

960,532.

A. FRANZ.
TRUCK BEARING.
APPLICATION FILED JAN. 2, 1909.

Patented June 7, 1910.

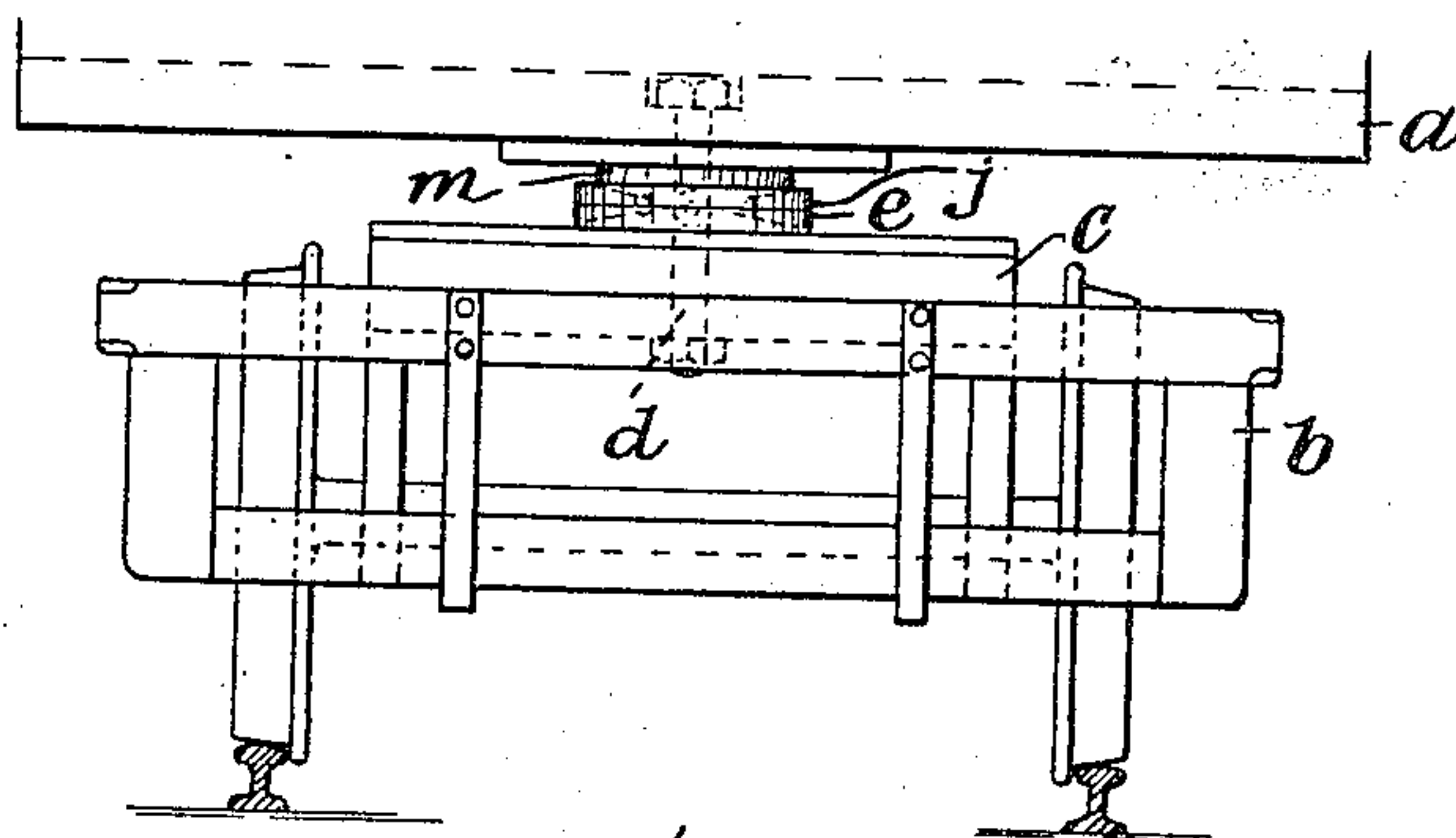


Fig. 1.

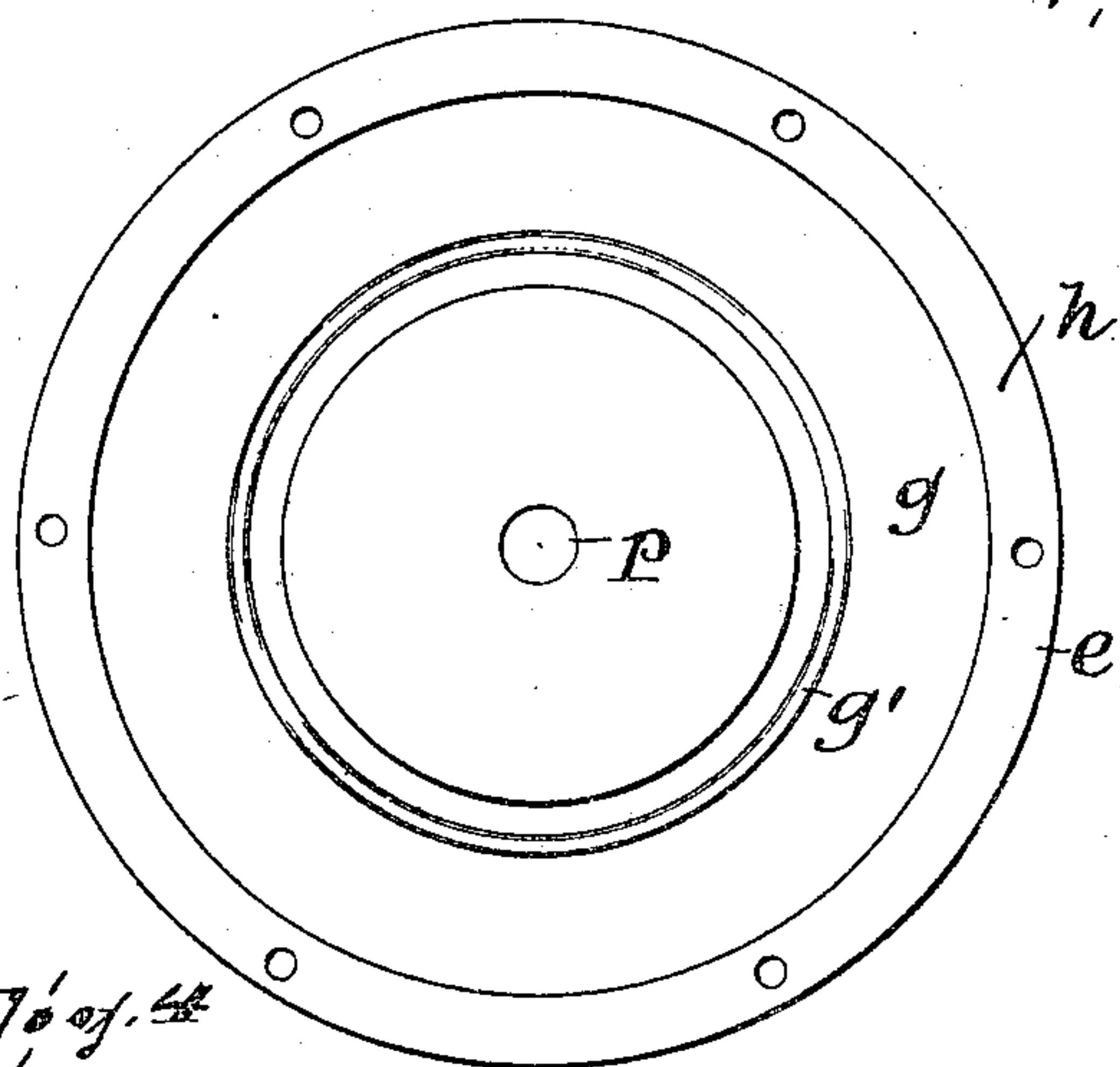


Fig. 4.

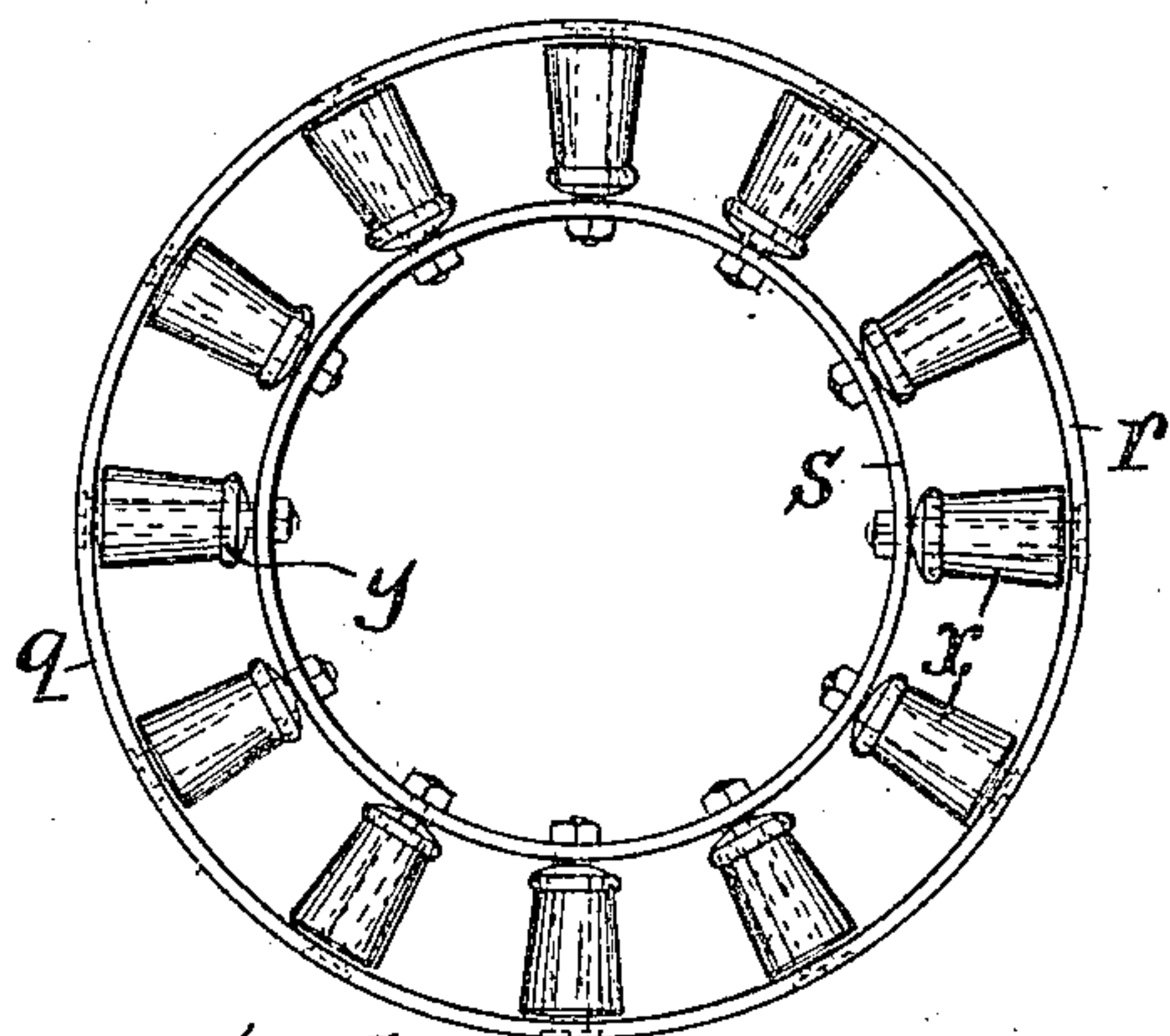


Fig. 3.

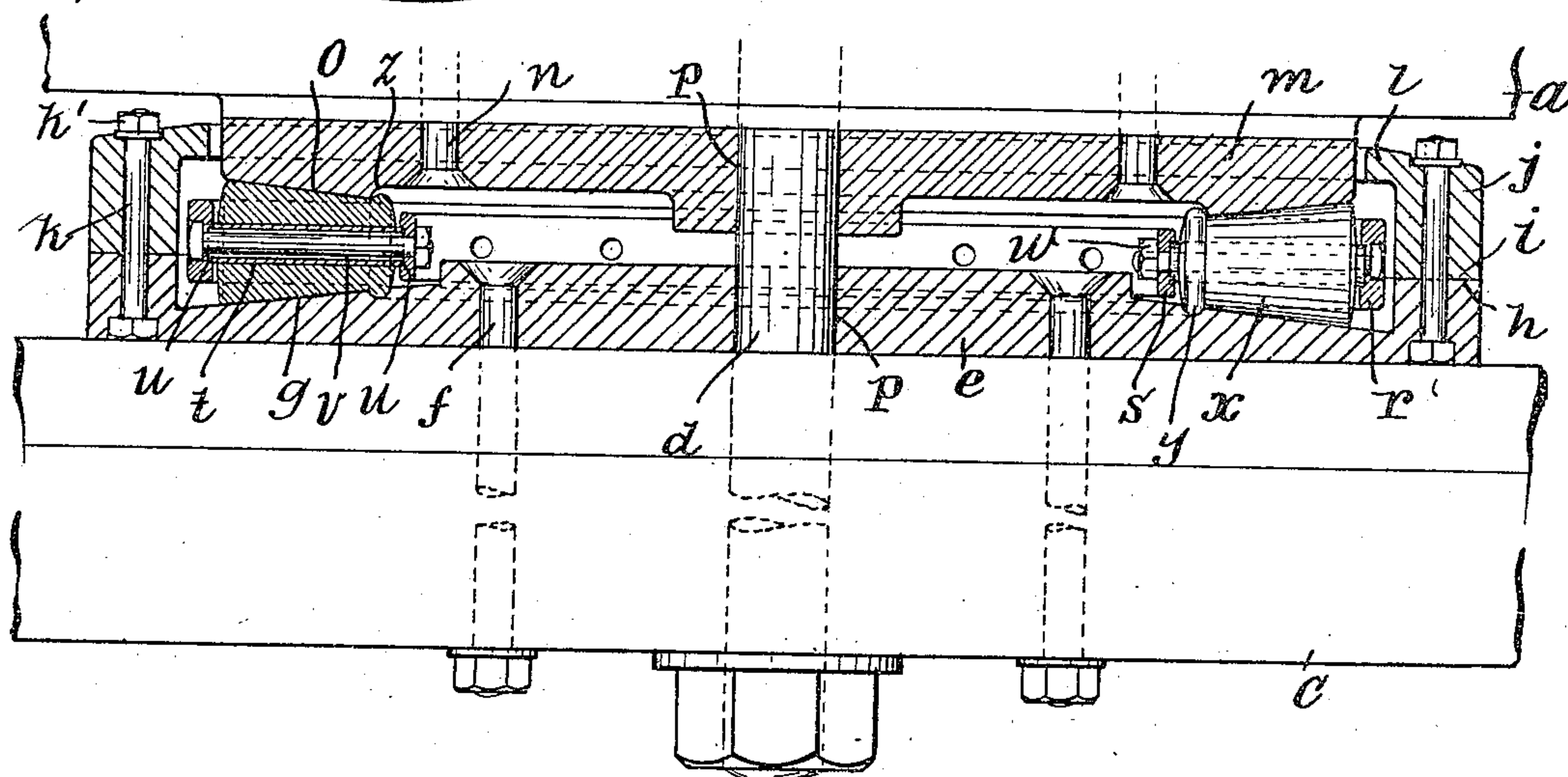


Fig. 2.

WITNESSES

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TRUCK-BEARING.

960,532.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AUGUST FRANZ, a subject of the Czar of Russia, residing in Passaic, Passaic county, New Jersey, have invented a certain new and useful Improvement in Truck-Bearings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide an anti-friction fifth-wheel mechanism for railway vehicles which shall be constructed with a special view to its being strong and durable, not likely to get out of order, capable of use in connection with vehicles of various types and construction and adapted to allow the removal of the vehicle body without necessarily disassembling the said mechanism, which itself, however, is readily capable of being disassembled should access to its parts for any purpose be necessary.

The invention will be found fully illustrated in the accompanying drawing, wherein,

Figure 1 is a view in front elevation of a car-truck provided with my improved fifth-wheel mechanism; Fig. 2 is a front elevation of the truck bolster which, through the medium of the improved fifth-wheel mechanism, supports the car body, said mechanism being here shown in central transverse section; Fig. 3 is a plan view of the roller-bearing member; and, Fig. 4 is a top plan view of the bed-plate of the mechanism.

In said drawing, *a* designates one of the beams forming a part of the car-body which stands directly over the truck *b*, whose bolster is designated *c*; *d* is the usual king-bolt penetrating the beam *a* and the bolster.

My improved mechanism comprises three members, one of which is carried by the vehicle body and is the uppermost member, another of which, the lowermost, is carried by the truck-bolster and the third of which is the interposed anti-friction member; as will be hereinafter explained, the lowermost member is preferably formed in two parts so as to permit the removal of the interposed member, which is normally held within it, when such becomes necessary.

The lowermost member is marked *e* on

the drawing; it is secured to the bolster by the bolts *f* and it is formed with a circular race-way *g* depressed therein in its top face and in turn formed near its inner margin with the concentric groove *g'*. Outside of the depressed race-way *g* the top surface of the member *e* is preferably left flat, as at *h*, and thereon rests the flat under surface *i* of a ring *j* which is secured to member *e* by the bolts *k* whose nuts *k'* bear against said ring, being thus readily accessible should it be necessary to remove the ring; the ring *j* has an interior flange or overhang *l*.

The uppermost member *m* is a plain disk which may be secured to beam *a* by the bolts *n* and it has an elevated race-way *o* coinciding, when the members are assembled, with the race-way *g* of member *e*; member *m* is of such diameter as just to enter the flanged upper part of ring *j*.

The members *e* and *m* are penetrated centrally by the king-bolt *d* when the parts of the mechanism are assembled, being formed with the holes *p* to receive it.

The interposed member *q* consists of an annular frame in which is journaled an annular series of rollers. The frame comprises the concentric rings *r* and *s* connected together by the radial bearing-pieces *t* (preferably in the form of sleeves) which are let at their ends into recesses *u* in the adjoining faces of the rings, and which, together with said rings, are penetrated by the bolts *v* having nuts *w* whereby the rings and the sleeves are clamped together to make of the annular frame a rigid structure. On each bearing-piece is journaled a roller *x* which is frusto-conical in form, its larger diameter being outermost, and which, at its inner end, is formed with the surrounding bead or flange *y*. The diameter of the annular frame is such as brings the rollers in direct coincidence with the race-ways *g* and *o* of members *e* and *m* when the three members are properly assembled. Its diameter is further such that the frame has no appreciable lateral play within member *e* and cannot be removed therefrom, on account of the flange or overhang *l*, without removing first the ring *j*.

The taper of each roller is such that in plan the lines forming the angle of its convergence coincide with radii of the frame; in order, therefore, that each roller may have full and proper contact with each race-way *g* and *o* the latter are both planed

in such manner that they lie in radii of a circle in a vertical plane having its center coincident with the axis of the king-bolt.

The beads of the rollers run in the groove 5 g' and bear outwardly against the shoulder z formed at the inner margin of the race-way o ; in consequence of this the outward thrust of the rollers is directed against the members e and m , the frame in which the 10 rollers are journaled being unaffected by such thrust and acting mainly to preserve the proper spaced arrangement of the rollers.

Having thus fully described my invention, what I claim and desire to secure by 15 Letters Patent is:

The combination of opposed upper and lower members and a third member interposed between said upper and lower members and comprising concentric rings, bolts 20 connecting said rings and rollers journaled between the rings on radial axes, the lower member comprising a lower or base part affording a bearing for said rollers and hav-

ing a horizontal annular elevated upper sur- 25 face surrounding the third member and also comprising a ring-shaped part bolted to the base part and having a horizontal under surface conforming with and bearing upon the annular horizontal surface of said base 30 part, said ring-shaped part having an interior flange projecting inwardly short of the outer ends of the rollers and overhanging the outer ring of the interposed member and the upper member projecting down into 35 said ring-shaped part and having from the lower side thereof upwardly to a plane above that of the flange its diameter less than the inside diameter of the outer ring but approximating the inside diameter of 40 the flange, substantially as described.

In testimony, that I claim the foregoing, I have hereunto set my hand this 29th day of December 1908.

AUGUST FRANZ.

Witnesses:

JOHN W. STEWARD,
WM. D. BELL.