

No. 870,999.

PATENTED NOV. 12, 1907.

S. T. SIMMONS.
TROLLEY HARP.

APPLICATION FILED APR. 16, 1906

2 SHEETS—SHEET 1.

Fig. 1.

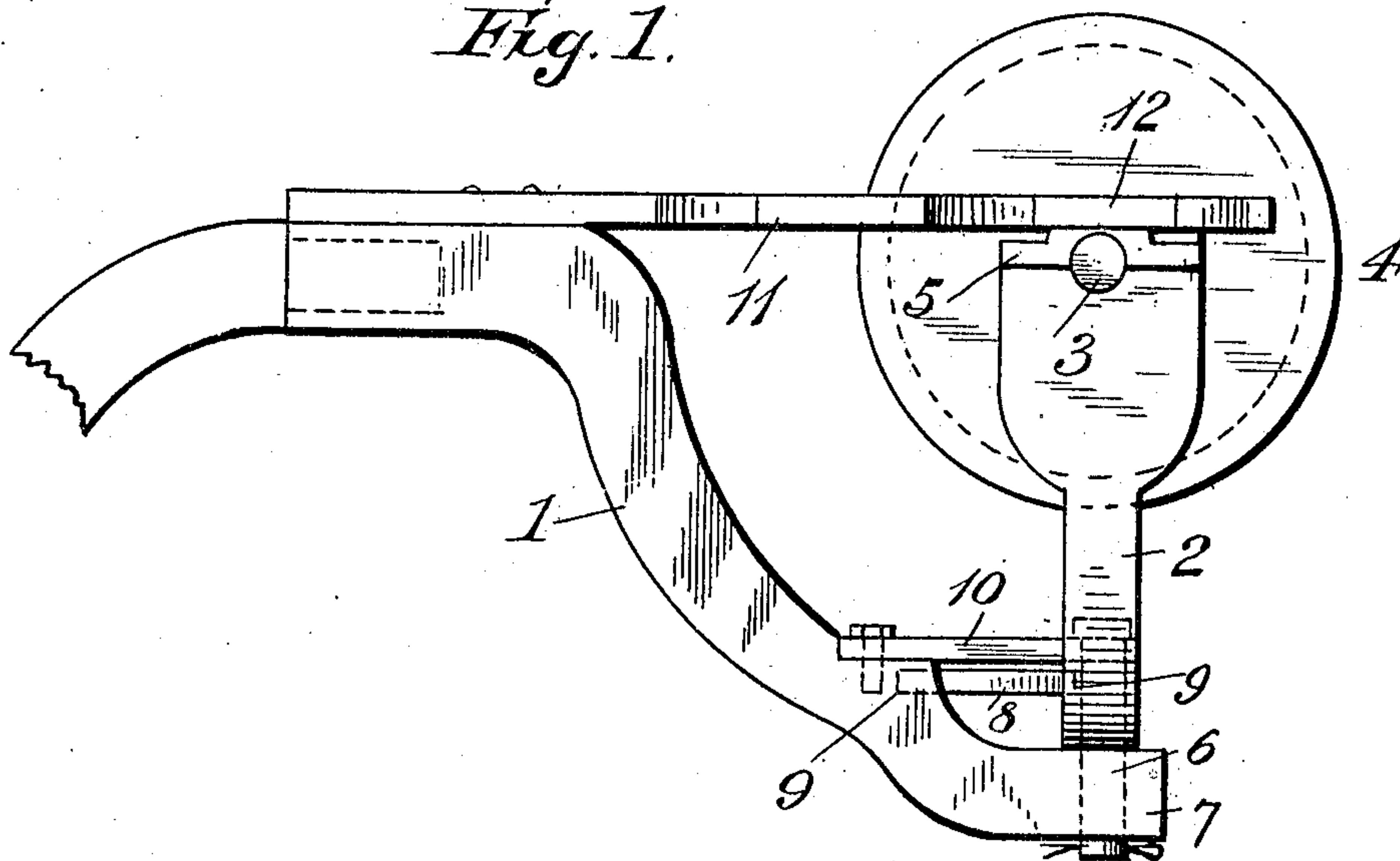
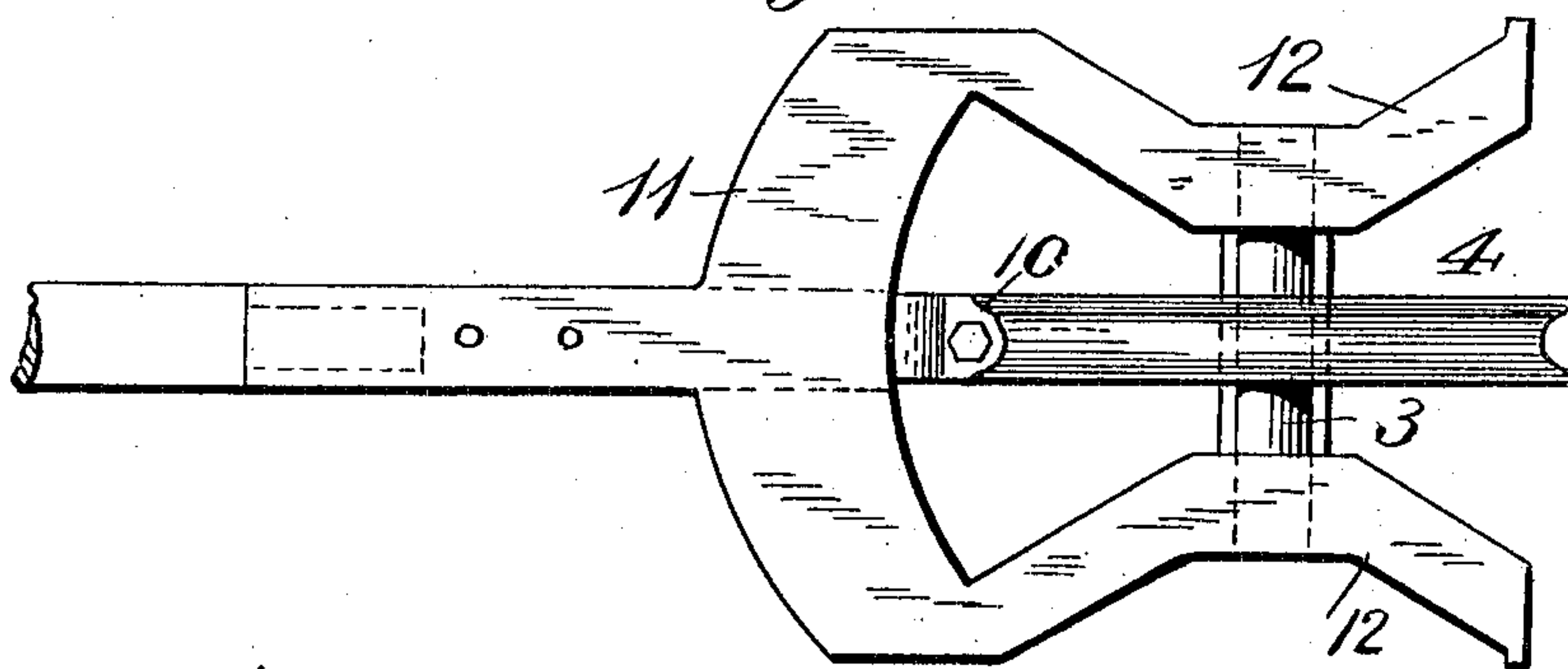


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

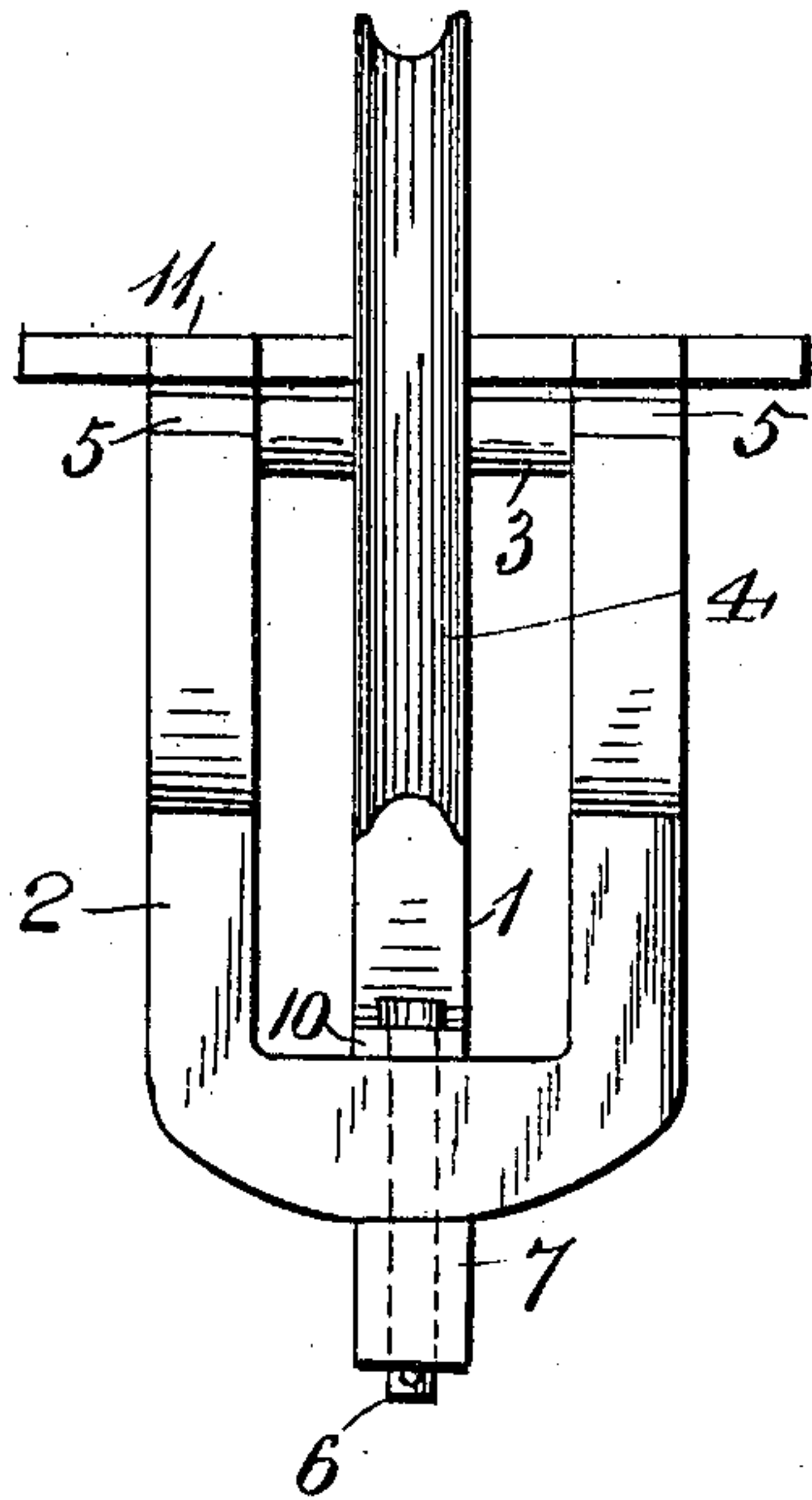


Fig. 5.

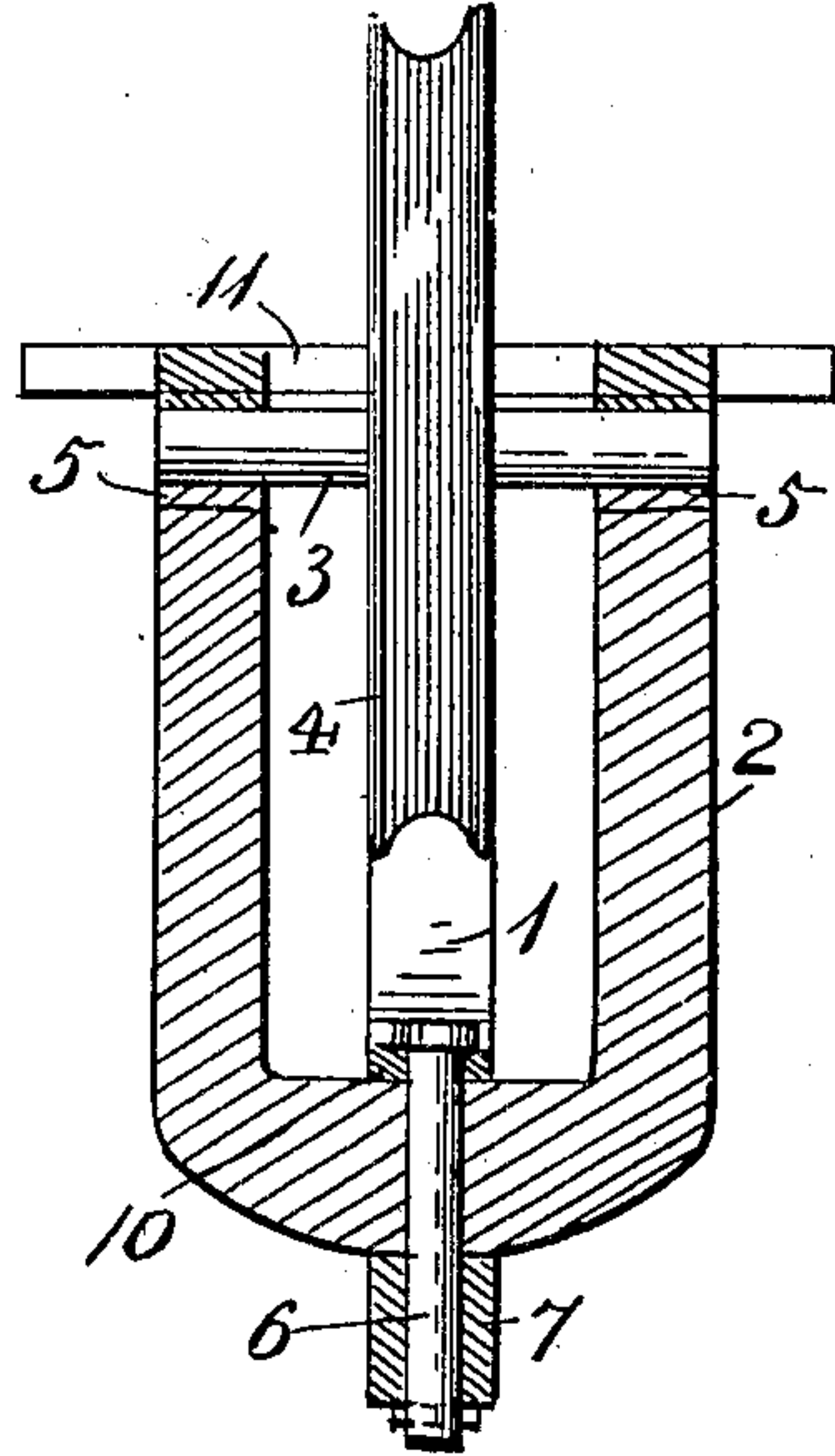
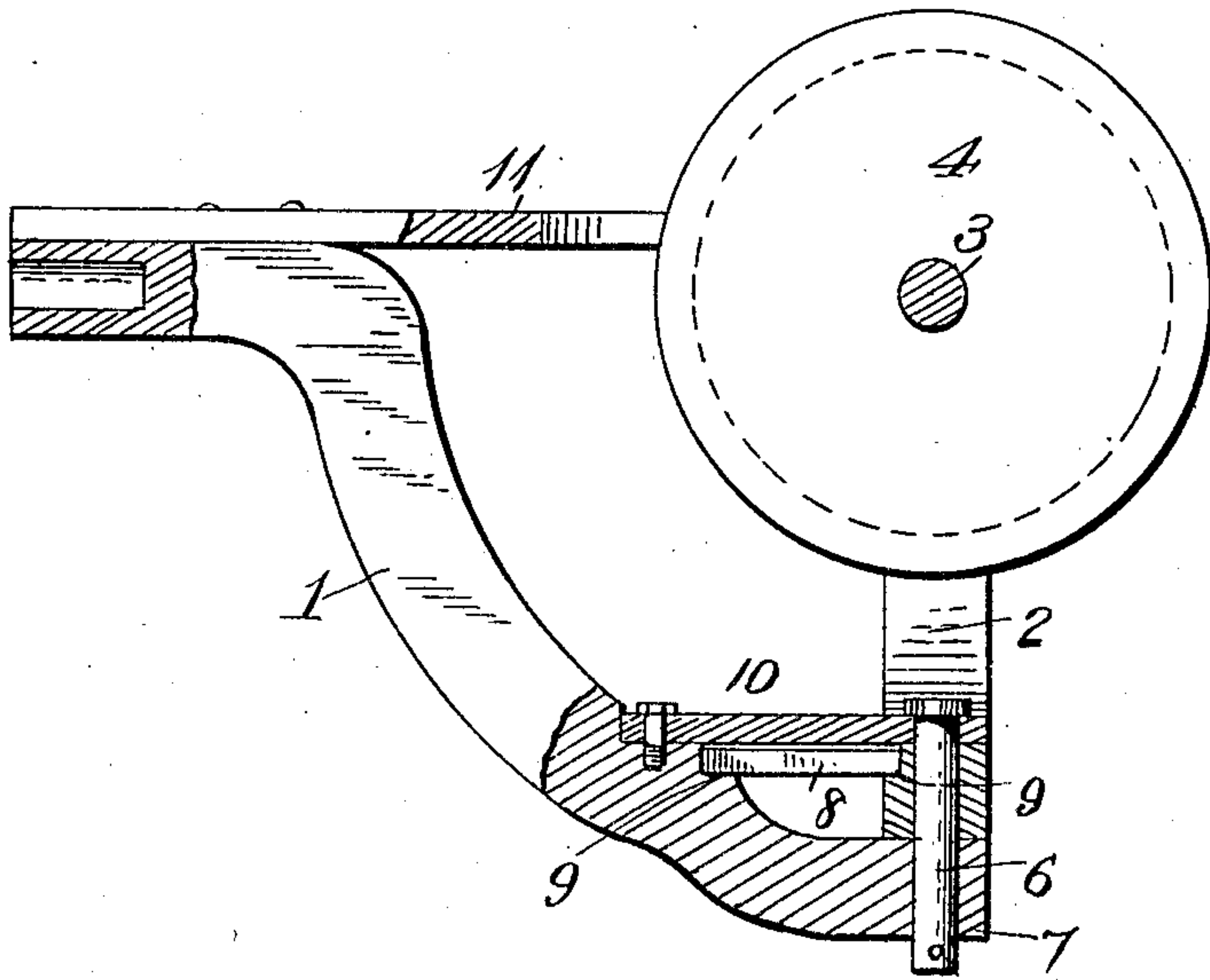


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL T. SIMMONS, OF COLUMBUS, OHIO.

TROLLEY-HARP.

No. 870,999.

Specification of Letters Patent.

Patented Nov. 12, 1907.

Application filed April 16, 1906. Serial No. 311,974.

To all whom it may concern:

Be it known that I, SAMUEL T. SIMMONS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Trolley-Harps, of which the following is a specification.

My invention pertains to improvements in what have been termed trolley pole heads for overhead electric railways.

Its object is to provide for the trolley wheel or pulley readily following the curves or turns in the overhead wire; to provide for centralizing the position of the trolley wheel or pulley relatively to the axis of the pole-head; to brace and guard the swiveling or pivoting of the movable parts, especially the wheel or pulley bearing or carrying member; and to carry out these ends in a simple, economic and effective manner.

Said invention consists of certain features substantially as hereinafter fully disclosed and particularly pointed out by the claims.

In the accompanying drawings illustrating the preferred embodiment of my invention: Figure 1 is a side elevation thereof. Fig. 2 is a plan view, and Fig. 3 is a front elevation of the same. Fig. 4 is a broken sectional elevation thereof, showing more especially the pivoting or swiveling connection between the pulley or its axle bearing fork, and Fig. 5 is a vertical transverse section of the device or invention.

In carrying out my invention, I suitably cast a harp or head member 1, preferably in the form shown, the same being designed to always stand vertically in its operative position, the desired or required connection therebetween and the ordinary pole (not shown) being effected so that the latter shall have the requisite angle of inclination, say, about fifteen degrees thereto, as it extends upward from the top of the car.

A practically U-shaped support or "fork" 2, with its arms forming bearings for the axle or shaft 3 of the pulley or wheel 4, has a central downward-extended pivot or spindle 6 entering or engaging a vertical socket 7 in the extreme forward end portion of the harp or head 1, for pivoting or swiveling the same in position, accordingly permitting the pulley or wheel to readily follow curves or turns in the trolley wire engaged thereby, as will be readily understood. Said fork or support 2 is suitably retained in swiveled or pivoted position by a preferably edgewise arranged plate metal spring 8 with its ends seated in slots 9, 9 formed in the fork 2 and the harp or head 1 opening upward; and over-

lying this spring and holding it in place against vertical displacement is a flat plate 10 suitably held or secured to said fork member over said slots. Said spring will, of course, by its elasticity, permit the requisite yielding action of the fork, with the pulley, in conforming to or rounding curves, and aid to restore said parts to their straight-ahead or initial position, as is apparent. This arrangement also provides for bracing and reinforcing the pulley or wheel bearing fork or support and adjunctive parts.

A bifurcated guard 11, having a central elongation or stem suitably secured upon the upper portion or surface of the pole-head 1, has its forwardly extended arms 12 adapted to rest upon or above the bearings 5, laterally of the wheel or pulley 4 and thus span the intervening space between said pulley, its carrying fork, and the aforesaid portion of said pole-head or harp, for guarding the same against the catching of a crossing wire in behind the pulley, especially in event of the slipping of the pulley from its wire.

Also, it is observed that, by the aforesaid arrangement of parts, the point of contact between the wire and the pulley is directly above or in alinement with the point of contact between the fork spindle and the pole-head, thus centralizing or receiving the greater strain or stress in the line of the axis of the latter or greater resistance.

I claim:

1. A device of the character described, comprising a pole-head, a fork bearing the trolley-pulley, having a pivotal or swiveling connection with said head, a yielding or resilient connection between said head and said fork, means for the retention of said yielding or resilient member in position, and a guard secured to said head, having forwardly projecting arms with their free-end portions outstanding laterally from each other and the trolley and resting upon the axle-housings of the trolley pulley.

2. A device of the character described, comprising a pole-head, a fork bearing the trolley pulley, having a pivotal or swiveling connection with said head, a yielding or resilient connection between said head and said fork, means for the retention of said resilient member in position, and a guard having a central rearward extension secured to said pole-head, and lateral forwardly extending arms forming intermediately of their ends reentrant angular portions effective to rest upon the axle-housings of the trolley pulley axle, the forward end portions of said arms diverging from each other and away from and laterally of said trolley-pulley.

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

SAMUEL T. SIMMONS.

Witnesses:

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