

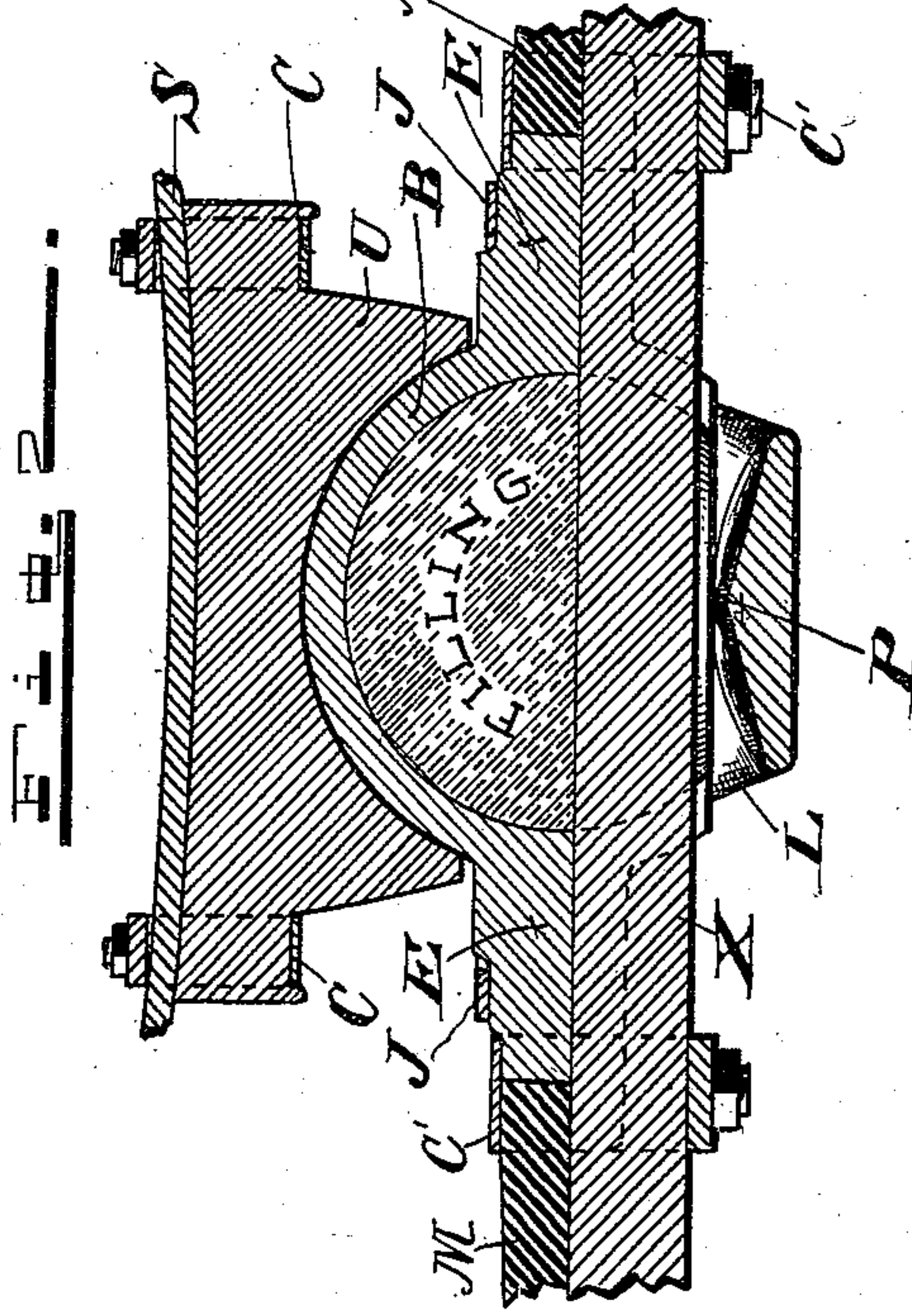
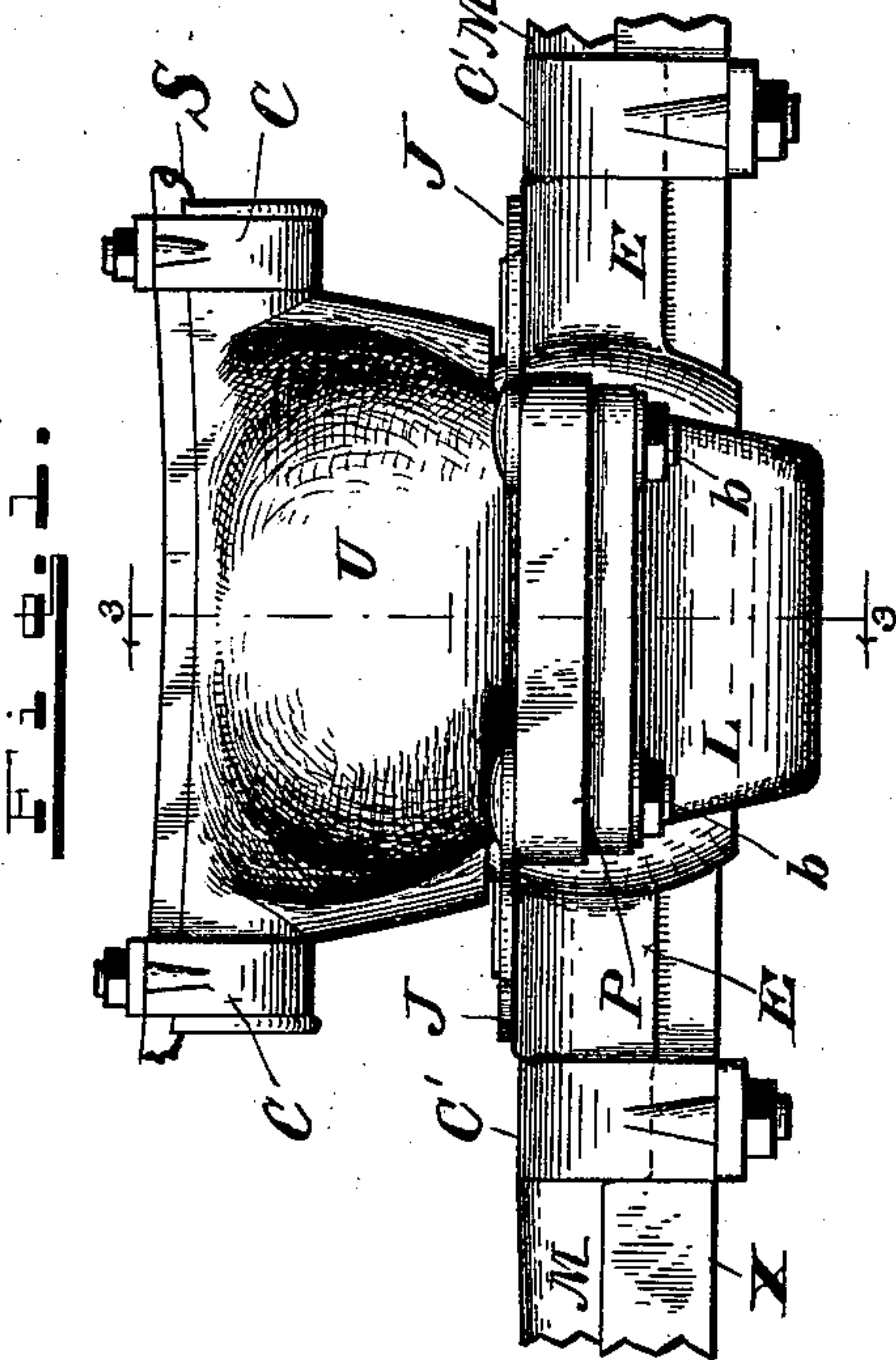
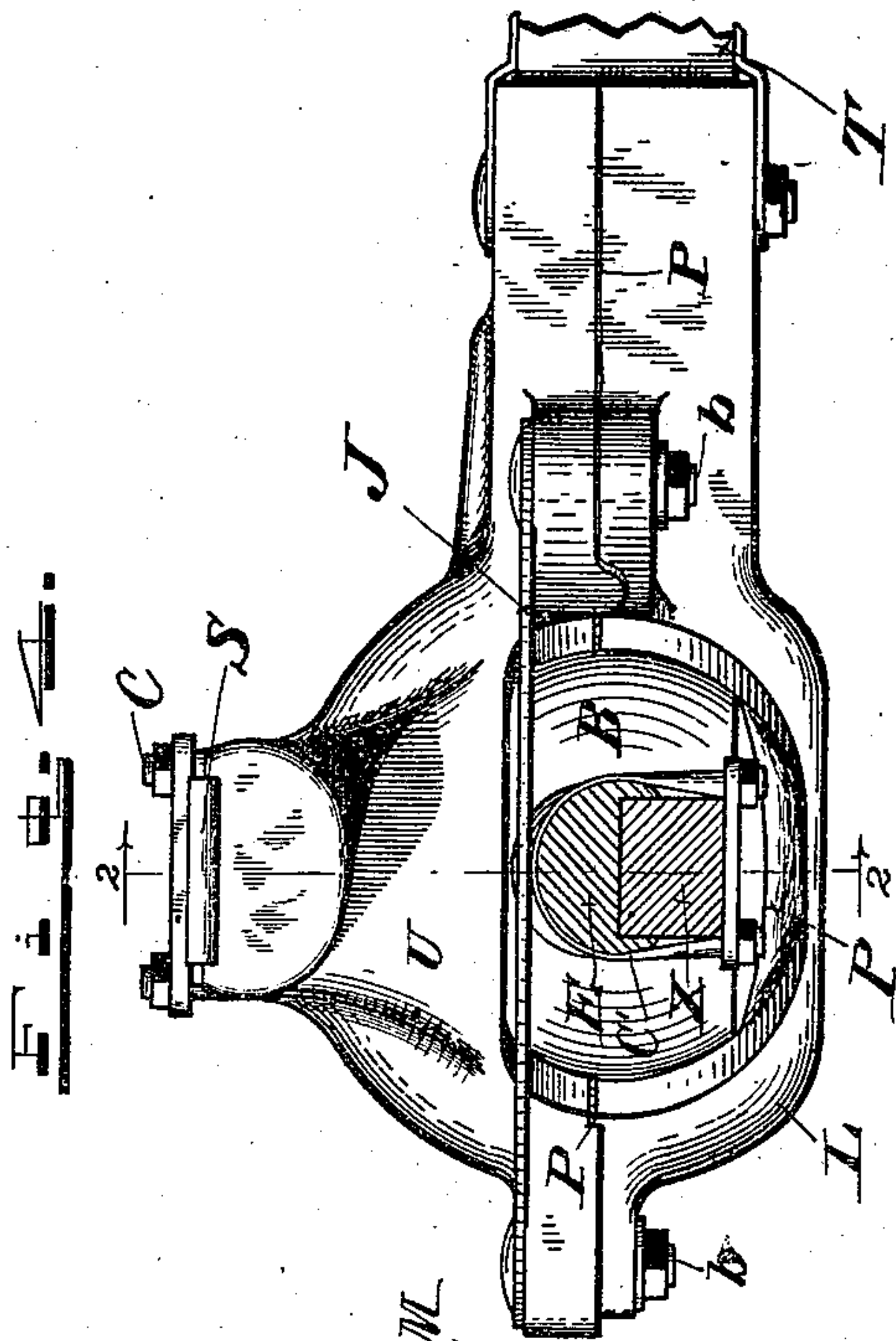
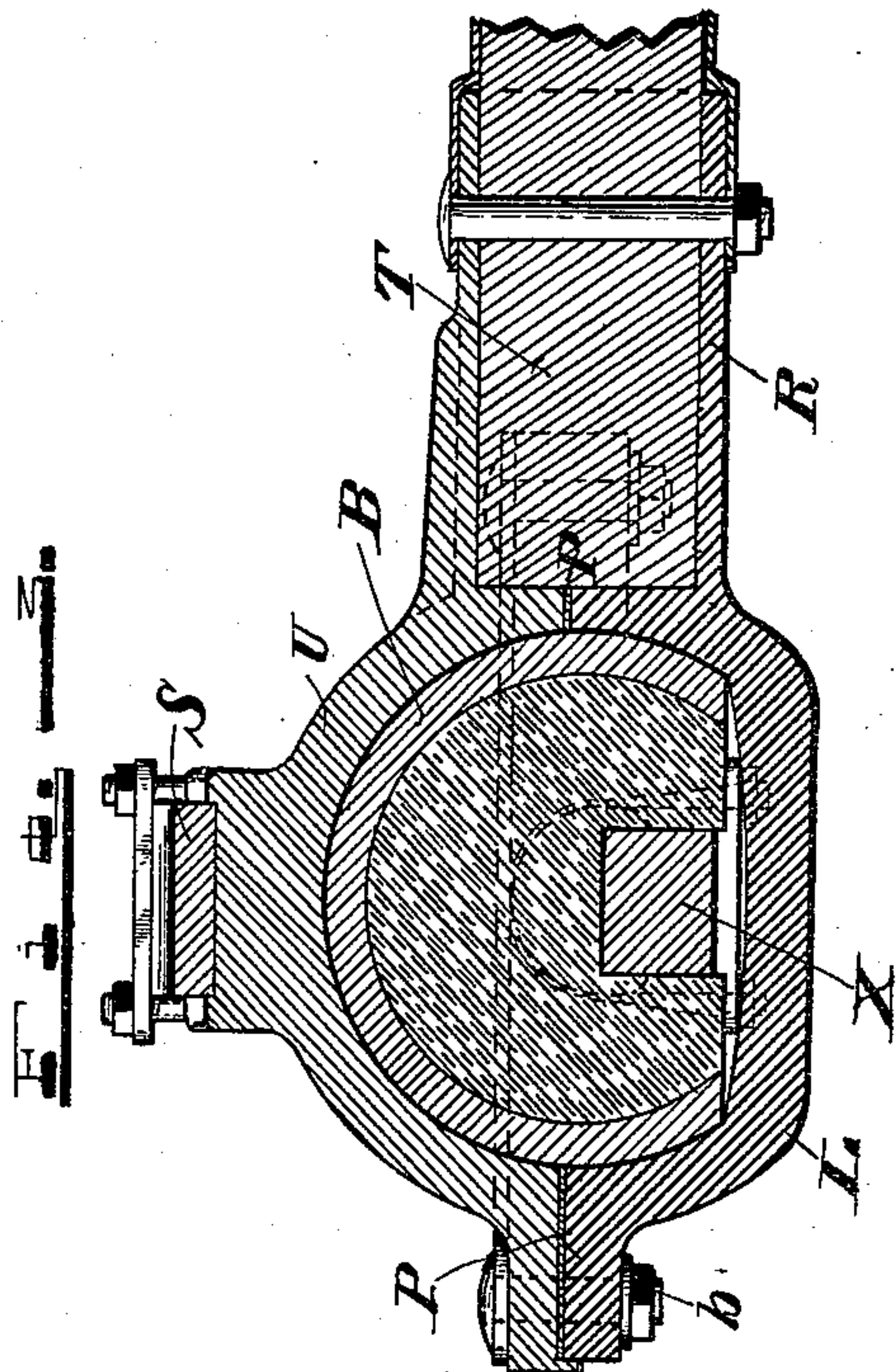
(No Model.)

2 Sheets—Sheet 1.

T. A. WATSON.
FIFTH WHEEL FOR VEHICLES.

No. 551,017.

Patented Dec. 10, 1895.



Witness my hand and seal this 10th day of December, 1895.

T. A. Watson

P. F. Meary

In witness whereof, I have hereunto set my hand and seal this 10th day of December, 1895.

Thomas A. Watson,
By Joseph A. McInture,

ATTORNEY.

(No Model.)

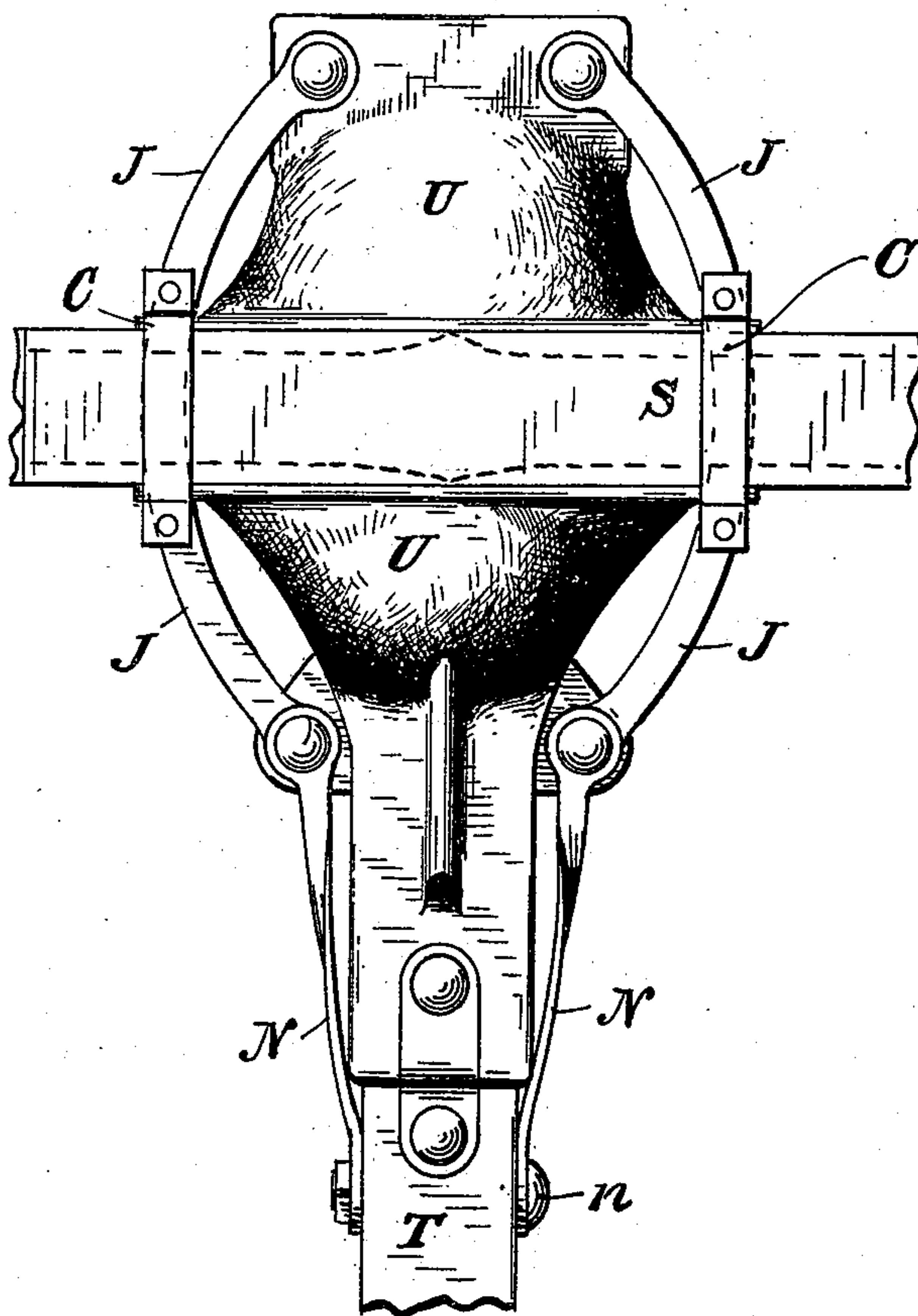
2 Sheets—Sheet 2.

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Fig. 5.



Witnesses.

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J. J. Meany

Inventor.

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UNITED STATES PATENT OFFICE.

THOMAS A. WATSON, OF BENTONVILLE, ARKANSAS.

FIFTH-WHEEL FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 551,017, dated December 10, 1895.

Application filed June 3, 1895. Serial No. 551,526. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. WATSON, a citizen of the United States, residing at Bentonville, in the county of Benton and State of Arkansas, have invented certain new and useful Improvements in Ball-and-Socket Fifth-Wheels; 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.

This invention relates to improvements in vehicles—such as carriages, light wagons, buggies, &c.—and has special reference to improvements in the fifth-wheels of said vehicles.

The invention can also be applied to cultivators and other implements, and is an improvement on fifth-wheels patented to me on the 15th day of December, 1891, No. 465,080.

The object of the present invention is to simplify and cheapen the construction and produce a stronger and more durable fifth-wheel.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of this device; Fig. 2, a central longitudinal section through the line 2 2 of Fig. 4; Fig. 3, a transverse section on the line 3 3 of Fig. 1; Fig. 4, a side elevation of Fig. 1; and Fig. 5, a top or plan view of the device.

Similar letters of reference refer to like parts throughout the several views of the drawings.

Referring to the said drawings, the letter U designates the upper and L the lower members of the casing, which are connected by bolts *b*, and S is the spring or bolster connected by the clips C to the upper member U. These two members are recessed at R at their rear ends, and within this recess is secured the front end of the perch or reach T. The meeting faces of the two members of the casing are preferably slightly separated by packing P, which may be removed and replaced by thinner packing to bring the members closer together when it becomes necessary by the wearing of their inner faces, and such faces are so shaped as to form a globular opening, for the purposes hereinafter fully described.

X is the axle, which will be provided with a swell at its middle portion, and roughly welded at that part in order to give adherence to the material with which the globe B surrounding the axle at that point is filled. The axle X passes transversely through the casing.

B is the ball or globe above referred to, fitted closely yet loosely within the opening in the casing and mounted upon the axle; but the lower portion of the ball is cut off, as is best seen in Fig. 3. At each side of the ball is a laterally-projected extension or arm E, having an under-side recess to fit over the axle X. Clips C' embrace the axle and the extensions, whereby the ball is held firmly but removably in place thereon. The ball is preferably hollow, and after the axle (welded roughly in the center) has been secured therein the ball is filled with plaster-of-paris, lead, or other plastic and strong material to prevent the rattling and displacement of the parts.

As seen in Fig. 4, openings of considerable area are provided in the sides of the casing, through which the axle and the arm-extension of the ball are projected, and this opening on each side of the casing permits the axle and extensions from the ball to move laterally, as is necessary when the vehicle is rounding a corner. The casing coming into contact with the extensions E on each side of the ball will keep the vehicle from rocking, and as an additional preventive I will provide the brace-bars J, which extend on each side of the fifth-wheel, starting from a point in front of the axle and terminating at the rear of same, in the manner clearly shown in Fig. 5. The ends of the brace-bars J are secured by the same bolts *b* that fasten the two parts of the casing together.

The lower member L of the casing is provided with the ridge P, transverse with relation to the axle and having sloping sides. The ball B rests upon the apex of this ridge, so that the axle is kept from twisting or rotating and yet is allowed free lateral and vertical movement. This is one of the essential features of my present invention and enables me to dispense with the lugs, which move in the arc-shaped apertures *a* referred to in my former patent.

N are brace-rods having their front ends

secured to the casing by the same bolts which fasten the rear ends of the stays J to the casing. The rods N are then carried back to the reach or perch and are secured thereto by means of the bolt n.

At the ends of the extensions E are small recesses to admit the ends of a wood cap M, which will cover the axle between the extensions E and the wheels.

With the fifth-wheel or coupler of the character above described the upper member of the casing is firmly supported at all times by the ball, and yet the latter is permitted to have such motion in the casing as is necessary in an ordinary vehicle. The axle may be removed from the ball and the perch may be disconnected from the casing when so desired.

Various changes may be made in the details of construction without departing from the spirit of my invention.

What I claim as new is—

1. In a ball-and-socket fifth-wheel having a two-part casing divided horizontally and bolted together at points both in front and to the rear of the axle of the vehicle, a pair of brace bars arranged, one on each side of the

fifth wheel and secured to the casing by the same bolts that unite the two parts of the casing, substantially as described and specified.

2. In a ball-and-socket fifth-wheel in which the axle is secured to the ball, a socket to receive said ball having side openings through which the axle is projected, and having a ridge transverse with relation to the axle integral with the casing and upon which the ball rests, said ridge having sloping sides, substantially as described and for the purposes specified.

3. In a ball-and-socket fifth-wheel in which the socket is secured to the body of the vehicle and the ball to the axle, and in which the lower portion of the ball is cut off, a ridge or knife edge support for the ball, transverse with relation to the axle, substantially as described and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS A. WATSON.

Witnesses:

J. T. BLAKE,

JO. S. STEVENSON.