

G. B. PERKINS & J. S. FORBES.

TRACK GAGE.

APPLICATION FILED APR. 13, 1909.

930,791.

Patented Aug. 10, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

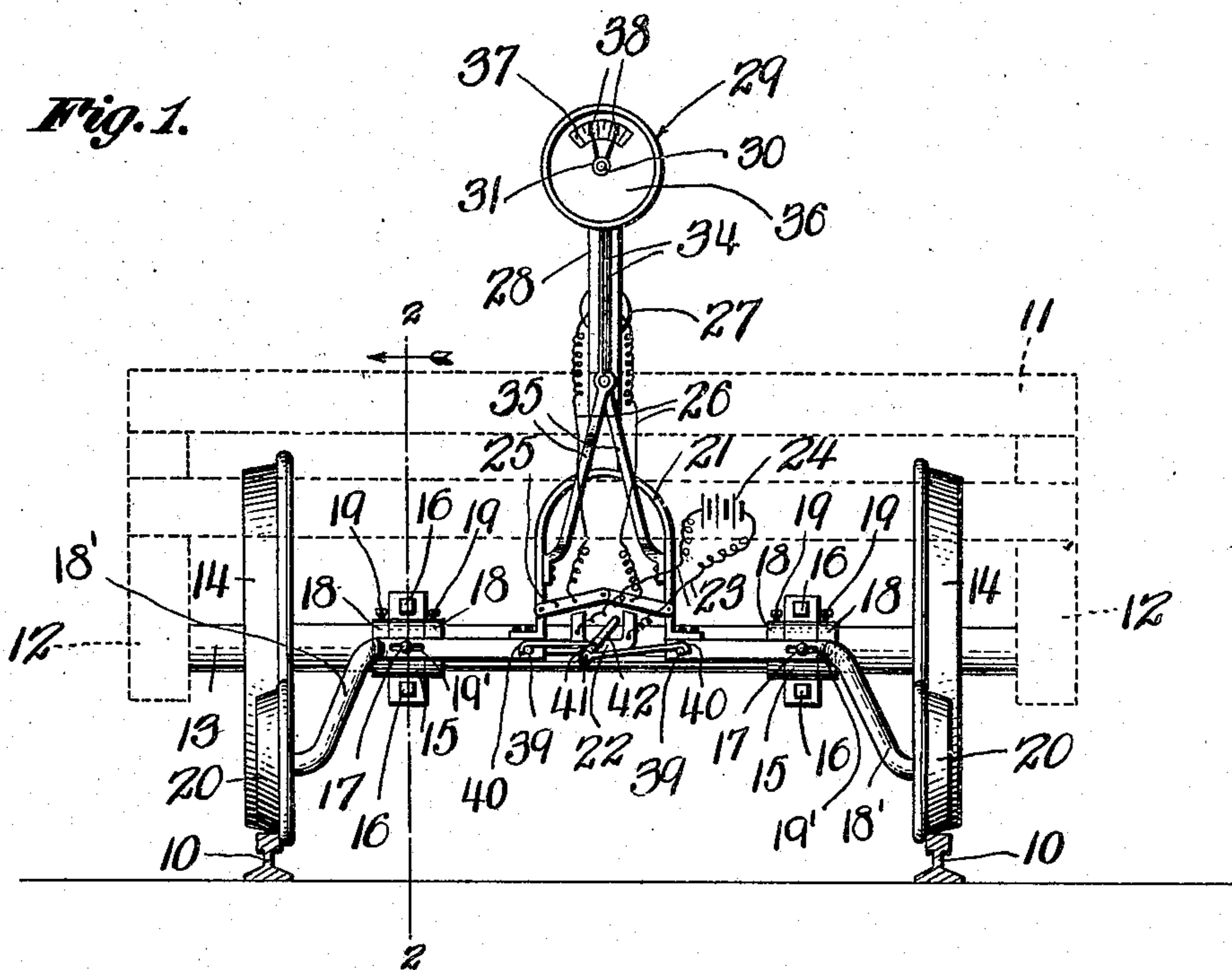
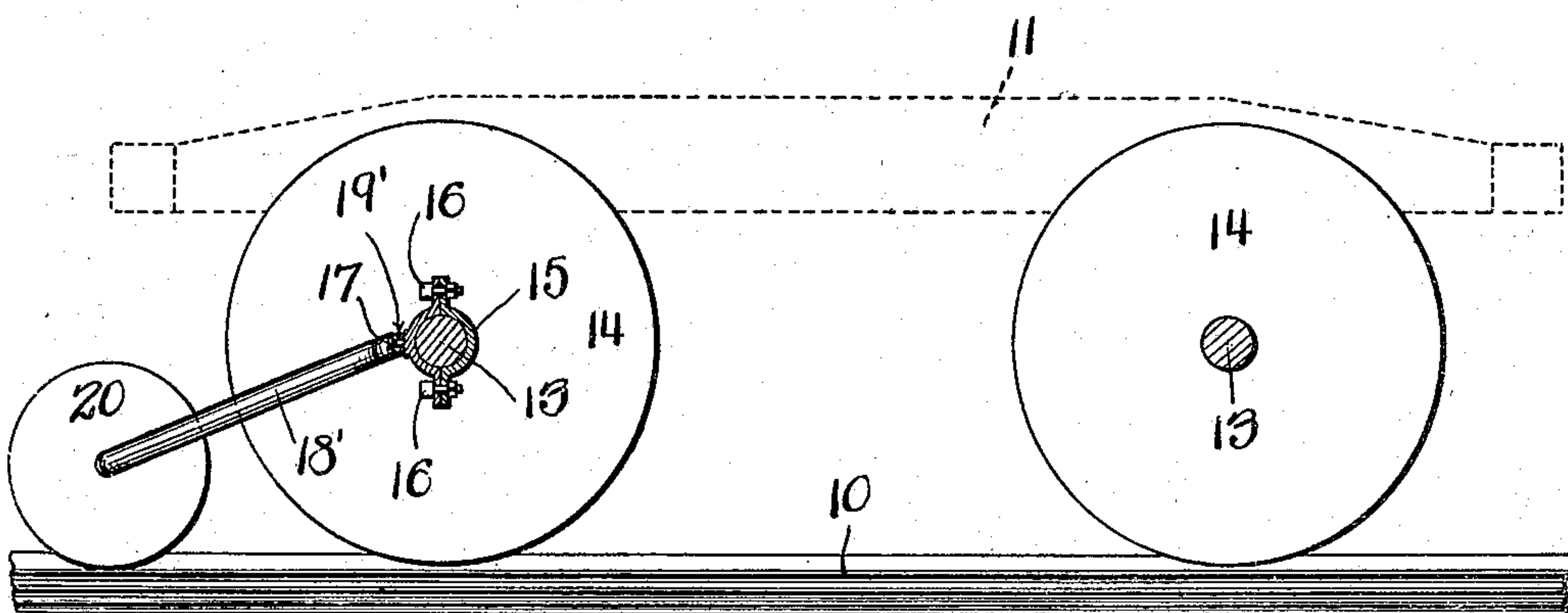


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

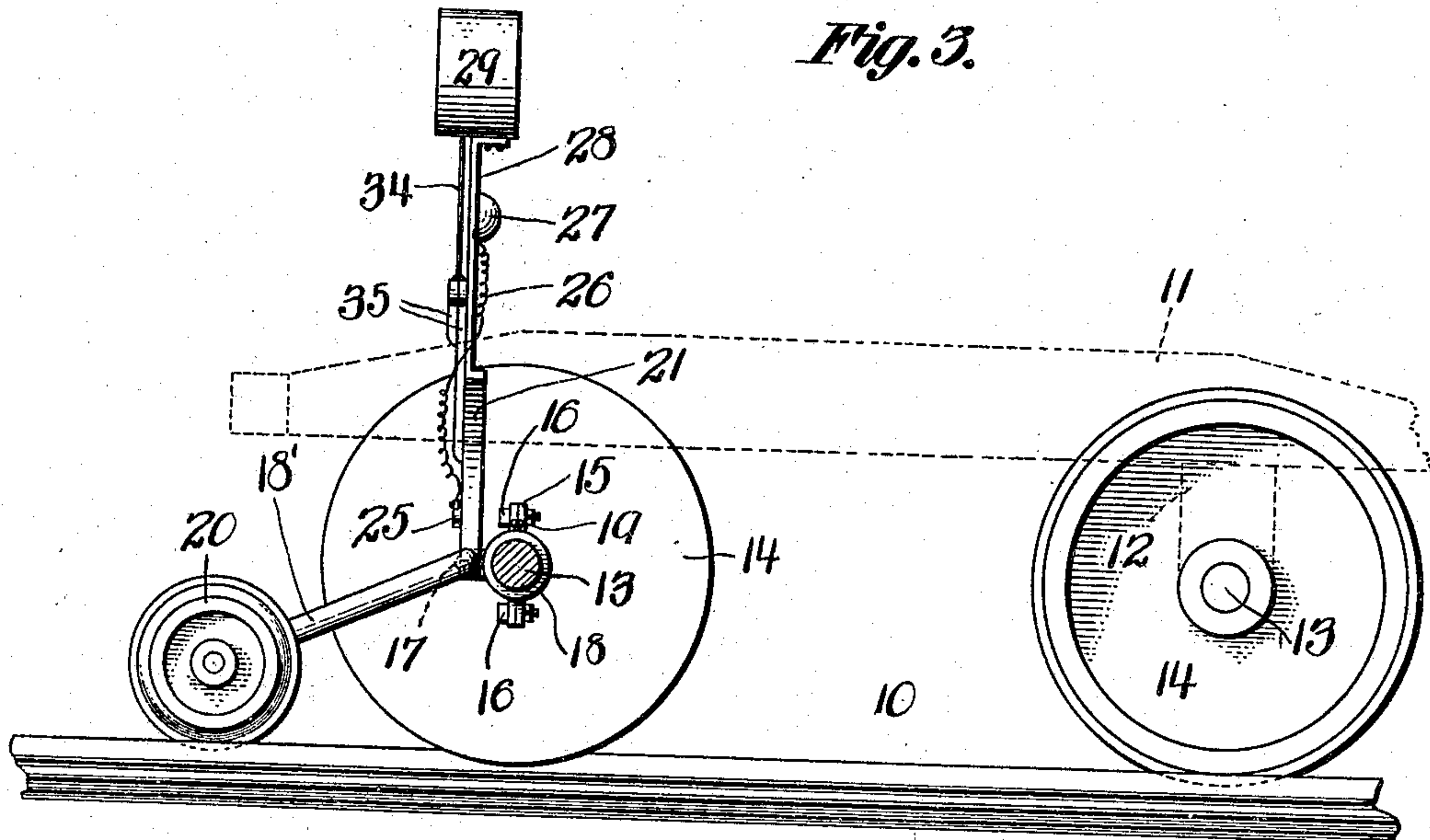


Fig. 4.

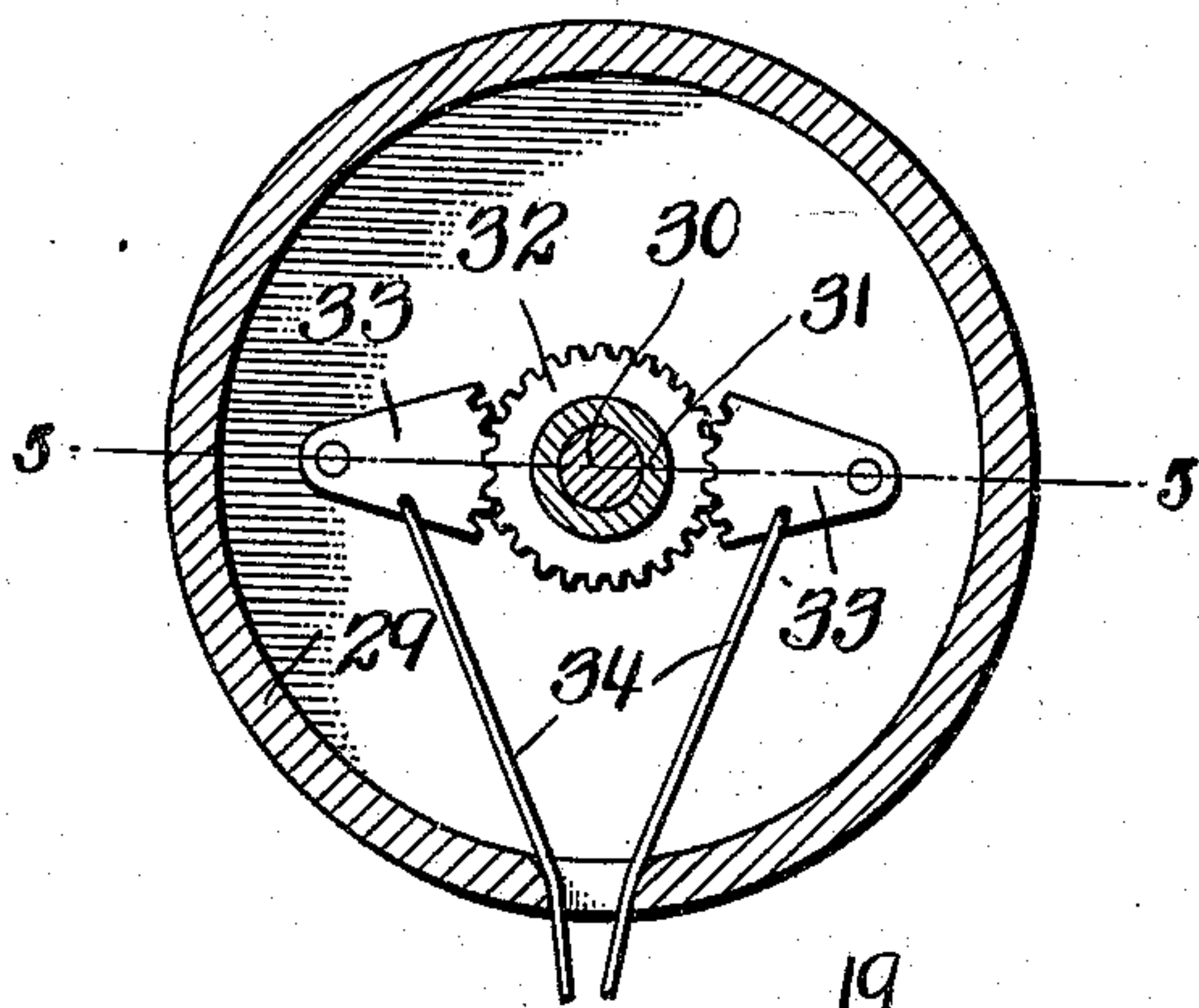


Fig. 5.

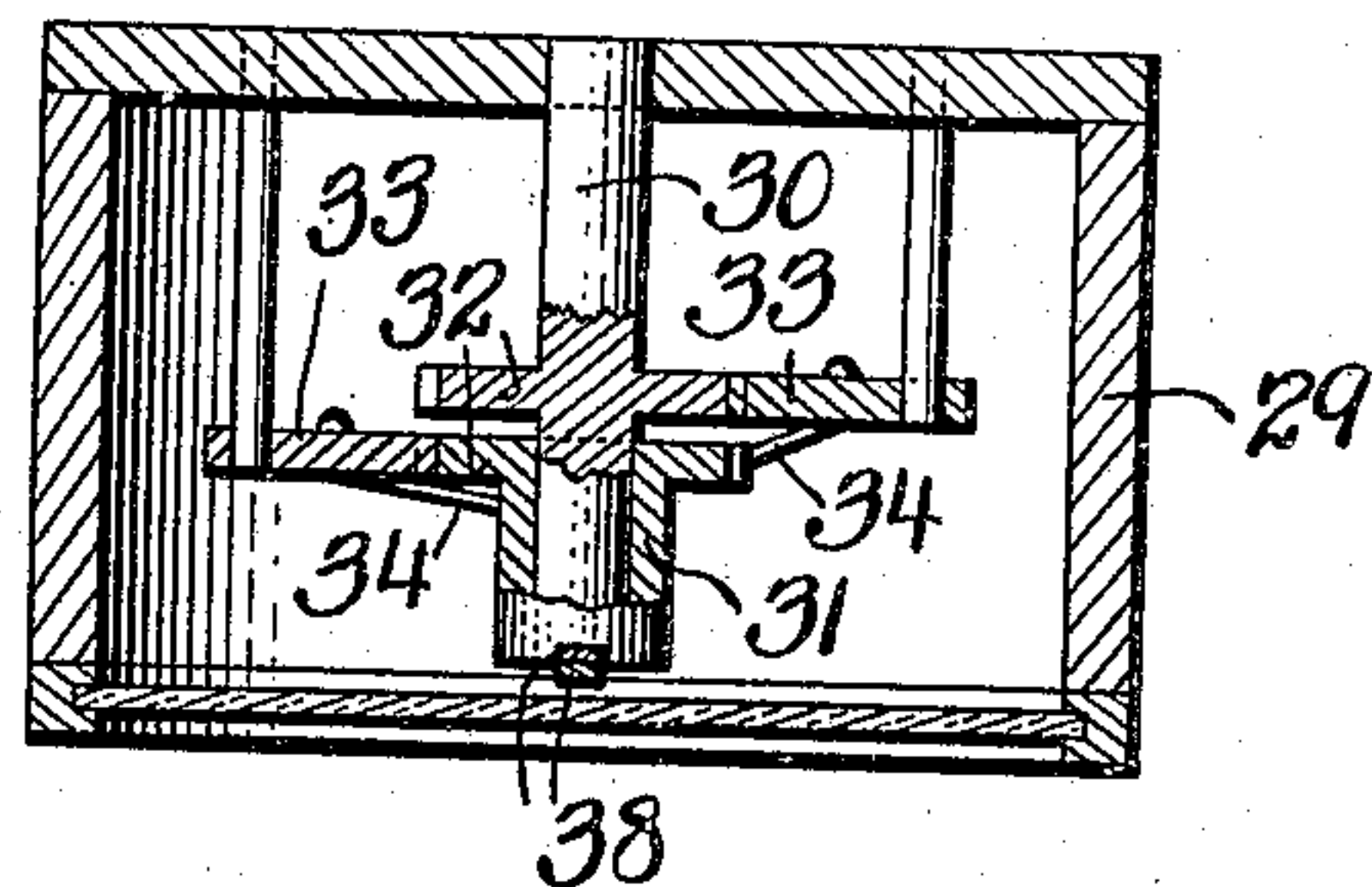


Fig. 6.

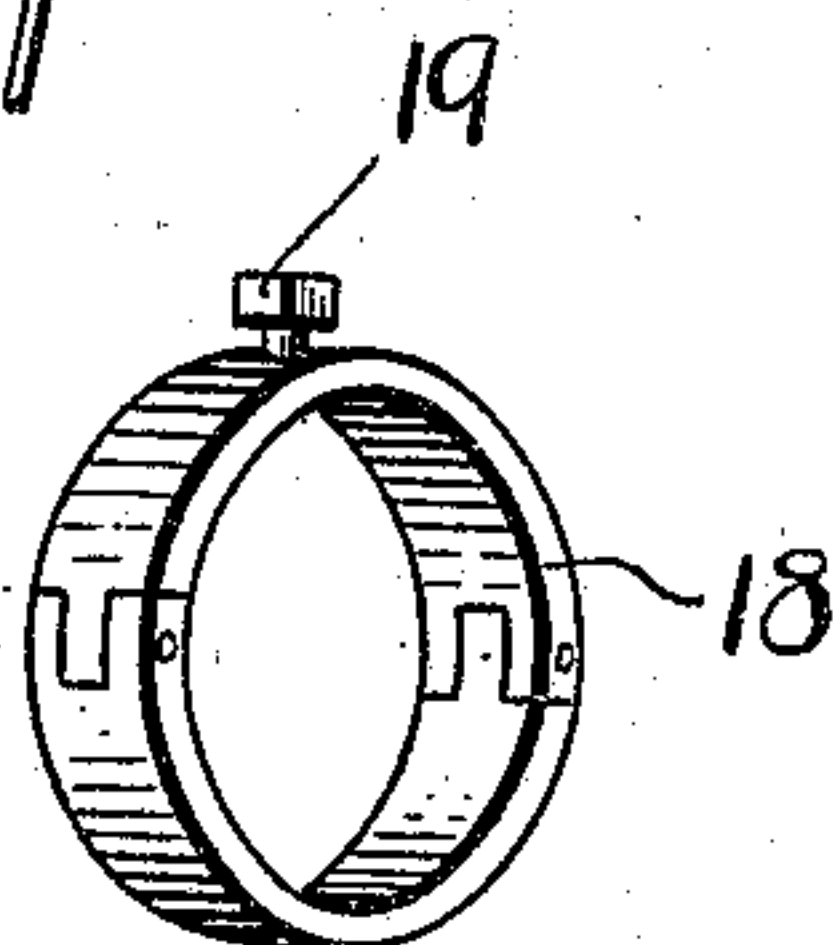
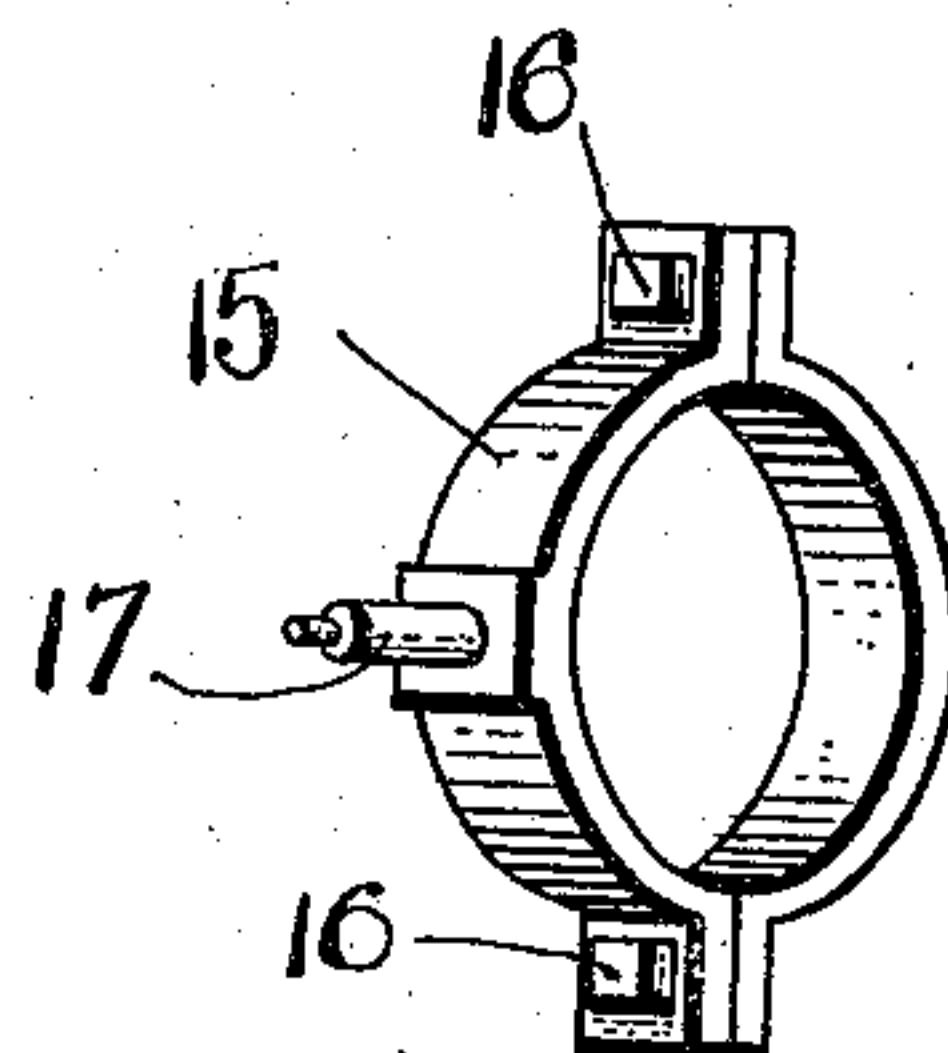


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE B. PERKINS AND JOHN S. FORBES, OF ELVINS, MISSOURI.

TRACK-GAGE.

No. 930,791.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed April 13, 1909. Serial No. 489,616.

To all whom it may concern:

Be it known that we, GEORGE B. PERKINS and JOHN S. FORBES, citizens of the United States, residing at Elvins, in the county of St. Francois, State of Missouri, have invented certain new and useful Improvements in Track-Gages; and we 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.

The invention relates to a track gage and more particularly to the class of automatic railway track gages with signaling means.

The primary object of the invention is the provision of an automatic track gage which will automatically indicate and announce any variation or irregularity in the width of the track or derangement of the same so as to enable a trackman or other inspector to have cognizance of the irregularity or derangement of the track and with accuracy the extent thereof.

Another object of the invention is to provide in combination with a track gage, a self adjusting alarm mechanism, either electrical or mechanical for making known immediately any derangement, irregularity or defect in the track.

A further object of the invention is the provision of a track gage of this character having suitable alarm mechanism which will be automatically operated simultaneously with the gage to notify the irregularity in the track and to indicate the degree thereof, and that is simple in construction, thoroughly efficient in operation, practical, and inexpensive in the manufacture.

With these and other objects in view the invention consists in the construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings which disclose the preferred form of embodiment of the invention and as brought out in the claims hereunto appended.

In the drawings:—Figure 1 is a front elevation of the invention mounted upon a truck. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is a side elevation. Fig. 4 is a sectional view through the gage. Fig. 5 is a sectional view on the line 5—5 of Fig. 4. Fig. 6 is a detail perspective view of one of the clamp boxings or collars. Fig. 7 is a perspective view of one of the split ring members.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

In the drawings the numeral 10 designates spaced track rails which are of the usual ordinary construction and are supported upon and spiked to cross ties in the usual manner. Adapted to travel upon the said track is a truck 11, which may be a hand or motor operated car truck having a body or platform with depending bearings 12 in which is journaled a front axle 13, the latter supporting flanged wheels 14, which are adapted to travel upon the tread of the track rails.

Loosely surrounding the axle 13 are split collars 15, each pair of which is detachably connected together by fasteners 16, and having integral therewith a forwardly projecting guide pin 17, to prevent longitudinal displacement of the loose collars 15 upon the axle 13 are two part clamp rings or collars 18, the latter disposed on opposite sides of the collars 15 and are fixed to the said axle by binding screws 19.

Carried by the collars 15 are laterally displaceable axle sections 18', each of which contains an elongated slot 19', receiving the guide pin 17, which latter serves to support the said axle section upon the collar and to guide it when laterally displaced with respect to the track. Journaled upon the outer ends of the displaceable axle sections 18', are flanged track wheels 20, which latter are adapted to engage the track rails, and connected to the inner ends of the said sections is an inverted substantially U-shaped spring yoke member 21, the same being vertically disposed and serves to spread the sections apart so as to tension the same and normally hold the flanges of the track wheels 20 constantly impelled against the inner faces of the track rail.

Secured to the inner end of one of the axle sections 18, is a forked contact member 22, the same being suitably insulated from said section and having electric wire connections 23 with a suitable battery 24 carried upon the truck. Pivotally supported by the spring yoke 21 and insulated therefrom is a toggle linked contact member 25 which latter has electric wire connections 26 with an audible signal such as an electric bell 27, the latter mounted upon a post or upright 28, fixed to the spring yoke. It is obvious that when the truck 11 travels over the rails

10 of the track and should the said rails be spread apart or deranged from their normal position along the track way the axle sections 18, will respond thereto under the action of the spring yoke which latter will cause the toggle linked member 25 to come into engagement with the forked contact member so as to close the circuit between the bell and the battery and in this manner the said bell is automatically sounded to announce the point of irregularity or derangement in the track.

Upon the post or upright 28 is mounted an indicator which comprises a case 29 in which is journaled the usual interfitting clock hand shafts 30 and 31 respectively, each having fixed thereto a pinion 32, enmeshing with a pivotal segment-shaped rack member 33, and both of these rack members have connection with rods 34, which latter are pivoted at a common center to bracket arms 35 the lower ends of which are fixed to the branches of the spring member 21, so that upon distortion of the latter the shafts 30 and 31 will rotate in unison in opposite directions with respect to each other.

Mounted in the case 29 is a dial 36, the latter having on its face an arcuate degree scale 37, over which is adapted to travel and cooperate therewith a pair of pointer hands 38 so as to indicate or make visible with accuracy the degree of derangement or irregularity of the rails of the trackway.

With the foregoing description and illustration the operation of the device will be readily understood, and it will be seen that lateral movement of the track or gage wheels 20, causes corresponding movement of the axle sections so as to effect the operation of the contact members which in turn establish an electric circuit which rings the bell whenever a variation in the gage of the track occurs and at the same time the indicator will disclose with accuracy the slightest extent of variation in the regularity of the track.

It will be obvious that the device may be as well mounted upon the body of the truck in lieu of its mounting on the front axle thereof.

It is to be understood that the foregoing and other changes, variations and modifications may be made such as come properly within the scope of the appended claims without departing from the spirit of the invention or sacrificing any of its advantages.

Projecting from the front faces of the

axle sections 18 near their inner ends are lugs 39, which are engaged by outer hook extremities of catch members 40 the latter pivoted as at 41 in spaced relation to each other to a lever 42 which will when thrown in one direction lock the axle sections 18 against spreading action by the influence of the spring yoke when the gage is not in use.

What is claimed is:—

1. The combination with an electric circuit, of an alarm operative thereby upon the closing of the same, wheeled laterally shiftable gage sections, means tensioning said sections, electric contacts arranged in said circuit and carried by the said means and one of the sections respectively and adapted to close the circuit upon the spreading of the sections, and indicator means having connection with the tension means and operable upon displacement of the sections.

2. A device of the class described, comprising opposed tensioned laterally shiftable axle sections, gage wheels journaled on the sections, a contact carried by one of the sections, a contact operated upon the displacement of the sections to engage the other contact, a normally opened electric circuit having connections with said contacts and adapted to be closed thereby, an audible signal operated upon the closing of the circuit, and a visible indicator operated by the displacing action of the sections.

3. The combination with a car truck and its front axle, of collars loosely surrounding the axle, means clamped about said axle to prevent longitudinal displacement of the collars, laterally displaceable axle sections carried by the collars, gage wheels journaled on said sections, a spring yoke carried by said sections and normally holding the same under tension, a normally opened electric circuit, a contact in said circuit and carried by one of the sections, a contact arranged in said circuit and supported by the spring yoke and adapted to close the circuit upon lateral displacement of the sections, an audible signal operated upon the closing of the circuit, and indicator mechanism operated upon the lateral displacement of the sections.

In testimony whereof, we affix our signatures in presence of two witnesses.

GEORGE B. PERKINS.
JOHN S. FORBES.

Witnesses:

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