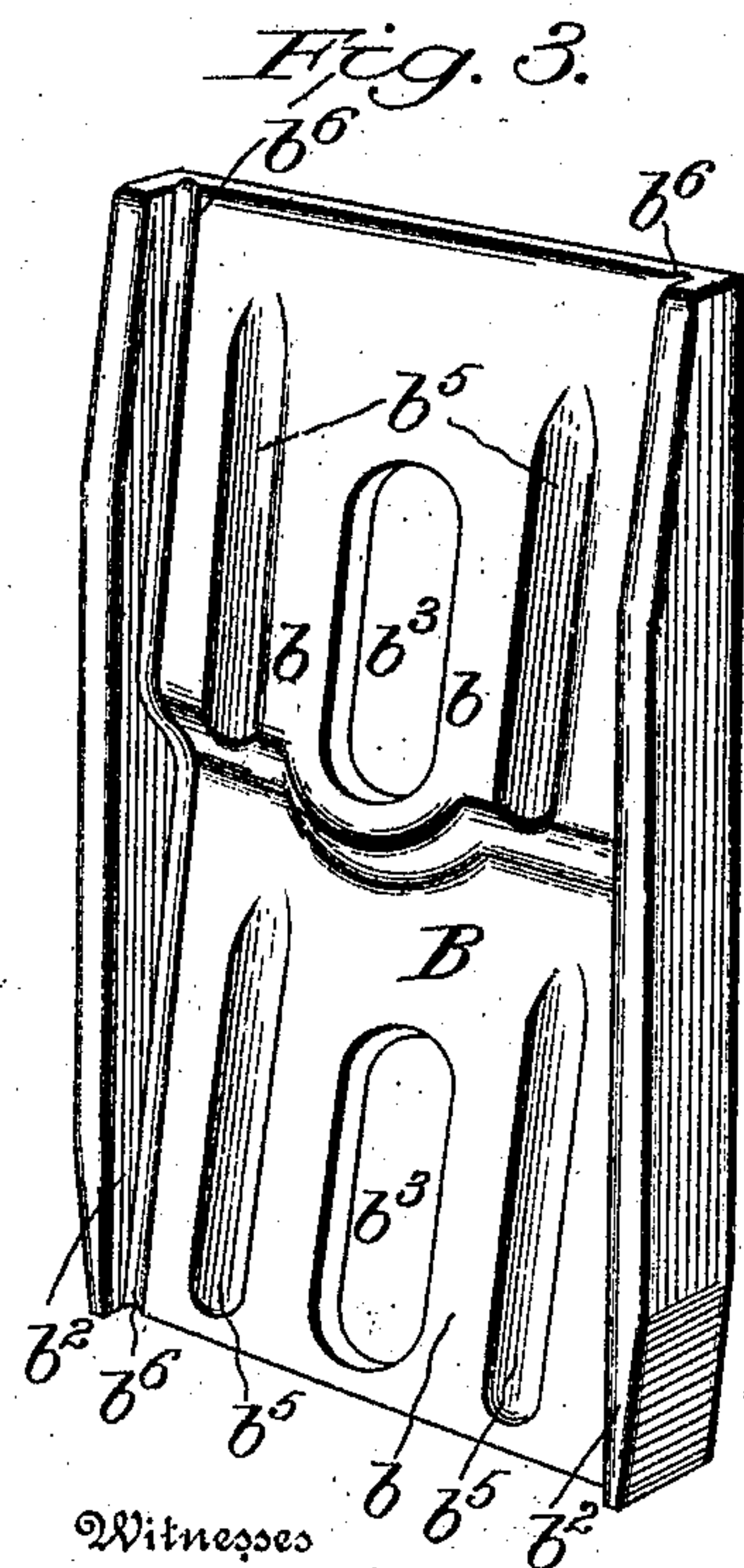
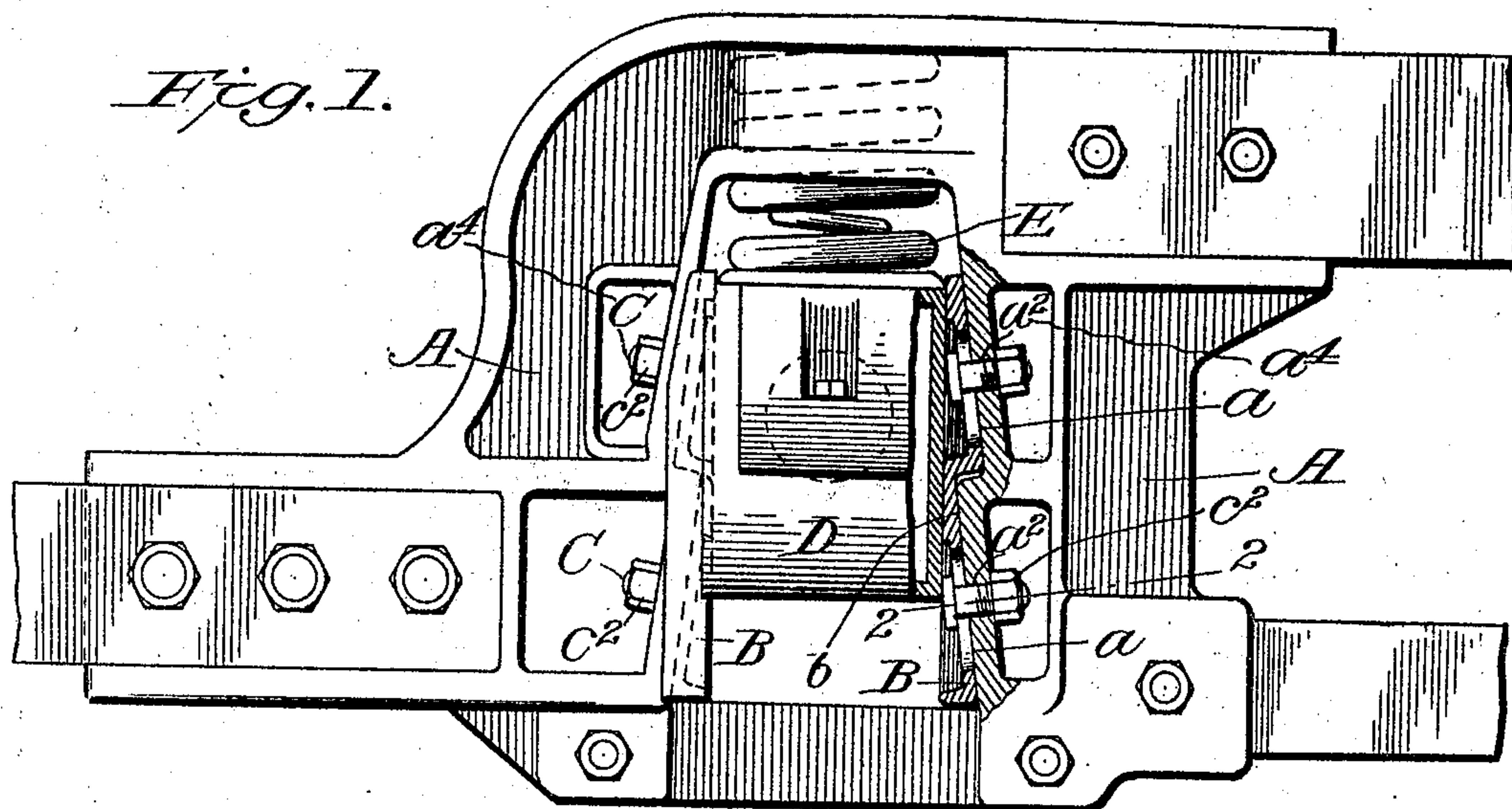


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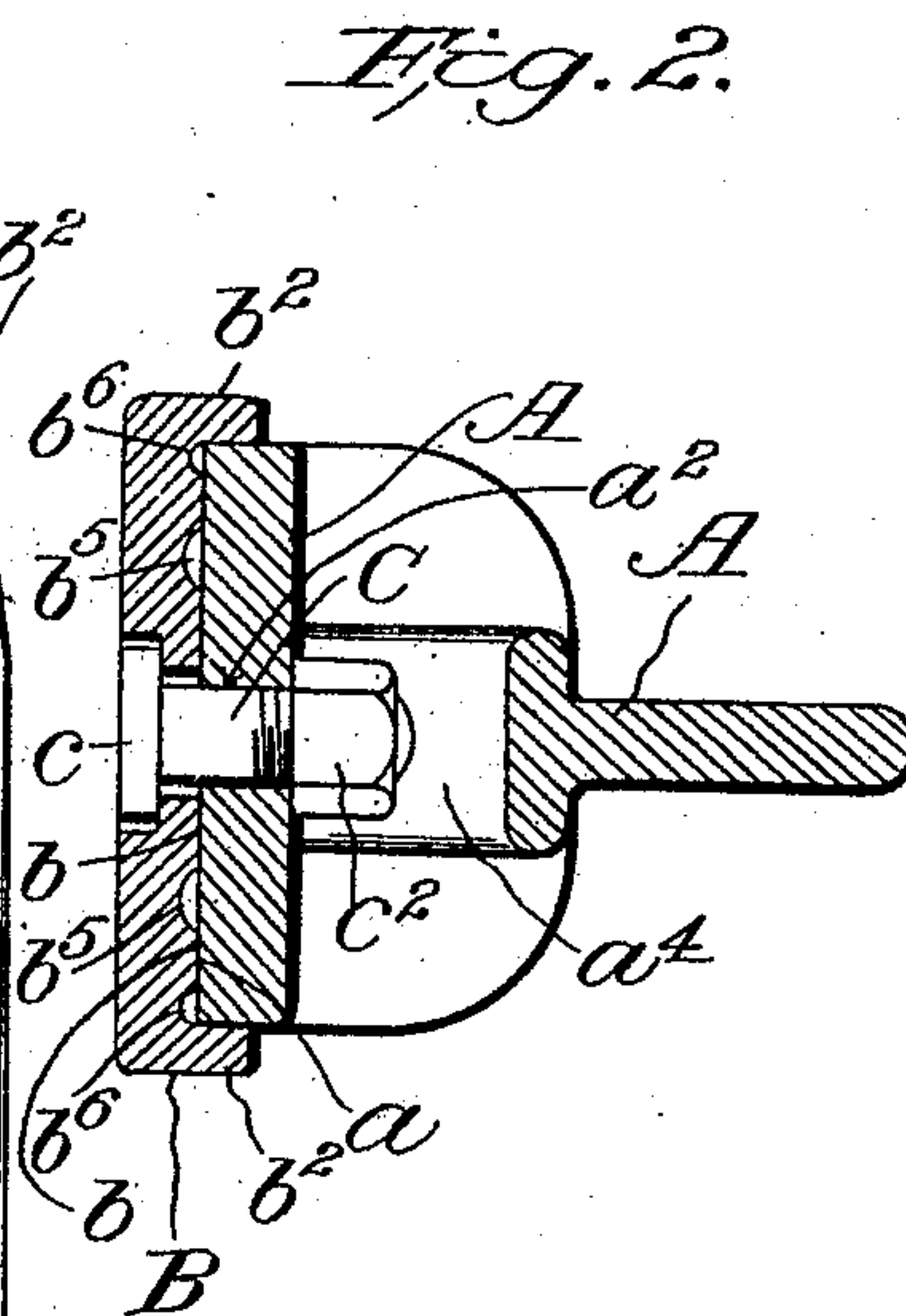
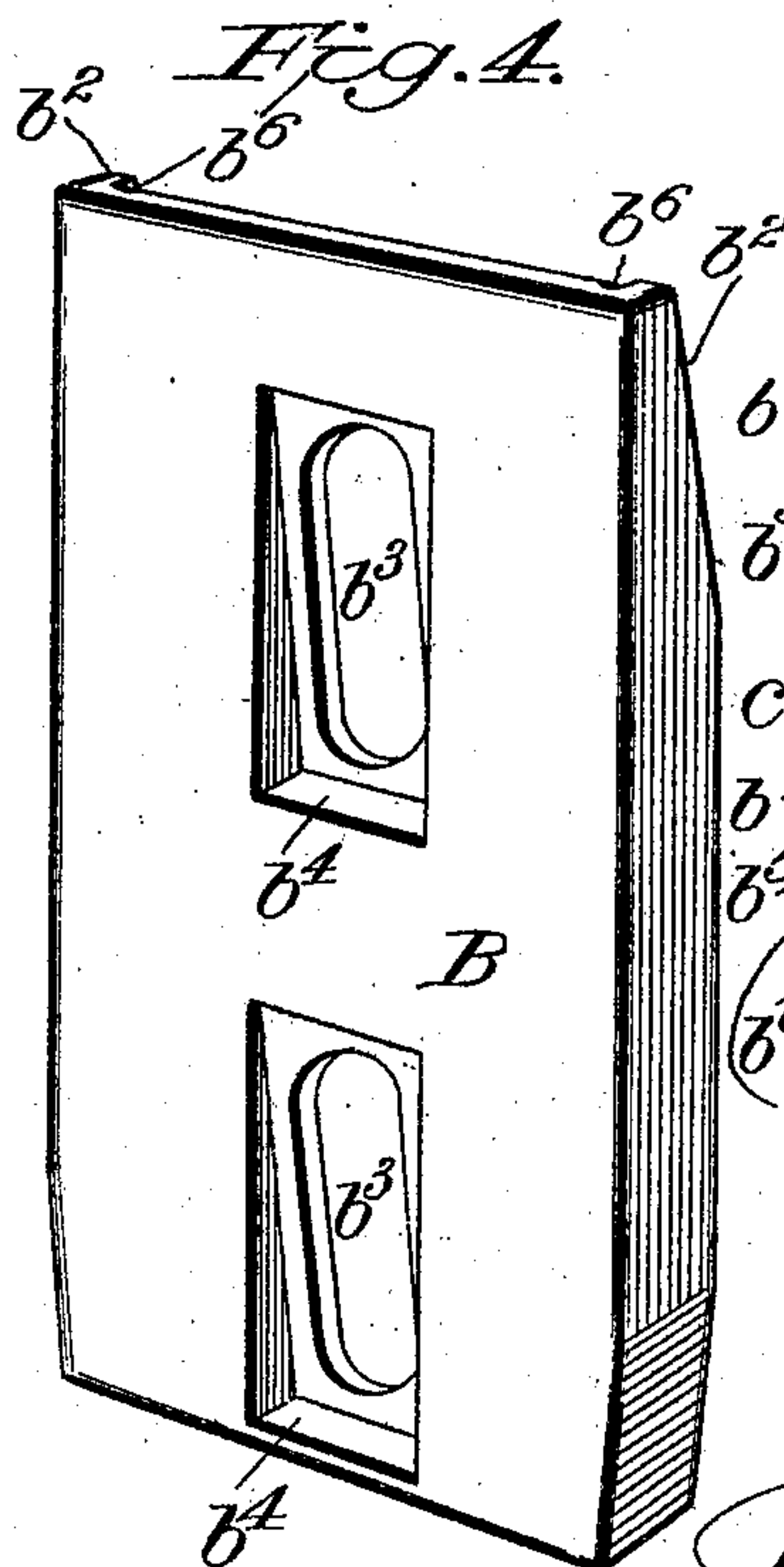
APPLICATION FILED AUG. 31, 1905.

3 SHEETS—SHEET 1.



Witnesses

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No. 806,022.

PATENTED NOV. 28, 1905.

J. TAYLOR.
CAR TRUCK.

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3 SHEETS—SHEET 2.

Fig. 5.

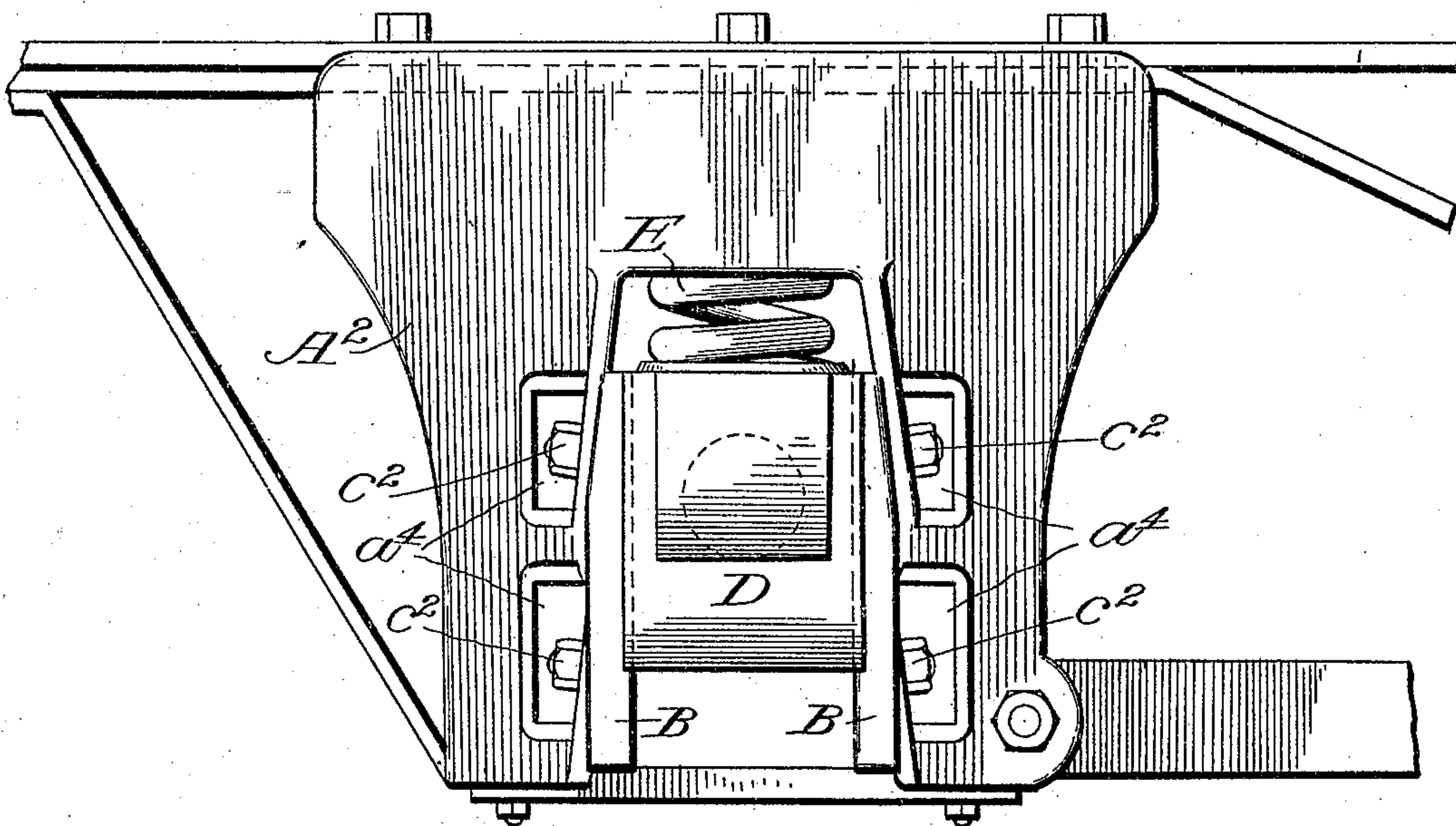


Fig. 6.

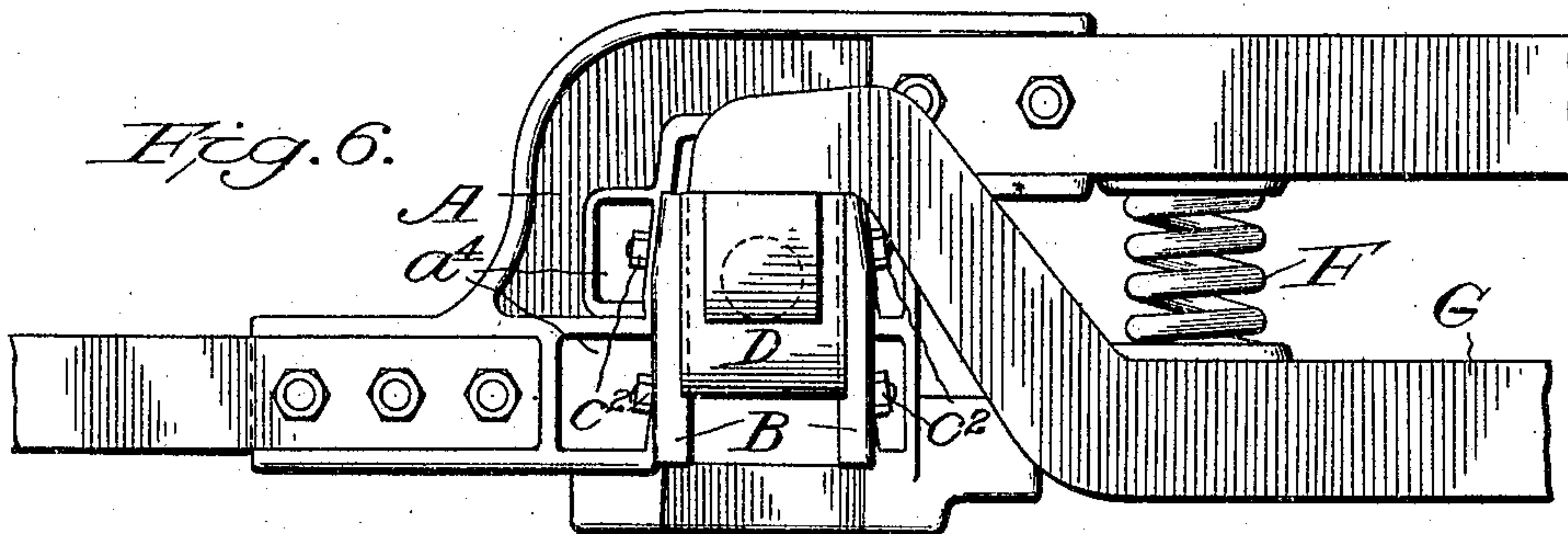
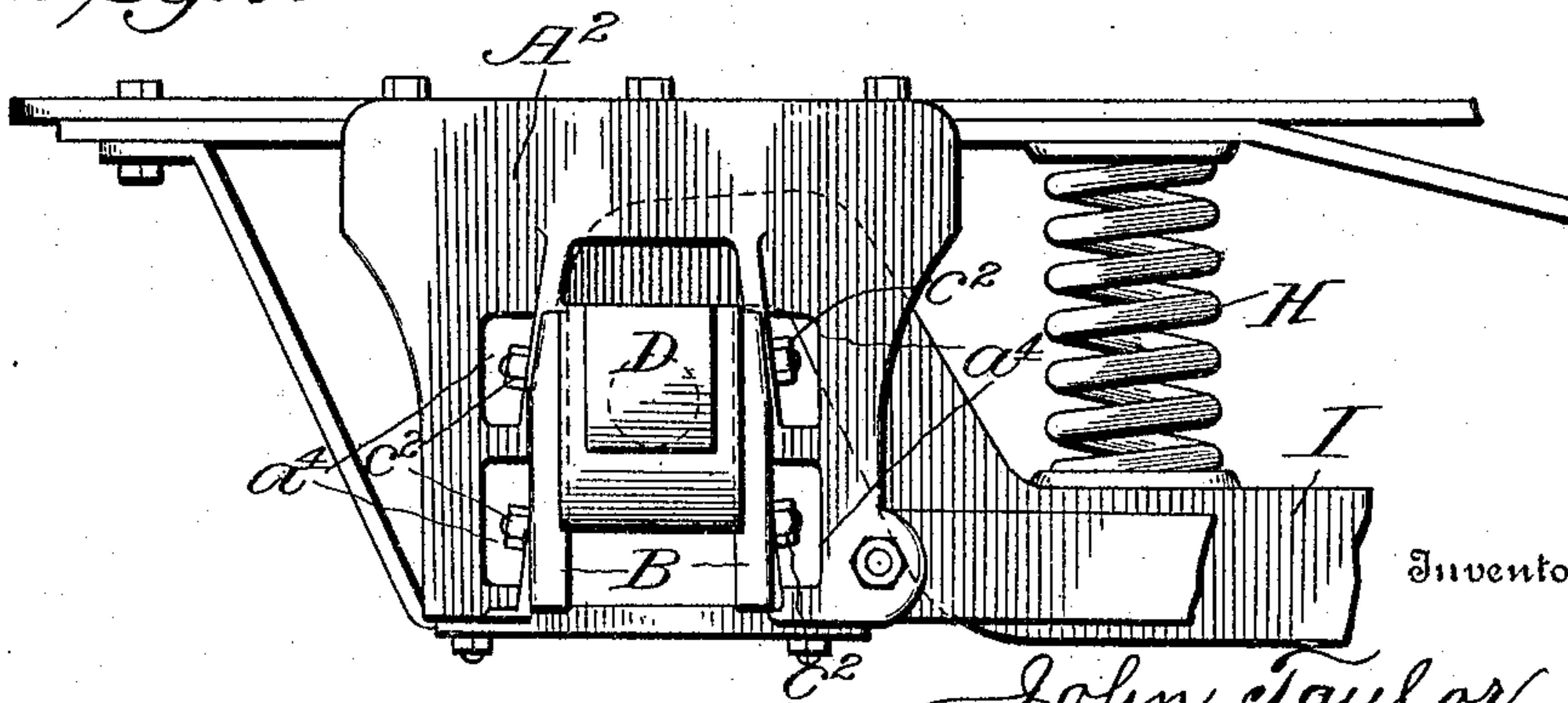


Fig. 7.



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3 SHEETS—SHEET 3.

Fig. 8.

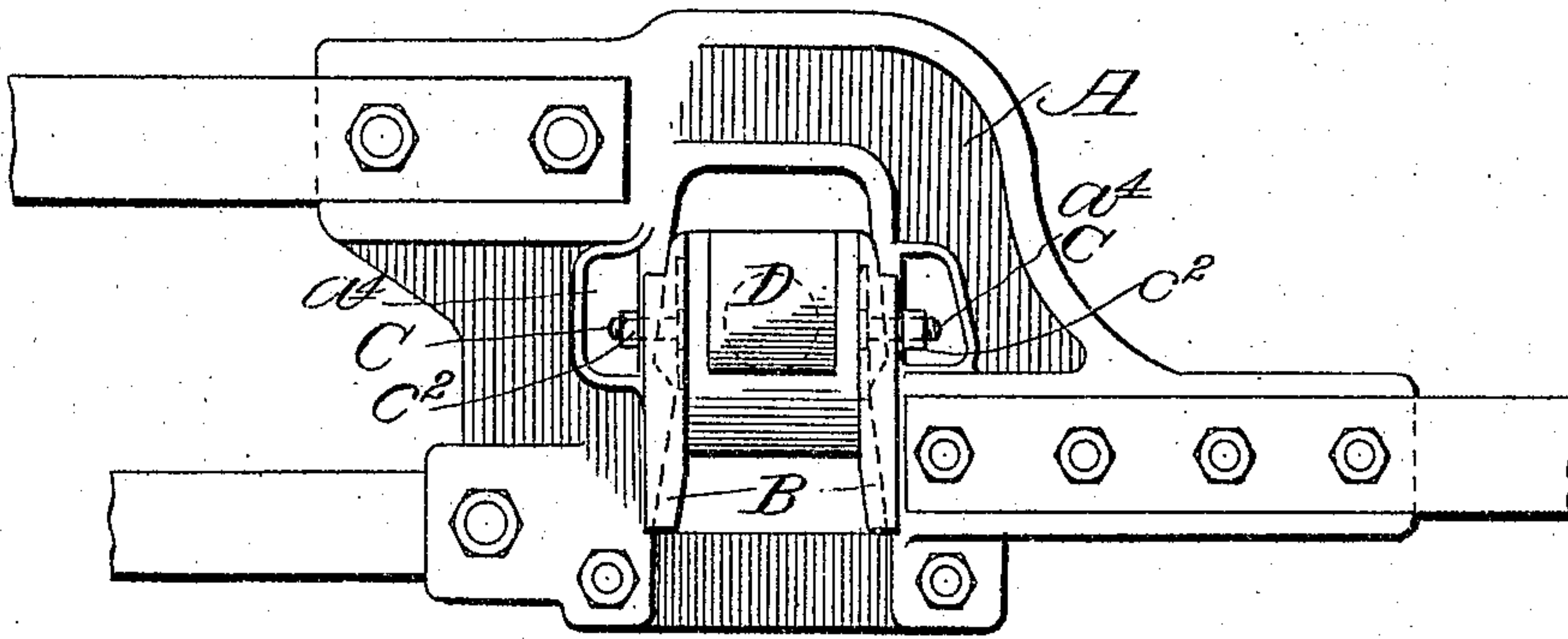


Fig. 9

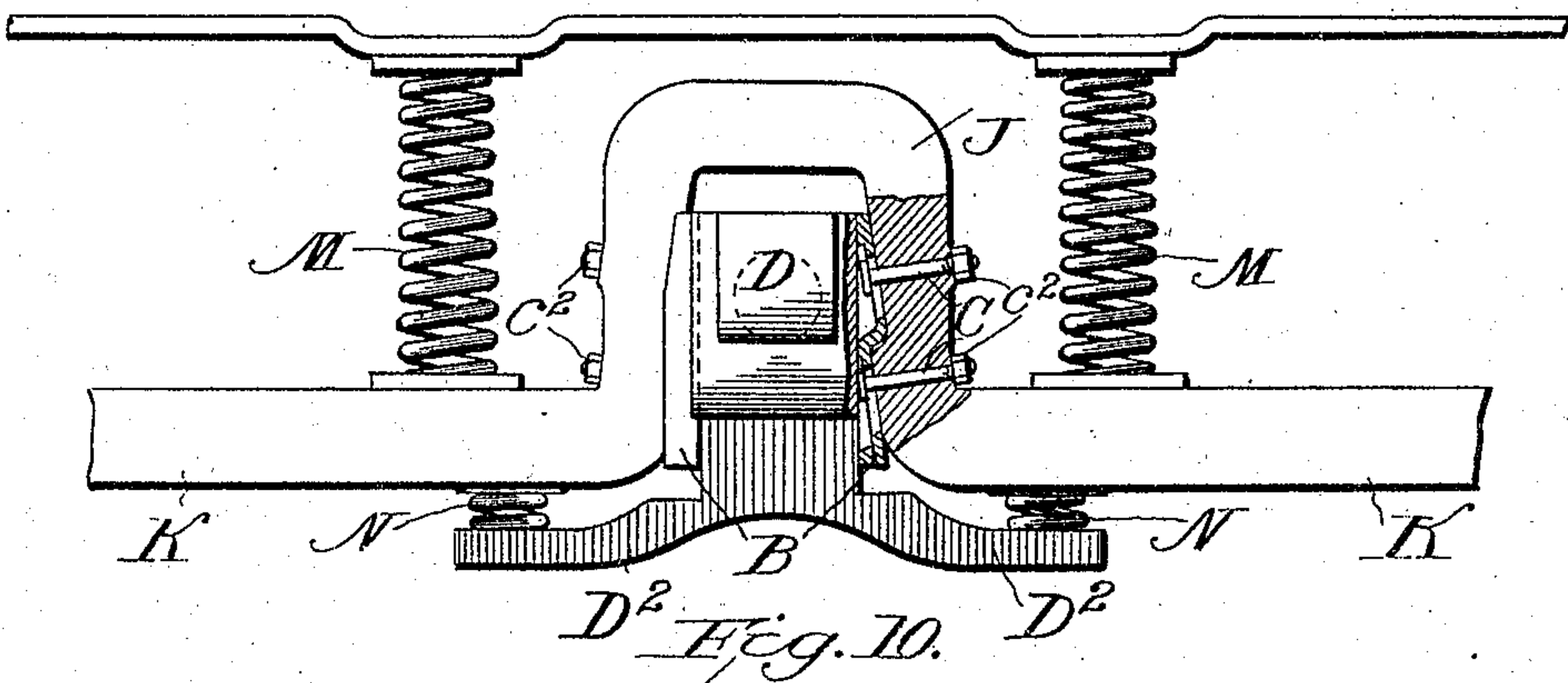
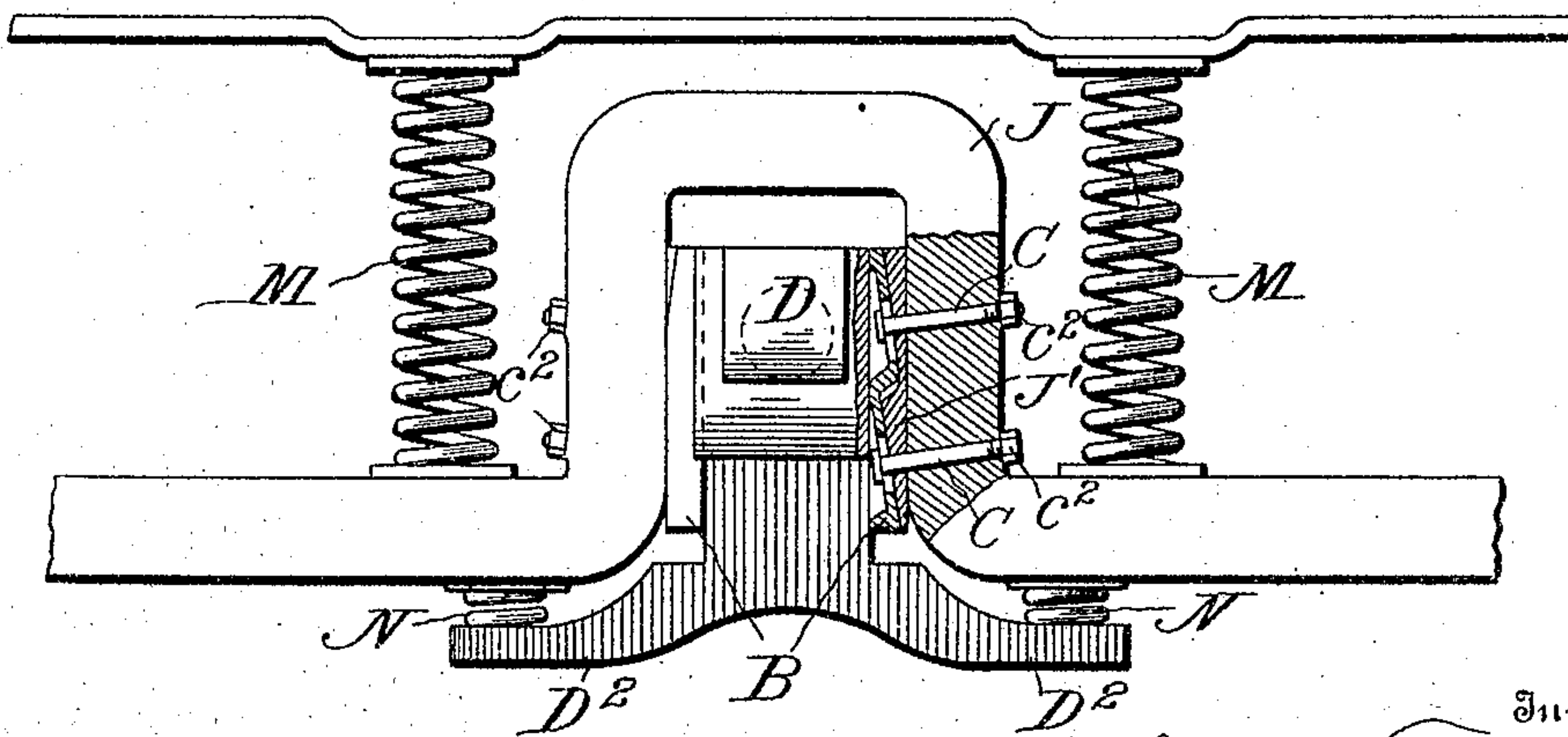


Fig. 10.



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UNITED STATES PATENT OFFICE.

JOHN TAYLOR, OF TROY, NEW YORK, ASSIGNOR TO TAYLOR ELECTRIC TRUCK COMPANY, OF TROY, NEW YORK.

CAR-TRUCK

No. 806,022.

Specification of Letters Patent.

Patented Nov. 28, 1905.

Application filed August 31, 1905. Serial No. 276,564.

To all whom it may concern:

Be it known that I, JOHN TAYLOR, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Car-Trucks; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to car-trucks, and in particular to means for taking up the slack or wear between the sides of the car-axle journal-boxes and the opposed faces of the jaws of the pedestals of the truck-frame; and its object is to provide vertically-adjustable wear-take-up plates between the jaws and pedestals, which plates can be adjusted so as to compensate for the wear between the journal-boxes and pedestal-jaws. In the preferred form of the invention the wear-take-up plates are preferably provided with double inclines or wedge surfaces on their outer faces, and the inner faces of the jaws of the pedestals are provided with similar but opposed inclines or wedge surfaces, and the plates are bolted to the inner faces of the jaws of the pedestals or axle-box housings, so that by simply loosening the bolts and slightly raising the plates they will move inward against the sides of the journal-box and take up or compensate for all wear or lost motion on the sides thereof, while leaving the journal-box free to move vertically in the pedestal and permitting the necessary free action of the springs by which the truck-frames are supported on the journal-boxes.

In ordinary service considerable lateral pressure is exerted at times between the journal-box and the pedestal-jaws. Where electric motors are used, the rotation of the motors, particularly in starting the car, tends to force the journal-boxes hard against the jaws of the pedestals at one side, and the up-and-down motion of the truck, caused by the action of the car-spring, produces considerable friction and wear between the journal-boxes and jaws. Similar actions occur when the brakes are applied, the pressure of the brake-shoes on the wheels forcing the axles hard in the opposite direction from the pressure of the brake-shoes and causing the journal-boxes to rub severely against the jaws of the pedestals. This wear in electric-car service occurs about equally on both sides of the journal-

boxes. Therefore it is preferable to provide the adjustable wear-take-up plates on both sides of the boxes, so that by adjusting each plate slightly the centers of the journals can be kept absolutely true in the truck-frame.

Another advantage of my adjustable wear-take-up plates with double inclines or wedge surfaces is that it enables me to obtain considerable lateral adjustment of the plates for comparatively slight vertical movements thereof, which is most essential in "low-down" trucks such as are commonly employed on street-railways.

The securing-bolts for the wear-take-up plates are arranged at right angles to the wedge surfaces, so that they will hold the plates accurately and positively, and as the bolts are oblique to the line of frictional contact between the journal-box and plates they are less liable to be disarranged by the rubbing action between said parts.

In the accompanying drawings I have illustrated the invention as applied to several of the principal types of electric street-railway trucks, for which use it is more particularly adapted; but I do not restrict myself to any particular kind or construction of truck or pedestal, as the invention is applicable to many forms of railroad-trucks and can also be applied to locomotive-trucks for adjusting the driving-wheel boxes.

In said drawings, Figure 1 is a detail side elevation, partly in vertical section, of an electric street-railway motor-truck equipped with my improved wear-take-up plates. Fig. 2 is a detail transverse section on line 2 2, Fig. 1, enlarged. Fig. 3 is an inner face view, and Fig. 4 an outer face view, of one of the wear-take-up plates detached. Figs. 5, 6, and 7 are detail views showing the wear-take-up plates attached to different types of truck-pedestals. Fig. 8 is a part side elevation and part section showing a slight modification of the wear-take-up plates. Fig. 9 is a detail elevation showing the wear-take-up plates attached to another form of trucks. Fig. 10 is a similar view, partly in section, showing a slight modification.

In Fig. 1 the pedestal has its opposite jaws A provided with two beveled surfaces $a a$ on their inner faces, these surfaces inclining downwardly from the top of the pedestal. Through these inclined surfaces are lateral openings a^2 for the passage of the bolts C,

which secure the wear-take-up plates B to the pedestals. Each wear-take-up plate has two beveled or wedge-shaped surfaces $b\ b$ on its inner face opposed to and adapted to fit against the beveled surfaces $a\ a$ on the pedestal-jaws. The plates, moreover, are provided with side flanges b^2 , which lap the front and rear edges of the jaws, as shown, and prevent transverse displacement of the plates and also protect the wedge surfaces from mud and dirt. Each plate, moreover, has a vertical slot b^3 in each of its wedge portions, through which slots pass the shanks of the bolts C, the heads c of said bolts being engaged in recesses b^4 in the outer faces of the plates, so as to be kept from contact with the sides of the journal-box D and also kept from rotating or turning. The bolts are secured by nuts c^2 on their outer ends, which nuts are protected by recesses or openings a^4 in the pedestal-jaws, as shown, and through which openings the nuts are readily accessible for tightening or loosening the bolts.

The journal-box D is of ordinary construction and has vertical parallel sides which fit closely but easily against the opposed faces of the wear-take-up plates B B, as shown, so as to permit the pedestal to move up and down vertically relatively to the journal-box, while not having any lateral play between said plates. In trucks having pedestals like those shown in Fig. 1 the truck-frame and pedestals are supported on the journal-boxes by means of stout helical springs E, interposed between the top of the journal-box and upper member of pedestal, as shown, the pedestal being recessed or pocketed to receive the spring, as is well known.

The wear-take-up plates may have grooves $b^5\ b^6$ in their wedge surfaces to insure a solid square fit or contact between the wedge faces of the plates and jaws.

It will be noted that the bases of the recesses b^4 in the wear-take-up plates and the sides of the openings a^4 , against which the nuts c^2 bear, are parallel with the inclined opposed faces of the wear-take-up plates and pedestal-jaws and that the bolt-openings are at right angles to such surfaces, so that the square heads of the bolts and of the nuts are parallel, and it is impossible for the bolts to shift or work loose.

Fig. 5 shows the wear-take-up plates B attached to the regular or ordinary pedestal A^2 of street-railway trucks, which do not require any specific explanation, but will be readily understood by those familiar with the art. In this case the truck-springs are arranged between the top of the pedestal and the axle journal-box substantially as in Fig. 1.

Fig. 6 shows the same type of pedestal as in Fig. 1, with the wear-take-up plates B attached thereto; but the truck-springs F are removed from above the journal-box and are placed on double equalizing-bars G, said

equalizing-bars being arranged one directly outside the truck-frame and the other inside the frame and supported at their ends on the journal-box D, as shown, forming what is known as a "twin" or "double" equalizing-bar truck. The construction of this truck is not claimed herein, and therefore does not require more specific description.

Fig. 7 shows the wear-take-up plates attached to the same style of pedestal as in Fig. 5; but in this case the spring H is removed from between journal-box and pedestal and is mounted on a single equalizing-bar I, that is supported on the journal-box, as shown, and this truck is commonly known as a "single" equalizing-bar style of truck.

Fig. 8 shows a pedestal, as in Fig. 1; but in this case the wear-take-up plates B are shown as fastened by but one bolt. This is an efficient fastening; but I prefer to use double bolts.

Figs. 9 and 10 show the wear-take-up plates B applied to a solid forged frame-truck, the pedestal J being formed or wrought practically integral with the side members K of the frame. In this style of truck the car-body is supported on springs M, mounted on the truck-frame, and the truck-frame is supported on springs N N, mounted on wings or hangers D^2 , attached to the journal-box, as shown.

In Fig. 10 instead of forming the wedge surfaces on the inner faces of the jaws of the pedestals they are shown as formed on auxiliary pieces J' , which are interposed between the wear-take-up plates B and the pedestal-jaws and may be secured in place by the same fastening-bolts C that retain the wear-take-up plates in position.

The various applications of the invention above described and shown in the drawings are merely indicative of its general applicability and not restrictive thereof nor intended to limit its uses.

Obviously, whether the wedge surfaces be formed on the pedestal-jaws, as in Figs. 1 to 9, or on a plate attached to said jaws, as in Fig. 10, the invention is embodied, the formation on the jaws or on a plate attached to the jaws being merely a matter of mechanical skill and preference on the part of the constructor, and therefore the broader claims are not restricted to either specific construction. The plates will of course be preferable in applying the invention to trucks or pedestals already made as more economical than attempting to cut wedge surfaces on the jaws, and in wrought pedestals the plates would be probably preferable. On cast or malleable pedestals the wedge-surfaces can be more economically formed on the jaws.

Having thus described my invention, what I claim as new is—

1. In combination with a pedestal, and a journal-box; of a wear-take-up plate interposed between the side of the journal-box and

the pedestal, and having a plurality of inclined or wedge surfaces engaging opposed wedge surfaces on the pedestal, substantially as described.

2. In combination with a truck-pedestal and an axle journal-box guided therein; of a vertically-adjustable wear-take-up plate interposed between the journal-box and the pedestal, said plate having inclined or wedge surfaces engaging similar opposed surfaces on the pedestal, and a securing-bolt transfixing the plate and pedestal-jaw, substantially as described.

3. In combination with a truck-pedestal and an axle journal-box; of a vertically-adjustable wear-take-up plate interposed between the side of the journal-box and the pedestal-jaw, and having inclined or wedge surfaces engaging similar opposed surfaces on the jaw, and also having side flanges engaging the edges of the jaws to prevent lateral displacement of the plate.

4. In combination with a truck-pedestal and an axle journal-box guided therein; of a vertically-adjustable wear-take-up plate interposed between the side of the journal-box and the pedestal-jaw, and having inclined or wedge surfaces engaging similar opposed surfaces on the jaw, and also provided with elongated slots and countersunk recesses around the slots, and bolts transfixing the jaw and engaging said slots and having their heads seated in said recesses, substantially as described.

5. In combination with a truck-pedestal, and a journal-box guided in said pedestal; of a wear-take-up plate interposed between the side of the journal-box and the pedestal-jaw, and having a plurality of wedge or inclined surfaces on its inner face engaging opposed wedge-surfaces on the jaw, and a plurality of securing-bolts transfixing the jaw and plate and arranged at right angles to the wedge surfaces, substantially as described.

6. In combination with a pedestal and a journal-box; of wear-take-up plates interposed between the sides of the journal-box and the jaws of the pedestal, said plates having a plurality of inclined or wedge surfaces engaging opposed wedge surfaces upon the pedestal-jaws, substantially as described.

7. In combination with a truck-pedestal and an axle journal-box guided therein; of vertically-adjustable wear-take-up plates interposed between the opposite sides of the journal-box and the adjacent faces of the pedestal-jaws, said plates having inclined or wedge surfaces on their inner faces engaging similarly inclined or beveled surfaces on the pedestal-jaws, and transversely-arranged bolts transfixing the plates and jaws for securing the plates in position.

8. In combination with a truck-pedestal and an axle journal-box; of vertically-adjustable wear-take-up plates interposed between the

opposite sides of the journal-box and the pedestal-jaws, and having inclined or wedge surfaces engaging opposed inclined or wedge surfaces on the jaws, and side flanges engaging the edges of the jaws to prevent lateral displacement of the plates, and securing-bolts transfixing the plates and jaws, substantially as described.

9. In combination with a truck-pedestal, an axle journal-box guided therein, and vertically-adjustable wear-take-up plates interposed between the sides of the journal-box and the pedestal-jaws, and having inclined or beveled faces engaging similar opposed wedge surfaces on the jaws and also having elongated slots and recesses around the slots in the outer faces of the plates, with bolts transfixing the jaws and passing through said slots and having their heads seated in the recesses, substantially as described.

10. In combination with a truck-pedestal, a journal-box guided in said pedestal, and wear-take-up plates interposed between the sides of the journal-box and the pedestal-jaws, and having a plurality of wedge or inclined surfaces on their inner faces engaging opposed inclined or wedge surfaces on the jaws; with a plurality of securing-bolts transfixing the jaws and plates, and having their heads confined in recesses in the plates, said bolts being arranged at right angles to the inclines, substantially as described.

11. A wear-take-up plate having a plurality of inclined or wedge-shaped surfaces on its inner face, and slots for engagement of securing-bolts.

12. A wear-take-up plate for truck journal-boxes, having a plurality of inclined or wedge-shaped surfaces on its inner face, side flanges, and recessed slots, substantially as described.

13. A wear-take-up plate for truck journal-boxes, having a plurality of inclined or wedge-shaped surfaces on its inner face, side flanges, and recessed slots, said wedge surfaces being longitudinally grooved, substantially as described.

14. In combination with a journal-box, a truck-pedestal embracing the box and provided with a plurality of inclined or wedge surfaces on the inner faces of the jaws adjacent the journal-box, and wear-take-up plates interposed between the journal-box and the jaws, having beveled or wedge surfaces opposite and engaging the wedge surfaces on the jaws; of securing-bolts transfixing the jaws and plates, and having their heads confined in recesses in the inner faces of the plates, and nuts on the outer ends of the bolts, substantially as described.

15. In combination with a journal-box, a truck-pedestal embracing the box and provided with a plurality of inclined or wedge surfaces on the inner faces of the jaws adjacent the journal-box, and wear-take-up plates

interposed between the journal-box and the jaws, having beveled or wedge surfaces opposite and engaging the wedge surfaces on the jaws, and lateral side flanges engaging the
5 sides of the jaws, and longitudinal slots; of securing-bolts transfixing the jaws and plates, and having their heads confined in recesses in the inner faces of the plates, and nuts on the outer ends of the bolts, said bolts being ar-

ranged at right angles to the inclined or wedge 10 surfaces, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN TAYLOR.

In presence of—

RAYMOND HENRY MATTOON,
JOHN A. LAVENDER.