No. 636,550. Patented Nov. 7, 1899.

J. PICKERSGILL.

AUTOMATIC WAGON BRAKE.

(Application filed Aug. 5, 1899.)

(No Model.)

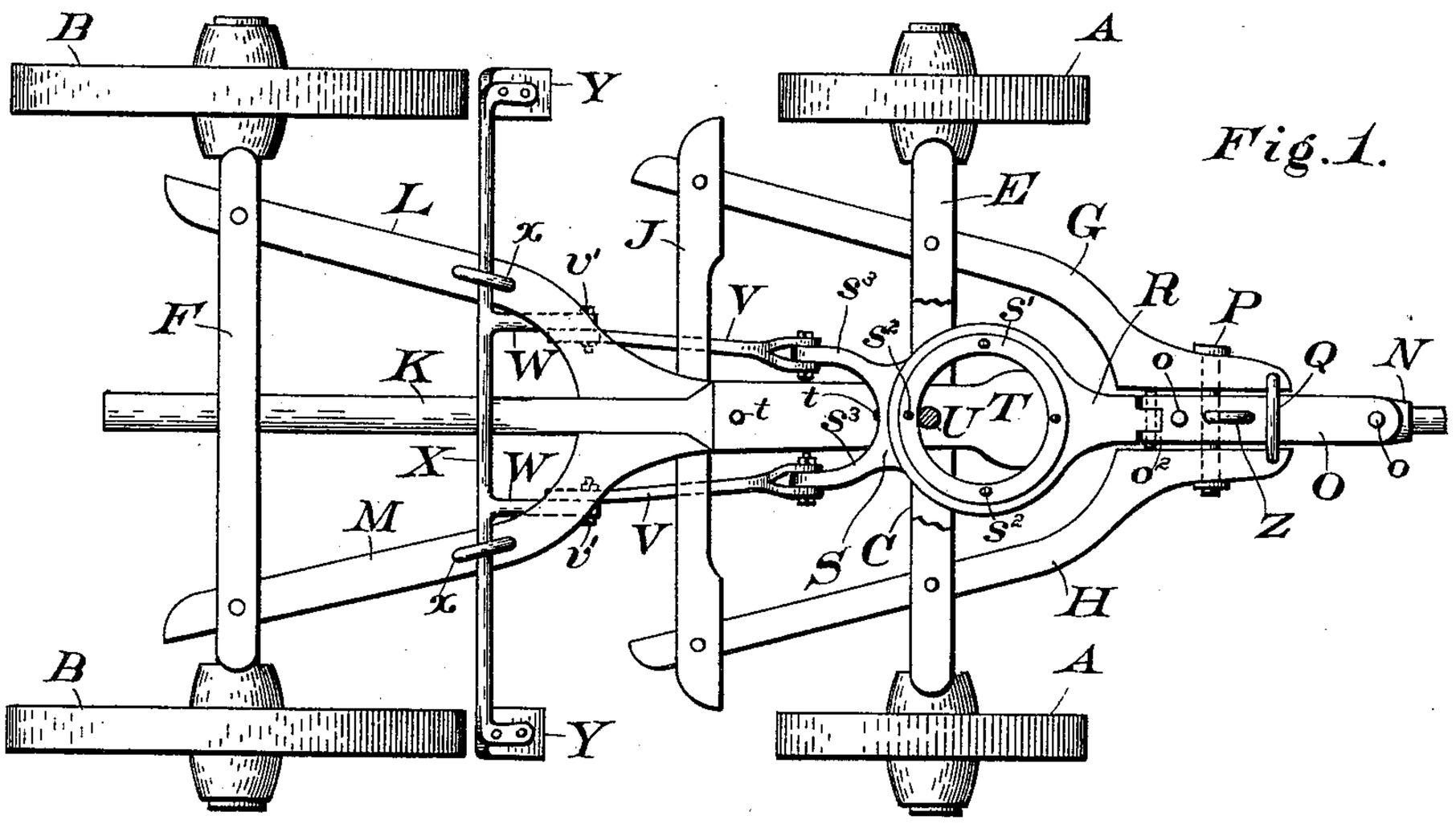


Fig. 1.

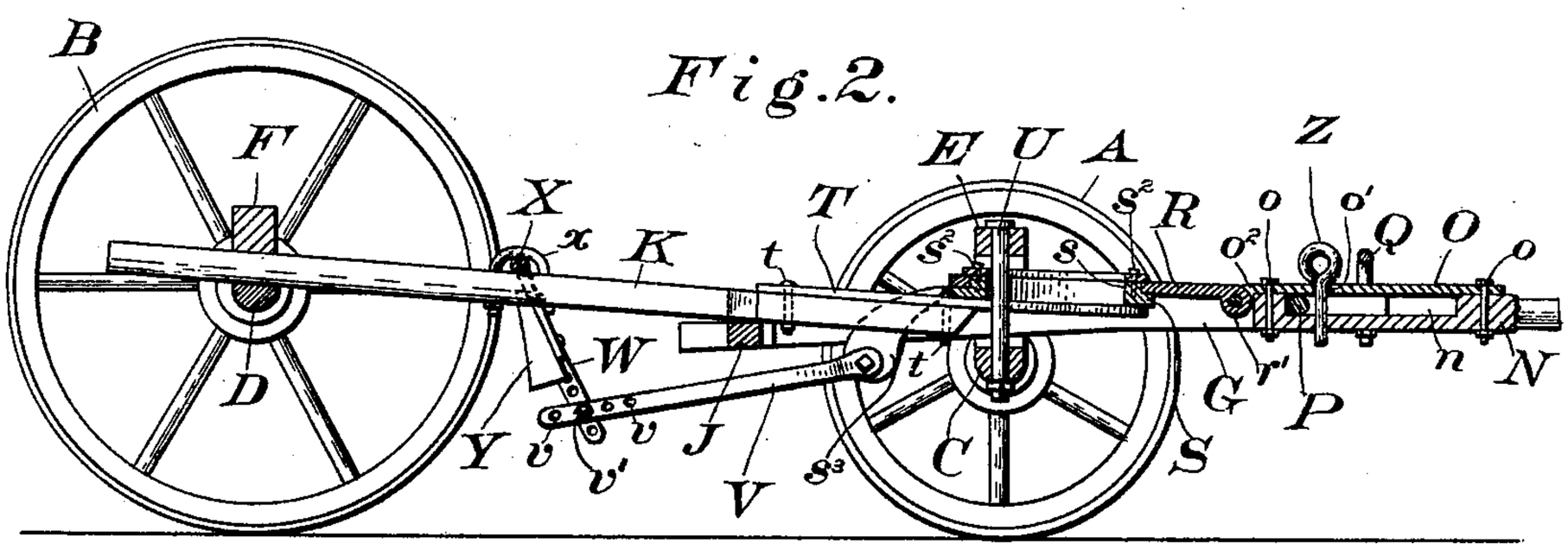
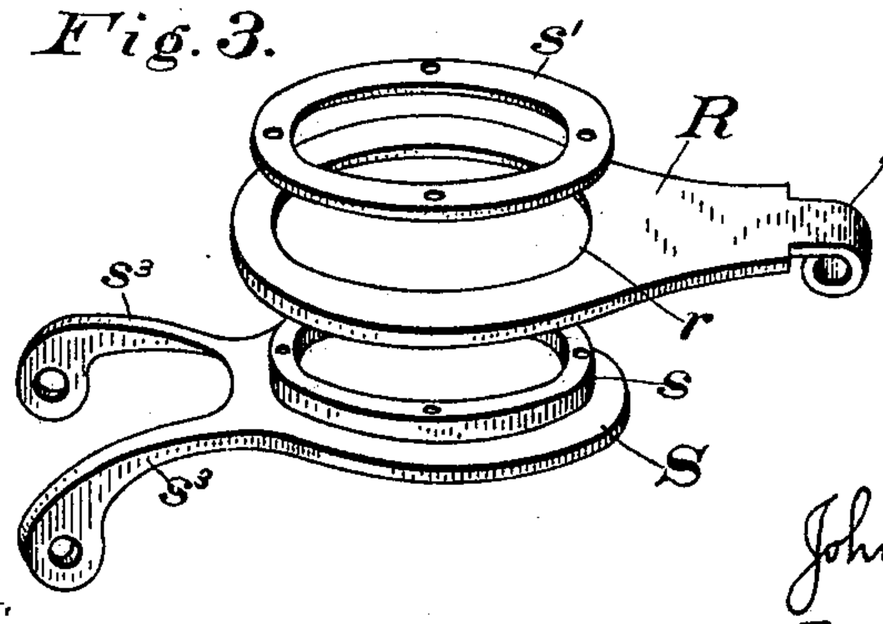


Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN PICKERSGILL, OF CENTRAL CITY, KENTUCKY, ASSIGNOR OF ONE-HALF TO SHELBY J. GISH, OF SAME PLACE.

AUTOMATIC WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 636,550, dated November 7, 1899.

Application filed August 5, 1899. Serial No. 726,238. (No model.)

To all whom it may concern:

Be it known that I, JOHN PICKERSGILL, a citizen of the United States, residing at Central City, in the county of Muhlenberg and State of Kentucky, have invented certain new and useful Improvements in Automatic Wagon-Brakes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to automatic wagon-brakes, and has for its object the improvement of the wagon-brake covered by Letters Patent of the United States No. 341,685, issued to me May 11, 1886. In said patented invention the turning of the front axle and parts attached was in a measure limited by a transverse slot. It is found desirable to afford greater freedom of turning movement, which is the specific purpose of my present invention.

To accomplish my object, I have devised two coacting plates, one having a standing circular flange, the other a circular opening movably fitting the flange exteriorly. The flanged plate is furnished with depending side portions pivotally connected with the brake-levers, and the other plate possesses a hinge connection with the slotted sliding bar to which the ordinary wagon-pole is secured.

Each constituent element of my invention is described in detail, and its individual office, together with the mode of operation of the whole, fully explained hereinbelow.

Of the accompanying drawings, Figure 1 is a top plan of the running-gear of a wagon provided with my invention. Fig. 2 represents a vertical mid-sectional view, and Fig. 3 a detail view, of the flanged plate and the flange-encircling plate.

Like letters designate the same parts throughout.

Considering the drawings, letters A A and B B mark the front and rear pairs of wheels, respectively, C and D the front and rear axles, (see Fig. 2,) and E and F the front and rear bolsters.

Secured upon the front axle C are the curved side bars or hounds G and H, the inner ends of which are joined by a cross-bar J, which, it will be noticed, passes beneath the coupling-pole K. Curved braces L and M extend from opposite sides of the coupling-pole divergently rearward to axle D in the usual manner. The forward ends of side bars G and H approach each other, and between them slides a pole-carrier or socket N. This element may be formed entirely of metal and in one piece, or it may be constructed as drawn. The part N is provided with a recess n, over which a metal plate O is fixed by bolts o o, and this plate is further provided with a third bolt-hole o' and one member o^2 of a hinge junction to be again referred to. By this construction the recess n becomes virtually a transverse slot, and in Figs. 1 and 2 will be seen the cross-bolt P, extending from side bar G to H and passing through the recess. The extreme forward ends of side bars G and H are braced firmly at the proper distance apart by the yoke Q. It will be now understood that the pole-carrier N, which may be simply an extension of the pole itself, can be given a backward-and-forward movement limited by the length of recess n in engagement with bolt P.

Next toward the rear lies the plate R, having the circular opening r and the complemental portion r' of the hinge junction with plate O, as plainly shown in Fig. 2. Immediately beneath plate R is situated plate S, having the standing flange s, passing upward through opening r of plate R and capped by a flat ring s', attached by screws s^2 (see Fig. 3) or in any effective way, the office of which is to prevent the separation of plates R and S. As best shown in Fig. 3, the plate S possesses twin rearward-depending portions s^3 s^3, which straddle the forward part of the coupling-pole K and also the extension-plate T, secured to the coupling-pole by bolts t t and acting as a support for the plates R and S, the connection between which is necessarily freely movable. As appears in Fig. 2, it will be seen that the king-bolt U passes through bolster E by way of the flanged opening above described through a suitable orifice in extension-plate T and axle C.

Projecting rearwardly are the duplicate connecting-rods V V, pivotally joined to the depending portions s^3 s^3 of plate S and with the brake-levers W W. To permit the running-gear to be elongated, I occasionally bore transverse orifices or eyes in the lower parts of levers W W and a succession of eyes v v in the rods, the bolts v' v' making a simple and efficient pivotal junction between rods and brake-levers. The levers are usually forged integrally with the brake-rod or rocking-shaft X, rotatively held by the staples x x upon the aforementioned braces L and M, and shoes Y Y are fastened to bent portions of the brake-rod in the customary manner.

In operation my present invention partakes of the general nature of that of my patented invention above noticed—that is to say, upon an upgrade the recess n permits the elements operating the brake to move forward and release the brakes, while upon a downgrade the team holds back and the rear portion of the running-gear presses forward, applying the brakes automatically.

When it is desired to back the wagon, which operation would otherwise set the brakes, I pass the pin Z through bolt-hole o' in plate O forward of bolt P and through a corresponding orifice in the pole-carrier N. It will thus be understood that the braking parts cannot be moved relatively backward when the wagon is being backed, nor the brakes applied. Furthermore, it will now be seen that owing to the peculiar formation of the plates R and S a much greater turning movement of the front wheels and axle is practicable than was possible in my aforesaid patented invention.

Having, therefore, described my invention, what I claim, and seek to secure by Letters Patent of the United States, is—

1. In an automatic wagon-brake, the combination of the pole carrier or socket having recess n, hounds G and H, bolt P, plate R pivotally connected with the pole-carrier and having the circular opening r, plate S having a standing circular flange, brake mechanism, pivotal connections between plate S and said brake mechanism, substantially as described.

2. In an automatic wagon-brake, the combination of the pole carrier or socket having recess n, hounds G and H, bolt P, plate R pivotally connected with the pole-carrier and having the circular opening r, plate S having a standing circular flange, a coupling-pole, extension-plate T, brake mechanism, and pivotal connections between plate S and said brake mechanism, substantially as described.

3. In an automatic wagon-brake, the combination of the pole carrier or socket having recess n, hounds G and H, bolt P, plate R pivotally connected with the pole-carrier and having the circular opening r, plate S having a standing circular flange and depending portions, a coupling-pole and extension-plate T passing between said depending portions and beneath plates R and S, brake mechanism, and pivotal connections between said depending portions of plate S and said brake mechanism, substantially as described.

4. In an automatic wagon-brake, the combination of the pole carrier or socket having recess n, hounds G and H, bolt P, plate R pivotally connected with the pole-carrier and having the circular opening r, plate S having a standing circular flange and depending portions, a coupling-pole and extension-plate T passing between said depending portions and beneath plates R and S, brake mechanism, pivotal connections between said depending portions of plate S and said brake mechanism, and hand-operated devices to prevent application of brakes when backing the wagon, substantially as described.

5. In an automatic wagon-brake, the combination of the pole carrier or socket having recess n, hounds G and H, bolt P, plate R pivotally connected with the pole-carrier and having the circular opening r, plate S having a standing circular flange and depending portions, a coupling-pole and extension-plate T passing between said depending portions and beneath plates R and S, brake mechanism, and pivotal connections longitudinally adjustable between said depending portions of plate S and said brake mechanism, substantially as described.

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

JOHN PICKERSGILL.

Witnesses:
L. COOPER,
JOHN M. VICK.