

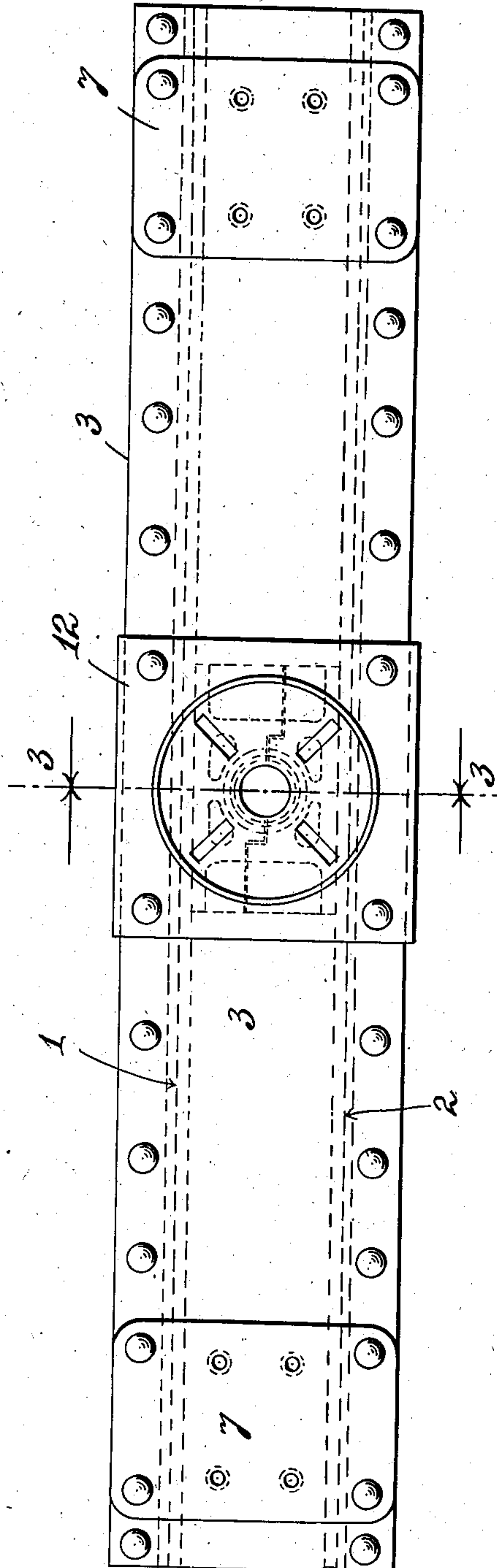
No. 816,010.

PATENTED MAR. 27, 1906.

J. M. GOODWIN.
TRUCK BOLSTER.
APPLICATION FILED JAN. 4, 1906.

5 SHEETS—SHEET 1.

Fig. 1.



Attest:
Edgeworth Krum
H. E. Kimball

Inventor:
John M. Goodwin
by *M. W. Jones* Attys.

No. 816,010.

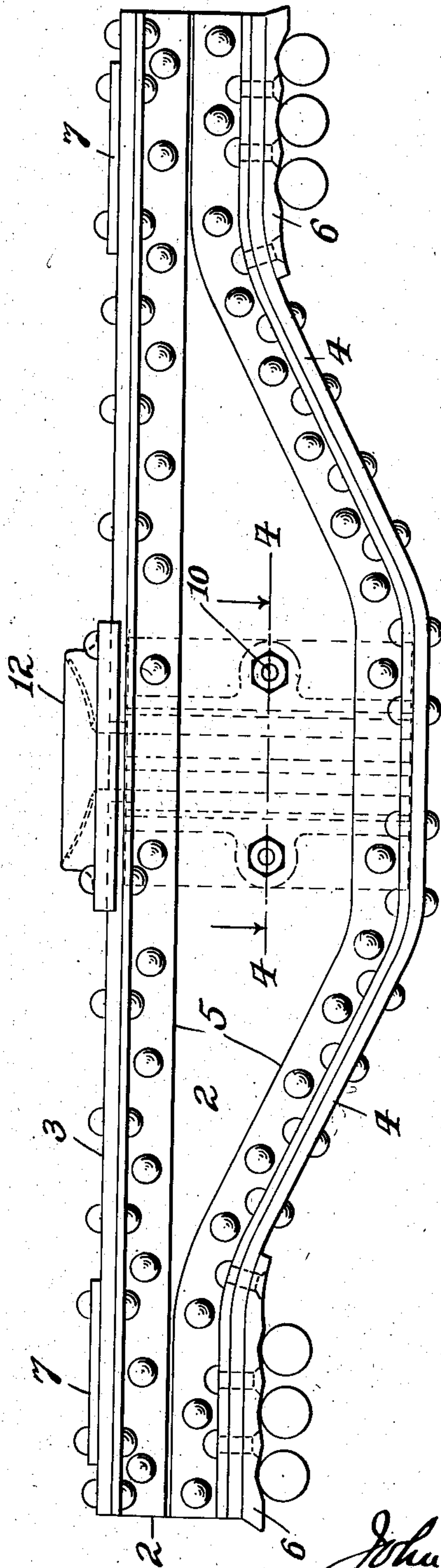
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5 SHEETS—SHEET 2.

Fig. 2.



Attest:
Edgeworth & Co.
H. L. Moore

Inventor:
John M. Goodwin
by *W. H. Moore, Jr.* Attys.

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5 SHEETS—SHEET 3.

Fig. 4.

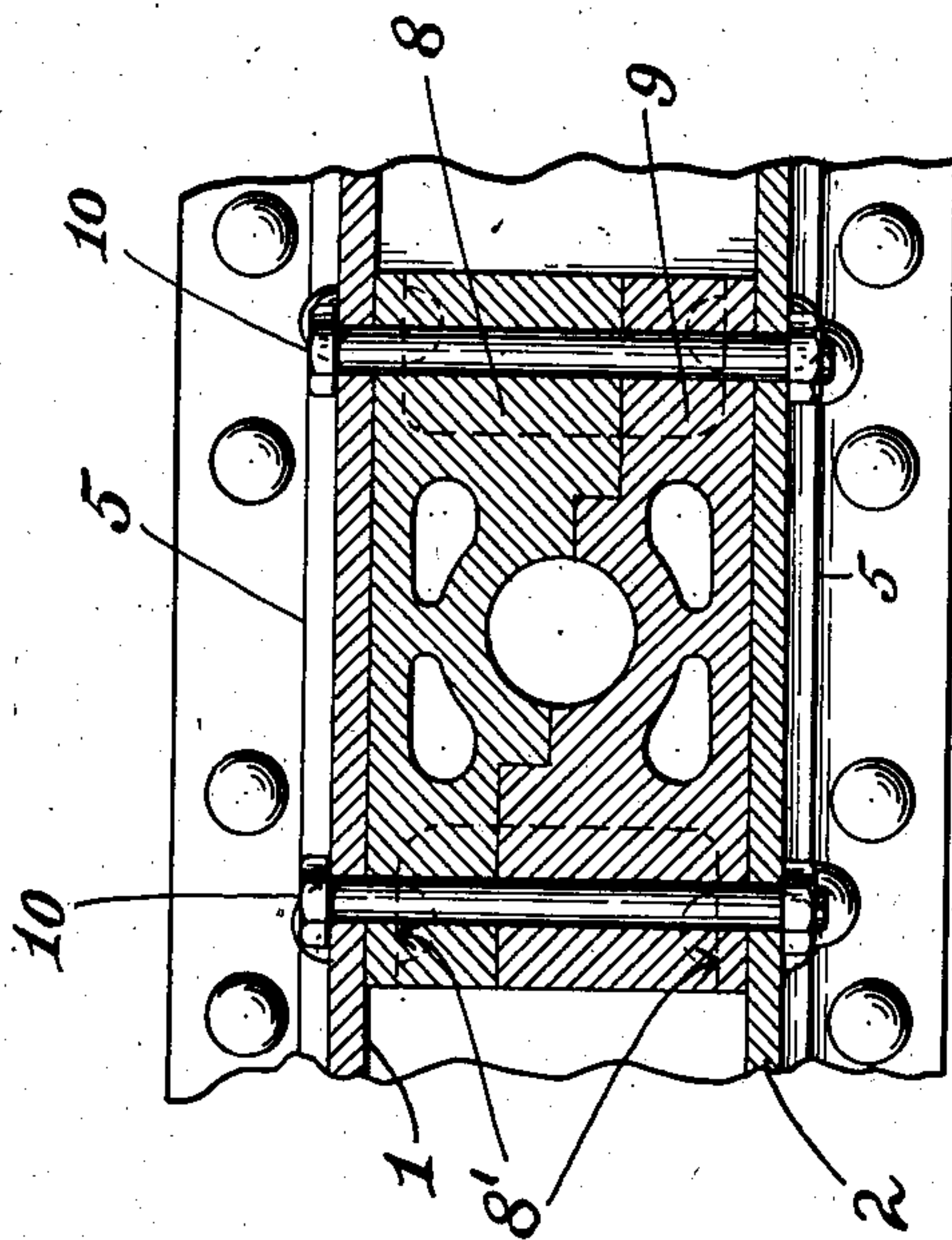
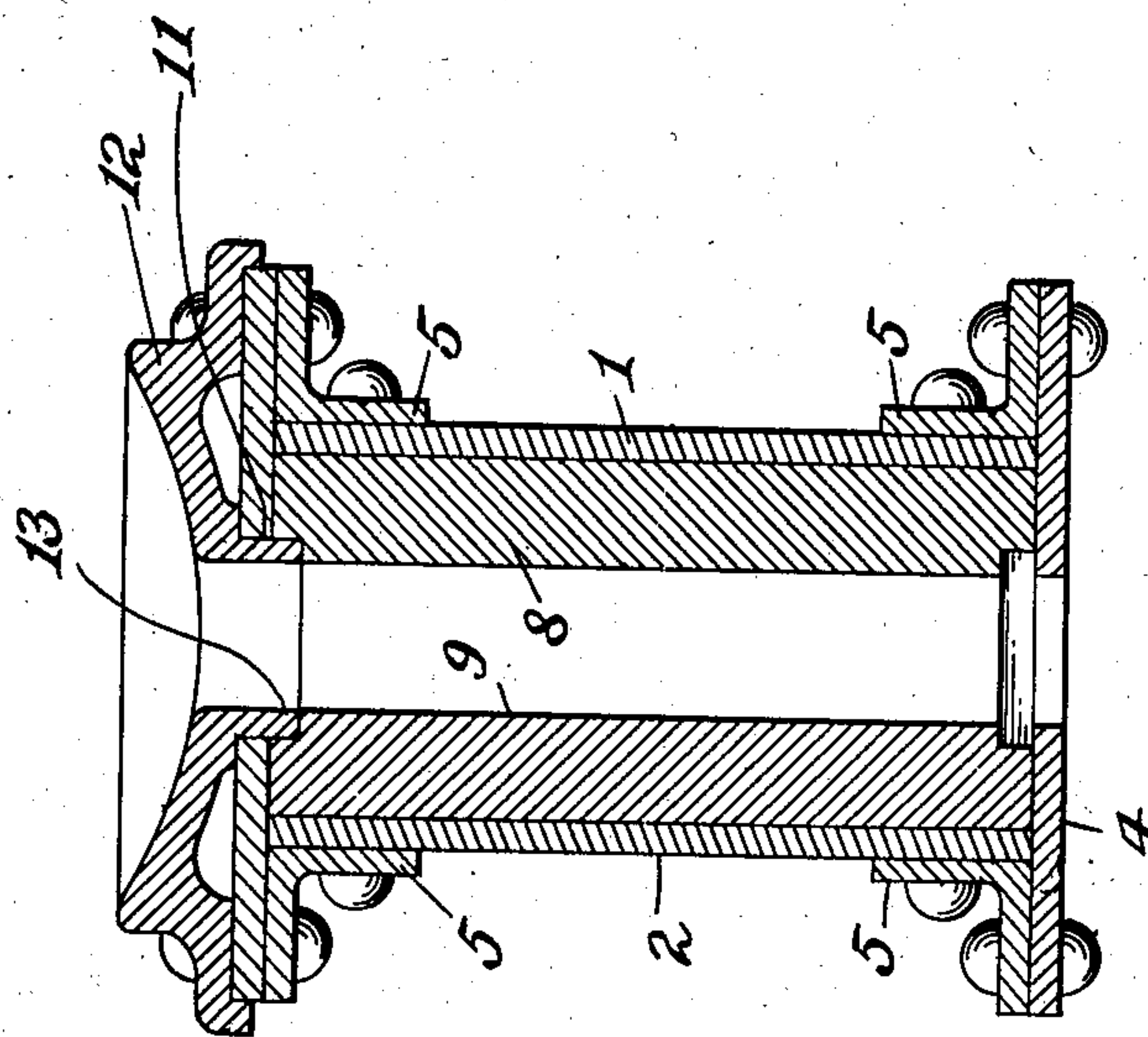


Fig. 3.



Attest:
Edgworth Payne
H. S. Moore

John M. Goodwin Inventor:
by *H. S. Moore* Attys.

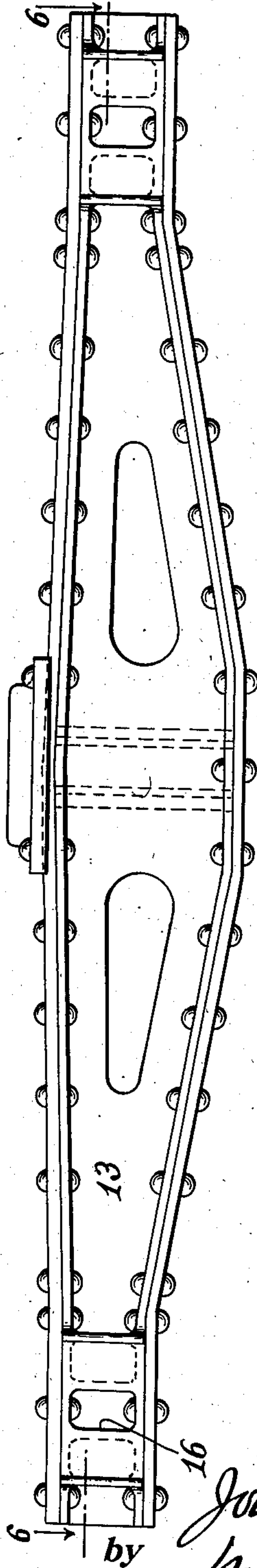
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TRUCK BOLSTER.
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5 SHEETS—SHEET 4.

Fig. 5.



Attest:
Edgeworth
H. G. Kimball

Inventor:
John M. Goodwin
by *Wm. J. Kimball* attys.

No. 816,010.

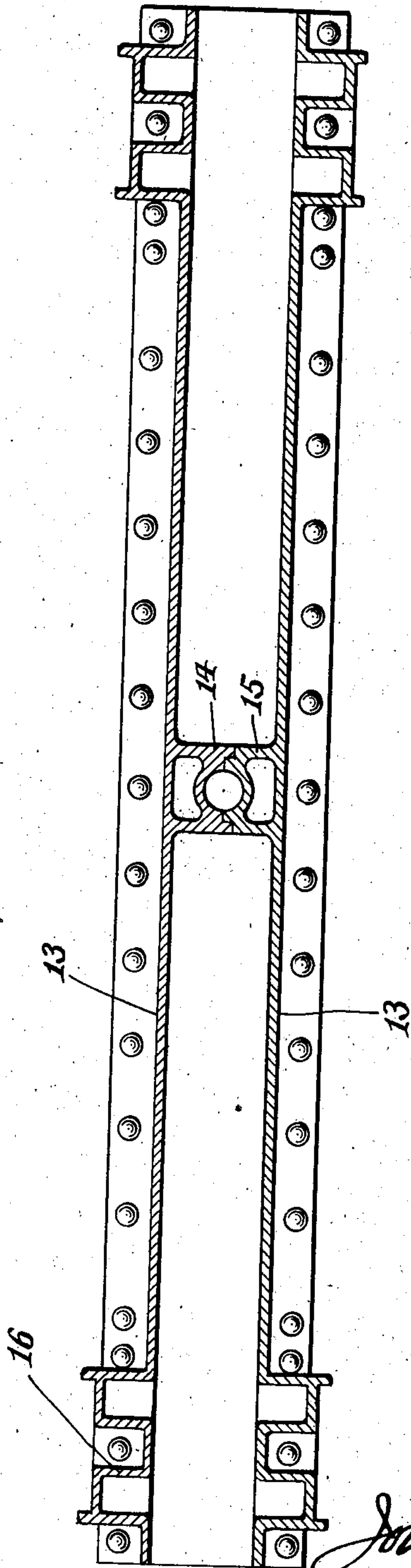
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J. M. GOODWIN.
TRUCK BOLSTER.

APPLICATION FILED JAN. 4, 1906.

5 SHEETS—SHEET 5.

Fig. 6.



Attest:
Edgeworth

H. B. Simon

Inventor:
John M. Goodwin
by *W. H. Simon* Attys.

UNITED STATES PATENT OFFICE.

JOHN M. GOODWIN, OF MOUNT VERNON, NEW YORK.

TRUCK-BOLSTER.

No. 816,010.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed January 4, 1906. Serial No. 294,522.

To all whom it may concern:

Be it known that I, JOHN M. GOODWIN, a citizen of the United States, and a resident of the city of Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Truck-Bolsters, of which the following, taken in conjunction with the accompanying drawings, is a full, true, and concise specification.

My invention relates to truck-bolsters, and more particularly to the bolsters of railway-trucks which support the load at a central point and rest by their ends upon the spring motion or side frames.

The object of the invention is to provide a bolster of light weight and simple construction which will properly transmit the weight of the vehicle to the vehicle-wheels without distortion or appreciable flexure; and the invention involves the several features of construction and arrangement of parts, as will be hereinafter fully described, and more particularly pointed out in the appended claims.

Referring to the drawings, which form a part of this specification, Figure 1 is a top plan view of a bolster embodying my invention. Fig. 2 is a side elevation thereof. Fig. 3 is a vertical transverse section on line 3 3 of Fig. 1. Fig. 4 is a horizontal section on line 4 4 of Fig. 2. Fig. 5 is a side elevation of a modified form, and Fig. 6 a horizontal section on line 6 6 of Fig. 5.

Referring first to Figs. 1 to 4, the bolster is formed of two longitudinal side sections 1 and 2, which in this form of the invention are formed of heavy sheet metal and provided with lateral flanges at the top and bottom margins thereof. The two side sections are fastened together at a fixed and preferably uniform distance from each other by means of a top binding-plate 3 and a bottom binding-plate 4, these binding-plates being shaped to conform to the desired contour of the side sections and firmly secured to the margins thereof by means of the angle-irons 5, above referred to. At each end the bottom binding-plate 4 is provided with a bearing-seat 6, suitably fashioned to rest upon the bearings of the side or suspension frames of the truck, and the top binding-plate is also provided with a cap-plate 7 vertically above the said bearing-seat, these parts being riveted or otherwise secured, respectively, to the top and bottom plates, as clearly shown in the drawings. The hollow box-like beam thus

formed is reinforced at its central portion, where the pressure of the load is intended to be applied to it, by means of a filler-block or rigid part substantially filling the entire central portion of its interior or having bearing engagement with the walls thereof. This filler-block is susceptible of different structural formations; but, as shown in Figs. 1 to 4, it is comprised of two projections 8 and 9, respectively, formed on or secured to the opposite interior walls of said beam or bolster, the two projections together constituting the said filler-block or stiffening means. As shown in Figs. 1 to 4, the projection 8 is made separately and secured to the side section 1, while projection 9 is secured to the side section 2, and the proximate faces of said projections are formed with complementary contours, so that the two will interlock or rabbet together. The two projections are equal in height to the height of the side sections, so that they form post members between the top and bottom binding-plates, and the lateral bolts 10 pass through the side sections and both projections to secure them in place and aid in holding the side sections firmly together; but the projections may be provided with flanges, as shown at 8', by means of which they may also be secured to their side sections. One or the other of the projections may be recessed to receive the swivel or king-pin of the truck; but, as shown herein, the king-pin aperture is provided by forming a vertical recess or groove in each of said members, and the said recesses when the projections are put together form a vertical cylindrical king-pin aperture. The top binding-plate 3 is apertured at 11 in registry with the said king-pin aperture, and a bearing-plate 12, provided with an annular depending boss 13, is secured to said top plate, with its said boss protruding through the aperture 11 and resting against the bottom of an annular rabbet-slot in the upper end of the filler block. The bearing-plate 12 is firmly secured to the top binding-plate and has its upper surface concaved to support the convex protuberance from the car-body bolster, which surrounds the king-pin. (Not shown.) For economizing metal and reducing weight the projections or members 8 and 9 of the filler-block may be cored out, as indicated in Fig. 4.

Referring now to Figs. 5 and 6, the invention is exhibited in a modified form in which the bolster is still hollow—that is to say,

formed of upright side sections 13, fastened together at a distance from each other by top and bottom binding-plates; but the said side sections in this modification are respectively
 5 cast or forged integrally with the inward or interior projections 14 and 15, which constitute the filler-block. The said projections interlock by a rabbet connection, and transverse bolts serve to hold them together. Portions of the projections are also cored out for the sake of lightness, as indicated in Fig. 5. In this form of truck the side sections are provided with vertical channels 16 at their ends, which serve as column-guides for the
 15 ends of the bolster in the side frames of the truck.

In both forms of the invention shown it will be observed that the pressure and strain exerted by the king-pin is borne in the first instance by the filler-block and by it transmitted to the body portion of the bolster and also that the said filler-block, in addition to its function of a guide or socket for the king-pin, serves as a strut which converts the top and bottom binding-plates into the top and bottom chords of a truss for withstanding the vertical pressure upon the bearing-plate 12, thereby increasing the rigidity and resistance of the device to the superimposed load.

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

1. A truck-bolster composed of side sections fastened together at a distance from each other, in combination with means filling the space between the central portions of said side sections and provided with an aperture adapted to receive the king-pin.

2. A truck-bolster comprised of longitudinal sections fastened together at a distance from each other and a filling-piece carried by the central part of one of said sections, projecting into the space between the same and provided with an aperture adapted to receive the king-pin.

3. A truck-bolster composed of longitudinal sections fastened together at a distance from each other so as to provide a space between them, in combination with projections mounted on the interior faces of said sections adapted to interlock with each other and providing an aperture to receive the king-pin.

4. A truck-bolster composed of upright side sections, a top and a bottom binding-plate secured respectively to said sections, in combination with projections mounted on the interior faces of said sections adapted to interlock with each other and provide a support for the king-pin.

5. A truck-bolster formed of side sections and binding-plates united together to form a box-like beam, projections on the opposite interior sides of said beam adapted to interlock and provide a strut member between the top and bottom binding-plates.

6. A truck-bolster formed of side sections and binding-plates united together to form a box-like beam, in combination with projections on the opposite interior sides of said beam of suitable vertical dimension to fill the distance between the top and bottom walls thereof, and provided with means for receiving the king-pin.

7. A truck-bolster formed of upright side sections and binding-plates securing the same together with a space between them, in combination with a filler-block secured in the space between said sections and a bearing-plate on the top binding-plate, the said block and bearing-plate being perforated to receive the king-pin.

8. A truck-bolster formed of upright side sections and top and bottom binding-plates, a filler-block secured in the space between said sections and recessed to receive the king-pin, in combination with a bearing-plate on the top binding-plate and an annular boss on said bearing-plate adapted to project through an opening in the top binding-plate and have engagement with said filler-block.

9. A truck-bolster formed of upright side sections fastened together with a space between them, in combination with projections on the interior faces of said side sections formed respectively with complementary rabbet-surfaces adapted to interlock and provided respectively with vertical grooves forming a king-pin aperture.

10. A truck-bolster formed of longitudinal sections fastened together at a distance from each other and provided respectively with interior projections which interlock, said projections together forming an apertured king-pin support, in combination with transverse bolts passing through said projections from the exterior of the sections.

11. A truck-bolster formed of upright side sections and top and bottom binding-plates securing the same together, in combination with column-guides on the ends of said sections and interior interlocking projections at their central portions forming a king-pin support.

12. A truck-bolster formed of upright side sections and top and bottom binding-plates securing the same together, in combination with interior projections formed on the side sections and adapted to fill the space between the top and bottom plates at their central portions, and a bearing-seat on the top binding-plate adapted to receive the pressure of the load and transmit the same to said projections.

In testimony whereof I have signed my name to the specification in the presence of two subscribing witnesses.

JOHN M. GOODWIN.

Witnesses:

H. G. KIMBALL,
G. A. TAYLOR.