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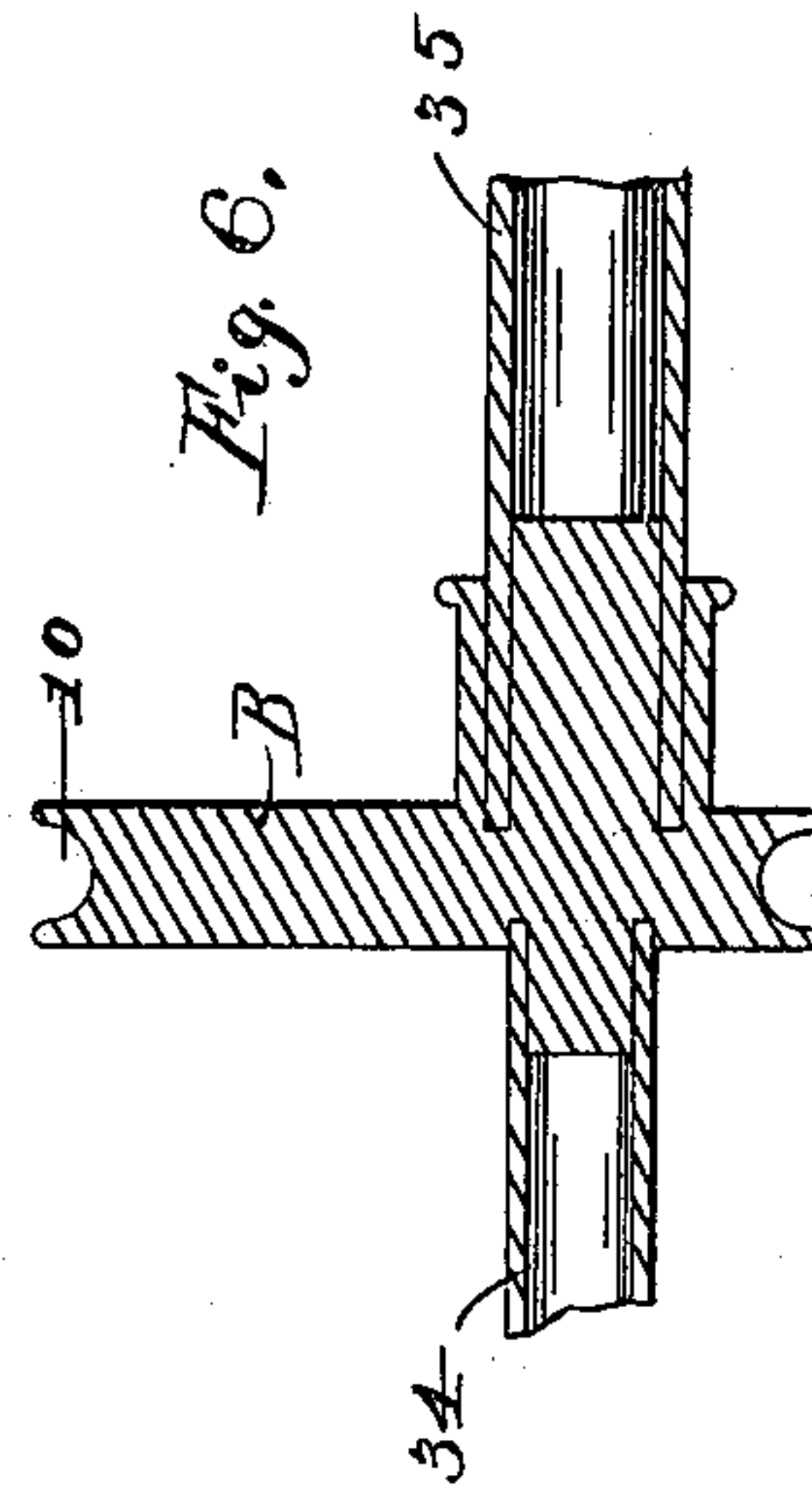
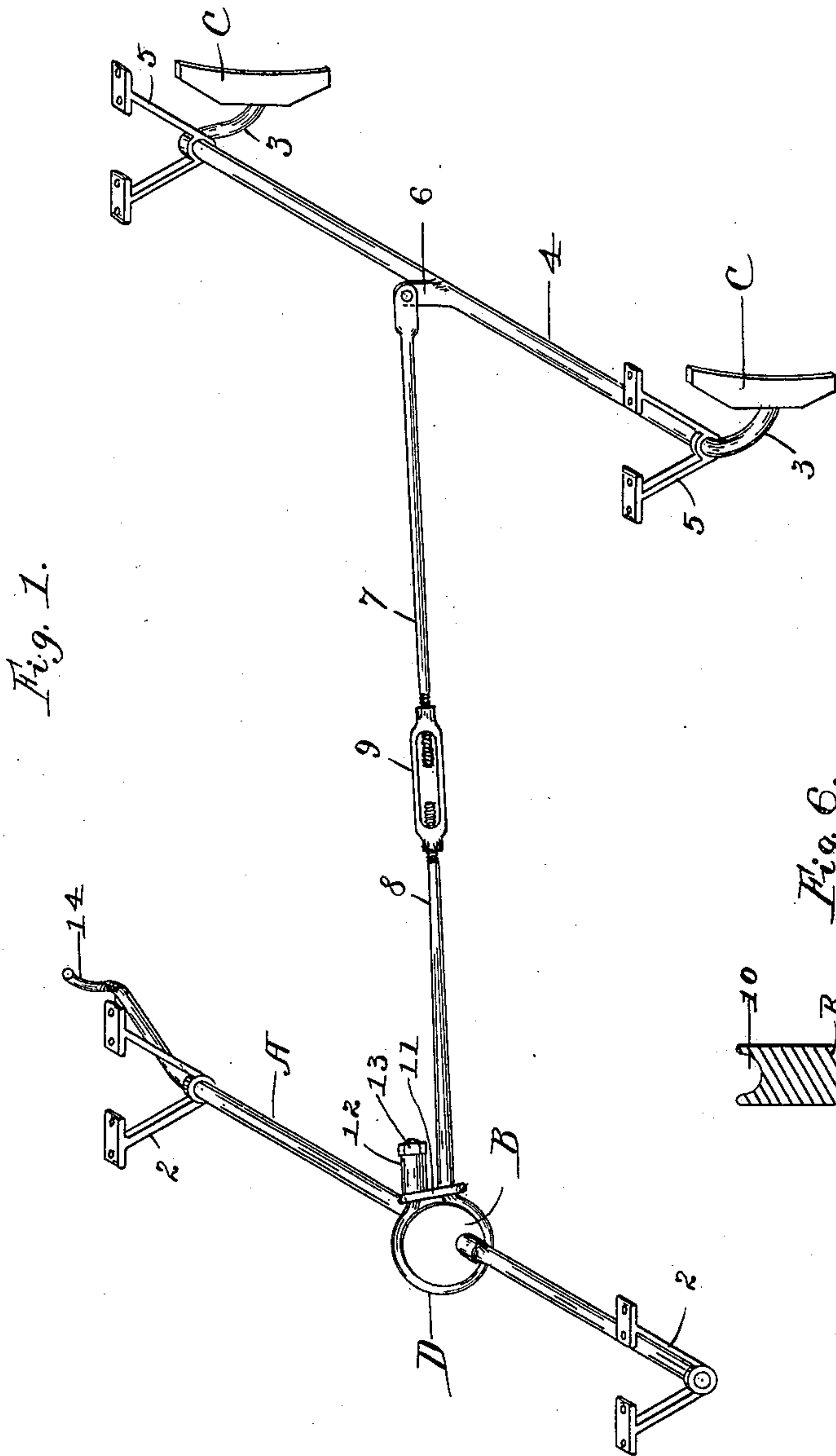
Patented Nov. 22, 1898.

G. A. WALTER.  
ECCENTRIC WAGON BRAKE.

(Application filed Sept. 11, 1897.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses:

*W. S. Badamy*  
*H. L. Johnson*

Inventor:

George H. Walter

per:

*D. M. Merwin*  
Attorney.

**No. 614,637.**

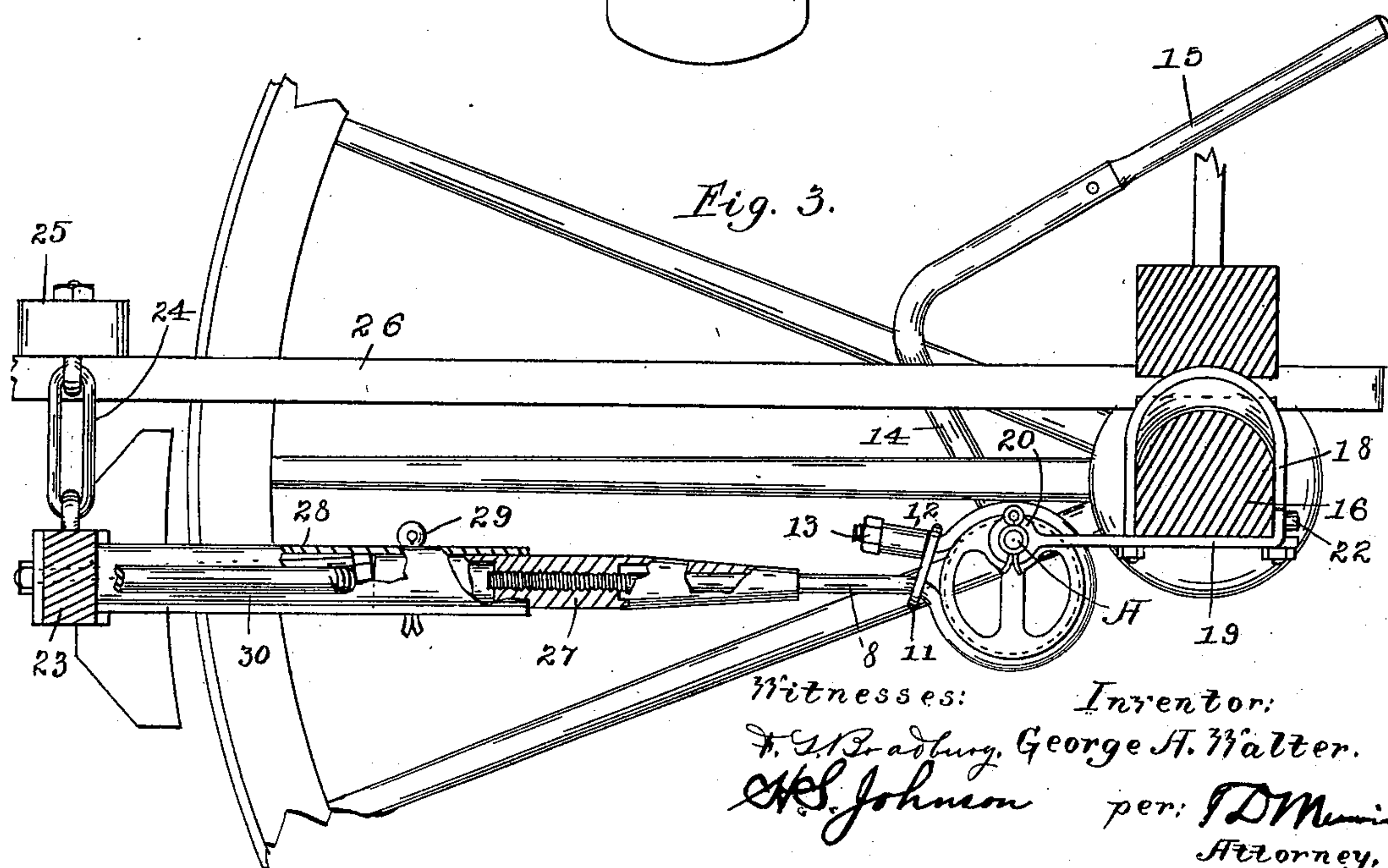
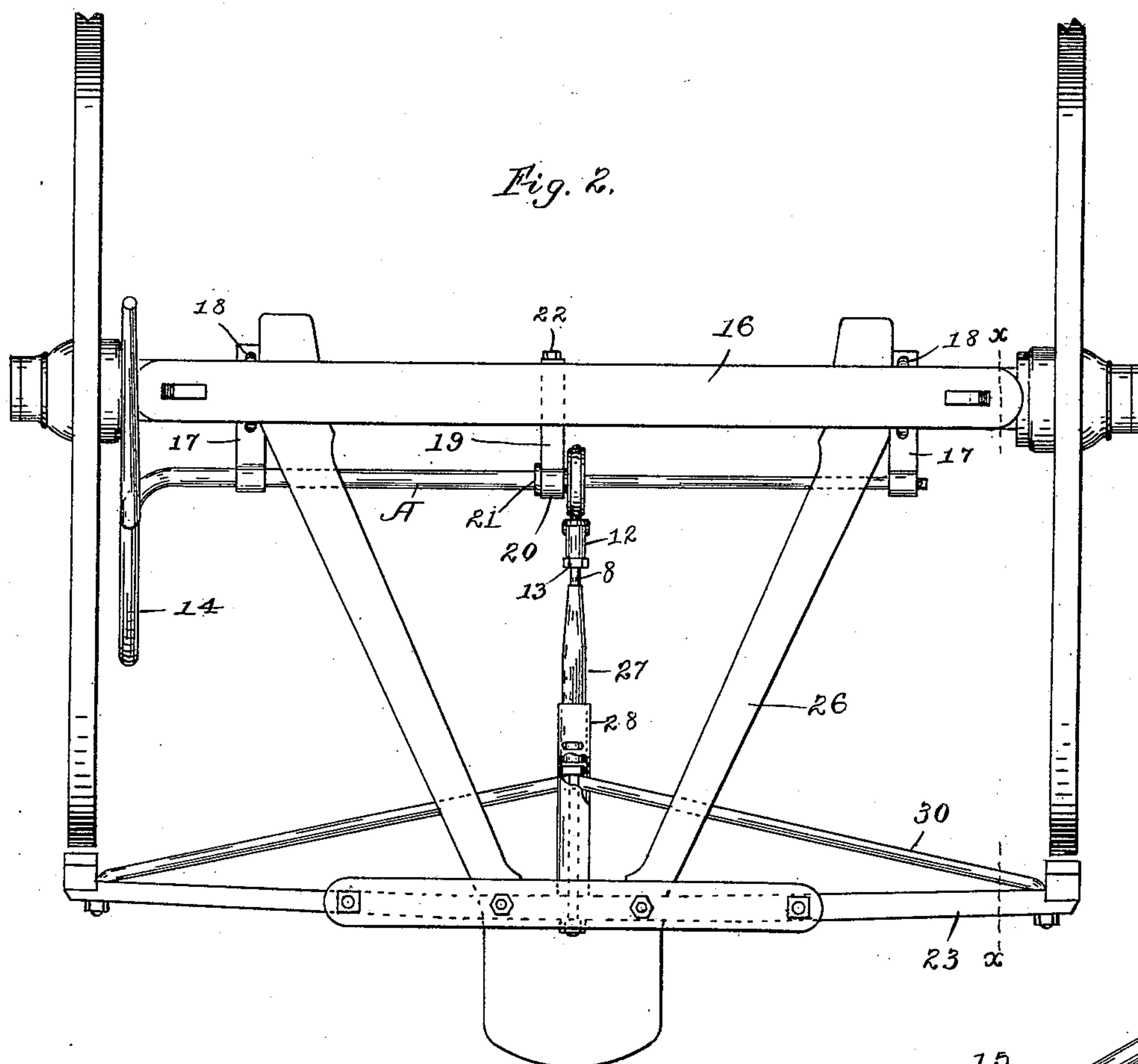
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(No Model.)

3 Sheets—Sheet 2.



Witnesses:

*Inventor:*

H. J. Bradbury, George H. Walter.

W. S. Johnson

per: J D Mearns  
Attorney,

**No. 614,637.**

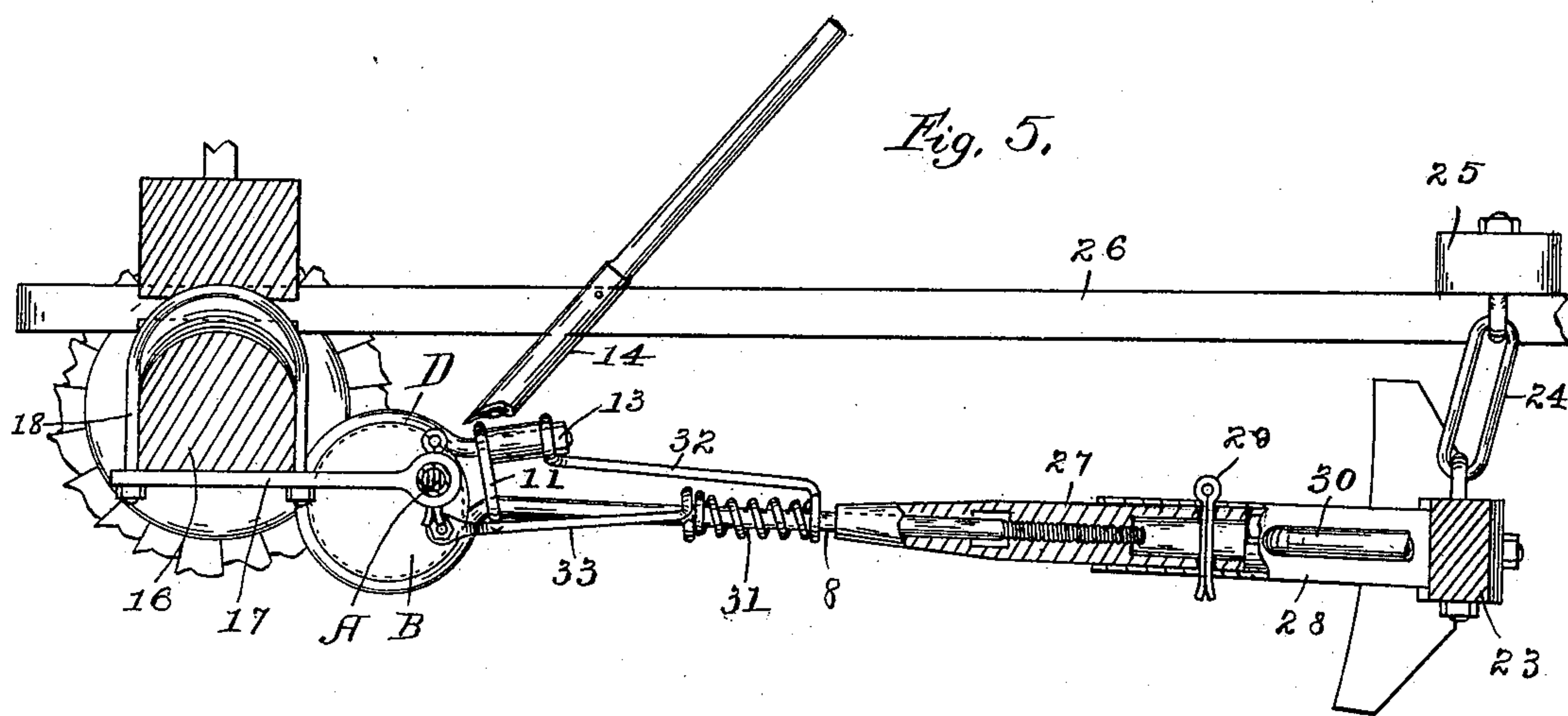
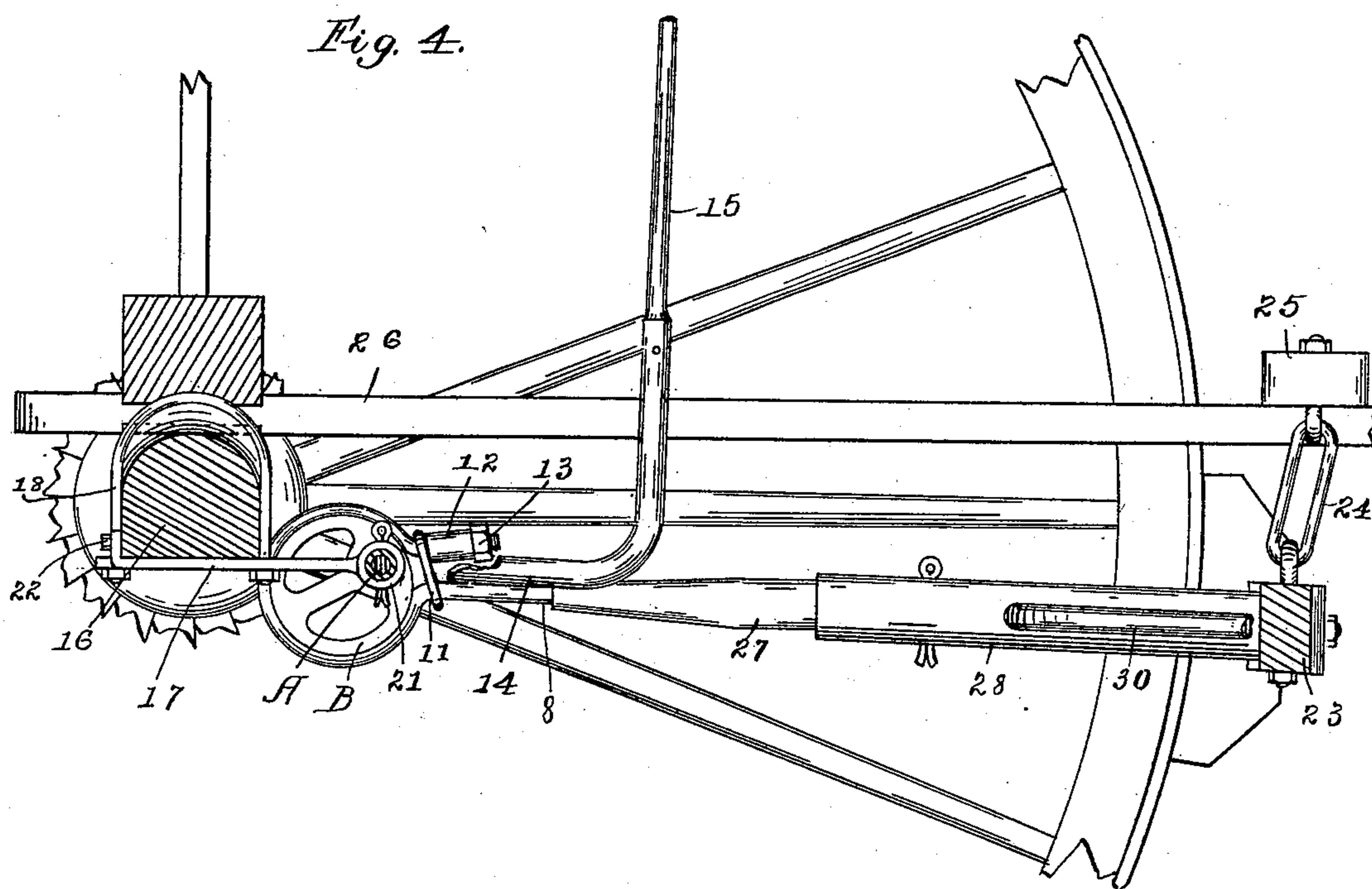
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(No Model.)

**3 Sheets—Sheet 3.**



Witnesses:

Wm. S. Johnson

*Inventor:*

George H. Walter.

per: D. Merwin  
Attorney,



# UNITED STATES PATENT OFFICE.

GEORGE A. WALTER, OF PRESCOTT, WISCONSIN.

## ECCENTRIC WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 614,637, dated November 22, 1898.

Application filed September 11, 1897. Serial No. 651,278. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE A. WALTER, of Prescott, Pierce county, Wisconsin, have invented certain Improvements in Eccentric Wagon-Brakes, of which the following is a specification.

My invention relates to improvements in brakes for wagons and similar vehicles, its object being to provide a construction of brake which will be automatically held in set positions, thus dispensing with the ordinary brake-lever and quadrant or equivalent feature for holding the brake set, its object being, further, to provide other improvements in the general construction of the brake.

To this end my invention consists in mounting an eccentric upon the lever-shaft and in surrounding said eccentric by a clamp-loop connected with the brake-shoes, said loop being adapted to automatically grip the eccentric and hold it in set position.

Where more than ordinary pressure of the brake-shoes is desired, I may use additional means for increasing the clamping effect of said loop upon the eccentric. This may consist of an overbalancing-weight or a suitable spring, as shown in the drawings.

My invention further consists in the features of construction and combination hereinafter particularly described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of the simplest form of my invention adapted for use where ordinary pressure of the brake-shoes is desired. Fig. 2 is a partial plan view of a wagon, illustrating one form of my invention applied thereto. Fig. 3 is a cross-section on line *xx* of Fig. 2, showing the brake-shoes in released position. Fig. 4 is a similar view showing the brake-shoes in contact with the wheel. Fig. 5 is a similar view of a modified construction in which a spring is used for increasing the efficiency of the brake, and Fig. 6 is a sectional view of the eccentric and integral lever-shaft.

In the drawings, A represents the operating-shaft, and B a central eccentric formed thereon. In the construction shown in Fig. 1 the shaft S is journaled in depending brackets 2, adapted to be secured to the bottom of the vehicle. The brake-shoes C in this construction are mounted upon the depending

ends 3 of the shaft 4, said shaft being journaled in brackets 5, which are secured to the vehicle-box in a manner similar to the brackets 2. This shaft 4 is formed with a lateral lug 6, connected with the eccentric B by the rods 7 and 8, provided with an intermediate turnbuckle 9, by means of which said rods may be adjusted. The rod 8 is formed with a loop D, nearly surrounding the eccentric B and fitting in the groove 10 thereof. The rearwardly-projecting end of the loop D and the adjacent portion of the rod 8 are connected by a link 11, a collar 12 and nut 13 being mounted upon the end of the loop adjacent said link, whereby the position of the link may be adjusted.

The end of the operating-shaft A is formed with a lever 14, by which the shaft and connected parts are actuated to turn the brake-shoes into set position. The link 11, forming, as it does, a loose connection between the end of the loop D and adjacent part of the rod 8, allows relative movement between said parts, causing said loop to serve as a clutch, gripping the eccentric, and thereby holding the shoes in set position without any brake-lever and quadrant or equivalent device being necessary.

Upon very heavy wagons it may be desired in some cases to provide additional means for holding the brakes set, and to this end I provide the constructions shown in Figs. 2 to 5, inclusive. In Figs. 2, 3, and 4 the lever 14 for actuating the brakes is formed with a rearwardly-extending portion 15, serving as an overbalancing-weight when the brakes are set. In this form of modified construction the shaft A is supported from the axle 16 by rearwardly-extending brackets 17, connected to loops 18, surrounding the axle, and by the central bracket 19, formed with a loop 20, surrounding the hub 21 upon the side of the eccentric and extending underneath the axle, to the rear side of which it is secured by a suitable bolt 22, so as to withstand the forward strain upon the shaft A. The brake-shoes in this construction are secured upon the ends of the cross-bar 23, said cross-bar being supported by links 24 from the cross-bar 25, secured upon the top of the hounds 26.

A modified form of connection between the rod 8 and the brake-shoe cross-bar 23 is also



preferably used in this construction. This consists of a rod 27, screw-threaded upon the end of the rod 8 and fitting in the end of a tubing 28, projecting rearwardly from the cross-bar 23, in which it is secured by a pin 29. The parts 27 and 28 may thus be disconnected and the part 27 adjusted upon the rod 8 to vary the relative positions of the eccentric and brake-shoes. The pipe 28 is strengthened by a suitable brace-rod 30, the ends of which project through the cross-bar 23, as shown in Fig. 2.

In the modified construction shown in Fig. 5 a spring 31 is employed for increasing the efficiency of the brake. This spring surrounds the rod 8, one end of the spring abutting against a strap 32, surrounding the rod 8 and connected with the projecting end of the loop D, the opposite end of the spring abutting against a similar strap 33, connected with the lower portion of the eccentric. It will be evident that the spring will thus increase the clamping effect upon the eccentric when the brakes are set. The tension of the spring may be increased by the adjusting of the nut 13.

In operation, with the parts in the position shown in Fig. 1, the brakes are set by throwing forward the lever-arm 14, thereby turning the eccentric and pulling the connected rod 3 to turn the shoes C into contact with the wheels. With the brake set the clamping effect of the loop upon the eccentric, which clamping effect is rendered possible by the loose connecting-link 11, will be sufficient to hold the brakes in set position. The forms in the other figures are actuated in the same manner, the spring and overbalancing weighted lever-arm in the respective modifications increasing the efficiency of the brake.

The shaft A consists of the sections of tubing 34 and 35, connected by the eccentric, which is integrally cast with said pipe-sections, as shown in Fig. 6. In the manufacture of this feature the metal for forming the eccentric is poured into a suitable mold, so formed as to allow the metal to run in the ends of the pipe-sections, fusing the metal of said tubing and thereby making one piece of said eccentric and tubing.

I claim—

1. In a brake, the combination with the operating-shaft, the eccentric mounted thereon, the brake-shoes, the connection between said

eccentric and shoes, and the means for automatically clamping said eccentric to hold the same in set positions.

2. In a brake, the combination of the operating-shaft, the eccentric mounted thereon, the brake-shoes, the clamping-loop inclosing said eccentric, and the connection between said clamp and the brake-shoes.

3. In a brake, the combination with the operating-shaft, the eccentric mounted thereon, of the clamp surrounding said eccentric, the connection between said clamp and the brake-shoes, and the means for increasing the clamping effect of said clamp upon the eccentric.

4. In a brake, the combination of the operating-shaft, the eccentric mounted thereon, the brake-shoes, the rod connected with said brake-shoes, the clamping-loop upon the end of said rod inclosing said eccentric, adapted to grip the same and hold it in adjusted positions, and the brace secured to the rear of the axle and connected with the operating-shaft forward of said axle.

5. In a brake, the combination with the operating-shaft, of the eccentric mounted thereon, the clamping-loop surrounding said eccentric, the brake-shoes, and the adjustable connection between said clamping-loop and shoes.

6. In a brake, the combination with the operating-shaft, of the eccentric mounted thereon, the brake-shoes, the transverse bar secured to the frame of the wagon, and supporting the brake-shoe beam by means of interposed links, and the connection between said eccentric and brake-shoe beam.

7. In a brake, the combination of the operating-shaft, the eccentric mounted thereon, the brake-shoes, the connection between said eccentric and shoes, and the overbalancing weight for said eccentric.

8. As an improved article of manufacture, a brake-operating shaft, consisting of two sections of tubing, and an eccentric cast intermediate the adjacent ends of said tube-sections and fused with the metal of said sections.

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

GEO. A. WALTER.

Witnesses:

H. S. JOHNSON,

MINNIE L. THAUWALD.