

No. 837,846.

PATENTED DEC. 4, 1906.

S. J. KILLINGWORTH.

CAR BRAKE.

APPLICATION FILED APR. 6, 1906.

2 SHEETS—SHEET 1.

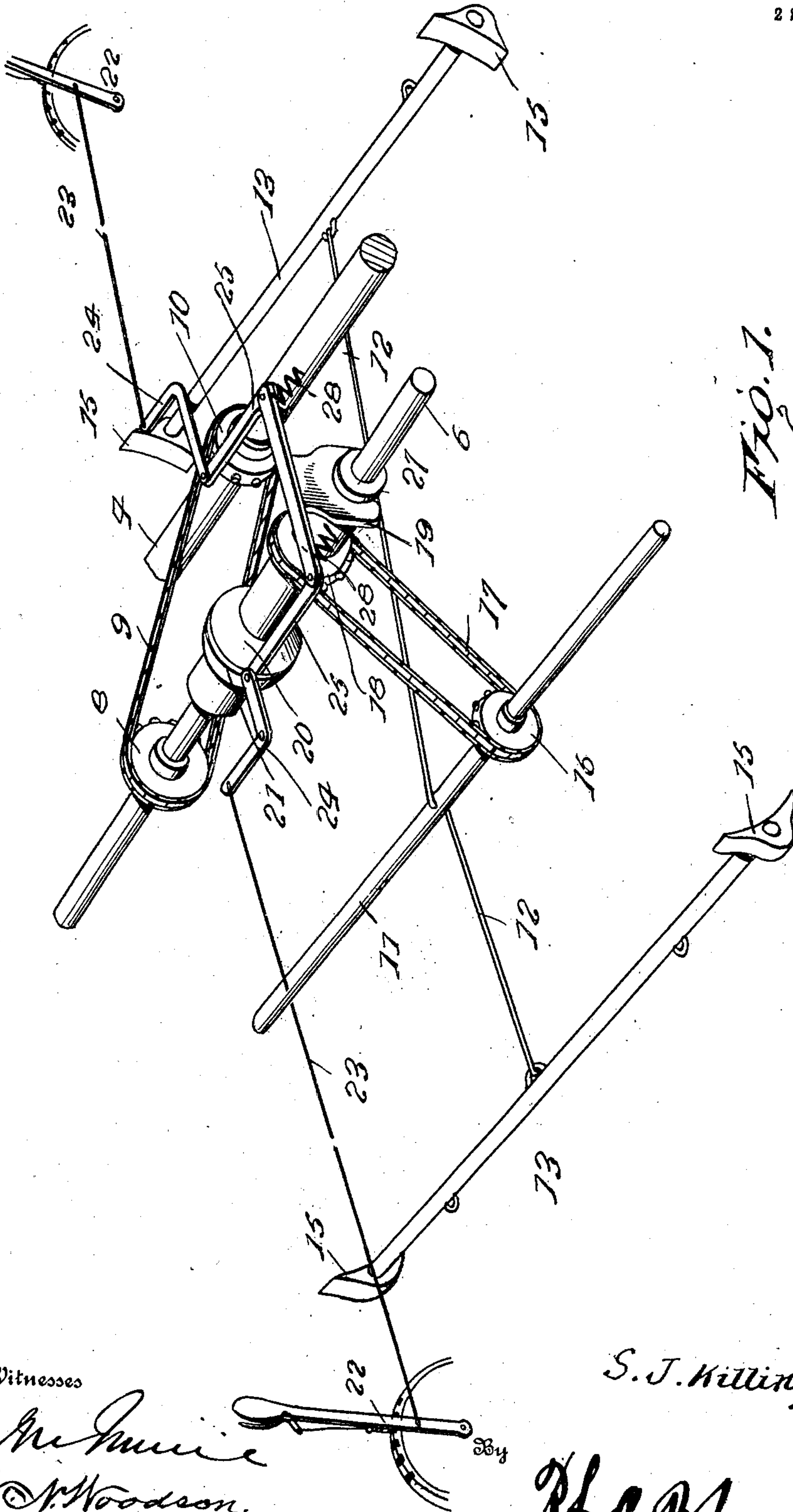


Fig. 1.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

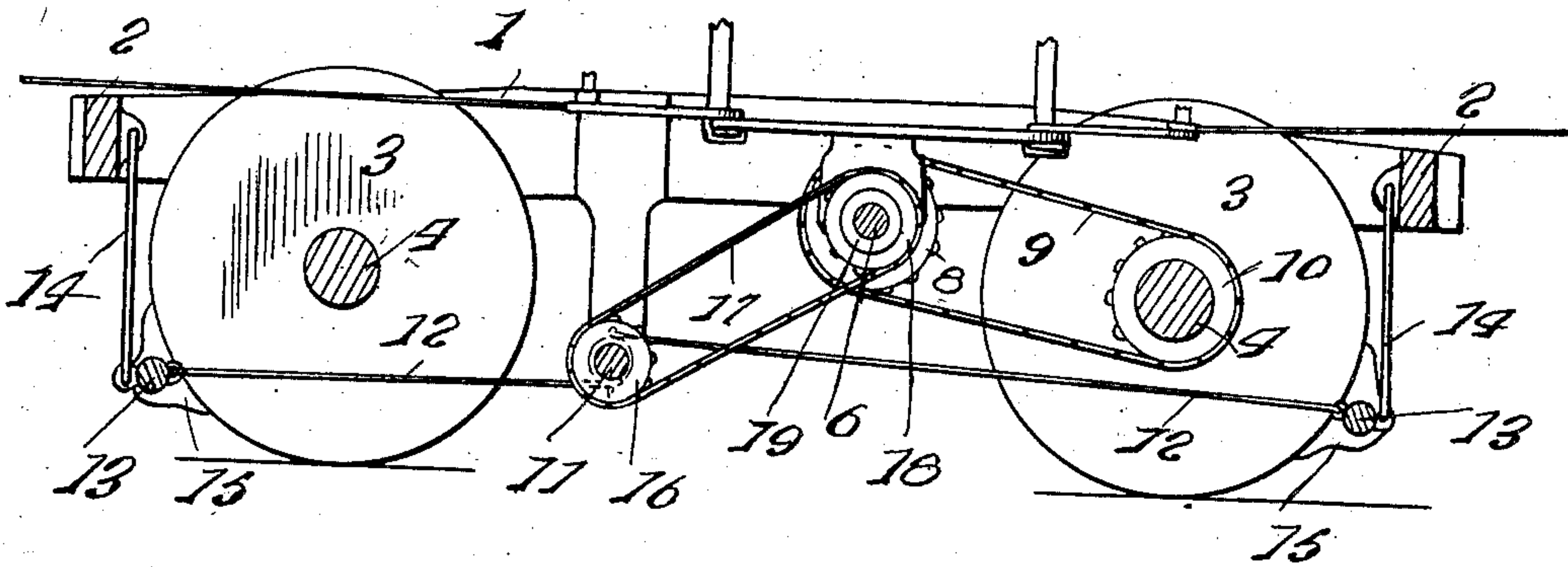
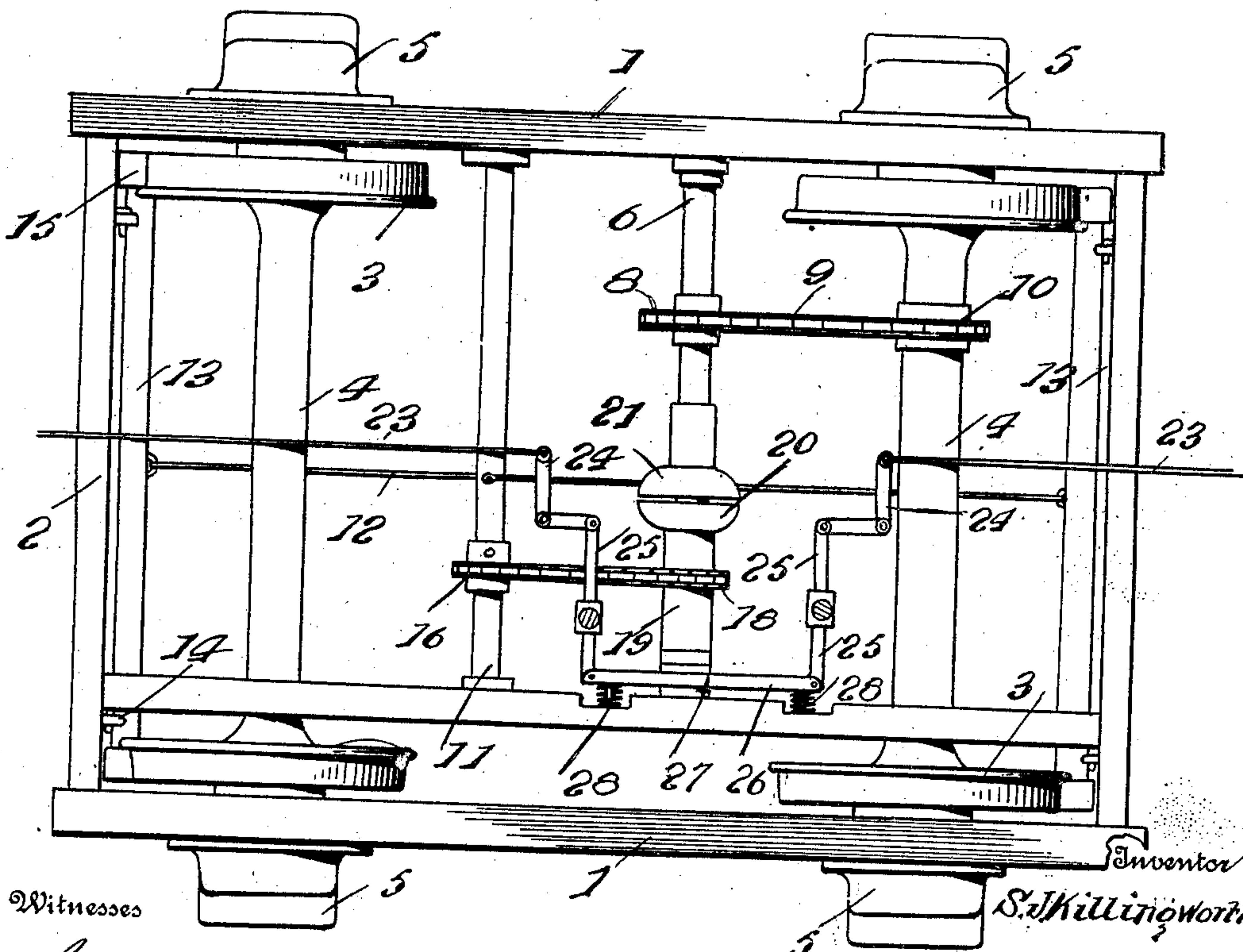


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

SAMUEL J. KILLINGWORTH, OF MASON, ALABAMA.

CAR-BRAKE.

No. 837,846.

Specification of Letters Patent.

Patented Dec. 4, 1906.

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To all whom it may concern:

Be it known that I, SAMUEL J. KILLINGWORTH, a citizen of the United States, residing at Mason, in the county of Escambia and State of Alabama, have invented certain new and useful Improvements in Car-Brakes, of which the following is a specification.

This invention relates to an improved car-brake, and has for its primary object to provide a brake of this character which is actuated directly by the energy of the moving car.

To this end the invention comprises, essentially, a shaft journaled in the car-truck and normally receiving motion from one of the axles, a second shaft for operating the brakes, and means whereby motion can be transmitted from the first shaft to the second shaft.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view showing the relative positions of the car-axle, the shafts, and the brake-beams. Fig. 2 is a longitudinal sectional view through a car-truck provided with the improved brake mechanism. Fig. 3 is a top plan view of the car-truck.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The invention is shown as applied to a car-truck the frame of which comprises, essentially, the longitudinal side pieces 1 and the connecting cross-bars 2. The wheels 3 are mounted in the usual manner upon the axles 4, the latter being journaled in the boxes 5, which are secured to the frame of the truck. A transverse shaft 6 is journaled in the main frame of the truck between one of the side pieces 1 thereof and an intermediate longitudinal beam 7. This shaft 6 has a sprocket-wheel 8 mounted thereon and a chain 9 passing over the sprocket-wheel 8, and a similar but preferably smaller sprocket-wheel 10 upon one of the axles 4 is employed to transmit motion from the axle to the shaft. A second shaft 11 is mounted between the longitudinal beam 7 and one of the side pieces 1 of the truck, and this shaft is connected, by means of chains or cables 12, to the brake-

beams 13. The brake-beams 13 are suspended from the car-truck by means of the hangers 14 and are provided at their opposite ends with brake-shoes 15, which are adapted to have a frictional engagement with the wheels 3. The cables 12 are so connected to the brake-beams and the shaft 11 that when the latter is rotated the cables are wound up so as to draw the brake-beams together and throw the shoes 15 into engagement with the car-wheels 3.

In order to transmit motion from the transverse shaft 6 to the brake-actuating shaft 11, the latter has a sprocket-wheel 16 mounted thereon, which is connected, by means of a chain 17, to a sprocket-wheel 18, mounted upon a sleeve 19, which is loosely placed upon the shaft 6. This sleeve 19 is provided with a disk 20, which is adapted to be thrown into engagement with a disk 21, rigidly mounted upon the transverse shaft 6, so that the motion of the shaft 6 is transmitted to the sleeve 19 and thence to the brake-actuating shaft 11. It will thus be apparent that when the friction-disks 20 and 21 are separated or out of engagement with each other the motion of the transverse shaft 6 will not be transmitted to the shaft 11 and the brake-beams 13 will hang freely, so as to hold the shoes 15 out of engagement with the wheels. However, when the sleeve 19 is moved upon the transverse shaft 6, so as to throw the friction-disks 20 and 21 into engagement with each other, the motion of the shaft 6 is transmitted to the shaft 11 and the cables 12 are wound up by the latter shaft in such a manner as to draw the brake-beams 13 together and throw the shoes 15 into engagement with the wheels.

The means for operating the brake mechanism may consist of the operating-levers 22, located at opposite ends of the car and connected by rods 23 with bell-crank levers 24, pivoted to suitable supporting-framework on the truck. Rods 25 connect the levers 24 with a spring-retracted bar 26, which is connected by a suitable swivel or similar connection 27 with the sleeve 19. The springs 28 are designed to act under tension and normally hold the member 20 away from the member 21, one end of each of the springs being secured to the bar 26, while the opposite end is connected to the car-truck.

When either of the levers 22 are actuated by the operator, the rods 23 will be pulled

upon, and this will effect movement of bar 26 to cause the clutch elements 20 and 21 to cooperate and effect the braking action.

The levers 22 may be supplied with suitable catches and cooperating toothed segments for operation in the customary way.

Having thus described the invention, what is claimed as new is—

1. In a car-brake, the combination of a truck, supporting-wheels for the truck, a shaft journaled in the truck, means for transmitting motion from the wheels to the shaft, a friction-disk rigidly secured to the shaft, a sleeve loosely mounted upon the shaft and provided with a friction-disk adapted to engage with the before-mentioned friction-disk upon the shaft, means for sliding the sleeve upon the shaft to throw the friction-disks into or out of cooperation with each other, a brake mechanism, a second shaft journaled in the car-truck and adapted to operate the brake mechanism, and means for transmitting motion from the before-mentioned sleeve upon the first shaft to the second-mentioned shaft.

2. In a car-brake, the combination of a truck, supporting-wheels for the truck, a shaft journaled in the truck, means for transmitting motion from the wheels to the shaft, a friction-disk rigidly secured to the shaft, a sleeve loosely mounted upon the shaft and provided with a friction-disk adapted to engage with the before-mentioned friction-disk upon the shaft, a spring-retracted bar for sliding the sleeve upon the shaft to throw the two friction-disks into or out of cooperation with each other, means for operating the spring-retracted bar, a brake mechanism, and means whereby the brake mechanism is operated through the before-mentioned sleeve.

3. In a car-brake, the combination of a truck, supporting-wheels for the truck, a shaft journaled in the truck, means for transmitting motion from the wheels to the

shaft, a friction-disk rigidly secured to the shaft, a sleeve loosely mounted upon the shaft and provided with a friction-disk adapted to engage with the before-mentioned friction-disk upon the shaft, a spring-retracted bar for sliding the sleeve upon the shaft to throw the two friction-disks into or out of cooperation with each other, a bell-crank lever mounted upon the truck, connecting means between the spring-retracted bar and one arm of the bell-crank lever, means for operating the bell-crank lever, a brake mechanism, and means whereby the brake mechanism is operated by the before-mentioned sleeve.

4. In a car-brake, the combination of a truck, an axle journaled in the truck and provided with a sprocket, supporting-wheels secured to the axle, a shaft journaled in the truck and provided with a sprocket, a chain passing around the two before-mentioned sprockets whereby motion is transmitted from the axle to the shaft, a friction-disk rigidly secured to the shaft, a sleeve loosely mounted upon the shaft and provided with a friction-disk adapted to engage with the before-mentioned friction-disk upon the shaft, the said sleeve being also provided with a sprocket, a spring-retracted bar for sliding the sleeve upon the shaft to throw the two friction-disks either into or out of cooperation with each other, means for operating the spring-retracted bar, a brake mechanism, a second shaft journaled in the frame and adapted to operate the brake mechanism, the said shaft being provided with a sprocket, and a chain passing around the said sprocket and the before-mentioned sprocket of the sleeve.

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

SAMUEL J. KILLINGWORTH. [L. S.]

Witnesses:

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