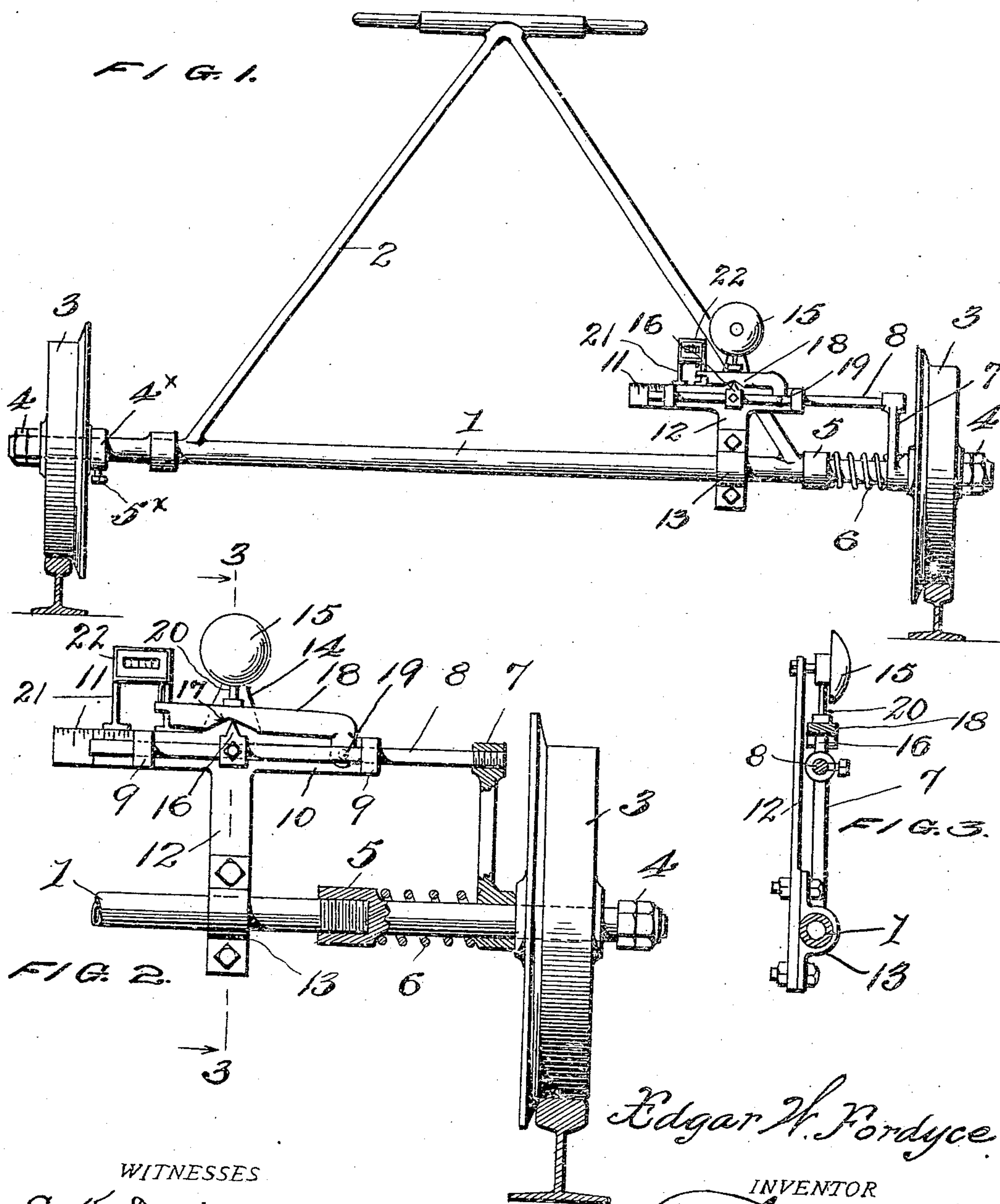


E. W. FORDYCE.
 TRACK GAGE.
 APPLICATION FILED MAY 6, 1909.

951,068.

Patented Mar. 1, 1910.
 2 SHEETS—SHEET 1.



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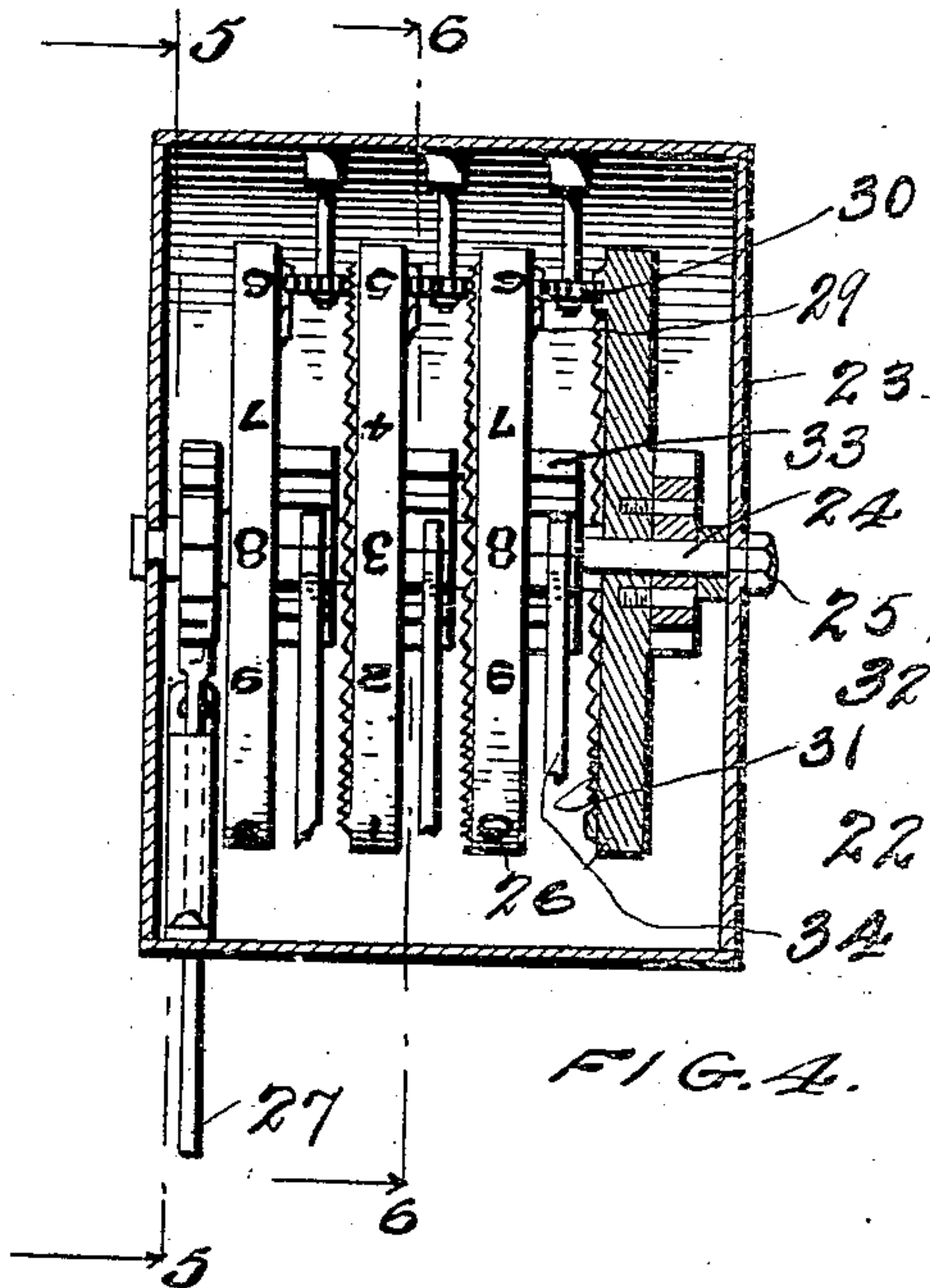


FIG. 4.

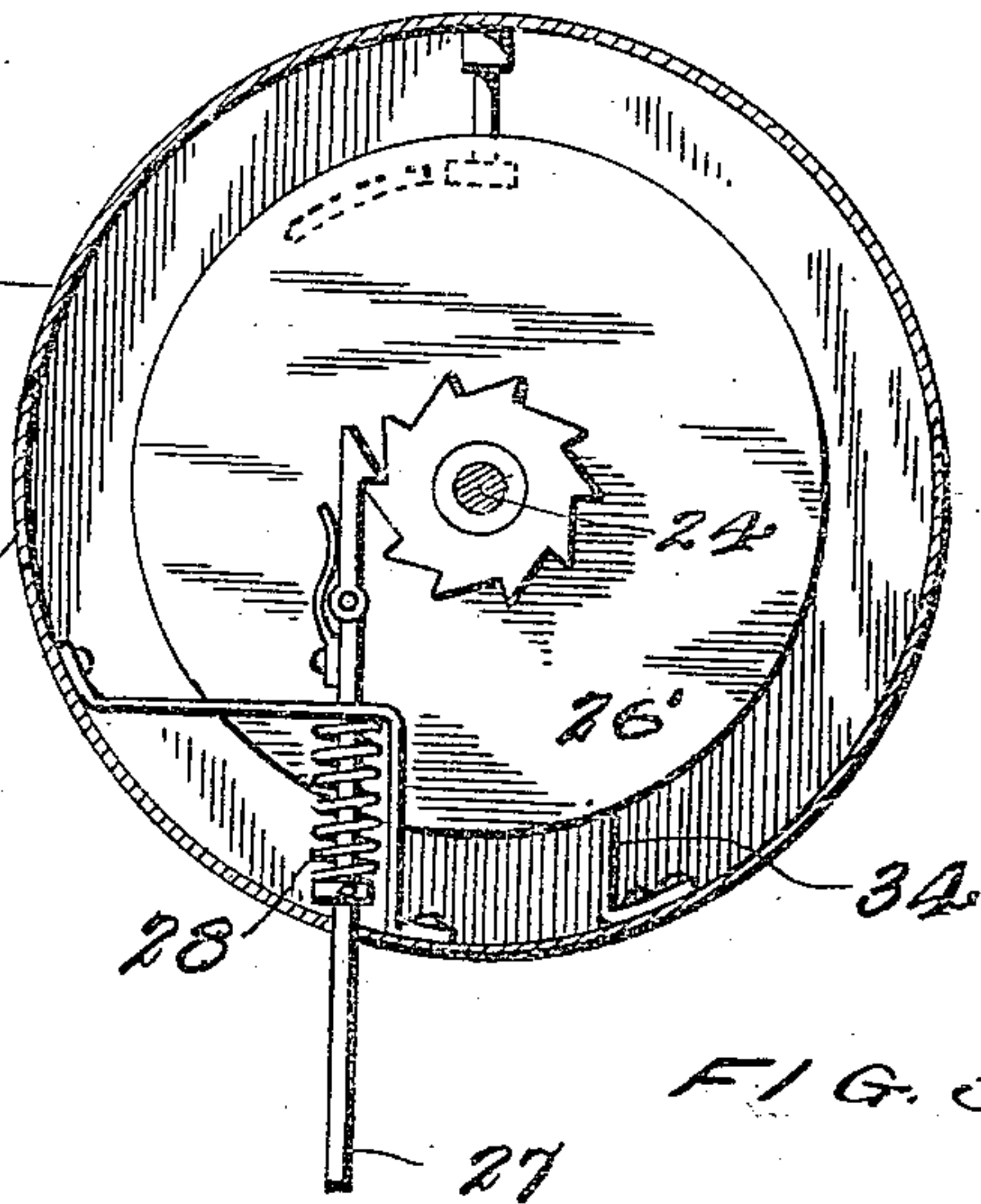


FIG. 5.

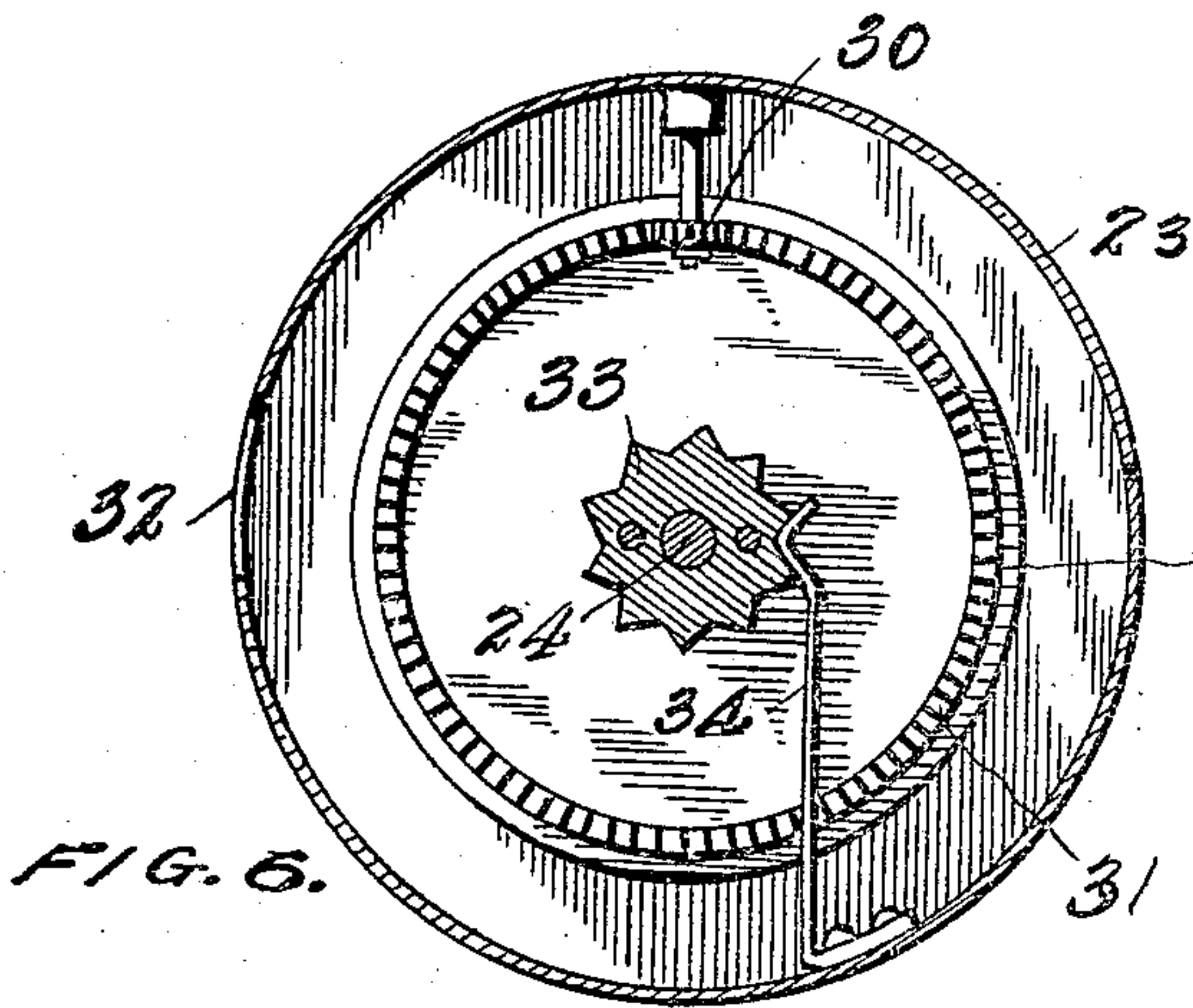


FIG. 6.

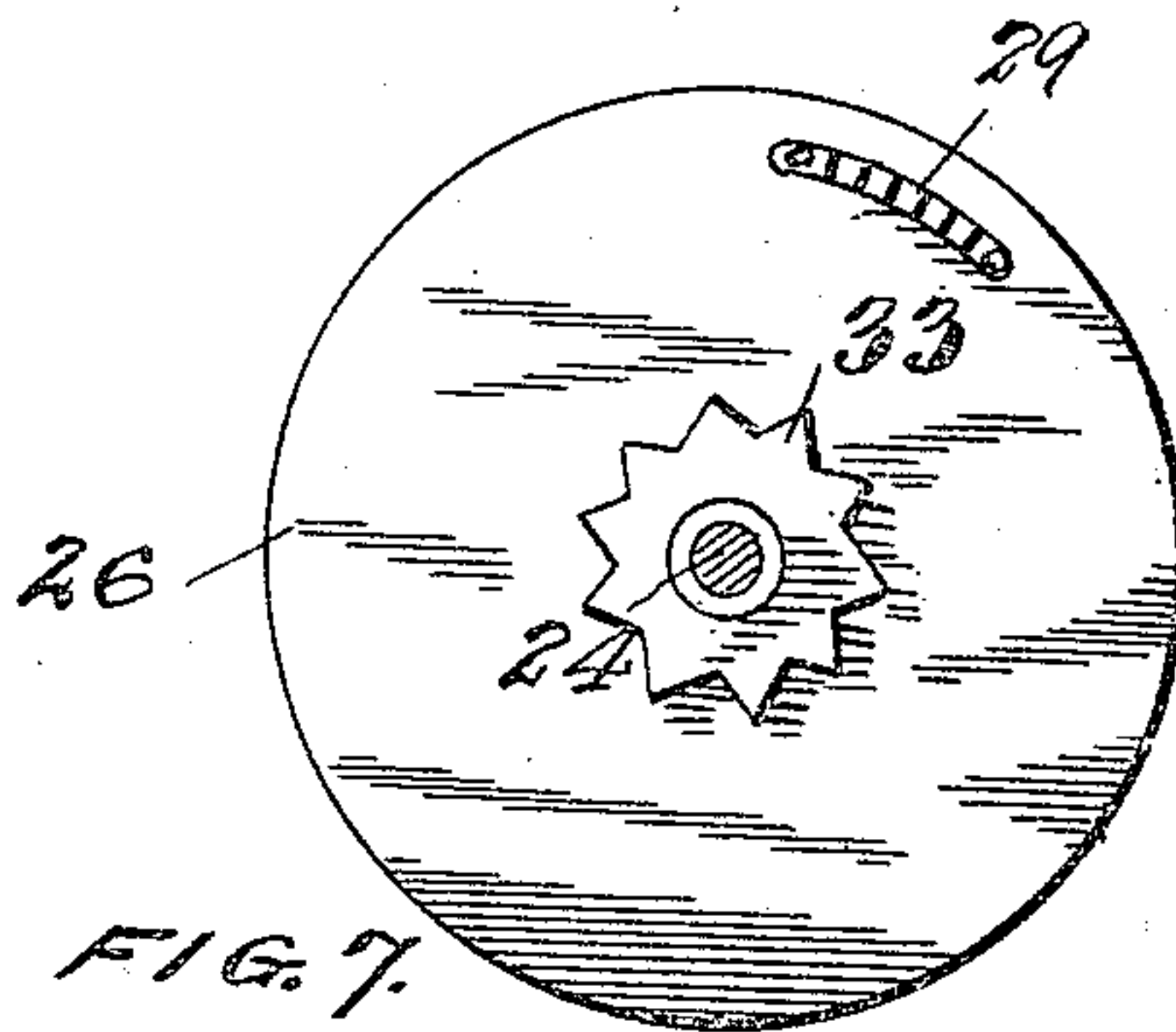


FIG. 7.

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UNITED STATES PATENT OFFICE.

EDGAR W. FORDYCE, OF ANNISTON, ALABAMA.

TRACK-GAGE.

951,068.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed May 6, 1909. Serial No. 494,369.

To all whom it may concern:

Be it known that I, EDGAR W. FORDYCE, a citizen of the United States, residing at Anniston, in the county of Calhoun and State of Alabama, have invented certain new and useful Improvements in Track-Gages, of which the following is a specification.

My invention relates to improvements in track gages, and has for its object the provision of a device adapted to be propelled along a trackway which will properly gage the tracks and will indicate whether the same is of the proper width, and which will give alarm of any variation or defect in the track and will register the number of said variations from the standard gage of the track.

Another object of the invention is to provide an improved form of gage which may be adjusted to the tracks of various widths to enable my gage to be adapted to tracks of any width.

A further object of my invention is the provision of a simple, inexpensive and practical form of track gage which will be absolutely reliable and efficient in operation, and one the different parts of which are adjustable so that the device may be used upon tracks of other than standard gage.

With these and other objects in view, my invention comprises a supporting axle, gage wheels mounted thereon, one of said wheels being capable of lateral movement on the axle, an alarm, means operated by the lateral movement of the gage wheel for actuating the alarm, and registering means for indicating the number of defective places in the track also operated thereby.

My invention further consists of a device of the character set forth embodying certain other novel features of construction, combination and arrangement of parts for service substantially as disclosed herein and as illustrated in the accompanying drawings, in which:

Figure 1, is a view in elevation of my improved track gage as in use upon a railway track. Fig. 2, is an enlarged detailed view of one of my improved gage wheels with adjusting, alarm and registering mechanism. Fig. 3, is a vertical sectional view

on the line 3—3 of Fig. 2. Fig. 4, is a rear elevation of the registering mechanism with the back of the casing removed and one of the wheels shown in section. Fig. 5, is a vertical sectional view on the line 5—5 of Fig. 4. Fig. 6, is a vertical sectional view on the line 6—6 of Fig. 4, and Fig. 7, is a view of the inner side of the left-hand wheel in Fig. 4.

In the drawings: the numeral 1, designates the supporting shaft or axle, upon which is mounted the frame 2, by means of which the device is pushed or pulled, either manually or otherwise. Gage wheels 3, are mounted upon the ends of the axle and adjustably confined thereon by means of the abutment collars or nuts 4. One of the wheels is mounted to have a simple rotary movement without any lateral play, but the opposite wheel is capable of sliding movement upon the axle, its outward movement being confined by the abutment collar 4 on the end of the shaft, from which it is normally held by the engagement of its flange with the inner side of the rail. The shoulder 5 limits the inward movement of the wheel, and a spring 6 is interposed between the shoulder and the arm 7 to force the latter outward against the end of the shaft and against the inner face of the wheel so as to shift to correspond with its movement. To the arm 7 at its upper end is connected the outer end of the rod 8, which extends inward passing through lugs 9 on the beam 10. The beam 10 is formed with a scale 11, which indicates the width in connection with the rod 8. The beam is formed with a post or support 12, having a clamp 13 for connection with the axle or shaft 1, and with an extension 14, upon which is mounted a bell or alarm 15. Upon the rod 8 is secured the pointer 16, which rests in the recess 17 of the lever 18, said lever being pivoted at 19 to the beam 10 and bearing on its upper side the striker or sounder 20 which rings or sounds the alarm when the pointer, by lateral movement in either direction caused by the variance of the width of the track, is moved from the center of the notch 17. On the beam 10 is also secured by means of the supporting posts or legs 21 the registering mechanism 22. This mechanism, as shown

most clearly in Fig. 4, comprises the casing 23, through openings in the ends of which is passed the axle 24, secured in place by the nuts 25. On said axle are mounted the registering wheels 26, each bearing a series of figures in sequence from 0 to 9, said series running in opposite directions on adjacent wheels as may be seen in Fig. 4.

In the operation of the registering mechanism, I provide the rod 27 which is normally held in contact with the lever 18 by means of a strong spring 28 which bears against a collar on the rod and forces it downward, a hooked end being pivoted at the other or inner end of the rod and held against a toothed wheel on the side of the large wheel 26' by means of a flat spring, and when the lever 18 is raised by the lateral movement of the pointer it forces the rod 27 upward and the hook engages a higher tooth than it previously did and when the lever falls and allows the rod to return to normal position, the spring 28 by pushing the rod downward causes the toothed wheel to be revolved and thus the wheel 26' is shifted one notch and registers the inequality in the gage of the track. At the 0 point on each wheel I provide the toothed segment 29 which engages a toothed wheel 30, pivotally attached to the casing, and it in turn engages the gears 31 on the wheels 26, so that as the 0 on the one wheel appears in the sight opening 32, the segment and gears cause the wheel of the next higher degree to revolve one point and show the next higher number in said opening. Thus it will be understood that any number may be registered, depending solely upon the number of wheels used and the operation being the same whatever number used. It will also be understood that when the highest possible number has been registered my device will return to the original position and begin over again.

To prevent the accidental displacement out of alinement of the wheels, I provide each with the notched wheel 33, against which bears the end of a spring 34 which is riveted to the casing and by having its end fitting in the notch at that point prevents the wheel 26 from turning except when actuated by the gear wheel.

It is apparent that but one of the gage wheels has any lateral play upon the axle, or is provided with alarm and registering mechanism, the other wheel simply rotating in the usual manner and being retained in place by means of the collar 4* secured by the screw 5*.

When it is desired to test a stretch of track, the gage is placed upon the rails and propelled along either manually or otherwise. The gage wheels make close engagement with the rails so that the slightest

variation in the width of the track will cause the movable gage wheel to be shifted laterally on the axle. This shifting of the gage wheel causes the alarm to be sounded, which immediately notifies the operator that the track is not of the standard gage and the defect may then be remedied, while by the same operation the registering mechanism is caused to register another defect in the gage of the track.

The gage may be adjusted so that the slightest variation in the track will operate the alarm and registering mechanisms, and the device thus serves to locate all the irregularities in the track and register the number thereof, and if desired, one or more levels may be carried by the device to indicate the comparative level of the tracks and the grade.

From the foregoing description taken in connection with the drawings, the operation and advantages of my improved track gage will be readily understood and appreciated, and it will be evident that I have produced a device of this character which is useful and practical in every particular.

I claim:

1. In a track gage, the combination with the axle, of supporting wheels therefor having flanged rims adapted to engage the inner side of the rails, one of said wheels having lateral movement on the axle, a bracket secured on the axle, alarm and registering mechanism carried thereby, a lever pivotally secured to the bracket, and means operated by the movement of the wheel for causing said lever to come into contact with and operate the alarm and registering mechanism.

2. In a track gage, the combination with the frame, of supporting wheels therefor, one of said wheels having lateral movement on its axle, means for retaining the wheels in tight engagement with the track, an alarm mechanism and a registering mechanism carried by the frame, a rod slidably secured to the frame and adapted to be moved by the lateral movement of the wheel, a lever pivotally secured above said rod, and means on the rod adapted to engage said lever and cause it to contact with the alarm mechanism to cause the sounding thereof and to engage the registering mechanism to cause said mechanism to register the fact of the movement of the rod caused by the lateral movement of the wheel.

3. In a device of the character described, the combination with an axle, of a wheel secured thereon, another wheel mounted and having sliding movement on the other end of the axle, a crank rod member having an opening in one end through which the axle passes, means on the axle bearing against the inner face of the crank rod member for

forcing it and thus in turn the wheel against
which it bears outward, alarm and register-
ing mechanism mounted on the axle, and
means mounted on the crank rod member
5 for causing the operation of said mechanism
upon the movement of the rod caused by the
lateral movement of the wheel.

In testimony whereof I affix my signa-
ture, in presence of two witnesses.

EDGAR W. FORDYCE.

Witnesses:

J. F. GREEN,
H. K. SMITH.