

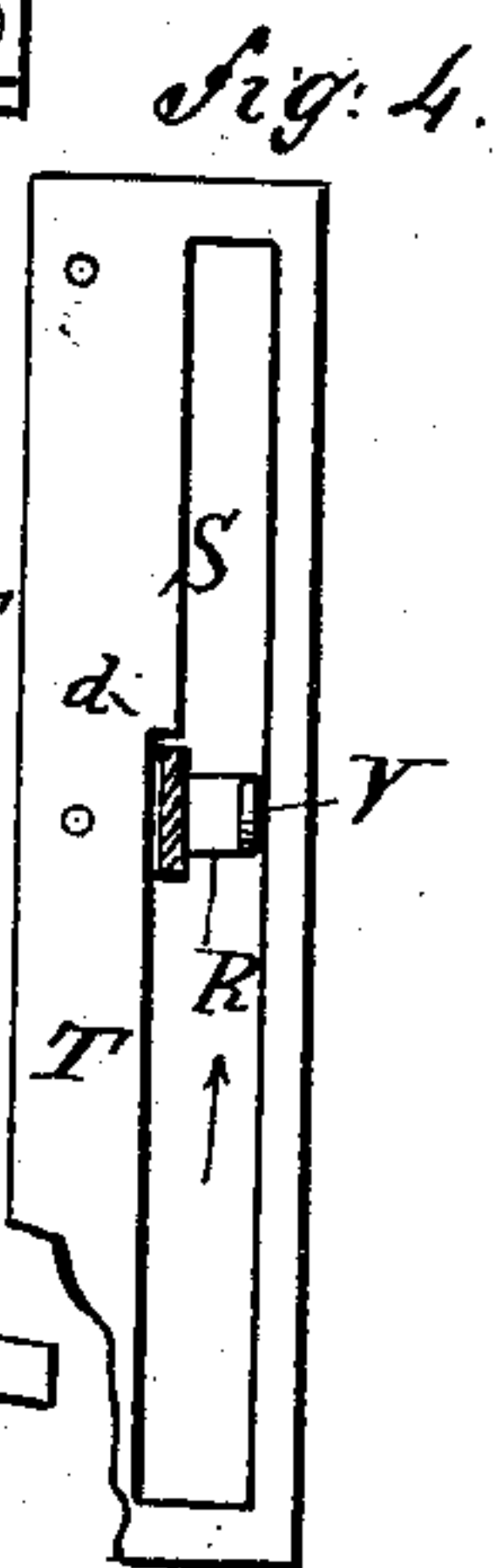
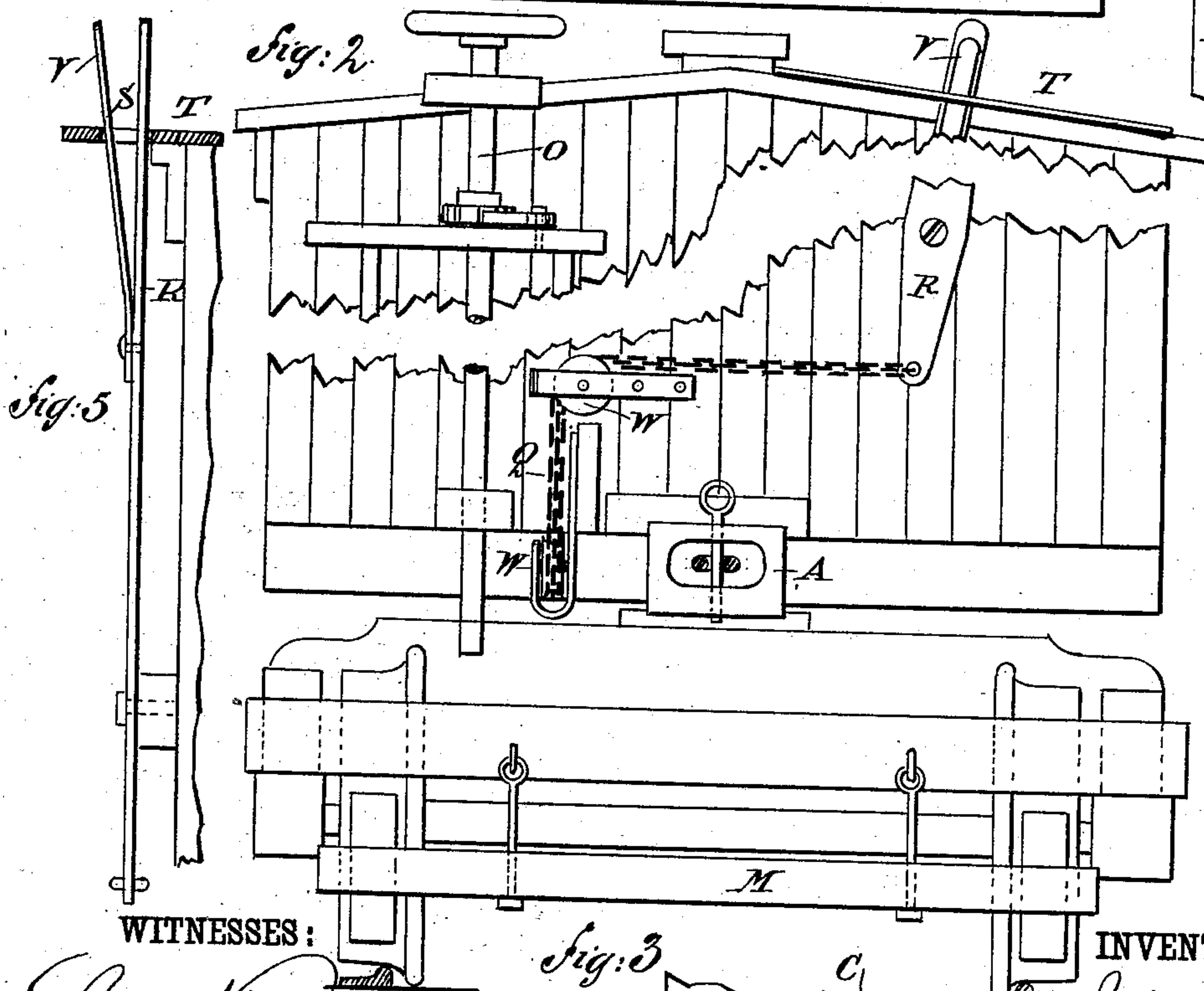
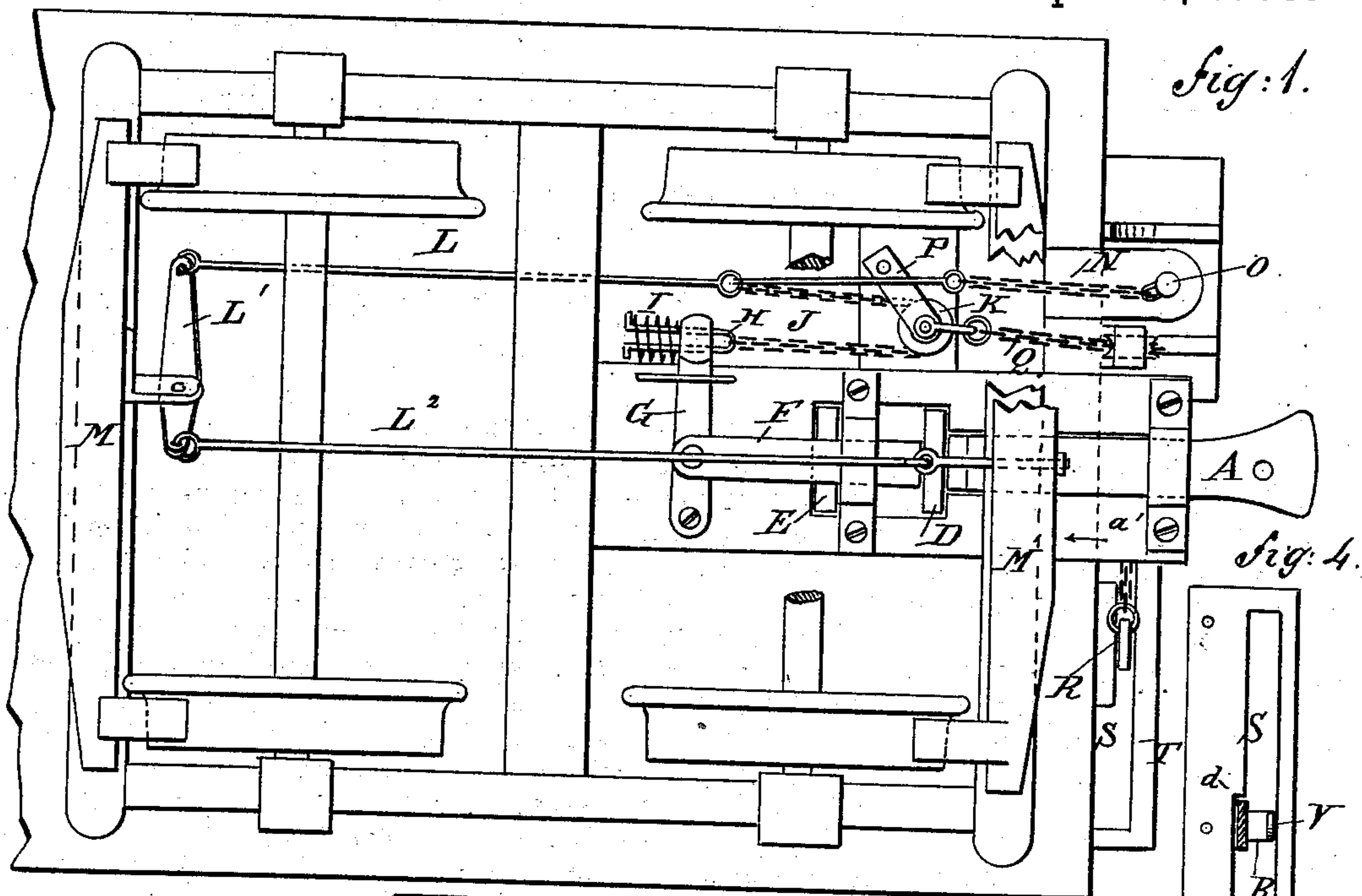
(No Model.)

J. B. O'DONNELL.

CAR BRAKE.

No. 275,513.

Patented Apr. 10, 1883.



*Fig. 5.*

WITNESSES:

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INVENTOR:

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# UNITED STATES PATENT OFFICE.

JAMES B. O'DONNELL, OF HAZLETON, PENNSYLVANIA.

## CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 275,513, dated April 10, 1883.

Application filed September 18, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BENEDICT O'DONNELL, of Hazleton, in the county of Luzerne and State of Pennsylvania, have invented an Improved Car-Brake, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved car-brake which can be adjusted so that it will be applied automatically as soon as the cars bump together.

The invention consists in the combination, with the draw-head, of a lever adapted to be acted upon by the draw-head, a chain connecting the swinging end of the said lever with the brake-rod, and an adjustable pulley-sheave over which said chain passes, the bracket of said pulley being connected by a chain to a lever.

It consists, also, in certain other combinations and arrangements of parts, substantially as hereinafter more fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the under side of a car provided with my improved brake. Fig. 2 is an end elevation of the same, parts being broken out. Fig. 3 is a longitudinal elevation of the draw-head, parts being shown in section. Fig. 4 is a plan view of the slotted guide-plate for the adjusting-lever. Fig. 5 is a longitudinal elevation of the said lever, the guide-plate being shown in section.

The draw-head A, which is held to the bottom of the car in the usual manner, is provided at its rear end with a spindle, B, which is surrounded by a spiral spring, C, held between the plates D and E, through which the spindle passes. A flat bar, F, is held by a clip against the bottom of the car or the frame in which the draw-head slides in such a manner that it can slide in the direction of the length of the car. The outer end of the bar F rests against the inner surface of the plate D, and the plate E rests on the bar F. The inner end of the bar F is pivoted to a lever, G, one end of which is pivoted to the car-bottom, and through the swinging end a double pin, H, passes, which is surrounded by a spiral cushion-spring, I, which is between the edge of the lever and the bent rear ends of the pin. A

chain, J, attached to the front or outer end of the double pin H, passes around a pulley-sheave, K, which is located between the pin H and the end of the car, and from the said pulley passes backward and is attached to the end of the brake-rod L, which is connected with a lever, L', pivoted on the inner brake-shoe bar, M, which lever has its other end connected by a rod, L<sup>2</sup>, with the outer brake-shoe bar, M'. A chain, N, connects the end of the brake-rod L with the vertical brake-shaft O, of the usual construction, on the end of the car. The pulley K is pivoted in the swinging end of a bar, P, pivoted on the bottom of the car to swing in the horizontal plane, and by means of a chain, Q, the swinging end of the bar P is connected with the lower end of a lever, R, pivoted on the end of the car, and passing through a guide-slot, S, in a plate, T, fastened on the car-roof, at the end of the same, which slot is provided in its back edge with a shoulder or offset, d, at or near its middle. The lever R is provided with a locking-spring, V, resting against the outer edge of the slot. The chain Q passes over guide-pulleys W W at the end of the car.

The operation is as follows: When the lever R rests against the outer end of the slot S, the lever P can swing on the bottom of the car and the brakes can be applied in the usual manner. If the cars bump together, the draw-head moves inward—that is, in the direction of the arrow a'—and the plate D presses against the outer end of the bar F, and the free end of the lever G is swung from the end of the car. The chain J draws the bar P in the same direction and the brakes will not be applied. If the lever R is adjusted to be at the middle of the slot S, and is held in this position by the spring V, and resting against the offset d, the free end of the bar P will be moved toward the end of the car, and will be held in this position. If the cars bump together, and the draw-head moves in the direction of the arrow a', the chain J cannot draw the free end of the bar P in the direction from the end of the car, as the said lever P is held by the chain Q. Consequently the brake-rod will be drawn in the inverse direction of the arrow a' as the free end of the lever G is moved in the direction of the arrow a' by the draw-head, and the brakes will be applied automatically. As the inner plate, E, is above the plate F, the latter will



not be affected by the draw-head when the same is drawn in the inverse direction of the arrow *a'*. In case the lever R should not be set to apply the brakes when the cars are  
 5 bumped together, it will only be necessary to move the said lever to the position hereinbefore described for applying the brakes, whereby the chain Q will be tightened and the brakes applied.

10 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-brake, the combination, with the draw-head, of a lever adapted to be acted upon  
 15 by the draw-head, a chain connecting the swinging end of the said lever with the brake-rod, an adjustable pulley over which the said chain passes, and a lever pivoted on the end of the car and connected by a chain with the ad-  
 20 justable pulley, substantially as herein shown and described, and for the purpose set forth.

2. In a car-brake, the combination, with the draw-head A, of the plate F, the lever G, the chain J, the brake-rod L, the pulley K, piv-  
 25 oted in the swinging bar P, the chain Q, and the lever R, substantially as herein shown and described, and for the purpose set forth.

3. In a car-brake, the combination, with the draw-head A, of the plate F, the lever G, the

chain J, the pulley K, the pivoted bar P, the  
 brake-rod L, the chain Q, the lever R, the  
 locking-spring V, and the slotted guide-plate  
 T, provided with an offset, *d*, substantially as  
 herein shown and described, and for the pur-  
 pose set forth.

4. In a car-brake, the combination, with the  
 draw-head A, of the plate F, the lever G, the  
 pin H, the spring I, the chain J, the pulley K,  
 the pivoted bar P, the chain Q, and the lever  
 R, substantially as herein shown and described,  
 and for the purpose set forth.

5. In a car-brake, the combination, with the  
 draw-head A, of the bar F, the lever G, the  
 chain J, the pulley K, the chains Q and N, the  
 lever R, and the brake-shaft O, substantially  
 as herein shown and described, and for the  
 purpose set forth.

6. In a car-brake, the combination, with the  
 draw-head A, provided with a spindle, B, of  
 the spring C, the plates D and E, the bar F,  
 the lever G, the chain J, the adjustable pulley  
 K, the brake-rod L, the chain Q, and the lever  
 R, substantially as herein shown and described,  
 and for the purpose set forth.

JAMES B. O'DONNELL.

Witnesses:

GEORGE J. WILDE,  
 C. E. BIRD.