

No. 889,759.

PATENTED JUNE 2, 1908.

P. BYNUM.

FLANGE.

APPLICATION FILED SEPT. 23, 1907.

Fig. 1.

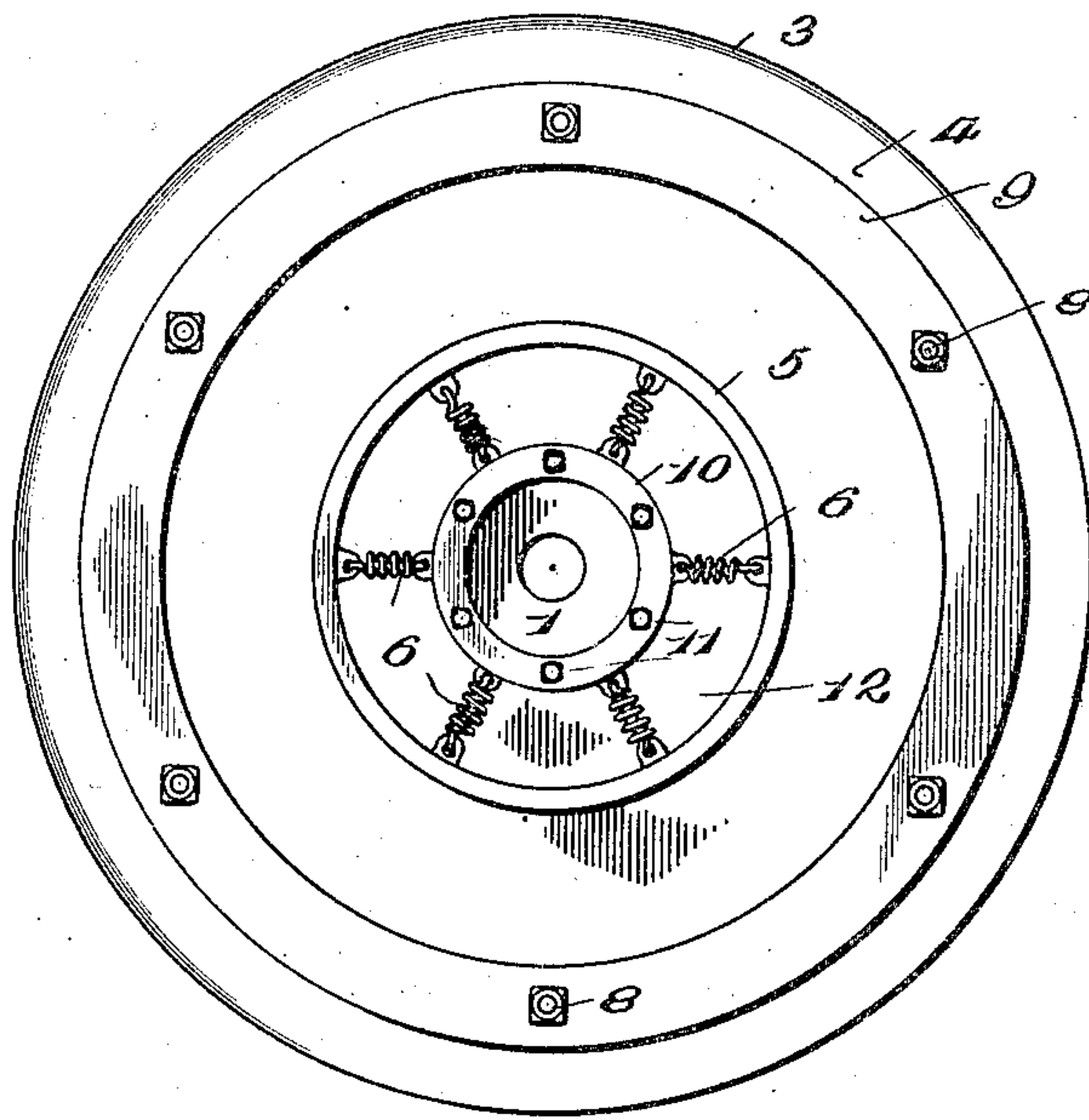


Fig. 2.

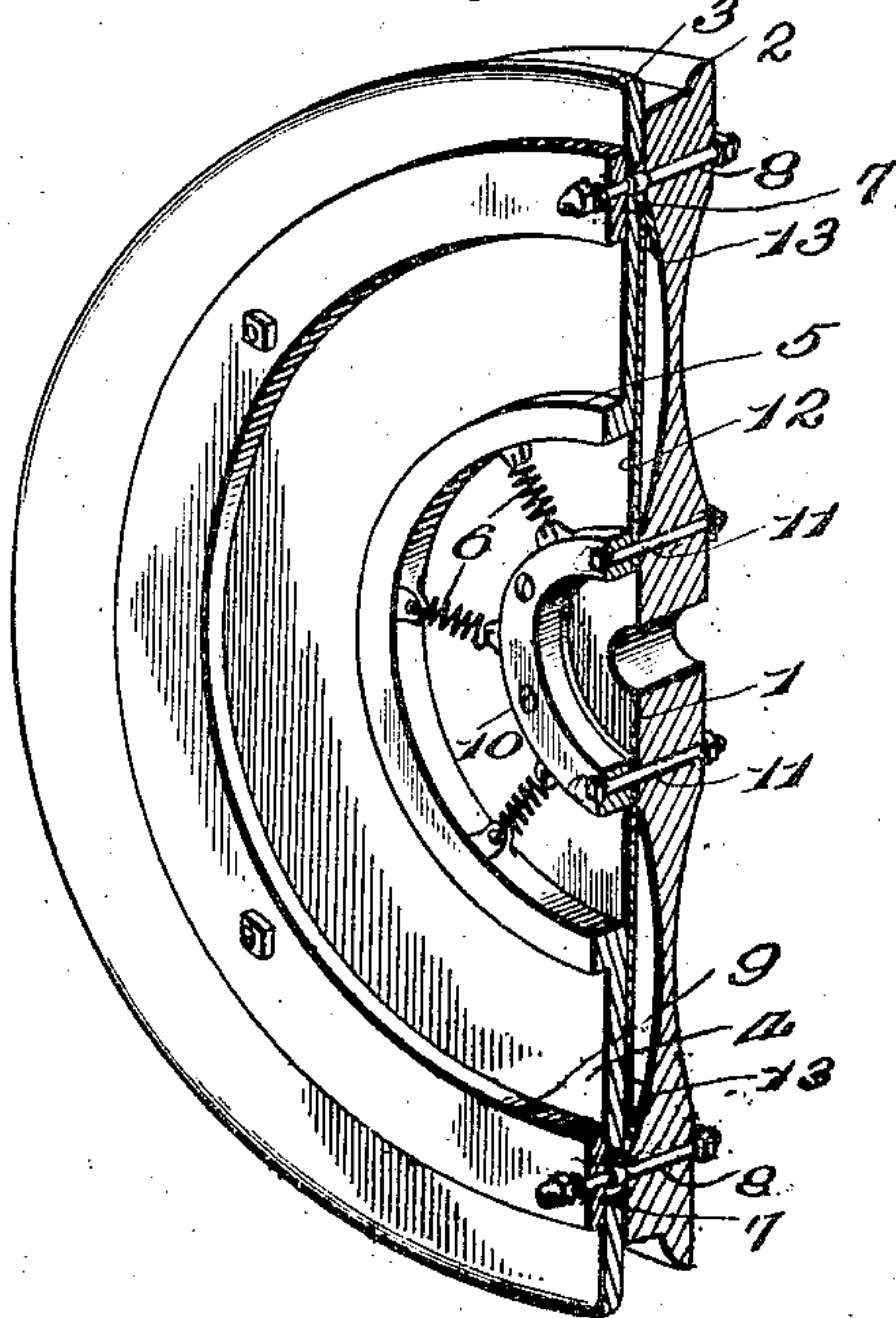
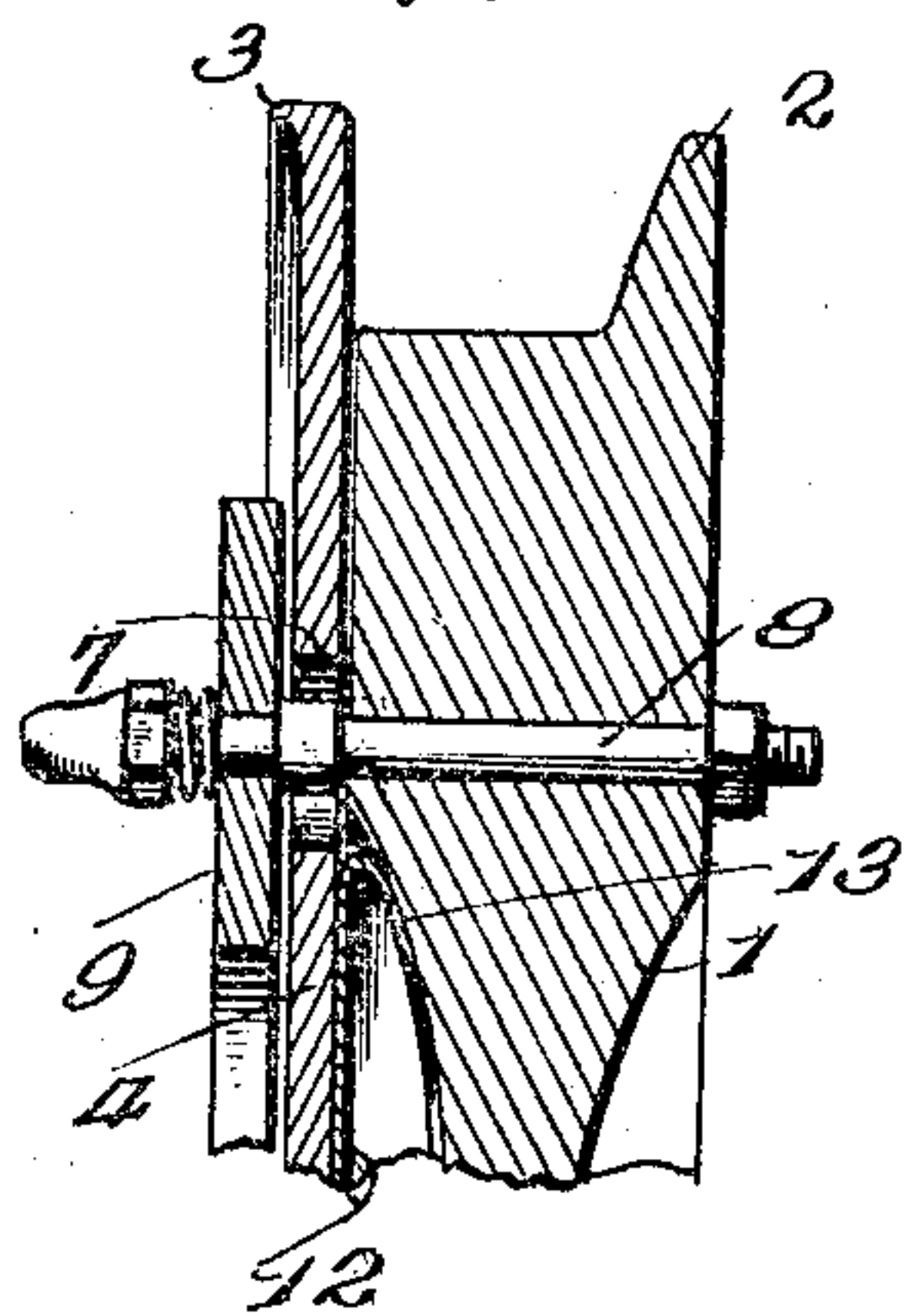


Fig. 3.



Witnesses

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FLANGE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, POLK BYNUM, subject of the King of England, residing at Strathcona, Alberta, Canada, have invented certain new and useful Improvements in Flanges, of which the following is a specification.

The present invention appertains to wheels designed to run upon tracks, the purpose being to supply the same with a yieldable flange, whereby the wheel may pass over a crossing rail without being lifted, the flange yielding to allow for the obstruction presented by the joint formed between the main and crossing rails or like parts.

The invention provides a car wheel having the usual integral flange with an auxiliary yieldable flange, the two flanges embracing the head or tread portion of a rail to prevent displacement of the wheel, the yieldable flange being arranged on the side so as to pass over a frog or rail abutting or touching that upon which the wheel is adapted to run to yield and prevent the lifting of the wheel when passing a frog or crossing rail.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side view of a car wheel supplied with a yieldable flange and adjunctive parts embodying the invention. Fig. 2 is a sectional perspective view of the car wheel, parts being broken away to show more clearly the structural arrangement and details. Fig. 3 is a transverse section of the outer part of the wheel and cooperating parts on a larger scale.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The wheel 1 may be of any construction such as adapted to run upon a track and is provided upon its tread portion with the usual integral flange 2. A yieldable flange 3 is provided upon the opposite side of the wheel, the two flanges 2 and 3 adapted to embrace opposite sides of the tread portion of the rail so as to prevent lateral displacement of the wheel and insure its retention upon the track. The flange 3 is yieldable so as to pass over a rail, frog, or like part touching the rail or track upon which the wheel 1 is mounted. The flange 3 constitutes the

outer edge portion of a plate 4 placed against the side of the wheel 1 opposite to that provided with the flange 2. The plate 4 is of annular formation and its outer edge portion constituting the flange 3 is slightly curved away from the plane of the wheel to prevent abrasive action between the flange and the track. An outer flange 5 surrounds the inner edge of the opening formed in the plate 4 and is apertured to receive the outer ends of tension springs 6 by means of which the plate 4 is centralized and held in normal position and made yieldable. A series of openings 7 are provided near the outer edge of the plate 4 and are spaced apart a uniform distance to receive the bolts or fastenings 8 by means of which the plate 4 and confining ring 9 are held in place. A ring 10 is fastened to the same side of the wheel 1 as the plate 4 and is apertured to receive the inner ends of the tension spring 6, said ring being secured to the wheel by means of bolts 11 or other suitable fastenings.

Inasmuch as car wheels have their sides cast hollow or made concave it is necessary to provide a support or filler 12 for the inner portion of the plate 4. The support 12 consists of a plate of annular form having its outer edge portion recurved, as at 13, to fit against the curved portion near the outer edge of the hollow side of the wheel so as to brace the plate 12. The inner edge portion of the plate 12 is secured to the thickened central portion of the wheel by means of the fastenings 11, being apertured to receive said fastenings and confined between the ring 10 and the central portion of the wheel 1. The outer side of the plate 12 is flush with the side of the thickened tread portion of the wheel against which the plate 4 bears, so that said plate 4 has a bearing throughout its extent. The bolts or fastenings 8 have their threaded ends reduced to receive the confining plate 9 so that said confining plate is prevented from binding the plate 4, while at the same time the nuts upon the threaded ends of the bolts 8 may be properly tightened. The flange 5 at the inner edge of the plate 4 and the ring 10 provide attaching means for opposite ends of the springs 6 and hold said springs clear of the wheel 1. The openings 7 near the outer edge of the plate 4 are sufficiently large to admit of the plate yielding when passing over a rail, frog, or like part touching the side of the track upon which the wheel 1 is moved, thereby preventing

lifting of said wheel when the flange 3 meets with and passes over said crossing or touching the rail, frog or like part.

Having thus described the invention, what is claimed as new is:

1. In combination with a wheel, a movable flange fitted to a side thereof, and tension springs normally exerting a pressure upon said flange to hold it in a given position and adapted to permit said flange to yield when passing over an obstruction without tending to lift the wheel.

2. In combination, a wheel, a plate placed against one side of the wheel and projecting beyond the tread thereof to form a flange, means for securing said plate to the wheel without binding the same, and tension springs normally exerting a pressure upon said plate to hold it in given position and adapted to permit the same to yield when passing over an obstruction without tending to lift the wheel.

3. In combination, a wheel, a plate secured to a side thereof and free to move, said plate having a flange at or near its inner edge, a ring secured to the same side of the wheel as the plate, and tension springs interposed between said rim and the flange of the plate and attached thereto.

4. In combination, a wheel having a hollow side, a plate secured to the hollow side of the wheel and free to move, tension springs normally exerting a pressure to hold said plate in a given position, and a support or filling piece secured to the hollow side of said wheel and forming a support for the inner portion of the aforementioned plate.

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

POLK BYNUM. [L. s.]

Witnesses:

JOHN R. LAVELL,
ADA L. BUNWARK.