(No Model.) 2 Sheets—Sheet 1.

J. S. ELLIOTT.

AUTOMATIC VEHICLE BRAKE.

No. 603,946. Patented May 10, 1898.

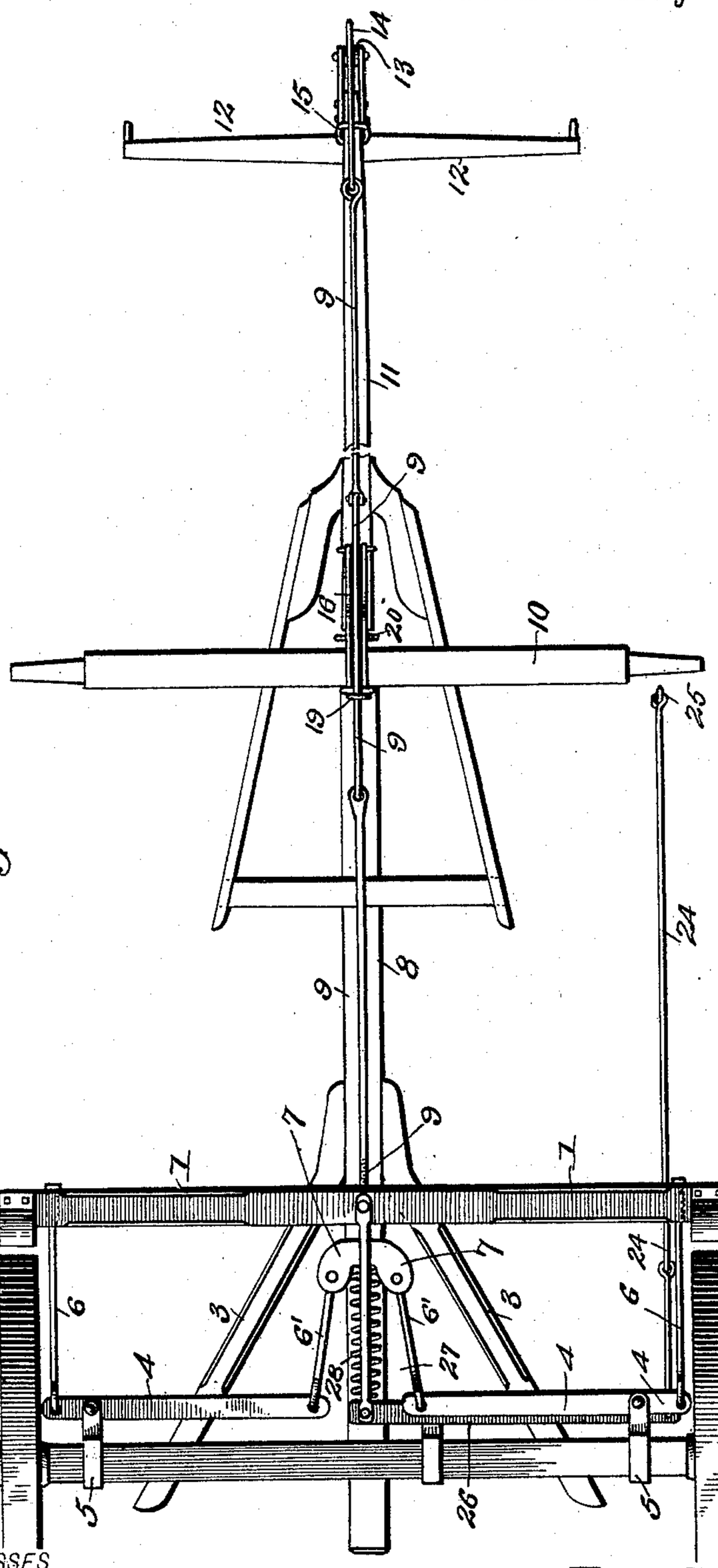

Fig. 1.

WITNESSES

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(No Model.)

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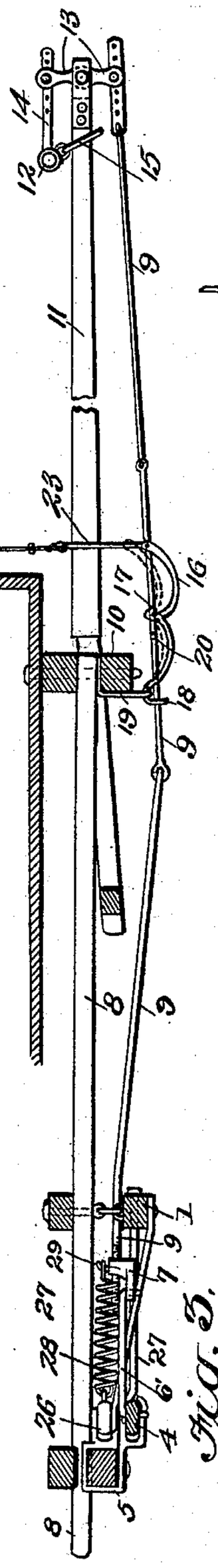


Fig. 2.

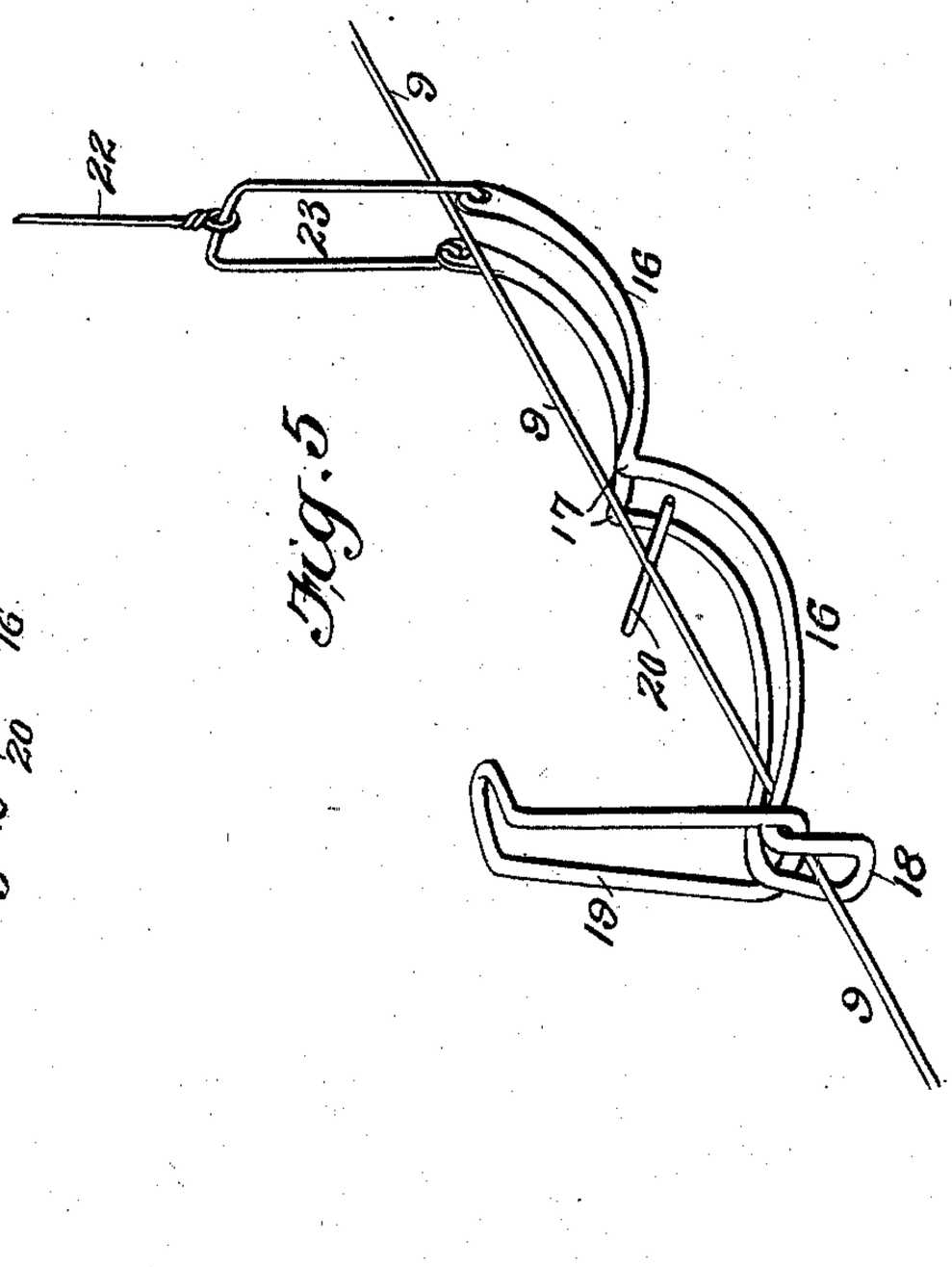
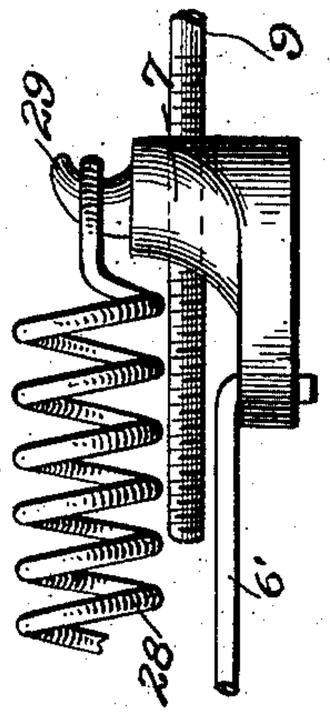


Fig. 5.

Fig. 3.



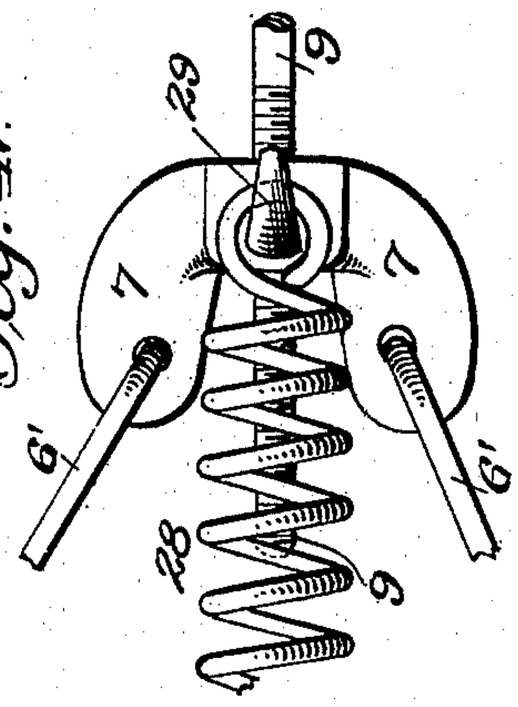


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOSEPH SAMUEL ELLIOTT, OF EDDY, TEXAS.

AUTOMATIC VEHICLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 603,946, dated May 10, 1898.

Application filed September 4, 1897. Serial No. 650,638. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH SAMUEL ELLIOTT, of Eddy, in the county of McLennan and State of Texas, have invented a new and Improved Automatic Vehicle-Brake, of which the following is a specification.

My invention is an improvement in that class of vehicle-brakes in which the brakes proper are applied by the team when holding back, such result being effected through the medium of flexible connection between the neck-yoke and levers that operate the brake-beam.

My invention embodies several features of novelty whereby practical advantages are attained, as hereinafter described.

In the accompanying drawings, (two sheets,) Figure 1 is an inverted plan view of a wagon running-gear embodying my improvement. Fig. 2 is a longitudinal section of a portion of the same. Fig. 3 is a detail side view of a portion of the apparatus. Fig. 4 is a plan view of the same. Fig. 5 is a perspective detail view of portion of the apparatus.

A brake-beam 1, Fig. 1, is arranged in front of the rear wheels 2 in the usual way, it being loosely connected with the rear hounds 3 by means of links and a cross-bar resting on the hounds, as shown in Fig. 2. Two horizontal levers 4, pivoted to clips 5, secured to the rear axle, are loosely connected at their outer ends with the brake-beam 1 by means of rods 6 and at their inner adjacent ends with a yoke 7 by rods 6′, which yoke is arranged below the reach 8 and is adjustably connected by means of a screw-thread with a pull-rod 9, which extends beneath the reach 8, front axle 10, and tongue or pole 11 to the front end of the latter, where it is connected with the neck-yoke 12 by an intermediate lever 13 and link 14.

The aforesaid yoke 7 has a central threaded hole which receives the threaded end of the rear jointed section of the pull-rod 9. It is apparent that this allows the connection between the brake-levers 4 and pull-rod 9 to be adjusted as may be required. Such adjustment may be made to compensate for wear of the brake-shoes or other cause.

The aforesaid lever 13 is pivoted vertically at the front end of the tongue or pole 11, and the neck-yoke 12 is loosely connected with its upper end by the link 14, which has a series of perforations to allow adjustment. The end of the pull-rod 9 has like perforations for the same purpose. The neck-yoke 12 is likewise slidably connected with the tongue 11 by means of a ring or link 15.

Directly beneath the front axle 10 is arranged a device 16, (see Figs. 2 and 5,) that combines the functions of a support, guide, lifter, and stop for the pull-rod. The same consists of an elongated link 16, whose parallel sides are bent upward at the middle 17 to form a stop and downward at its rear end 18 to adapt it for hooking into the link 19, that depends from the axle 10. Said link 19 is bent at a right angle and the king-bolt passes through its horizontal portion, as shown.

The pull-rod 9 passes through the link 16 and is provided with a cross-pin 20, which when the pull-rod is drawn forward engages the angle 17 of the device 16. A foot-lever 21, Fig. 2, is pivoted on the front of the wagon-body and connected with the device 16 by means of a rod 22 and forked link 23.

It is apparent that when the team holds back, and thus pulls on the neck-yoke 12, the pull-rod 9 and the attached yoke 7 will be drawn forward, and thus cause the levers 4 to draw the brake-beam 1 rearward until its shoes are applied to the wheels 2. When it it is desired to back the team, the brake must of course be prevented from applying to the wheels. To effect this, the driver depresses the inner end of lever 21 on the wagon-body and thus raises the front end of the device 16, so that the cross-pin 20 of pull-rod 9 will engage the angle 17 when the team pulls back on the neck-yoke 12. Such engagement will prevent the pull-rod 9 being drawn forward, and thus hinder the application of the brake.

The brake mechanism operates automatically. To enable the brake to be operated manually, I employ a brake-rod 24, Fig. 1, hand-lever 25, and rack, (not shown for the latter,) which are arranged as usual on farm-wagons; also, a lever 26, that is arranged over and parallel to one of the aforesaid brake-levers 4, and a rod 27, Fig. 2, that connects the short arm of said lever 26 with the brake-beam 1 at a point as near its middle as practicable. By operating hand-lever 25 the brake-beam 1 will be retracted, as in the automatic move-

ment, and the latter will be resisted by the spring 28, which is connected at its rear end with the lever 26 of the hand-brake apparatus and at its forward end with a hook 29 on yoke 7. It will be seen, also, that the brake-rod 24 is jointed, which allows due freedom of motion of the automatic mechanism.

What I claim is—

1. The combination with the brake-beam rods 6′, and levers 4, arranged in rear of the brake-beam and in the same plane therewith, of the yoke 7, having the central hook 29, the spring 28, attached to the latter, the pull-rod, threaded as specified and passing through a threaded bore in the yoke, and the hand mechanism, comprising the lever 26 arranged parallel to brake-levers 4, the rod 24, and hand-lever 25, as shown and described.

2. The combination, with the brake apparatus proper, of the link 19, suspended from the front axle, the device 16, consisting of an elongated link having an upward curve 17, at its middle, the pull-rod passing through said device and having the cross-pin 20 arranged in rear of the curved portion of said device, and the lift lever and rod attached to the front end of said device, as shown and described.

JOSEPH SAMUEL ELLIOTT.

Witnesses:

G. W. BARGER,

A. C. BEARD.