

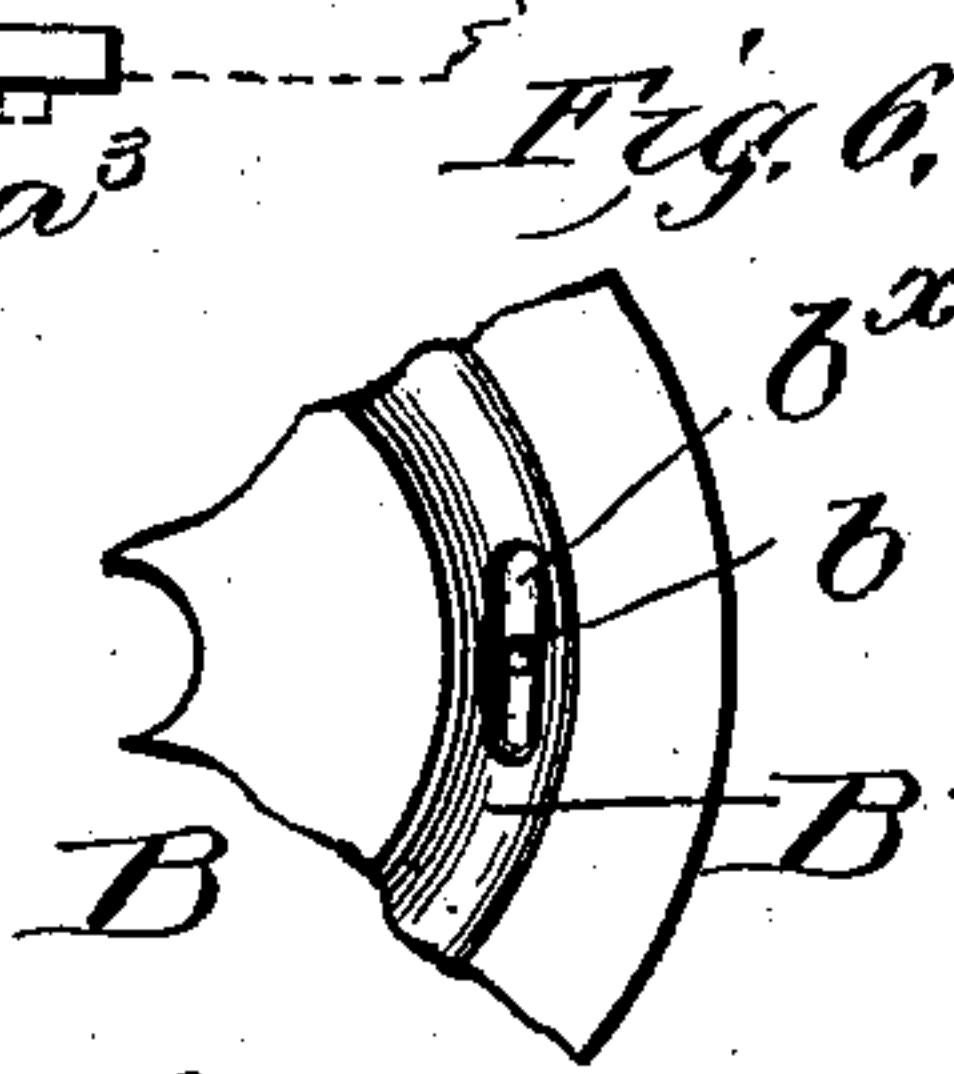
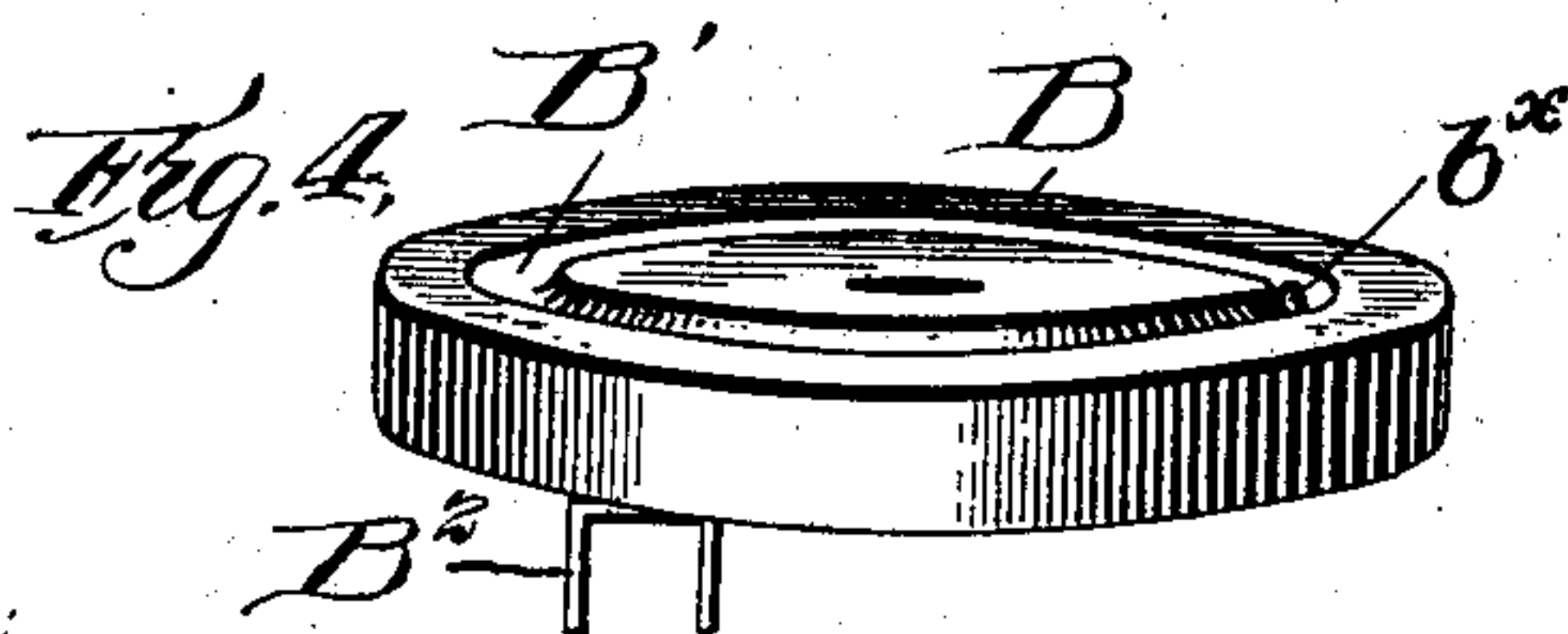
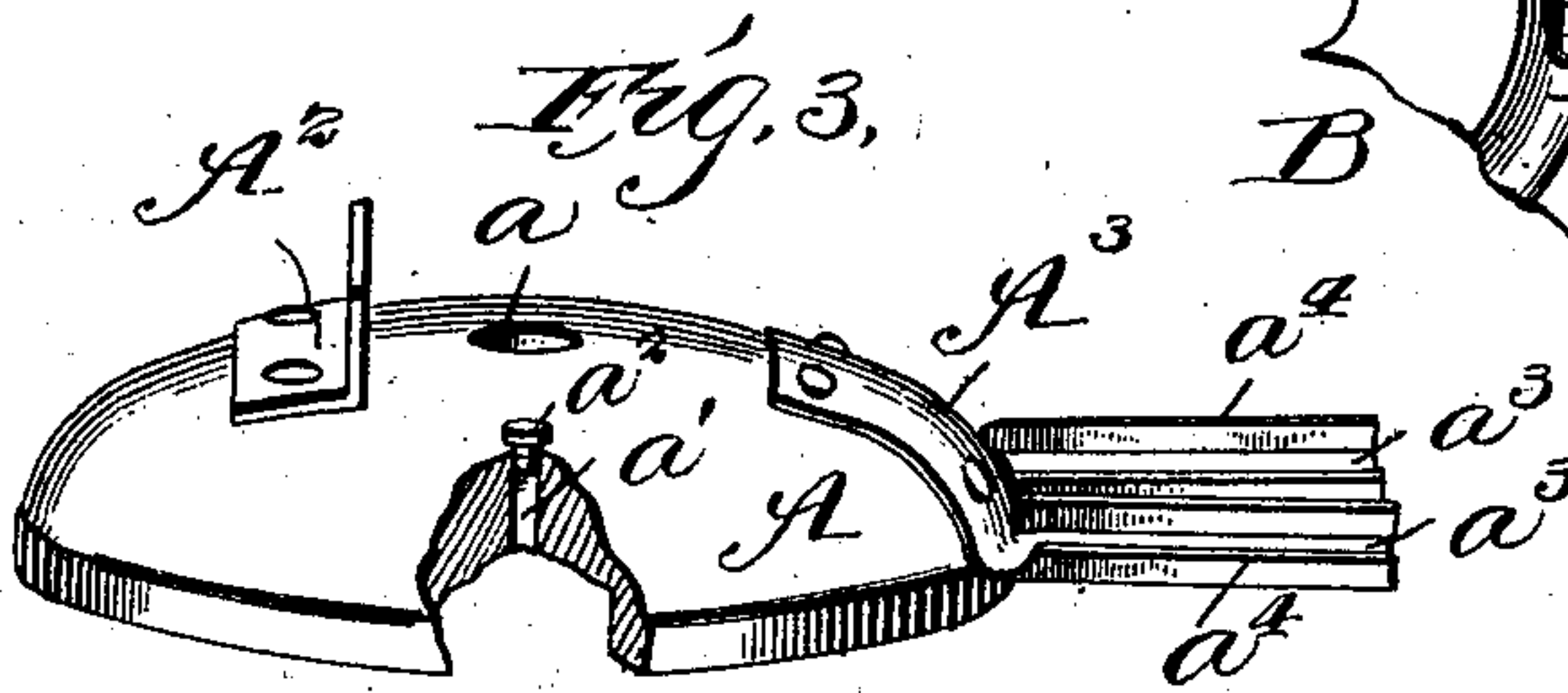
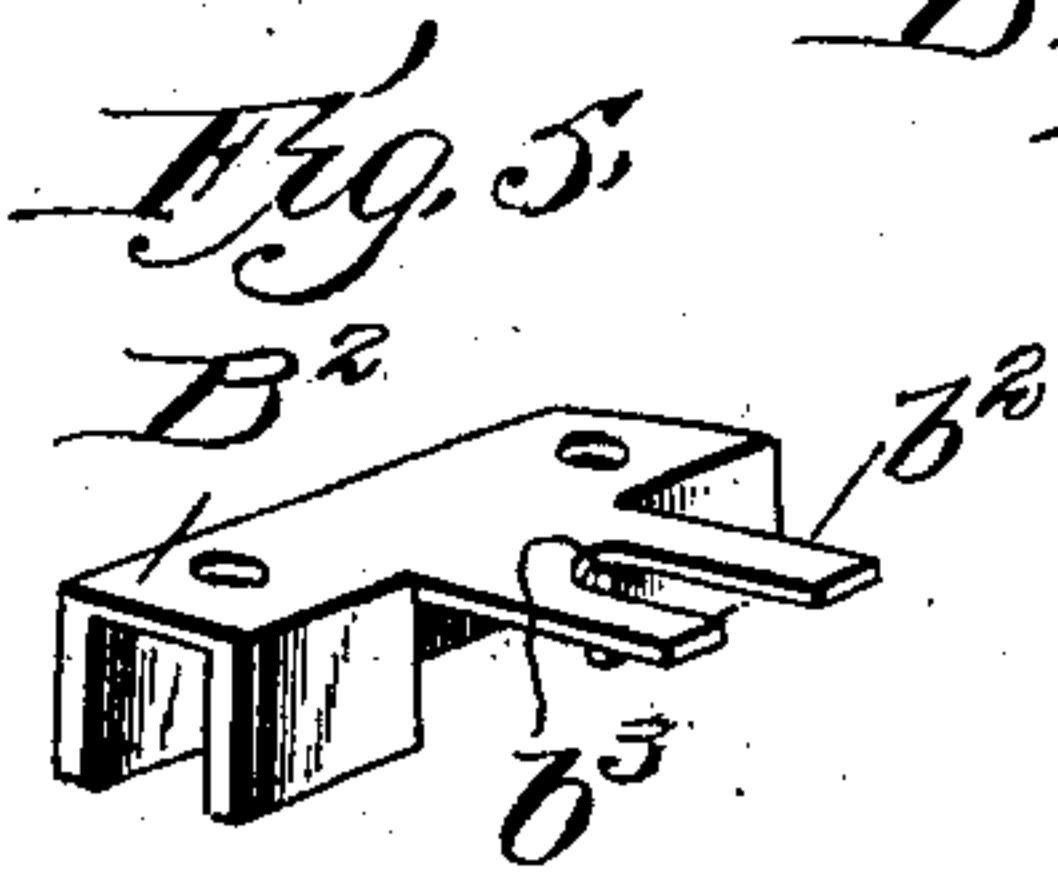
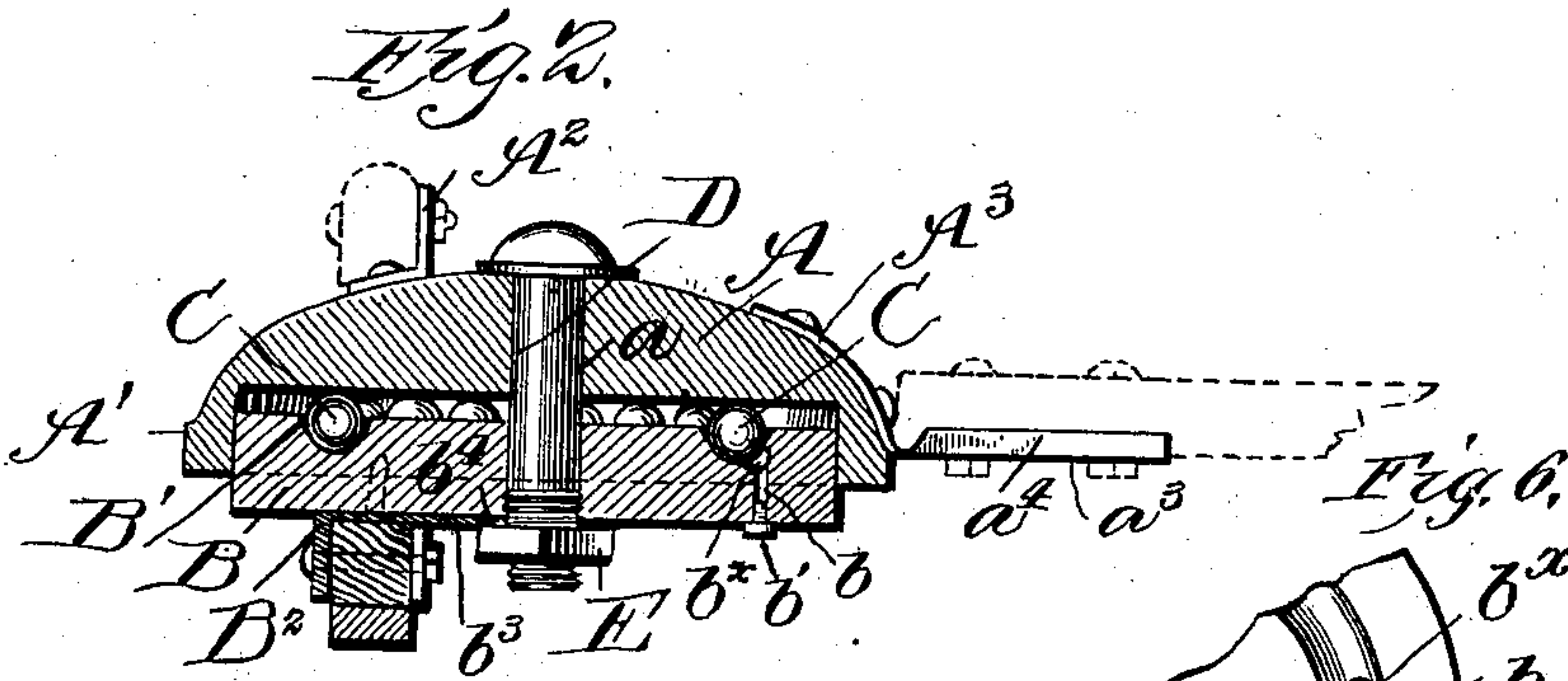
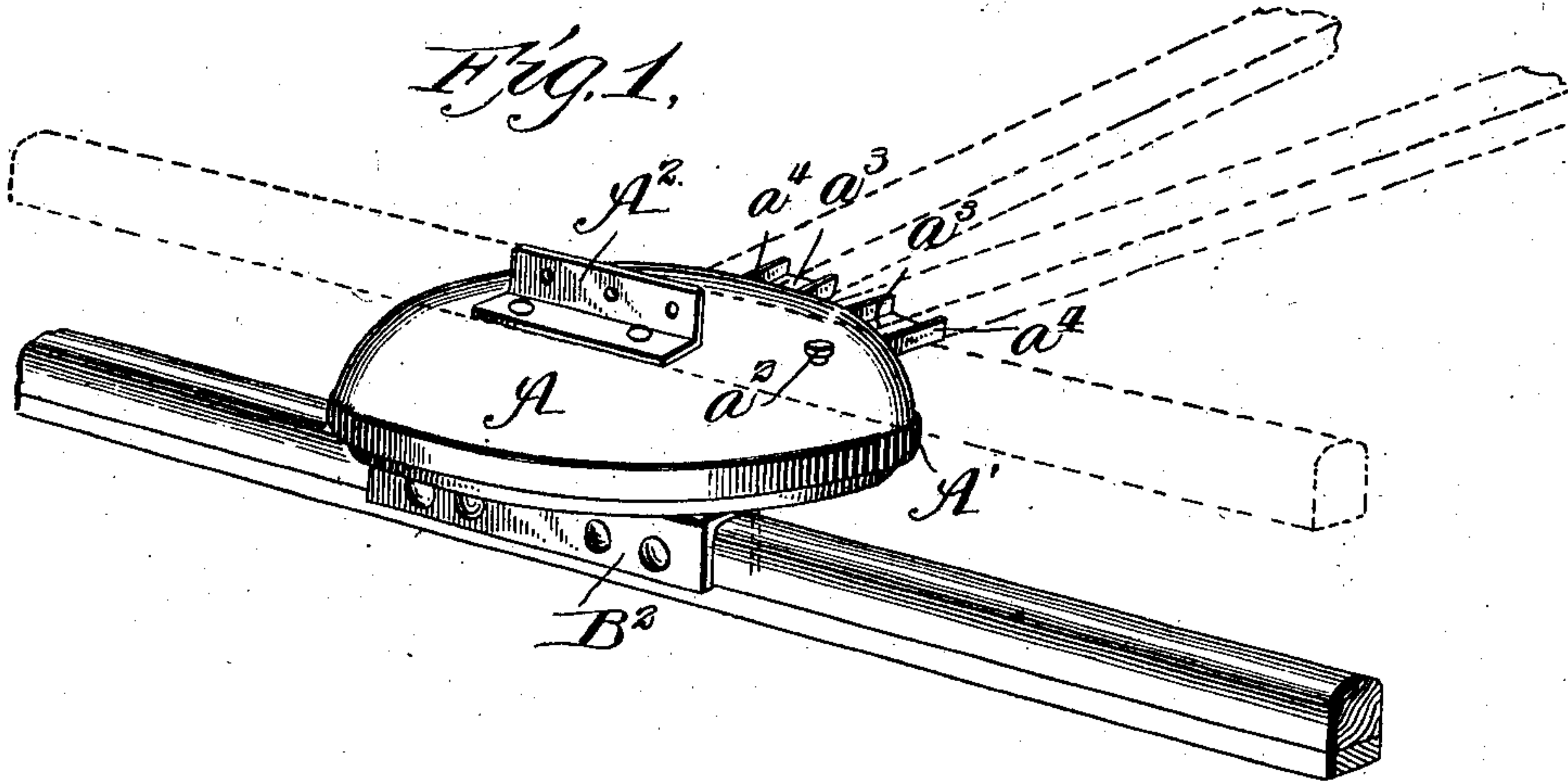
No. 747,878.

PATENTED DEC. 22, 1903.

W. B. FLETCHER.
FIFTH WHEEL.

APPLICATION FILED AUG. 8, 1903.

NO MODEL.



WITNESSES:

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WILLIAM BURLEY FLETCHER, OF CAMERON, WEST VIRGINIA.

FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 747,878, dated December 22, 1903.

Application filed August 8, 1903. Serial No. 168,770. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BURLEY FLETCHER, a citizen of the United States, residing at Cameron, in the county of Marshall and State of West Virginia, have invented a new and useful Improvement in Fifth-Wheels, of which the following is a specification.

My invention relates to an improvement in fifth-wheels for vehicles wherein the friction and strain is reduced to a minimum and dust will be excluded from the working parts.

The object of my invention is to provide a device for the purpose mentioned which shall be cheap, simple, and efficient.

My invention consists in certain novel features of construction, as will be hereinafter fully described, and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view showing one mode of application of my improvement. Fig. 2 is a vertical sectional view. Fig. 3 is a detached perspective view of the upper member of the device. Fig. 4 is a similar view of the lower member thereof. Fig. 5 is a detached perspective view showing the plate for attaching to axle. Fig. 6 is a detail plan showing the discharge-passage and groove leading thereto.

In carrying out my invention I construct the fifth-wheel of two members—an upper member A and a lower member B. The member A is made with a convex upper surface and a downwardly-projecting annular flange A', which fits over and incloses the lower member B. Said member A is also provided with a central opening *a*, through which is passed a bolt to secure it in position on top of member B. As shown in the drawings, the upper surface of member A may be provided with an angle-plate A², to which the bolster of a vehicle is to be secured, said plate A² being located forward of the central opening *a*. To the upper surface of member A may also be secured the plate A³, which has rearwardly-diverging members *a*³ *a*³, having their edges bent to form flanges *a*⁴, within which fit the reaches of the vehicle. An oil-feed hole *a'* passes through the cap member A and is closed by a screw-plug *a*² or other suitable means.

The lower member B is provided with an annular groove or channel B' in its upper face, said groove being substantially semi-circular in shape, forming a race to receive a suitable number of antifriction-balls C. Said balls are of such size as to rest in the groove B' and project above the flat upper surface of member B, and upon these balls rests the upper or cap member A. A waste oil or drainage passage *b* leads from the groove or ball-race B' to and through the lower surface of member B, and said passage may be closed by a screw-plug *b'*. Member B also has a central vertical opening which registers with the central opening in the upper member, and through these openings is passed the king-bolt D, having the nut E on its lower end to hold the two members together in their proper relation.

To the lower surface of member B is secured a transverse inverted-U-shaped plate B², within which is secured the axle E. This plate B² is located forward of the vertical center of member B and in alinement with the angle-plate on top of member A, to which the bolster is attached. These plates are respectively placed just above and below the front balls in the raceway. The object in so placing them is that as the bolster and axle are to be secured to them the main strain will be borne by the antifriction-balls, thus reducing the strain on the king-bolt and obviating the liability of said bolt breaking, as is quite common in the ordinary type of fifth-wheels.

While I have shown the bolster, reach, and axle attaching means as separable attachments, it is obvious and in many instances preferable, according to the type of vehicle, to make these parts integral with the upper and lower members, it being understood that they will occupy the same relative positions as indicated in the drawings.

By means of the oil-feed passage oil or lubricant may be fed to the antifriction-balls, and if at any time it be desired to draw off the accumulation of oil in the raceway the waste-passage may be opened for that purpose.

The overhanging flange A' extends downwardly a considerable distance on the sides of member B and excludes all dust and dirt from the interior of the device, as well as equalizing the strain in all directions.

It will be seen that by the use of the anti-friction-rollers a freely-working fifth-wheel is produced, the friction between the various parts being reduced to a minimum, and one in which the strain is equalized and practically removed from the king-bolt, thus materially lessening the liability of breakage thereof from any cause. This advantage is also increased by locating the points of attachment for the axle and bolster or other part forward of the pivotal center of the device. The nut on the lower end of the king-bolt is prevented from unscrewing by any suitable nut-lock.

It will be observed that my device is simple, can be easily and cheaply manufactured, as it consists of few parts, and is susceptible of adaptation to various forms of vehicles and running-gear. Instead of the double-reach plate a plate for a single reach may of course be used.

As shown in Fig. 5, the attaching-plate B² may be provided with a rearwardly-extending slotted part b², the slot b³ of which permits it to be slid under the nut E and embrace the bolt D. It is then securely held in place by screwing up the nut tight against it.

As shown in Fig. 6, the waste-drainage passage b is surrounded by a small depression or groove b^x, which directs the waste oil to said passage b.

By having the upper face of the cap member A convex moisture, dirt, &c., will be shed from the same.

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

1. A fifth-wheel for vehicles, comprising an upper and lower member pivotally secured together, the upper surface of the upper member being convex, and its under surface a horizontal plane, said upper member provided with a downwardly-projecting annular flange, the lower member having its upper surface a horizontal plane and provided with an annular ball-race in said upper surface, anti-friction-balls within the annular ball-race, the lower member fitting within the annular

flange of the upper member, and means located forward of the vertical centers of each member for attachment to the body and axle, respectively of a vehicle, said attaching means being placed in vertical alinement with the front anti-friction-balls.

2. A fifth-wheel for vehicles comprising an upper member having a convex upper surface and provided with a downwardly-projecting annular flange, a lower member fitting within said flange, and pivotally secured to the upper member at the vertical centers thereof, said lower member provided with an annular ball-race in its upper face, anti-friction-balls in said ball-race, the upper member provided with an oil-feed passage, and the lower member having waste-oil passage leading from the ball-race through the lower face of said member, and means located forward of the vertical axis of each member in vertical alinement with the front anti-friction-balls for attaching said members to the body and axle respectively of a vehicle.

3. A fifth-wheel for vehicles comprising an upper member having a convex upper surface and provided with a downwardly-projecting annular flange, a lower member fitting within said flange and pivotally secured to the upper member at the vertical center thereof, said lower member provided with an annular ball-race in its upper face, anti-friction-balls in said race, the upper member being provided with an oil-feed passage and the lower member having a waste-oil passage leading from the ball-race through the lower face of said member and guide-grooves leading from said race to the waste-oil passage, a removable plug for closing said waste-passage, and means located forwardly of the vertical axis of each member for attaching said members to the body and axle, respectively of a vehicle, said attaching means being in vertical alinement with the front anti-friction-balls.

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Witnesses:

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