

No. 667,966.

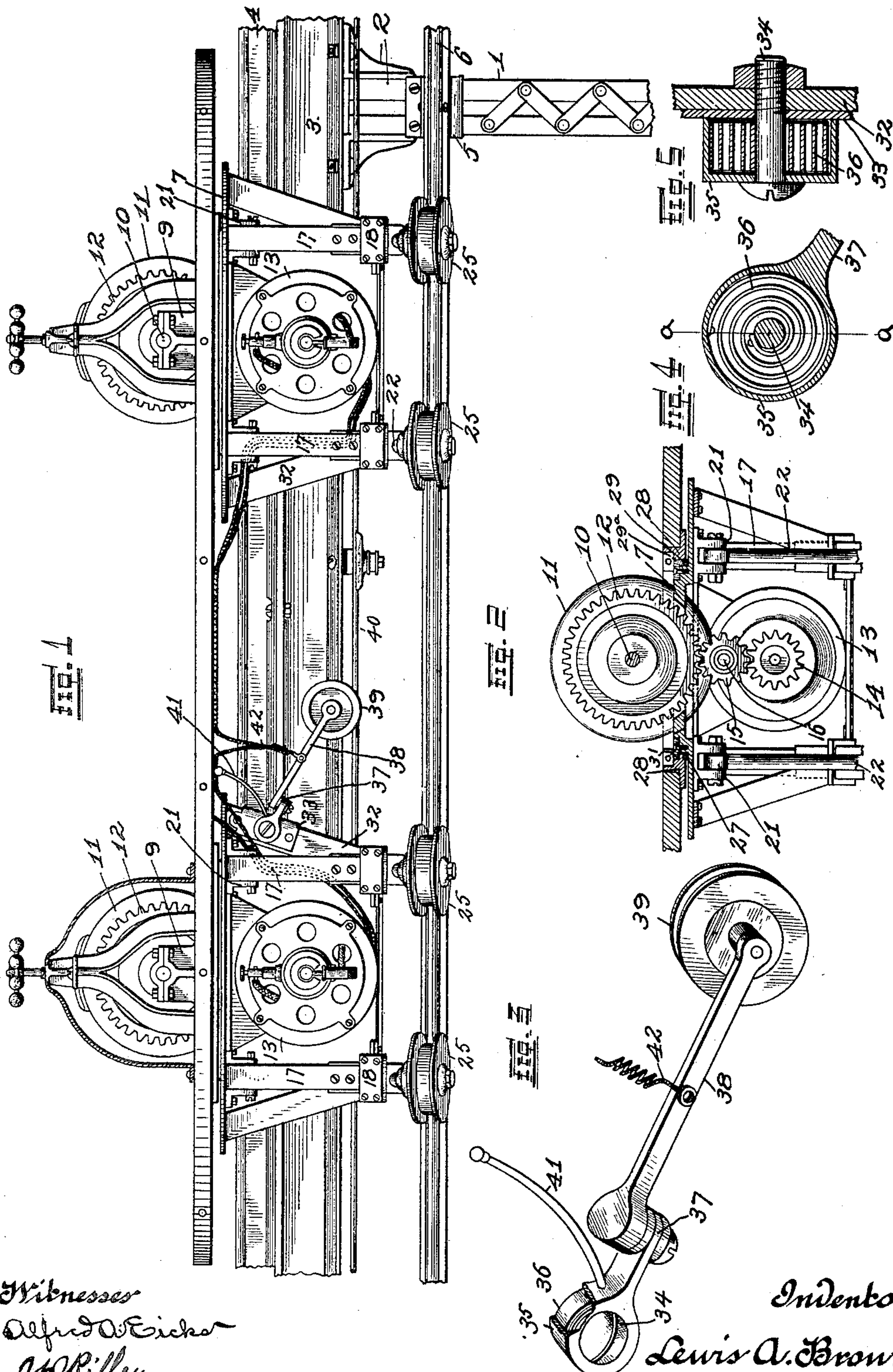
Patented Feb. 12, 1901.

L. A. BROWN.
ELEVATED ELECTRIC RAILWAY.

(Application filed Oct. 22, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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Indentor.
Lewis A. Brown
By Higdon & Longant, Atty's

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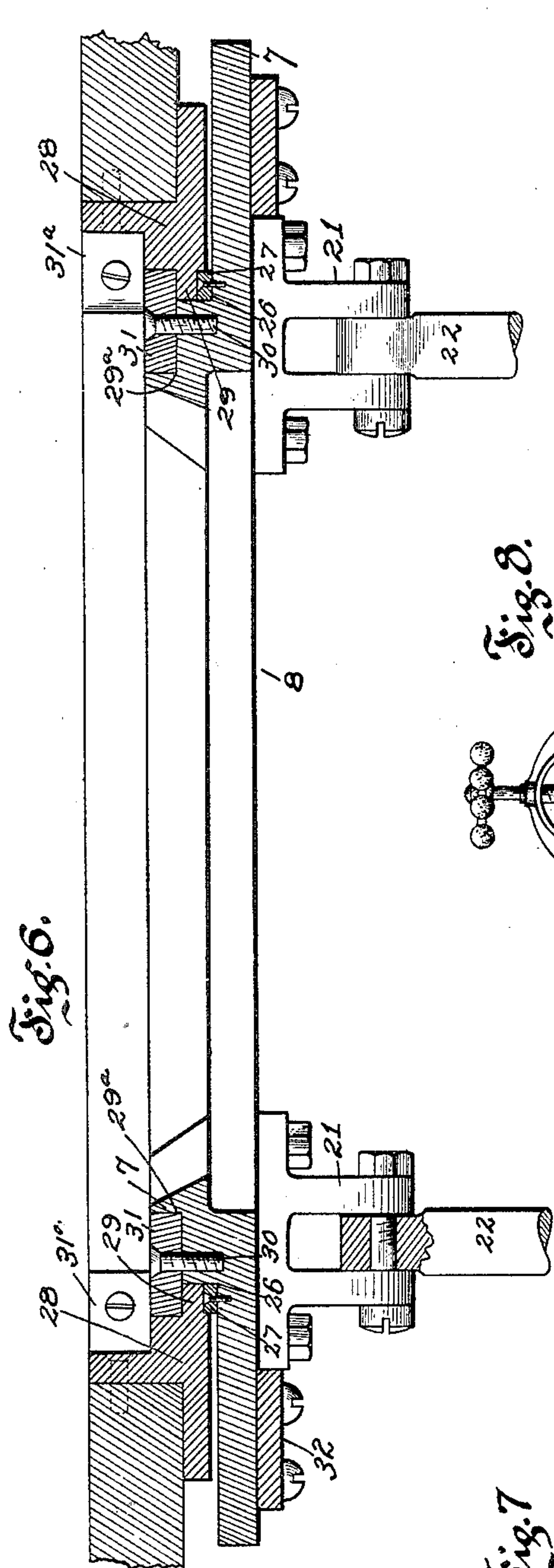


Fig. 6.

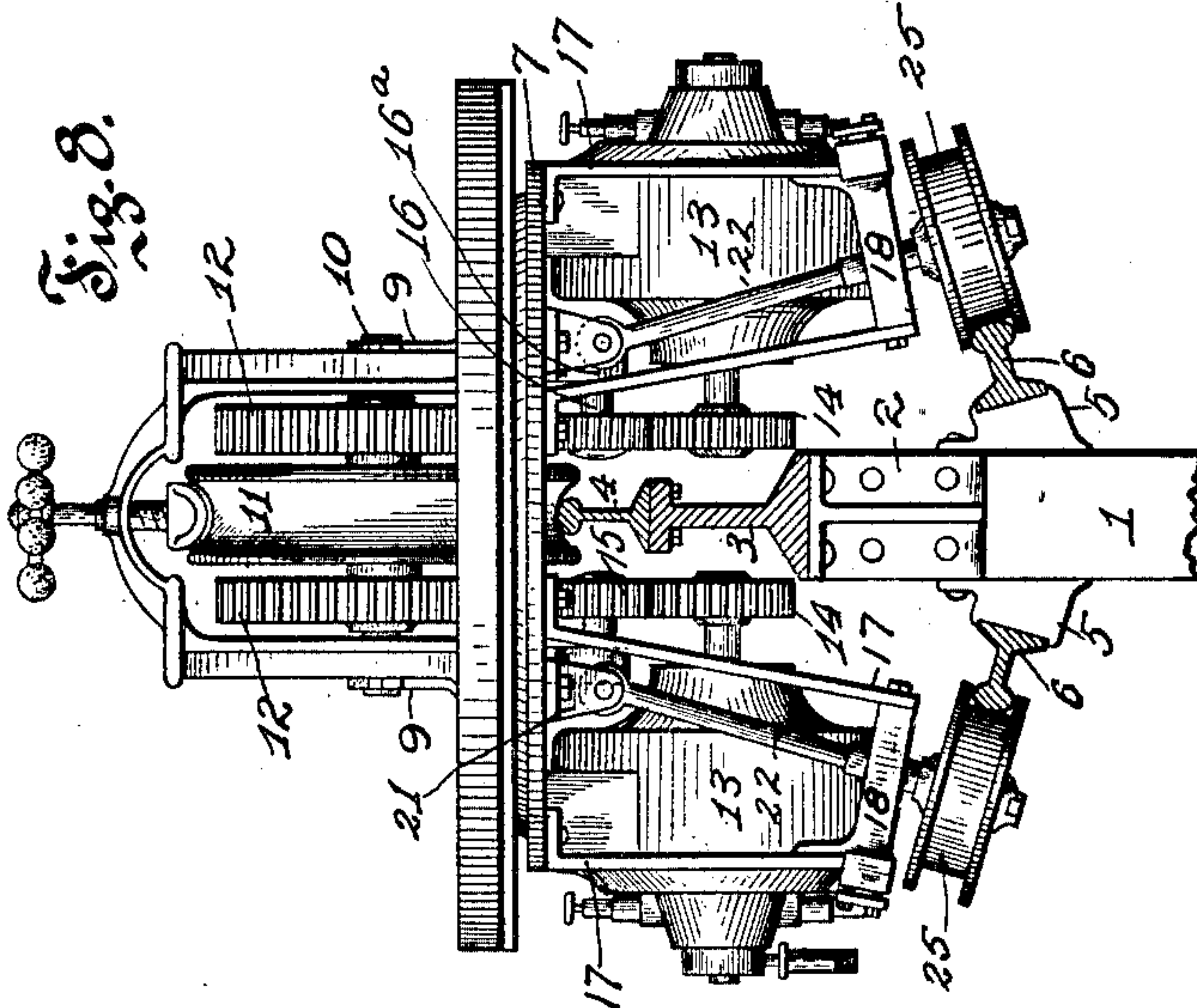


Fig. 8.

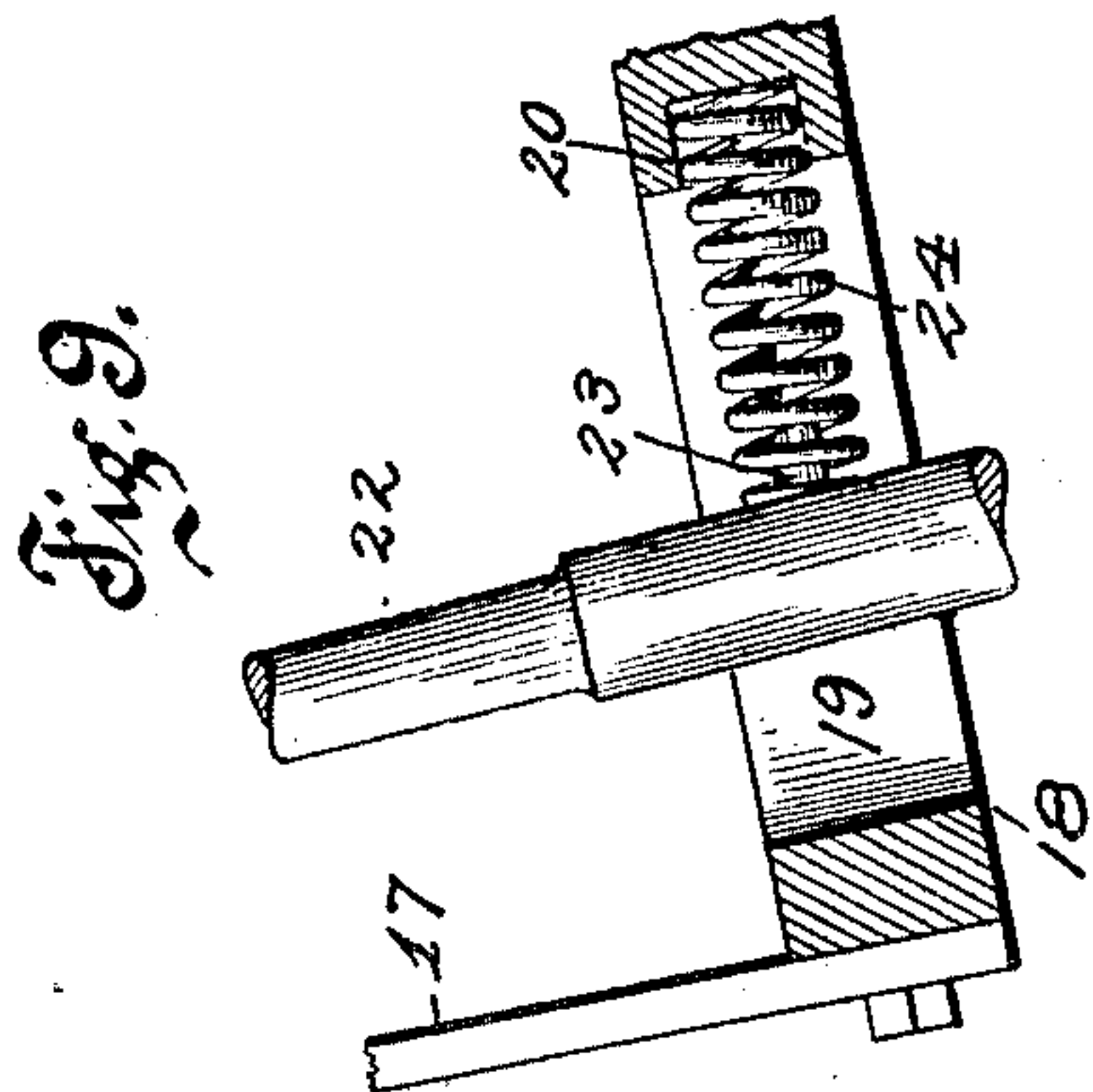
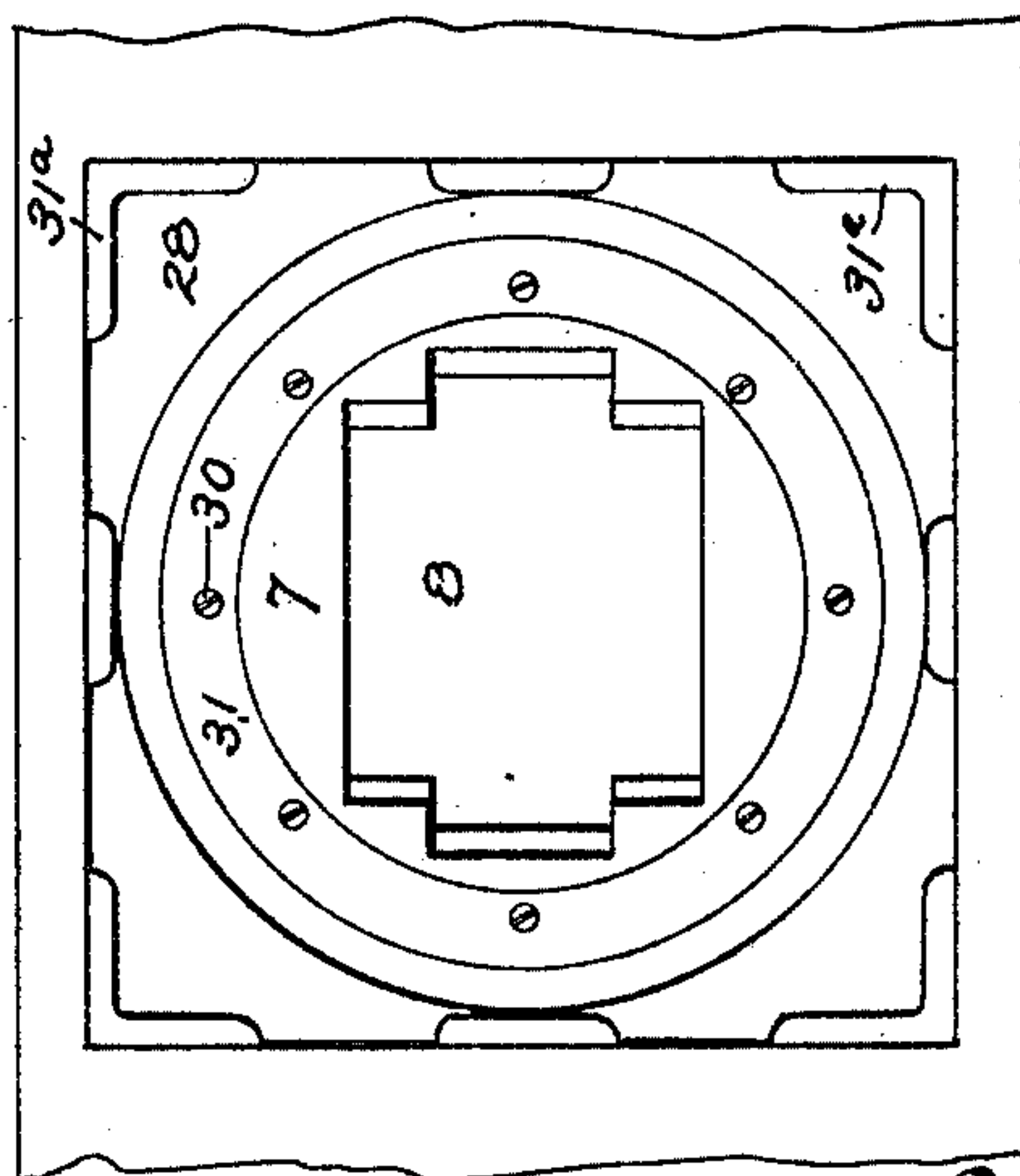


Fig. 9.

Fig. 7



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UNITED STATES PATENT OFFICE.

LEWIS A. BROWN, OF ST. LOUIS, MISSOURI.

ELEVATED ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 667,966, dated February 12, 1901.

Application filed October 22, 1900. Serial No 33,961. (No model.)

To all whom it may concern:

Be it known that I, LEWIS A. BROWN, of the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Elevated Electric Railways, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to elevated electric railways; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

Figure 1 is a side elevation showing my improved elevated-railway truck in operative position. Fig. 2 is a sectional view of one of the trucks, showing the construction and arrangement of the different parts. Fig. 3 is a perspective view showing a trolley made use of in carrying out the invention. Fig. 4 is a sectional view showing a spring which pulls the trolley-wheel on the wire. Fig. 5 is a sectional view taken on the line *a a* of Fig. 4. Fig. 6 is an enlarged detail view showing one of the truck-frames and the manner in which the different parts are secured together. Fig. 7 is a plan view of one of the truck-frames. Fig. 8 is an end view showing the truck in operative position on the rails. Fig. 9 is a detail view showing the manner in which the side wheels are held against the rail.

Referring by numerals to the accompanying drawings, 1 indicates the supporting-posts, having on their upper ends brackets 2, rigidly secured to which are suitable T-rails 3, carrying on their upper surface ordinary traction-rails 4. On each side of the supporting-posts, near their upper ends, are secured supporting-brackets 5, which are made to carry at suitable angles the guide-rails 6.

7 denotes a casting substantially rectangular in shape and having in its center an elongated opening 8, on each side of which and supported by the said casting is a bearing 9. Rotatably journaled in the said bearings is a shaft 10, keyed upon the middle of which and operating in the opening 8 is a large grooved traction-wheel 11, the same operating upon the rails 4. Keyed upon the said shaft 10 on each side of the wheel is a large gear-wheel 12 of equal size, but smaller than the wheel 11.

Suspended in any suitable manner from the

sides of the casting 7 are motors 13, each of which is made to operate a small gear 14. Each of the gears 14 meshes with an intermediate gear 15, the same being carried on the short shafts 16, operating in bearings 16^a, suspended from the casting 7. The gears 15 mesh with the large gears 12, and thereby rotate the shaft 10 and the traction-wheel 11.

Suspended from each corner of the casting 7 is a bracket 17, rigidly secured to the lower end of which are bearing-plates 18. The plates 18 are provided with elongated apertures 19, in the outer ends of which are the annular spring-seats 20. Pivotaly secured to the downwardly-pending ears 21, secured to the plate 7, is a plurality of shafts 22, one of which is provided for and projects through each of the apertured plates 18, each of said shafts being provided with an integral lug or projection 23 within the apertures 19. A spring 24 is mounted around each of the said lugs 23, the outer ends of said springs resting in the annular spring-seats 20. Below the plates 18 and rotatably carried by the shafts 22 are suitable guide-wheels 25, which are made to operate against the guide-rails 6. It is evident that the said wheels will at all times be pressed against the guide-rails 6 by the springs 24 and will be prevented from any displacement by the said springs.

The plate 7 is provided with an annular seat 26, within which is placed a ring 27, carried upon which is a plate 28, the general shape of which is about the same as that of the plate 7. The said plate has integral therewith a projection 29, extending entirely around the inner side thereof and which bears against a raised portion of the plate 7. Upon the upper surface of the plate 7 and inwardly from the seat 26 is another seat 29^a of less depth than the seat 26 and the bottom of which is even with the upper surface of the projection 29. Within this seat and rigidly held by screws 30 is a ring 31, the outer edge of which projects over the projection 29, and thereby prevents the plate 27 from being tilted up in any manner or from displacement from any cause whatever. Rigidly secured to or integral with the corners of the plate 28 are elevations 31^a, which are adapted to engage against the timbers of the car-body and hold the car in position on the track.

Secured to a standard 32 adjacent to the motor is a plate 33, and carried by the said plate and standard is a trunnion 34, over which is arranged a barrel 35. A spring 36 has its inner end secured to the trunnion 34 and its outer end to the barrel 35, and the tendency of the said spring is to draw downwardly the projection 37 integral with one side of the barrel 36. Pivoted to the projection 37 is a rod or pole 38, and carried by the outer end of the said pole is a wheel 39, the purpose of which is to ride upon the long wire 40, carried in any suitable position relative to the traction-rail 4. A spring-stop 41 projects upwardly from the projection 37 and the upper end of the said stop bears against the under side of the car-frame, thereby preventing the trolley-wheel from becoming removed from the wire.

42 indicates suitable electrical connections leading from the pole 38 to the motors.

The above is a description of one of the trucks, two of which are used on each car; but the construction of both being identical it is deemed unnecessary to show more than one. In operation one is used at each end of the car.

I claim—

1. An elevated-electric-railway truck, comprising a plate, a traction-wheel operating through an opening in said plate, motors carried by said plate, gear connections between said motors and the shaft of the traction-wheel, and a movable supporting-plate mounted on the first-mentioned plate, and means carried by the latter for holding said movable plate in position, substantially as specified.

2. An elevated-railway truck, comprising a plate having an opening through its center, a traction-wheel supported by said plate, motors carried by said plate, gear connections between said motors and the shaft of the traction-wheel, a supporting-plate movably mounted on the first-mentioned plate, means carried by the latter for preventing dislocation of said supporting-plate, and a plurality of guide-wheels suspended from said plate, substantially as specified.

3. An elevated-railway truck, comprising a plate, a supporting-plate movably mounted above it, means for holding said supporting-plate in position, a traction-wheel carried by the first-mentioned plate, motors carried by

said plate for rotating the said traction-wheel, guide-wheels suspended from said plate, and springs for holding the guide-wheels in position at all times, substantially as specified.

4. An elevated-railway truck, comprising a plate, a traction-wheel carried by said plate and operating through an aperture therein, motors suspended from said plate for rotating the said traction-wheel, a second plate carried by the first-mentioned plate, means whereby the said second-mentioned plate is allowed to rotate on the first-mentioned plate, and means carried by the latter for holding said plate in position thereon, substantially as specified.

5. In an elevated-railway truck, a plate carrying a traction-wheel, means carried by said plate for operating said wheel, guide-wheels suspended from said plate, means for holding said guide-wheels in position, a second plate rotatably carried on the first-mentioned plate, means for retaining it in position thereon, and lugs carried by the said second-mentioned plate for holding the car-body in position, substantially as specified.

6. An elevated-railway truck, comprising a plate, a traction-wheel carried by said plate, means for rotating said wheel, guide-wheels suspended from said plate, springs for holding said guide-wheels against the guide-rails, a movable support carried by said plate for receiving the car-body, means for holding said support upon said plate, and means for holding the car-body in position upon said attachment, substantially as specified.

7. An elevated-railway truck, comprising a plate, a movable support carried by said plate for receiving the car-body, means for holding said support in position upon the plate, a traction-wheel carried by said plate, motors carried by the said plate for rotating the traction-wheel, spring-actuated guide-wheels suspended from the plate, a trolley-pole carried below the plate, and means for holding the trolley-pole in connection with the wire, substantially as specified.

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

LEWIS A. BROWN.

Witnesses:

ALFRED A. EICKS,
JOHN C. HIGDON.