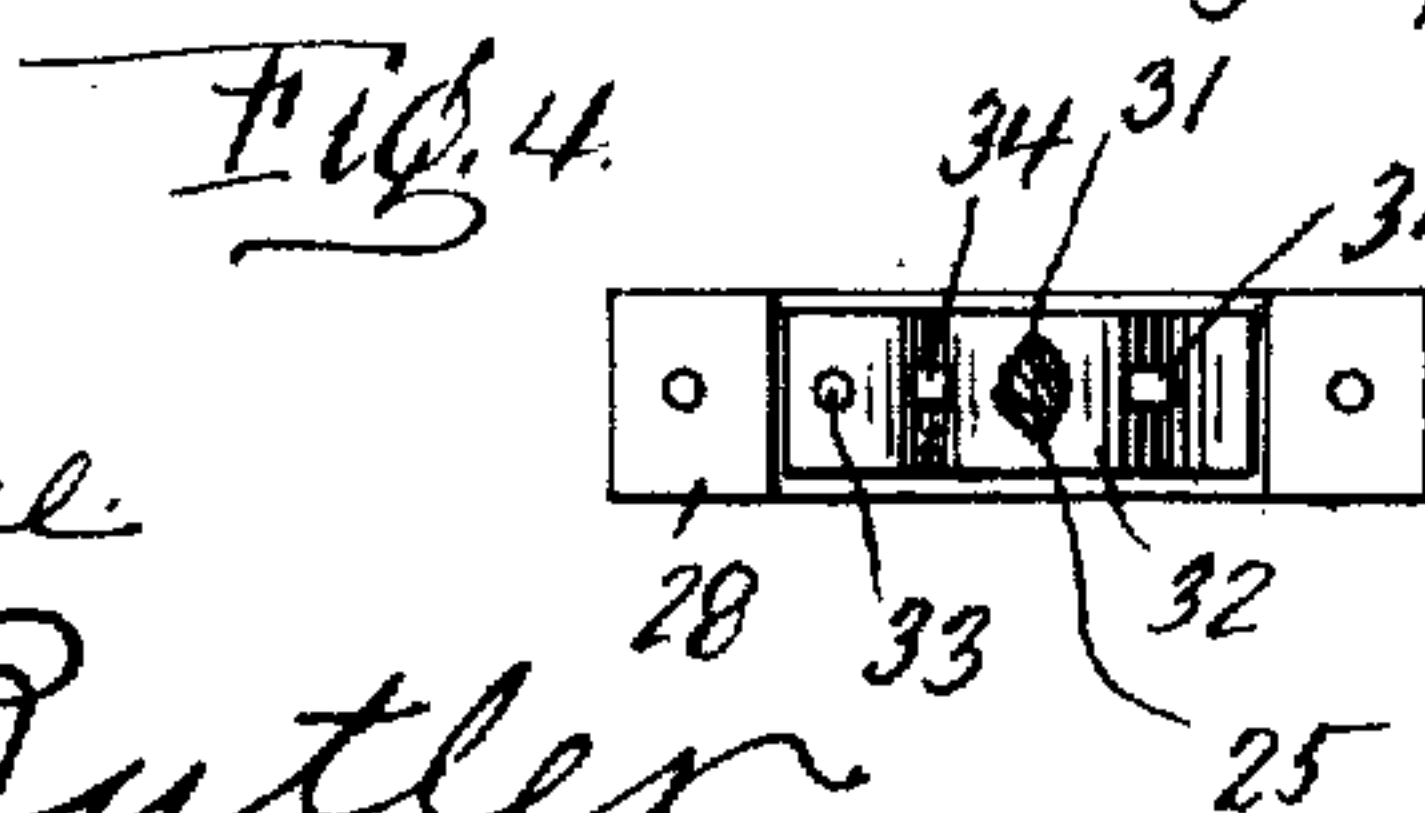
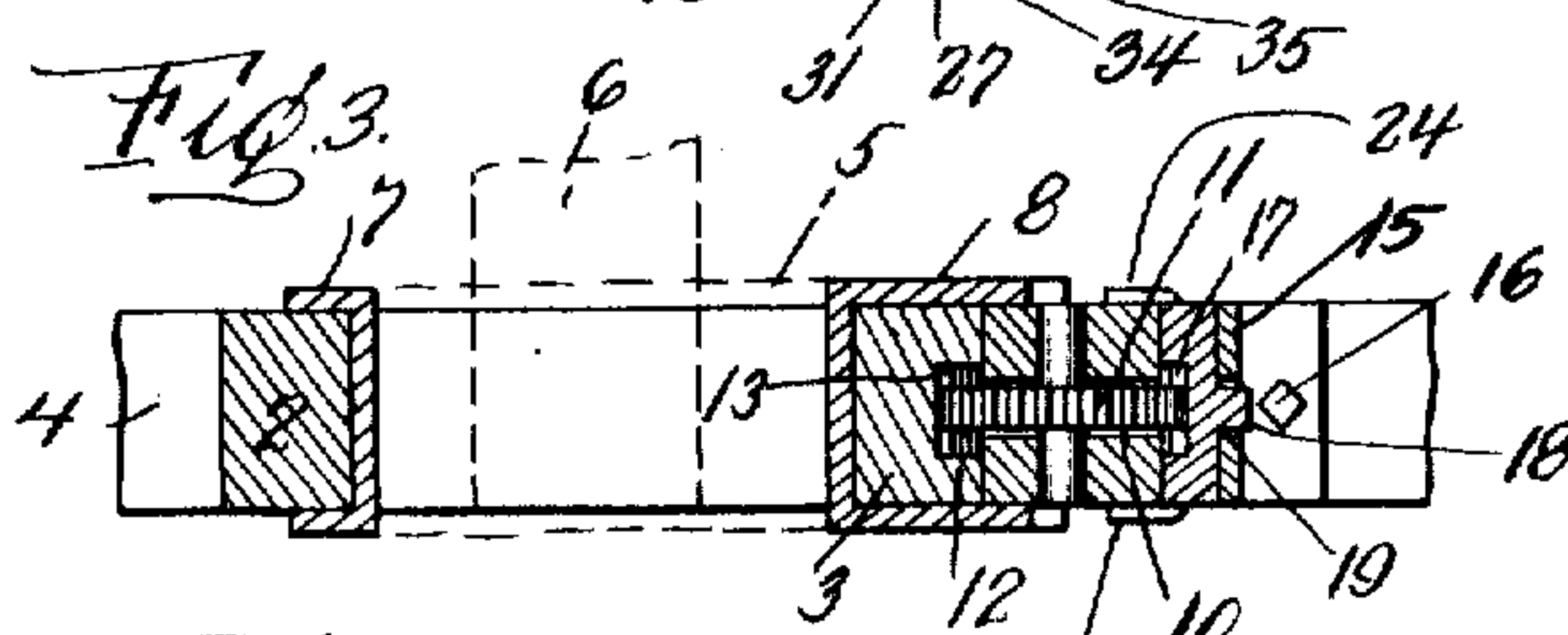
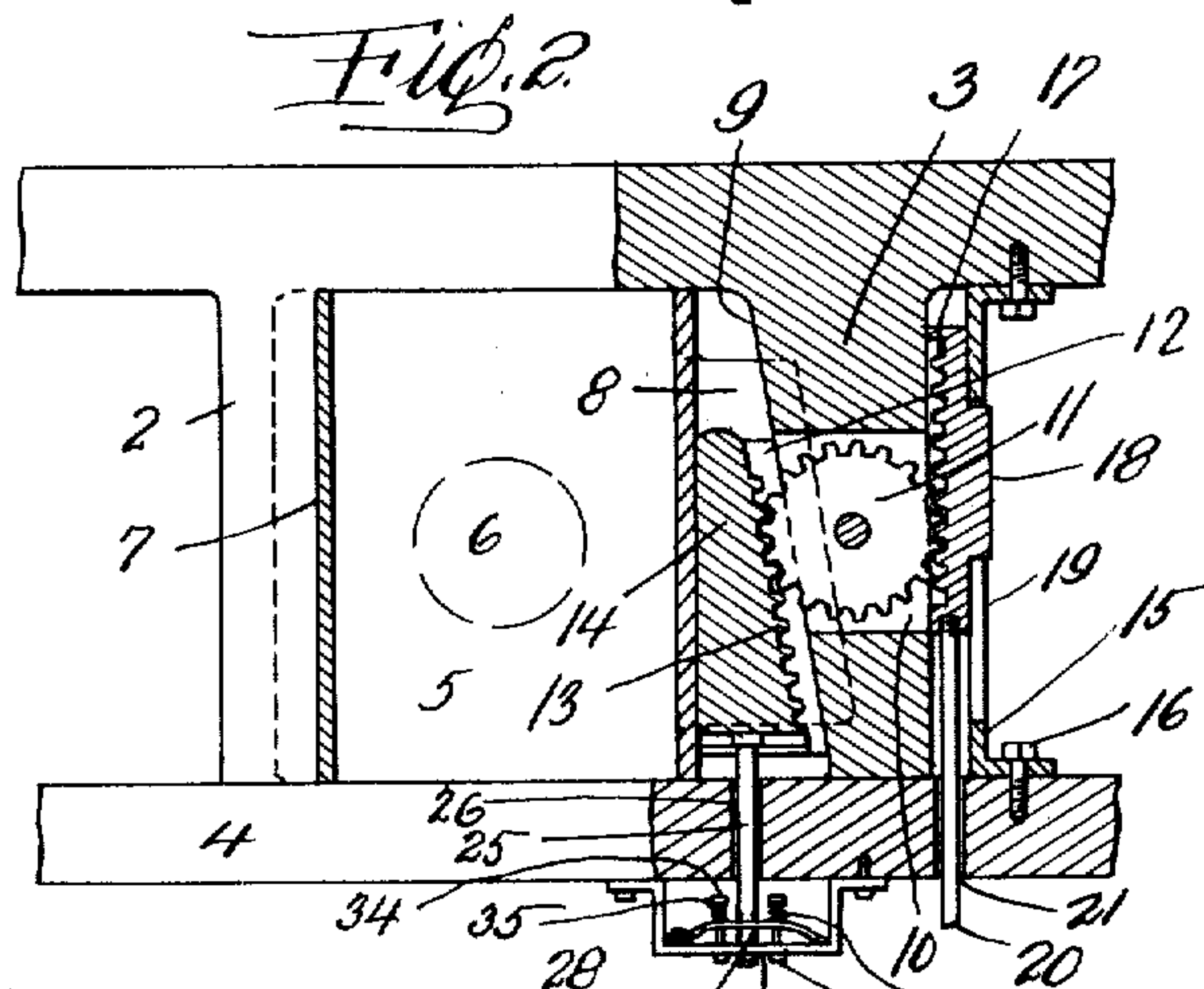
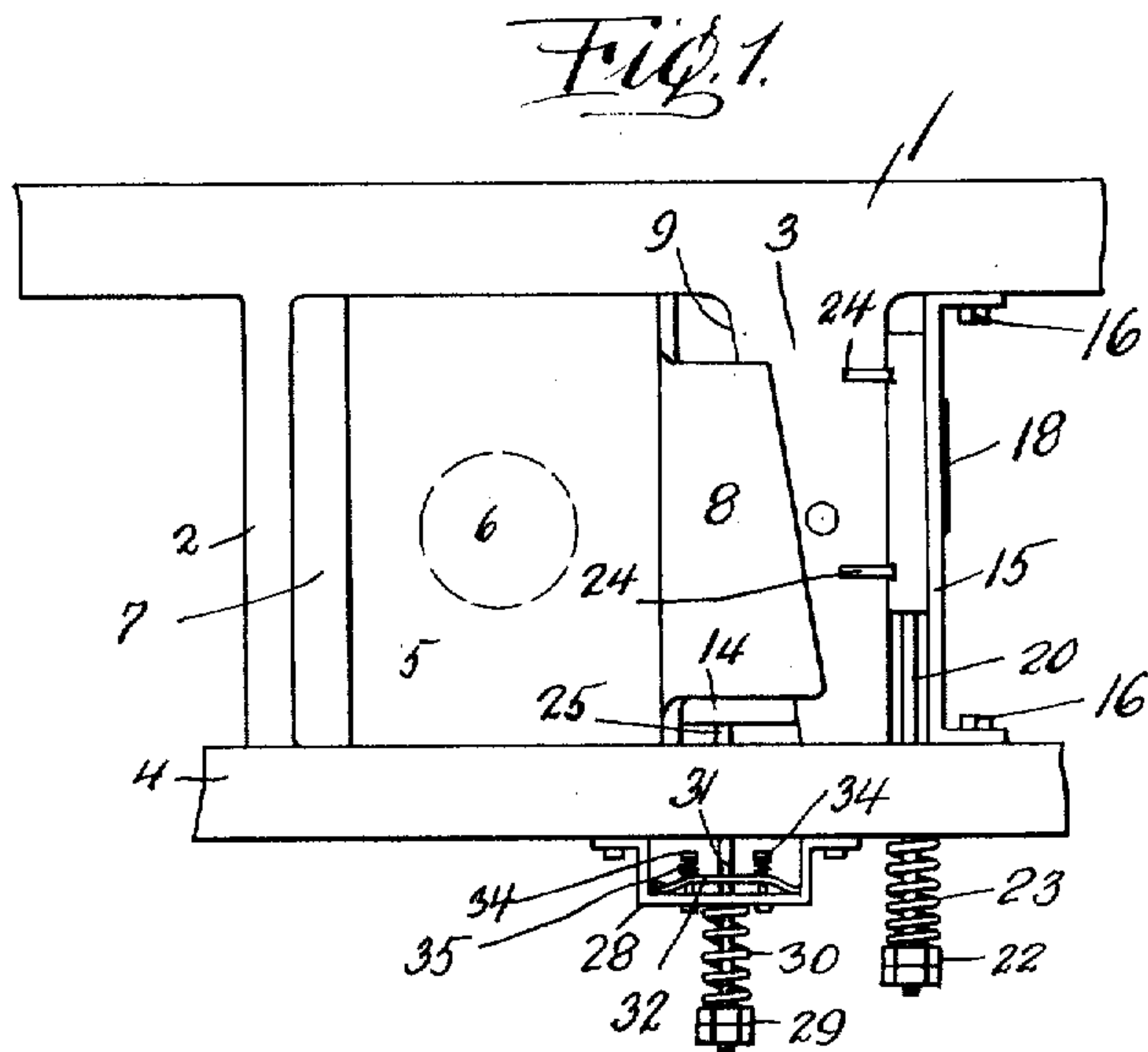


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ADJUSTING MECHANISM FOR THE JOURNAL BOXES OF LOCOMOTIVES.
APPLICATION FILED MAY 23, 1908.

904,938.

Patented Nov. 24, 1908.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES CONLIN, OF BRADDOCK, PENNSYLVANIA.

ADJUSTING MECHANISM FOR THE JOURNAL-BOXES OF LOCOMOTIVES.

No. 904,938.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES CONLIN, a citizen of the United States of America, residing at Braddock, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Adjusting Mechanism for the Journal-Boxes of Locomotives, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to adjusting mechanism for the journal boxes of locomotives, and the primary object of my invention is to provide a self-adjusting mechanism that will compensate for the wear and lost motion of a journal box, due to the vibrations to which the same is subjected by the rolling stock of a railway.

Another object of this invention is to provide an automatically actuated wedge that will normally maintain a journal box in its proper relation to the frame of a locomotive. To this end, I have devised a simple and inexpensive mechanism with which the locomotives can be equipped and the engineers and roundhouse men saved considerable work in maintaining journal boxes in position. It is a well known fact that derailments and other accidents often occur due to the shifting of journal boxes in a locomotive frame, making a set of wheels untrue or out of alinement with the frame of the locomotive, besides causing considerable pounding that is injurious to a locomotive.

With the above and other objects in view which will more readily appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts to be presently described and then specifically pointed out in the appended claims.

In the drawings: Figure 1 is an elevation of a portion of a locomotive frame, illustrating my mechanism applied thereto, Fig. 2 is a vertical sectional view of the same, Fig. 3 a horizontal sectional view, and Fig. 4 a plan of a bracket forming part of my mechanism.

In the accompanying drawings, 1 designates a frame of a locomotive having vertical bars 2 and 3, and an under bar 4, these bars providing a housing for a journal box or bearing 5 of an axle 6. In the housing is located two vertical wearing plates 7 and 8, said plates being U-shaped in cross section to embrace the sides of the bars 2 and 3, as

best shown in Fig. 3 of the drawings. The bearing 3 is formed with an inclined side 9 and with a transverse opening 10. In the opening 10 is journaled a pinion 11 adapted to extend into a groove 12 and mesh with a rack 13 formed in a wedge 14, said wedge normally engaging the wearing plate 8.

Between the top of the frame 1 and the under bar 4 and upon the outer side of the bar 3 I secure a slotted strap 15 by a screw 16 or similar fastening means. Between the strap 15 and the bar 3 is slidably mounted a rack 17 having a rearwardly projecting rib 18 extending into the slot 19 of said strap 15. The rack 17 is adapted to mesh with the pinion 11, and is provided with a depending rod 20, said rod extending through an opening 21 provided therefor in the under bar 4. Upon the end of the rod 20 is adjustably mounted a nut 22, and interposed between said nut and the under bar 4 is a coil spring 23, said spring encircling the lower end of the rack rod 20. The rack 17 is provided with side arms 24 for engaging the sides of the bar 3 and guiding the rack 17 when moved.

Slidably connected to the lower end of the wedge 14 is a depending bolt 25, said bolt extending through an opening 26 formed in the under bar 4, and through an opening 27 provided therefor in a bracket 28, carried by the bar 4. The lower end of the bolt 25 is provided with an adjustable nut 29 and interposed between said nut and the bracket 28 is a coil spring 30, said spring encircling said bolt. The bolt 25 is notched, as at 31, and adapted to engage in said notches is a flat spring 32, having one end secured to the bracket 28, as at 33. The spring 32 is normally retained under tension by bolts 34 having coil springs 35 arranged between their heads and the spring 32.

The tension of the spring 23 normally pulls downwardly upon the rack rod 20, consequently the wedge 14 will be normally held in contact with the wearing plate 8, through the medium of the pinion 11. At any time, the engineer of a locomotive can adjust the nut 22 upon the rack rod to increase the tension of the spring 23. The spring 30 tends to pull downwardly upon the bolt 25. The tension of this spring is weaker than the tension of the spring 23, and the object of the spring 30 is simply to compensate for any expansion of the journal or wearing plates. The spring 32 engaging

in the notches 31 of the bolt 25 serves as a lock for the wedge 14, preventing a sudden downward movement of the bolt 25 and receding to permit of an upward movement of the wedge 14. Since the wearing plate 8 is normally held in engagement with the journal 5, it will be impossible for said journal to unduly shift in the frame of a locomotive.

While in the drawings forming a part of this application there is illustrated the preferred embodiments of my invention, I would have it understood that the elements thereof can be changed or varied, as to the shape, proportion and exact manner of assemblage, without departing from the spirit of the invention.

Having now described my invention what I claim as new, is:—

1. The combination with a locomotive frame and the journal thereof, of vertical wearing plates engaging said journal and said frame, a wedge movably mounted between one of said wearing plates and said frame, said wedge having a rack formed therein, a pinion journaled in said frame and engaging the rack of said wedge, a slotted strap carried by said frame, a rack guided by said strap and adapted to mesh with said pinion, a depending rod carried by said rack and extending through said frame, a nut upon the end of said rod, a spring interposed between said frame and said nut, a depending bolt slidably carried by said wedge and

extending through said frame, means arranged upon the lower end of said bolt for normally pulling downwardly upon said bolt, and means supported below said frame and engaging said bolt for temporarily locking the same. 35

2. In an adjusting mechanism for journals, the combination of a locomotive frame and a journal, of a wedge located in said frame for moving said journal, a pinion journaled in said frame for raising said wedge, a rack slidably supported by said frame and engaging said pinion for elevating said wedge, a rod carried by said rack, means located upon the end of said rod for normally pulling downwardly upon said rack, a bolt slidably connected to the lower end of said wedge, and means located at the lower end of said bolt for exerting a downward pressure upon said wedge. 40 45 50

3. An adjusting mechanism for the journals of locomotives, comprising a wedge having a rack formed therein, means for moving said wedge, said means including a pinion, a rack and a spring for actuating said rack. 55

In testimony whereof I affix my signature in the presence of two witnesses. 60

JAMES CONLIN.

Witnesses:

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