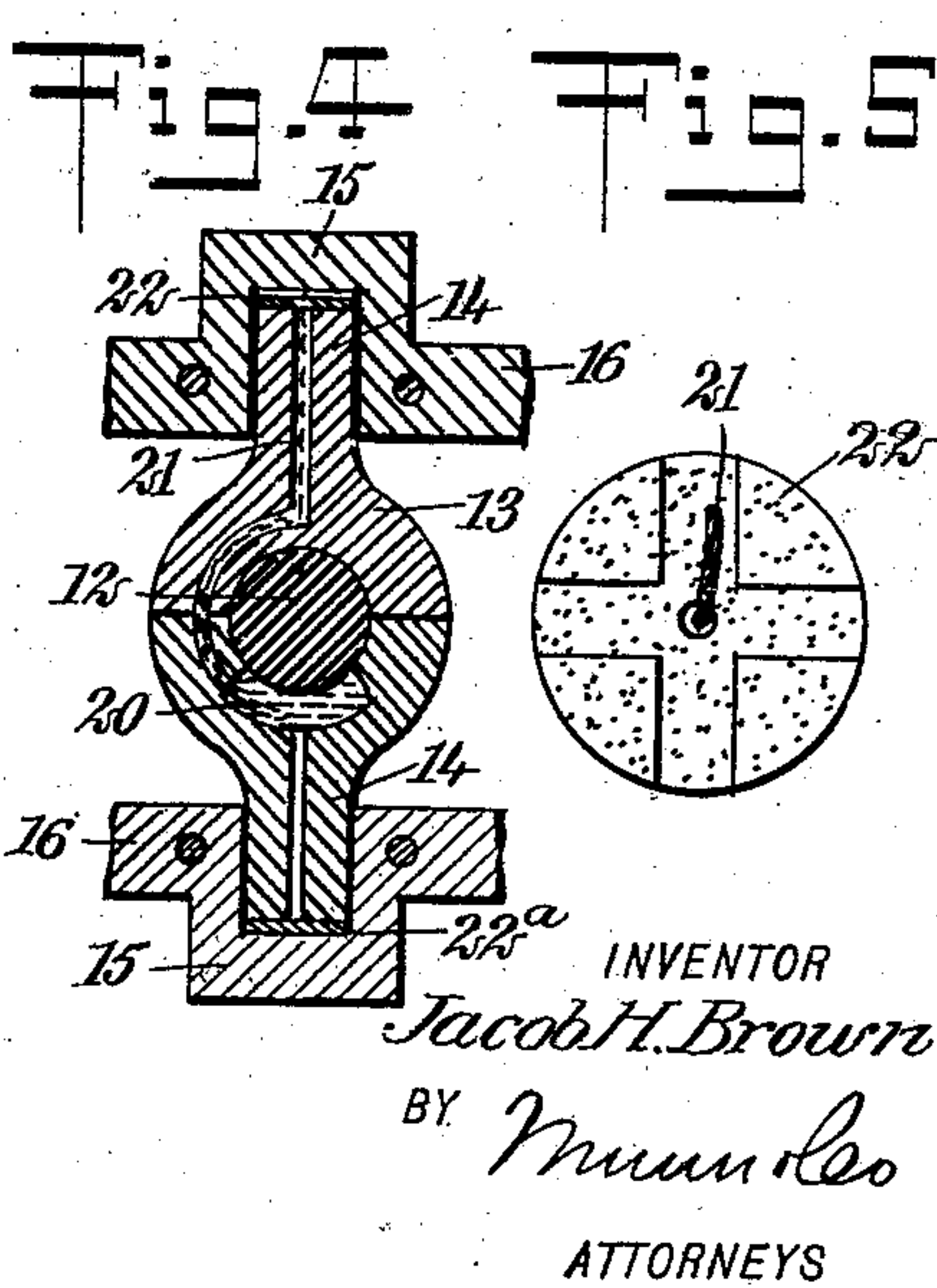
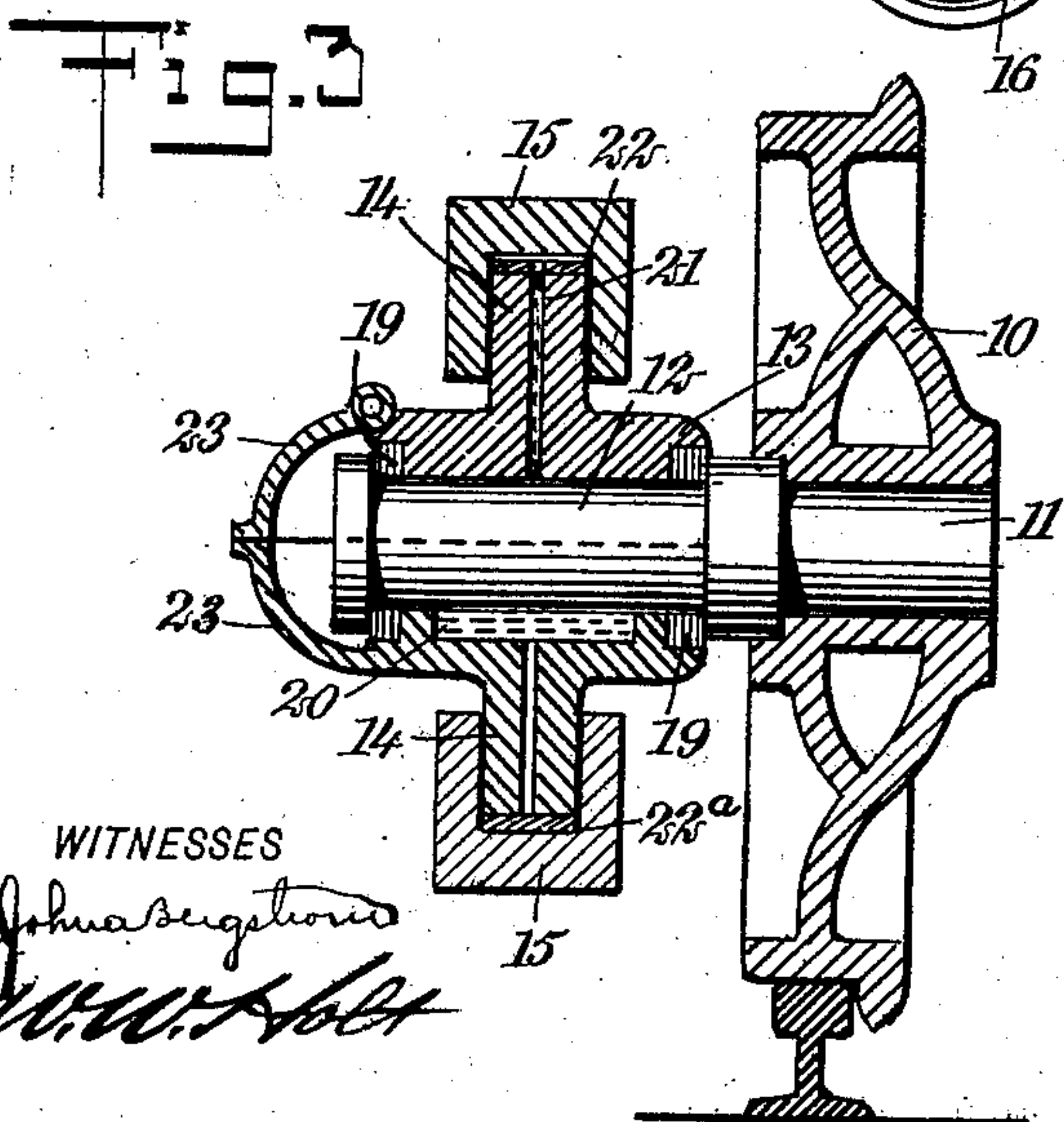
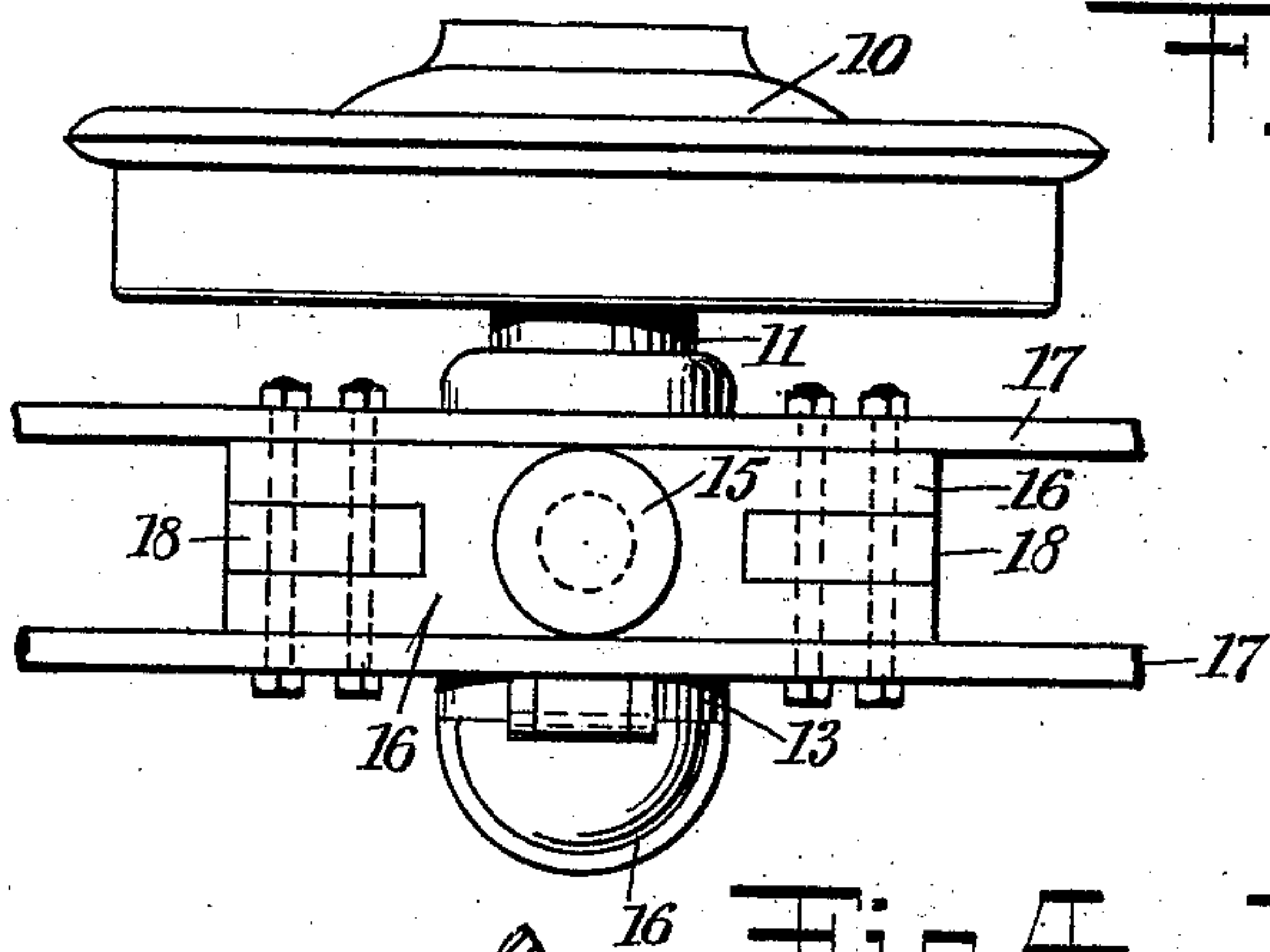
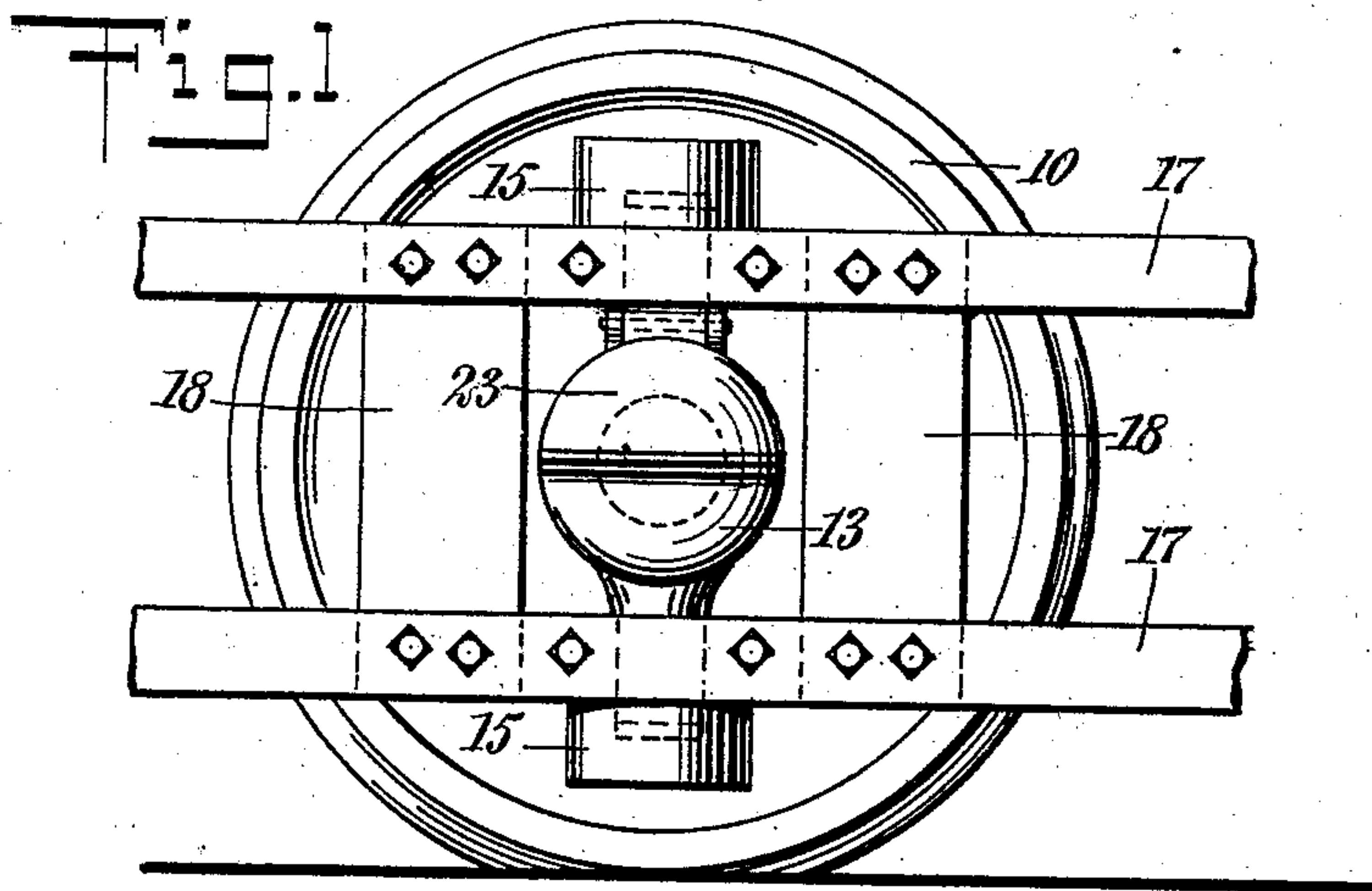


J. H. BROWN.
RAILWAY WHEEL MOUNTING.
APPLICATION FILED MAR. 18, 1908.

915,548.

Patented Mar. 16, 1909.



WITNESSES
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RAILWAY-WHEEL MOUNTING.

No. 915,548.

Specification of Letters Patent.

Patented March 16, 1909.

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To all whom it may concern:

Be it known that I, JACOB H. BROWN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Railway-Wheel Mounting, of which the following is a full, clear, and exact description.

This invention is an improvement in the mounting of wheels of railway rolling stock, such as cars, engines, etc., and has for its purpose the minimizing of the friction incident to, and the power required in, rounding curves, and reducing the lateral stress on the rails tending to spread the gage. To this end I pivotally support the wheel at one side to swing in a horizontal plane, which admits of the turning of the wheel, by the contact of the flange with the rail, in the direction of the track. This I preferably do by journaling the axle in a bearing-box at the outside of the wheel, having substantially vertical trunnions.

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 views.

Figure 1 is a side elevation of a railway wheel mounting embodying my invention; Fig. 2 is a plan of the same; Fig. 3 is a central vertical section of the mounting; Fig. 4 is a central vertical cross-section through the bearing-box; and Fig. 5 is a plan of an anti-friction washer placed at the top of the upper trunnion of the bearing-box.

My mounting is designed especially to be used in connection with any flanged car or engine wheel 10, that shown being a conventional form of car wheel, having an axle 11 pressed or otherwise secured therein, the same terminating at the inner face of the wheel but projecting outwardly therefrom in the shape of the usual or other type of journal 12, that shown having the customary collars at each end. The journal 12 is mounted in a journal-box 13, having alining trunnions 14 approximately vertically arranged and respectively projecting from its top and bottom. These trunnions are journaled in cupped bearings 15 having laterally-projecting flanges 16 at opposite sides which are respectively secured between the top and bottom truck beams 17 in any approved way,

as by the bolts shown, each truck beam consisting of spaced bars, as clearly illustrated in Fig. 2. The flanges 16 of the cupped bearings are centrally bifurcated at opposite ends for receiving vertical tie-bars 18 which are held in place by cross-bolts passing through the flanges and beams and rigidly connecting the latter together.

The bearing-box 13 is counterbored at opposite ends for receiving anti-friction rings 19 arranged adjacent to the collars of the journal. Between these rings the lower portion of the box adjacent to the axle journal is constructed with an oil reservoir 20, with which communicate oil holes passing centrally through each of the trunnions 14, the upper oil hole curving about the journal, as shown in Fig. 4, and is provided with a wick 21 which passes to an anti-friction disk 22 interposed between the end of the top trunnion and its respective cupped bearing. A friction disk 22^a is also arranged between the lower cupped bearing and the end of the bottom trunnion. By this construction the thorough lubrication of the axle journal as well as that of the trunnions of the bearing-box, is automatically and thoroughly effected. This is, however, further insured by providing the usual chamber at the end of the box beyond the axle for the reception of oily waste or other suitable lubricant, access to this chamber being had through the hinged top lid 23. In order that the journal of the axle may be placed within and removed from the bearing-box, the latter, as shown, is made in two sections by splitting it on a horizontal plane. This, however, may obviously be dispensed with by modifying the construction, such, for example, as by making the outer collar of the trunnion removable. The bearing-box may also be provided with the usual brass shells or boxes, if desired, and the truck provided with springs of any suitable customary or other type of construction.

By the construction shown, it will be observed that the axles are supported from the journal boxes only, and that each wheel is adapted to swing independently of the others in an approximately horizontal plane to conform to the direction of the track, and is properly directed by the contact of its flange with the rail, thus relieving the rails of the usual lateral stress tending to spread the

gage, and at the same time greatly reducing the friction and the power required to drive the train on curves.

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

1. The combination of a railway wheel, truck - beams, oppositely - disposed cupped bearings carried by the truck-beams, a box having trunnions approximately vertically arranged, journaled in the bearings, and an axle journaled in the box and secured to the wheel.

2. The combination of a railway wheel, a bearing-box having a lubricating reservoir, trunnions extending from the box, having oil-ways connecting with the reservoir, and an axle journaled in the box and secured to the wheel.

3. The combination of a railway wheel having a lubricating reservoir, oppositely-arranged cupped bearings, vertically-arranged trunnions projecting from the bearing-box into the bearings and having oil-ways connecting with the reservoir, a friction disk interposed between the ends of the trunnions and their bearings, a wick leading from the reservoir through the oil-way of the upper trunnion to the upper disk, and an axle journaled in the bearing-box and secured to the wheel.

4. The combination of a railway wheel, a

bearing-box having a lubricating reservoir, trunnions projecting from the opposite sides of the box, approximately vertically arranged and having oil-ways connecting with the reservoir, an axle journaled in the box and secured to the wheel, having collars at the opposite ends of its bearing, and friction rings interposed between the collars of the axle and the bearing box.

5. The combination of a flanged railway wheel, a bearing-box pivoted adjacent to the outer face of the wheel, and an axle secured to the wheel and journaled in the bearing-box, said axle being otherwise disconnected.

6. The combination of a flanged railway wheel, a bearing-box pivoted adjacent to the outer face of the wheel, and an axle having one end secured to the wheel and its opposite end journaled in the bearing-box.

7. The combination of a railway truck having flanged wheels, with each wheel pivoted at that side adjacent to the tread of the wheel to swing in an approximately horizontal plane free and independent of the other wheels.

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

JACOB H. BROWN.

Witnesses:

JOHN KRUSI,
JOHN P. DAVIS.