

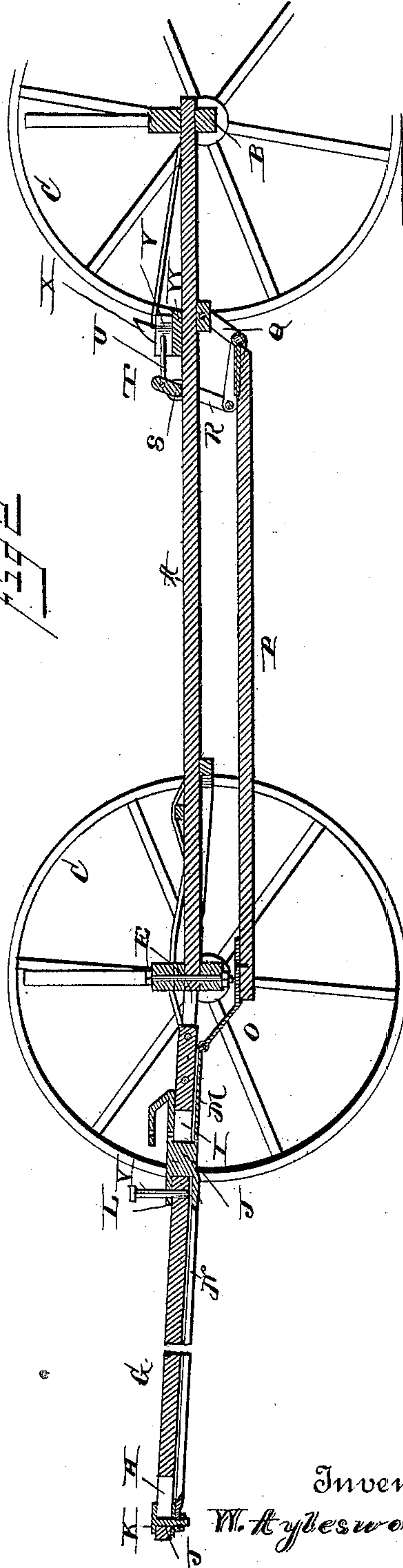
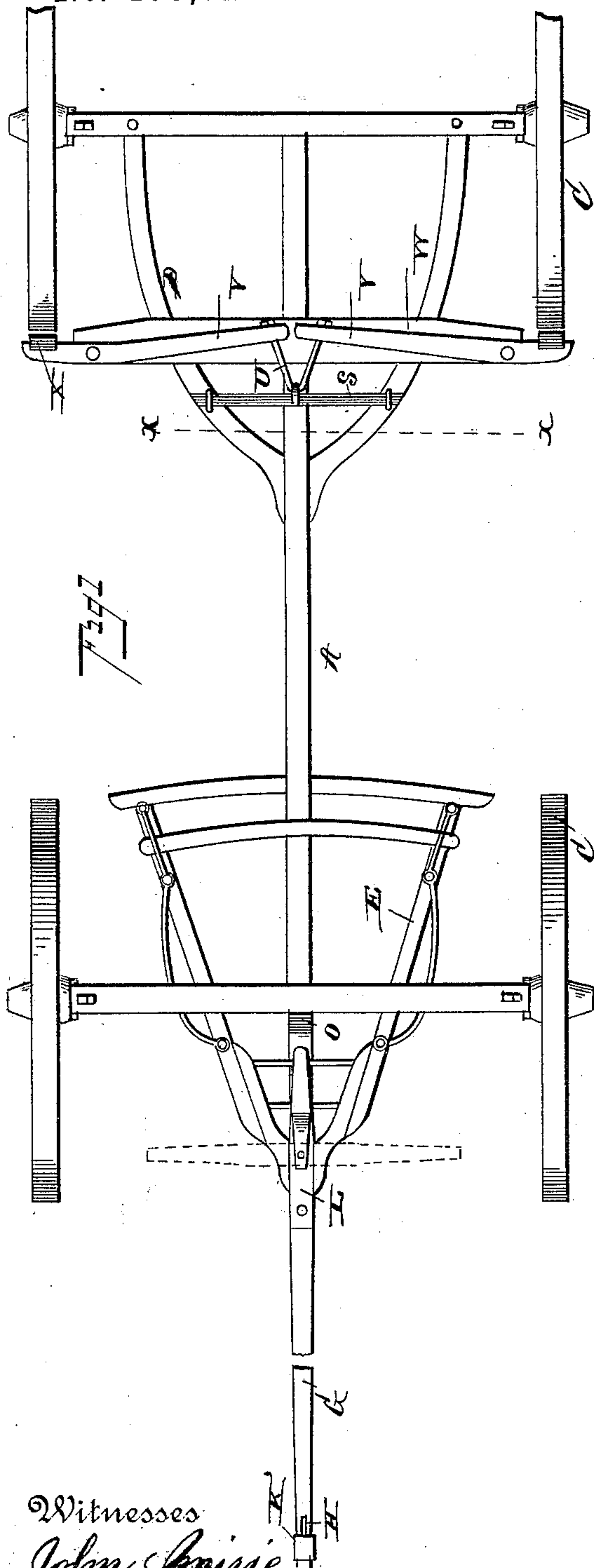
(No Model.)

2 Sheets—Sheet 1.

W. AYLESWORTH, 1st.  
AUTOMATIC WAGON BRAKE.

No. 405,520.

Patented June 18, 1889.



Witnesses  
*John Smiric*  
*R. W. Bishop.*

By *W. J. S.* Attorneys

Inventor  
*W. Aylesworth, Jr.*

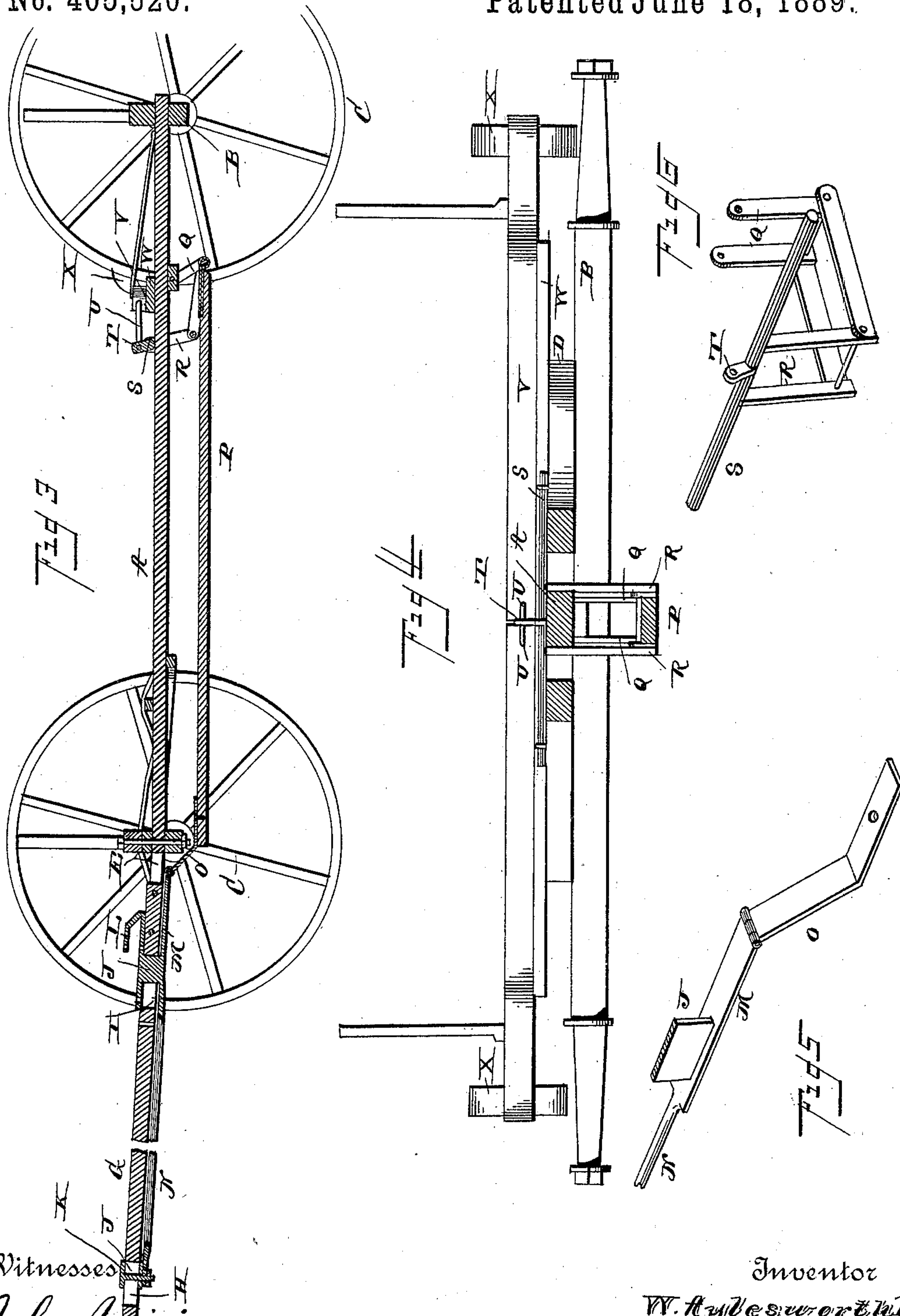
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By his Attorneys

*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

WILLIAM AYLESWORTH, 1ST, OF BLOSSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO JAMES H. MOLD, OF SAME PLACE.

## AUTOMATIC WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 405,520, dated June 18, 1889.

Application filed January 10, 1889. Serial No. 296,009. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM AYLESWORTH, 1st, a citizen of the United States, residing at Blossburg, in the county of Tioga and State of Pennsylvania, have invented new and useful Improvements in Automatic Wagon-Brakes, of which the following is a specification.

My invention relates to improvements in automatic wagon-brakes; and it consists in certain novel features, hereinafter first fully described, and then pointed out in the claims.

In the drawings, Figure 1 is a plan view of the running-gear of a wagon, showing my improved brake applied thereto. Figs. 2 and 3 are longitudinal sections of the same, showing the brake in different positions. Fig. 4 is a transverse section on the line  $x x$  of Fig. 1. Figs. 5 and 6 are detail views, in perspective, of parts of the operating mechanism.

Referring to the drawings by letter, A designates the perch, B the axles, and C the wheels, of an ordinary running-gear.

D D are the hounds secured to the perch and the rear axle, and E is the fifth-wheel, having the tongue G pivoted in its front end. This tongue G is provided at its front end and near its rear end with the longitudinal slots H I, through which pass the vertical pins and plates J, the forward one of which is connected to the neck-yoke K, surrounding the front end of the tongue, the rear one being connected to the sliding bracket L at its upper end, and at its lower end to a sliding plate M, as shown. The sliding bracket is mounted on the upper side of the tongue, and the whiffletrees are pivoted thereto. The sliding plate M is arranged beneath the tongue, and is connected to the neck-yoke by a rod N, as shown. To the rear end of the sliding plate M, I hinge the front end of a downwardly and rearwardly extending link O, the rear end of which is pivotally secured to and supports the front end of a push bar or rod P, which extends longitudinally of the running-gear beneath the perch to near the rear end of the same, and has its rear end pivoted between two angle-levers Q Q, the vertical arms of said levers being pivoted at their upper ends to the perch, and the horizontal arms being extended forward and pivoted to the lower ends of the parallel arms R, depending from and formed

integrally with a transverse rock-shaft S, journaled upon the hounds. This rock-shaft S is also provided with a central upwardly-projecting arm T, to which are connected the front ends of the links U, the rear ends of which are connected to the inner adjacent ends of the levers V V. These levers V V are pivoted to a cross bar or plate W, secured upon the hounds. The outer ends of the levers V V project outward to a position in front of the rear wheels, and the brake-shoes X are secured to said outer ends of the levers.

Y is a brake-pin, which is inserted through the front end of the sliding bracket L into the tongue to prevent the application of the brake when backing the wagon.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of my device will be readily understood.

The normal position of the parts is that shown in Figs. 1 and 2. If the wagon be on a downgrade, or if from any cause the velocity of the wagon should be increased, the horses will draw backward upon the neck-yoke, thereby causing the push-bar to move backward, and through the angle-levers and the depending arms of the rock-shaft to throw the upper arm of the same forward, thereby drawing the inner ends of the levers forward, throwing the outer ends backward and applying the brakes to the rear wheels, thereby reducing the speed of the vehicle. When the wagon again reaches a level grade, or when it is on an upgrade, the whiffletree will be drawn forward and the push-bar and its connections actuated to release the brakes from the wheels.

From the foregoing description it will be seen that I have provided a very simple and efficient brake, which is automatically operated by the draft-animals without any attention on the part of the driver. It will be observed that the device is very simple in its construction and open in its arrangements. The several parts are beneath the body of the running-gear, and are consequently easily gotten at for the purpose of repairs, &c.

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

1. In an automatic wagon-brake, the combination, with the running-gear, of the tongue



having longitudinal slots near its front and rear ends, the plate arranged to slide in the rear slot, the bracket secured to the upper edge of said plate, the horizontal plate secured  
5 to the lower edge of the latter and having a forwardly-extending rod connected with a pin sliding in the front slot of the tongue and carrying the neck-yoke, and the angular link  
10 hinged at the rear end of the horizontal sliding plate and connected by intermediate mechanism with the brake-levers, substantially as set forth.

2. The combination, with the tongue having the slot I, of the vertical plate J, sliding  
15 longitudinally in said slot, the bracket secured permanently at the upper edge of said plate and adapted to carry the whiffletrees, the horizontal plate M, secured permanently at the lower edge of said plate and having the forwardly-extending rod N, connected with the  
20 neck-yoke, a link hinged to the rear end of the horizontal sliding plate M and connected by intermediate mechanism with the brake-

levers, and a pin adapted to be inserted detachably through a perforation in the bracket  
25 L into the tongue, substantially as set forth.

3. The combination, with the running-gear and the tongue, of the levers mounted on the running-gear and carrying the brake-shoes, the rock-shaft mounted on the running-gear  
30 in front of the levers and having an upwardly-projecting arm T, the links connecting said arm with the levers, the parallel arms R, depending from the rock-shaft, the angle-levers pivoted at one end to the running-gear and at  
35 the other end to the arms R, the push-bar pivoted between the angle-levers, and devices mounted on the tongue to operate the push-bar, as set forth.

In testimony that I claim the foregoing as  
40 my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM AYLESWORTH, 1st.

Witnesses:

WILLIS WELCH,  
I. O. CALDWELL.