

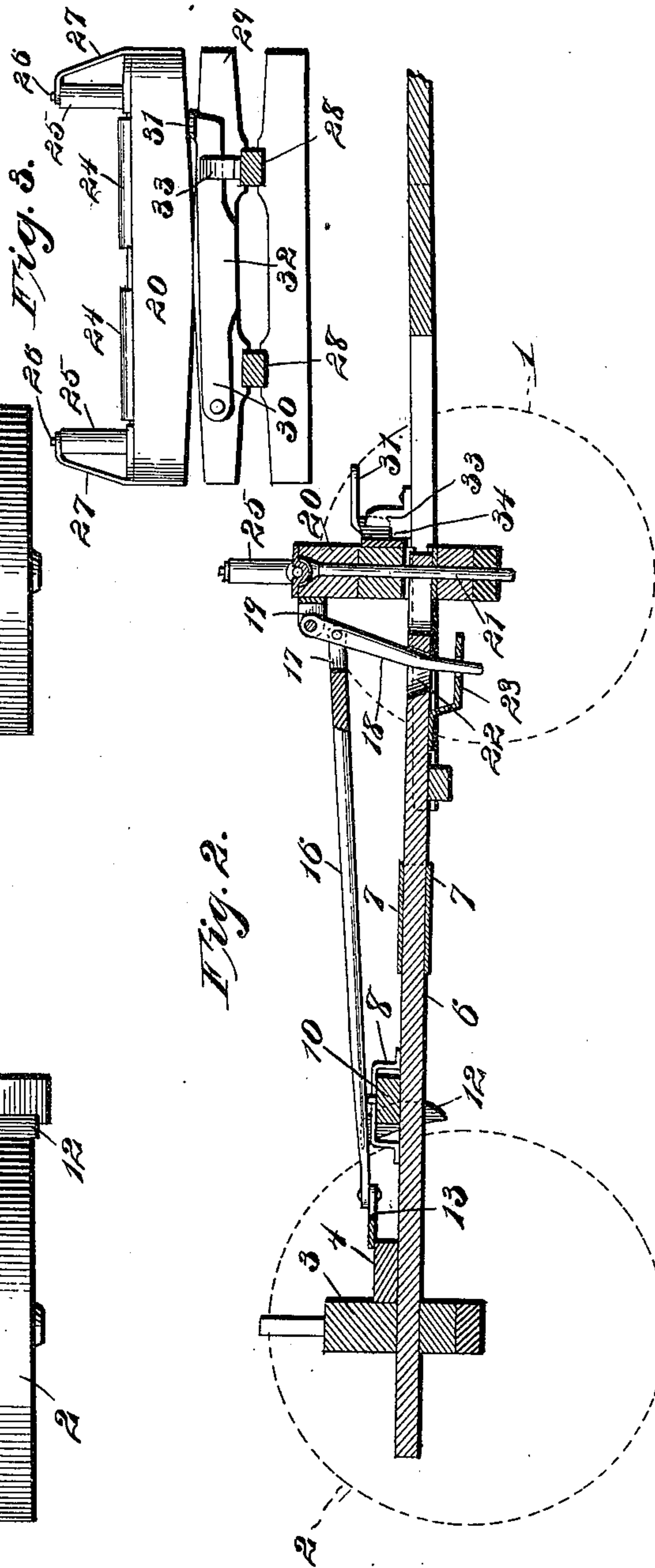
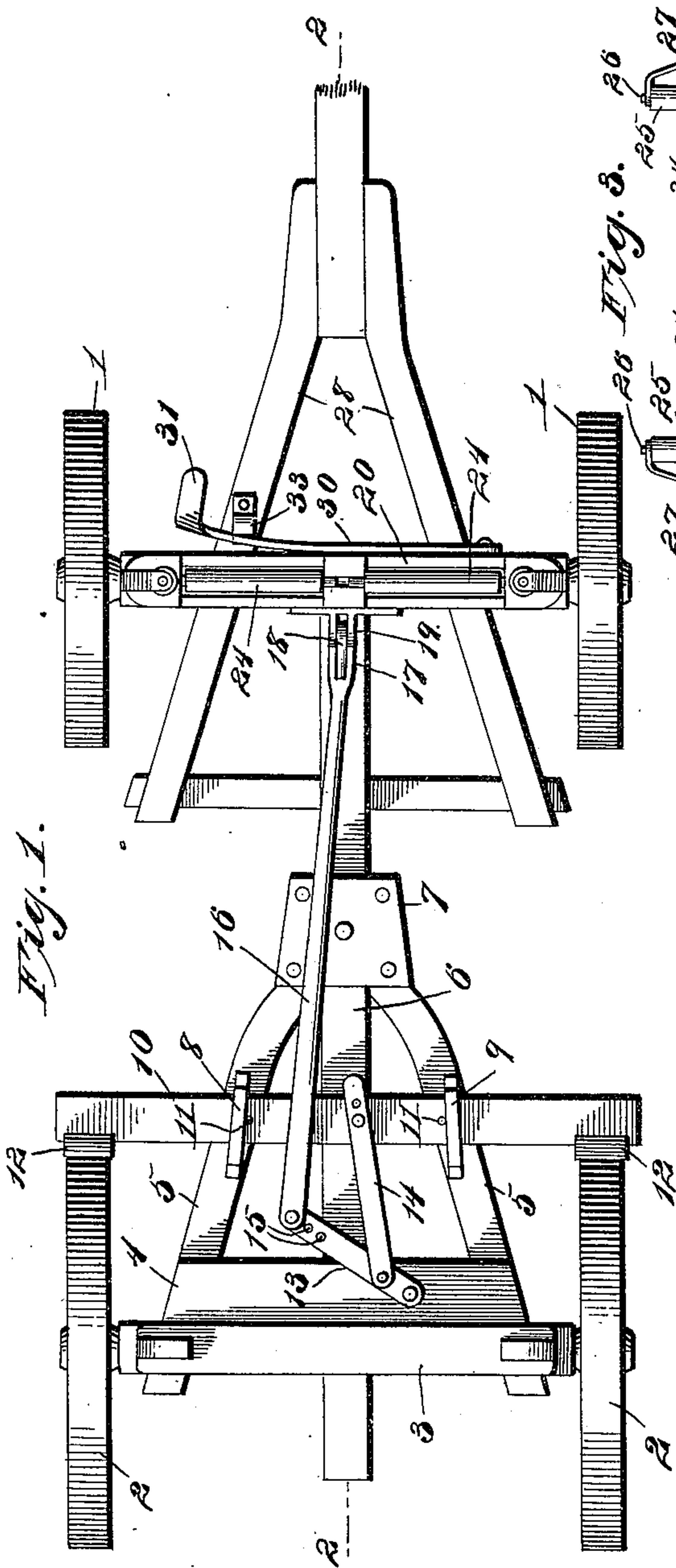
No. 635,250.

Patented Oct. 17, 1899.

J. M. HEID.
WAGON BRAKE.

(Application filed July 14, 1899.)

(No Model.)



WITNESSES

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JOHN M. HEID, OF HYDE, INDIANA.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 635,250, dated October 17, 1899.

Application filed July 14, 1899. Serial No. 723,836. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. HEID, a citizen of the United States, residing at Hyde, in the county of Jennings and State of Indiana, have
5 invented certain new and useful Improvements in Wagon-Brakes, of which the following is a specification.

My invention relates to wagon-brakes; and its primary object is to provide a brake which
10 will be automatic in both applying and releasing the brake.

The main characteristic feature of the invention is that the weight of the load applies the brake upon a downgrade by moving the
15 reach of the wagon longitudinally, thus advancing the rear wheels of the wagon into contact with the brake-shoes in contradistinction to forcing the brake-shoes rearward by back pressure upon the tongue.

20 The construction of the brake will be fully described hereinafter, and its novel features defined in the appended claims in connection with the accompanying drawings, in which—

Figure 1 is a plan view of a wagon provided
25 with my improved brake mechanism. Fig. 2 is a longitudinal vertical section on the line 2 2 of Fig. 1; and Fig. 3 is a detail front elevation of the wagon, partly in section.

The reference-numeral 1 designates the
30 front wheels, and 2 the rear wheels, of the wagon, mounted upon suitable axles. Upon the rear axle is supported the rear bolster 3, from the front side of which projects a platform 4, secured to the rear hounds 5. The
35 rear ends of the hounds 5 extend below the bolster 3, and their forward ends converge and are secured to the reach 6 by the top and bottom plates 7.

8 and 9 designate guides or keepers secured,
40 respectively, one to each of the rear hounds 5, and serving to support the brake-beam 10 upon the hounds and reach, said beam 10 having pins 11 projecting upwardly therefrom on the inner sides of the keepers 8 and 9 to act
45 as stops to limit the lateral play of the brake-beams. The length of the keepers 8 and 9 exceeds the width of the brake-beam to permit the latter to have a limited movement in a direction lengthwise of the reach, as will
50 be explained more fully hereinafter. The brake-beam 10 is provided at its ends with

brake-shoes 12 of the usual or any preferred construction.

A lever 13 is fulcrumed at one end upon the platform 4 at one side of the reach and connected by a link 14 to the brake-beam 10. 55 The free end of the lever 13 is formed with a series of holes 15 to permit of the adjustable attachment thereto of the rear end of a brake-rod 16, the front end 17 of which is forked 60 and pivotally secured to an arm 18, depending from a bracket 19, secured to the rear side of a bolster 20, the latter being pivotally secured at its center by a king-bolt 21 upon the front axle. The arm 18 extends through an 65 elongated slot 22 in the front end of the reach 6, and its lower free end projects through an opening in a bracket 23, secured to the under side of the reach. The bolster 20 is provided on either side of its pivotal point with a horizontal roller 24, mounted in suitable bearings, and at each end of the bolster 20 is a 70 vertical roller 25, supported upon pins 26, having bearing at their lower ends in the bolster and at their upper ends in bracket-arms 27, secured to the bolster. These rollers 24 and 25 serve as antifriction-rollers between the running-gear and the wagon-body, permitting the latter to move forward and backward freely without undue friction. 80

Secured to the front hounds 28 of the running-gear and below the pivoted bolster 20 is a supplemental bolster 29, to which is pivotally secured one end of a locking-lever 30, the free end of which is formed with a treadle 85 31. This lever 30 is formed at its center with a depending lip or flange 32, which is adapted, when the free end of the lever is depressed, to extend in front of the forward end of the reach to lock the reach against longitudinal 90 movement and thus permit the wagon to be backed without applying the brakes. A catch 33, secured upon one of the hounds 28, supports the free ends of the lever, said catch having a shoulder 34, which normally supports the locking-lever above the front end 95 of the reach. When it is desired to back the wagon, the lever 30 is depressed by means of its treadle 31, which is within easy reach of the driver's foot, throwing said lever off of 100 the shoulder 34 and down in front of the end of the reach.

The operation of the brake mechanism as thus described is as follows: When the wagon reaches a downgrade, the weight of the load forces the reach forward, (the front end of the wagon-body sliding on the rollers carried by the front bolster,) thus advancing the rear wheels of the wagon and causing them to contact with the brake-shoes. It will be apparent that the braking force will be proportioned to the load, a heavy load exerting a greater power upon the brakes than a light one. As soon as the wagon reaches level ground the rear wheels recede and allow the reach to move backward to release the brakes. Thus it will be seen that the load is not thrown forward against the back pressure of the horses and that the team and driver are entirely relieved of the work of applying and releasing the brakes.

I claim—

1. In a wagon-brake, the combination with a brake-beam, of a reach adapted to move longitudinally independently of the front bolster; an arm pivotally secured to the front bolster and extending through an elongated slot in the reach; a brake-rod pivotally se-

cured at its front end to said arm; connections between said brake-rod and brake-beam; and means for permitting backing of the wagon, comprising a lever arranged transversely in front of the front bolster and pivoted at one end, formed with a depending lip at its center and a treadle at its free end, and a catch for supporting the free end of said lever.

2. In a wagon-brake, the combination with the brake-beam, a longitudinally-movable reach, and a brake-rod connected by a lever and link to the brake-beam, of a front bolster; a supplemental bolster below said front bolster; a lever fulcrumed at one end to said supplemental bolster, a lip depending from said lever; a treadle at the free end of said lever, and a catch supported in front of said lever, formed with a shoulder upon which the free end of the lever normally rests.

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

JOHN M. HEID.

Witnesses:

C. A. SMITH,

GEORGE F. LAWRENCE.