

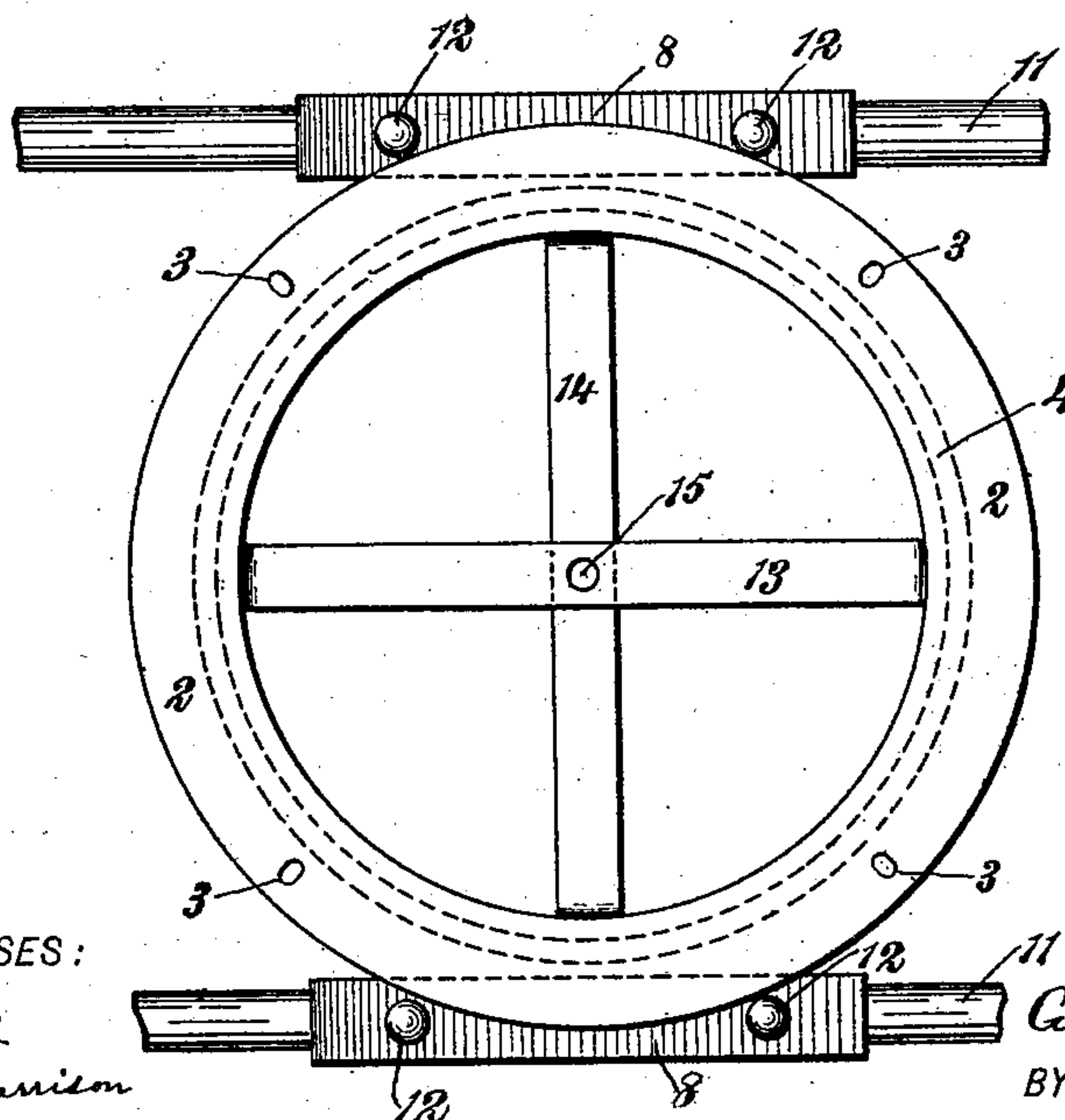
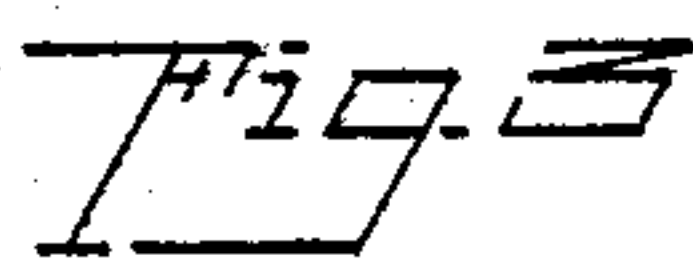
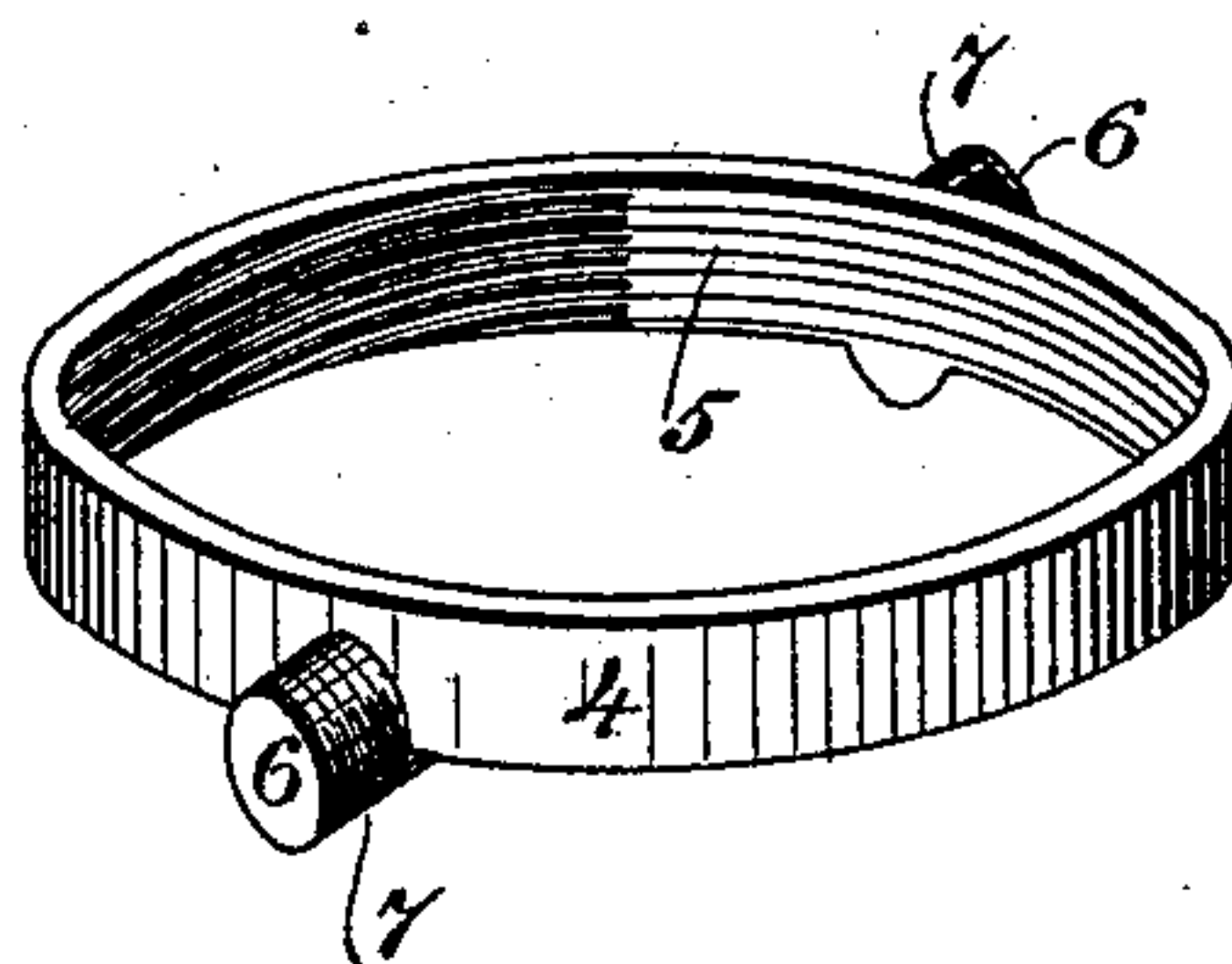
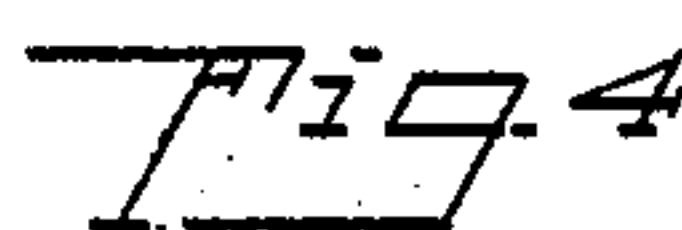
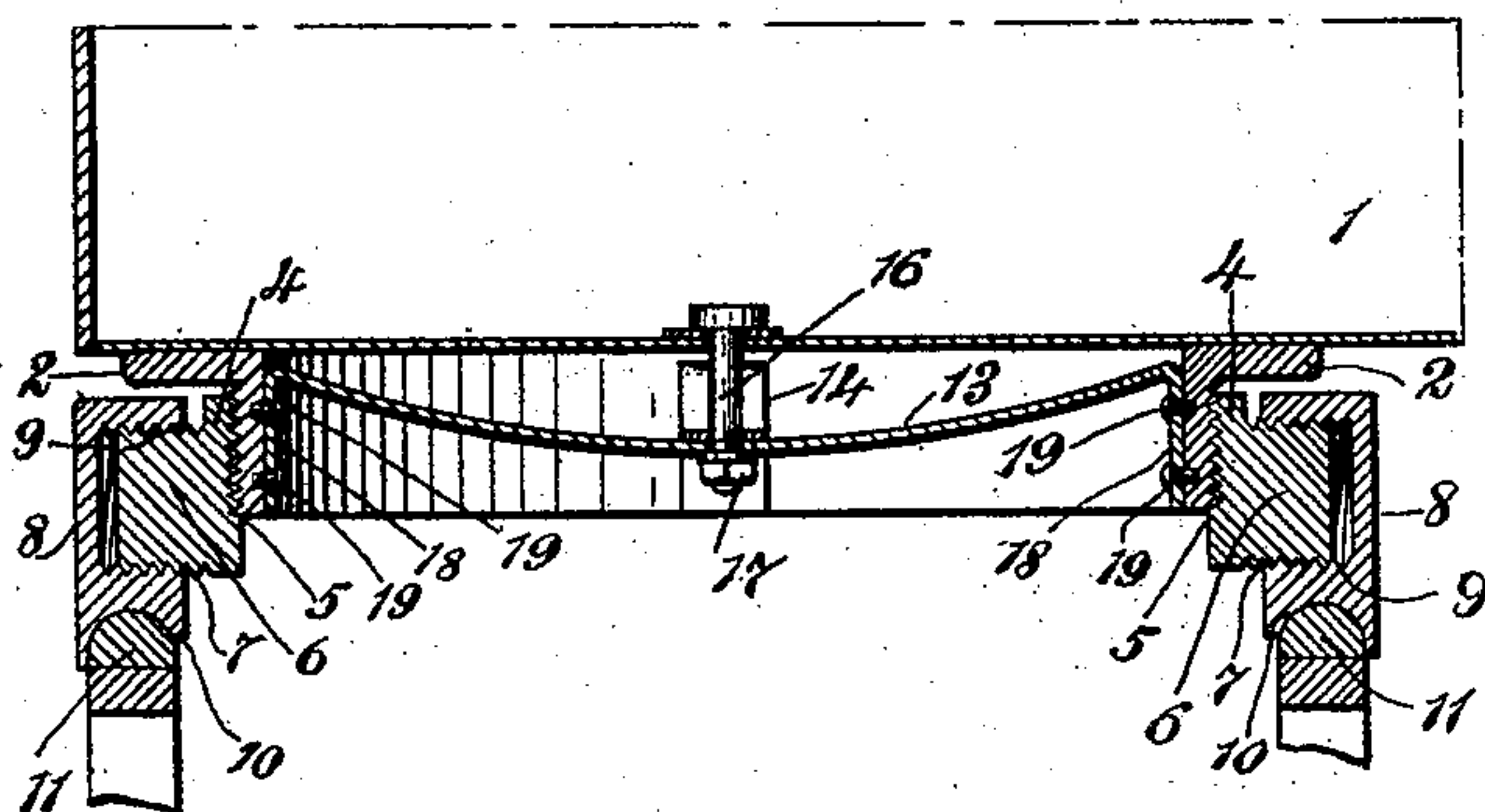
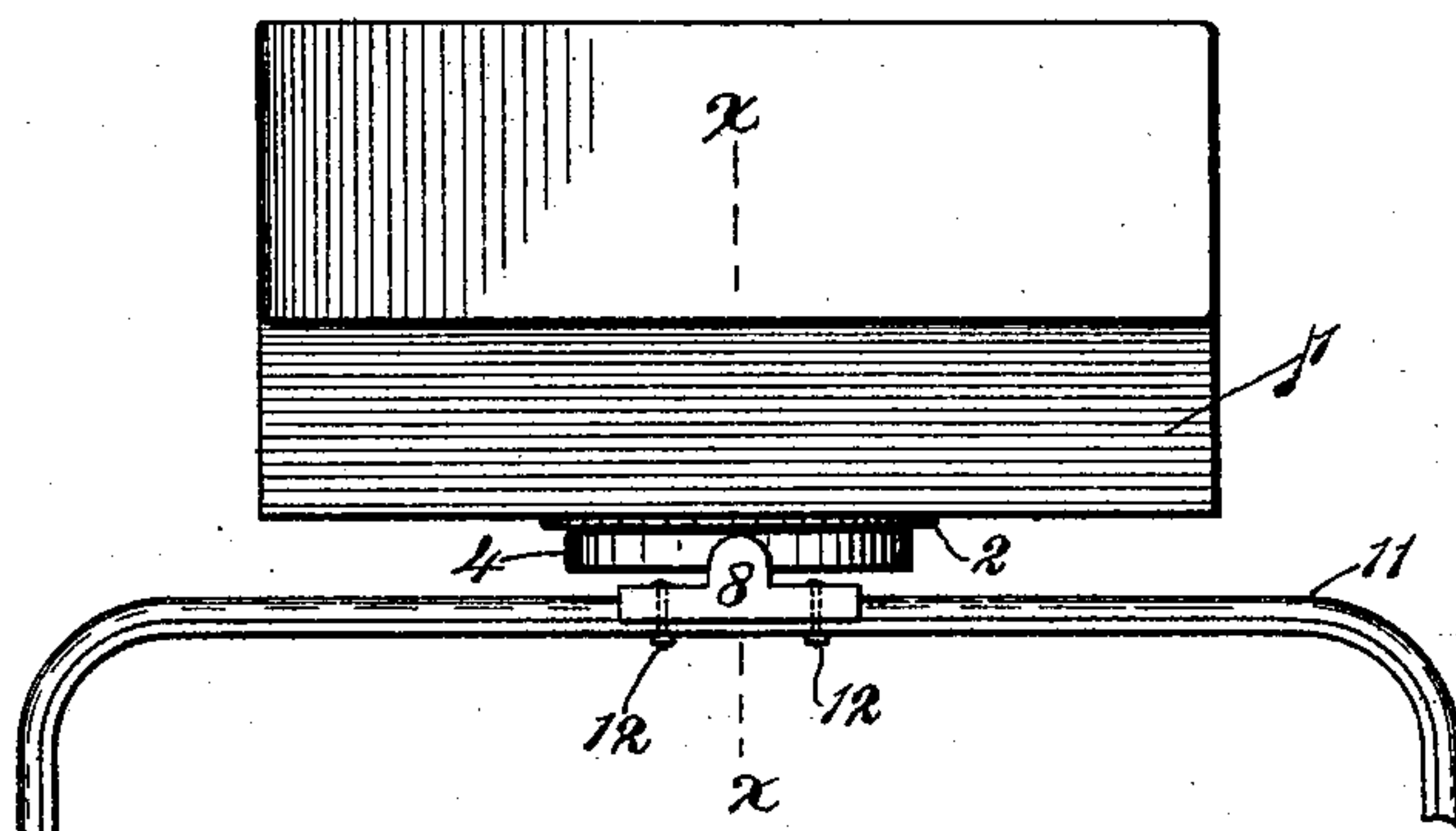
**No. 689,701.**

**Patented Dec. 24, 1901.**

**G. BENJAMIN.  
FIFTH WHEEL.**

(Application filed Oct. 19, 1901.)

(No Model.)



**WITNESSES :**

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BY

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# UNITED STATES PATENT OFFICE.

GEORGE BENJAMIN, OF SAGINAW, MICHIGAN.

## FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 689,701, dated December 24, 1901.

Application filed October 19, 1901. Serial No. 79,252. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE BENJAMIN, a citizen of the United States, and a resident of Saginaw, in the county of Saginaw and State of Michigan, have invented a new and Improved Fifth-Wheel, of which the following is a full, clear, and exact description.

My invention relates to fifth-wheels for vehicles.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of a vehicle, showing my invention applied. Fig. 2 is a vertical section on the line *xx* of Fig. 1. Fig. 3 is a plan view of the fifth-wheel, the body of the vehicle being removed; and Fig. 4 is a perspective view of one of the details of the fifth-wheel.

The bed of the vehicle is shown at 1, and at its front end rests upon the fifth-wheel in the usual manner. The fifth-wheel is composed of an inner annular flanged member 2, provided with elliptical screw-holes 3 or other equivalent means for securing the same to the vehicle-bed, and an outer annular member 4, to be connected with the front axle of the vehicle. These inner and outer annular members are free to turn relatively toward each other and are provided with threads 5, whereby the members are neatly fitted together. The members are secured together by means of these threads, but are not twisted sufficiently to take up the entire length of the thread, thus rendering the members somewhat loose relatively to each other. This enables the front axle to have as much radial play as could be desired relatively to the vehicle-body.

The outer annular member 4 corresponds to the lower member of the ordinary vehicle and is provided with oppositely-disposed lugs 6, which are provided with screw-threads 7. Upon these lugs 6 are screwed the longitudinal members 8, each of which is bored out and provided with a screw-thread 9, whereby the members are simply screwed onto the lugs 6.

As in the case of the annular members the screw-threads are not entirely taken up by the amount of twist, so that each of the members 8 is free to rock radially upon its lug 6. Each of these longitudinal members is provided with a semicylindrical hollow 10, whereby the members 8 are fitted upon the convex surfaces of the two parts 11 of the front axle, which is bifurcated, as shown in Fig. 3. Bolts or other fastenings 12 are used to secure the members 8 upon the axle. The inner annular member 2 is provided with bow-shaped strips 13 and 14 of spring metal, which are secured in any desired manner upon the interior of said annular member and cross each other at a right angle, as shown in Fig. 3. These bow-shaped pieces are each provided with a round hole 15, which is engaged by a bolt 16, provided with a nut 17 for the purpose of adjusting the same. By tightening or loosening the nut 17 the bow-shaped members are slightly flattened or rounded, as the case may be, thus distorting the inner annular member and causing the same to bind with more or less force upon the outer annular member. Any desired degree of friction can thus be given to the inner and outer annular members in their movements relative to each other. In other words, by tightening or loosening the nut 17 the vehicle can be made hard to turn or easy to turn, as may be desired. The outer ends of the bow-shaped members are provided with feet 18, through which screws 19 pass into the vertical portion of the inner annular member.

It will thus be seen that I have invented a fifth-wheel that is simple, durable, easy to operate, not liable to get out of order, and made up of parts easily interchanged. Furthermore, the fifth-wheel is adjustable and all of its parts are readily accessible. I find that this wheel is exceedingly efficient and gives universal satisfaction wherever tried.

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

1. A fifth-wheel, comprising a pair of annular members provided with threads and loosely screwed together, one of said members being provided with means for connecting the same with the front axle of a vehicle, and the other annular member being pro-



vided with means for connecting it with the bed of said vehicle.

2. A fifth-wheel, comprising outer and inner annular members provided with threads 5 and loosely screwed together, means for connecting said annular members respectively to relatively movable parts of a vehicle, and an adjusting device controllable at will for tightening and loosening one of said members 10 relatively to the other.

3. A fifth-wheel, comprising outer and inner annular members movably secured together and free to turn relatively to each other in substantially parallel planes, means 15 for securing one of said annular members to the bed of a vehicle, longitudinal members loosely secured upon the other of said annular members by means of screw-threads and free to rock in planes at right angles to the 20 general plane of said annular members, and fastenings for securing said longitudinal members to some part of a vehicle movable relatively to the bed thereof.

4. A fifth-wheel, comprising outer and inner annular members provided with oppositely-disposed threads and loosely screwed

together so as to be free to move relatively to each other in planes substantially parallel, means for securing one of said members to the bed of a vehicle, longitudinal members 30 movably connected with said annular members and free to swing in planes at right angles to said first-mentioned members, and means for connecting said longitudinal members with some part of a vehicle movable 35 relatively to the bed thereof.

5. A fifth-wheel, comprising outer and inner annular members provided with threads and loosely screwed together, bow-shaped members of spring metal secured to said inner annular member and crossing each other 40 so as to form a spider, and a screw for exerting pressure upon said spider, for the purpose of distorting said inner annular member relatively to said outer annular member. 45

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

GEORGE BENJAMIN.

Witnesses:

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CHARLES O. DOBBINS.