

S. R. BOLTON.

Wagon Brake.

No. 83,032.

Patented Oct. 13, 1868.

Fig. 1.

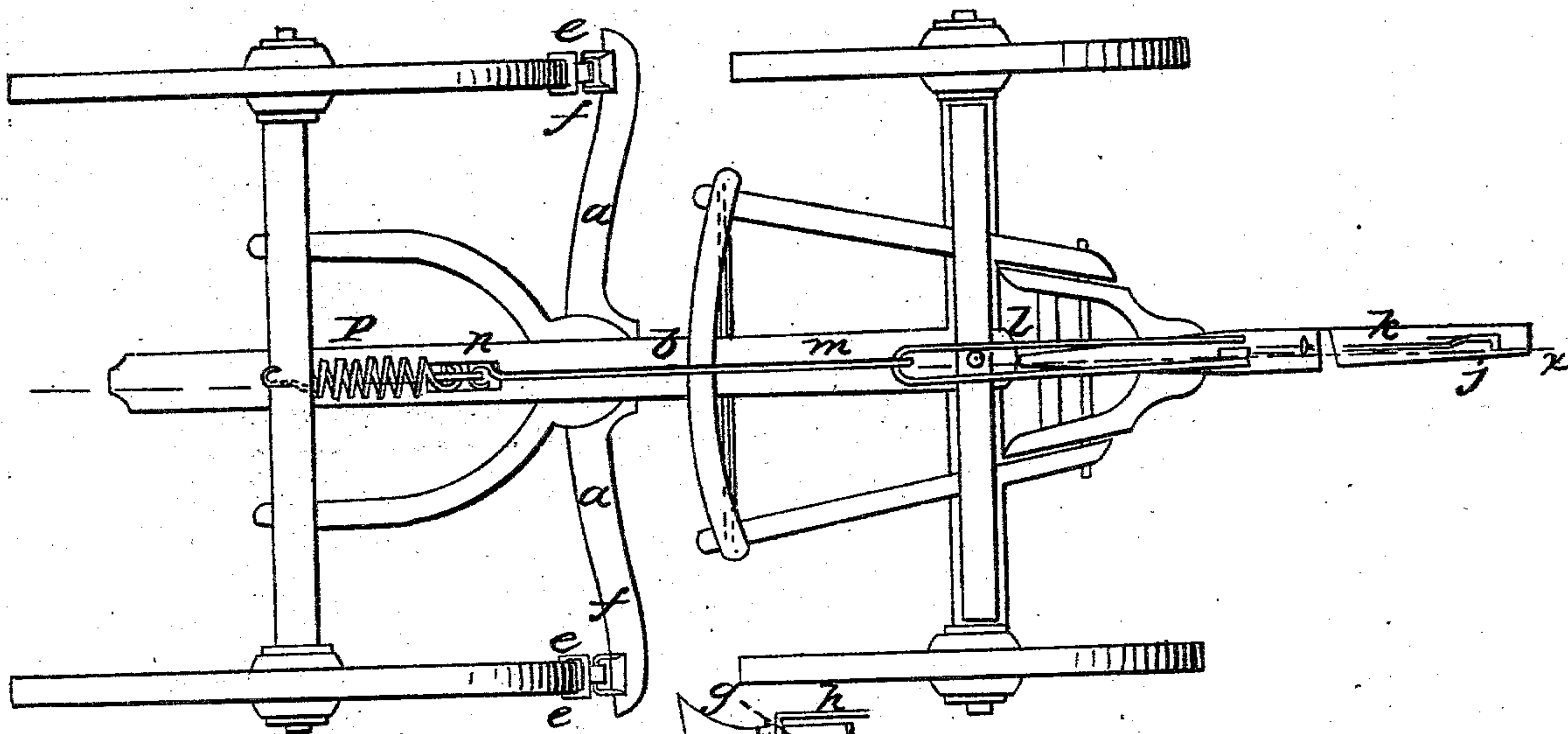


Fig. 3.

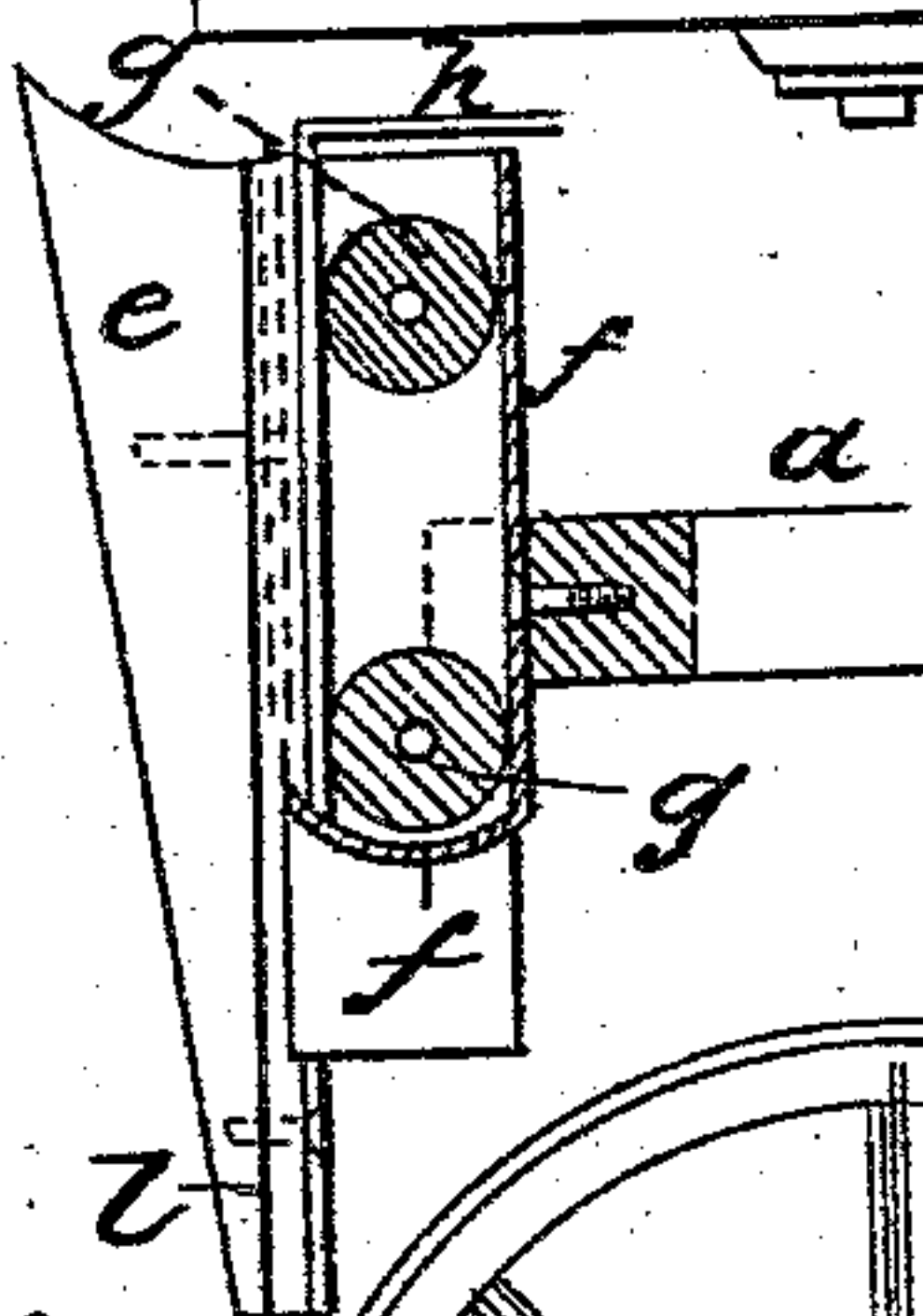
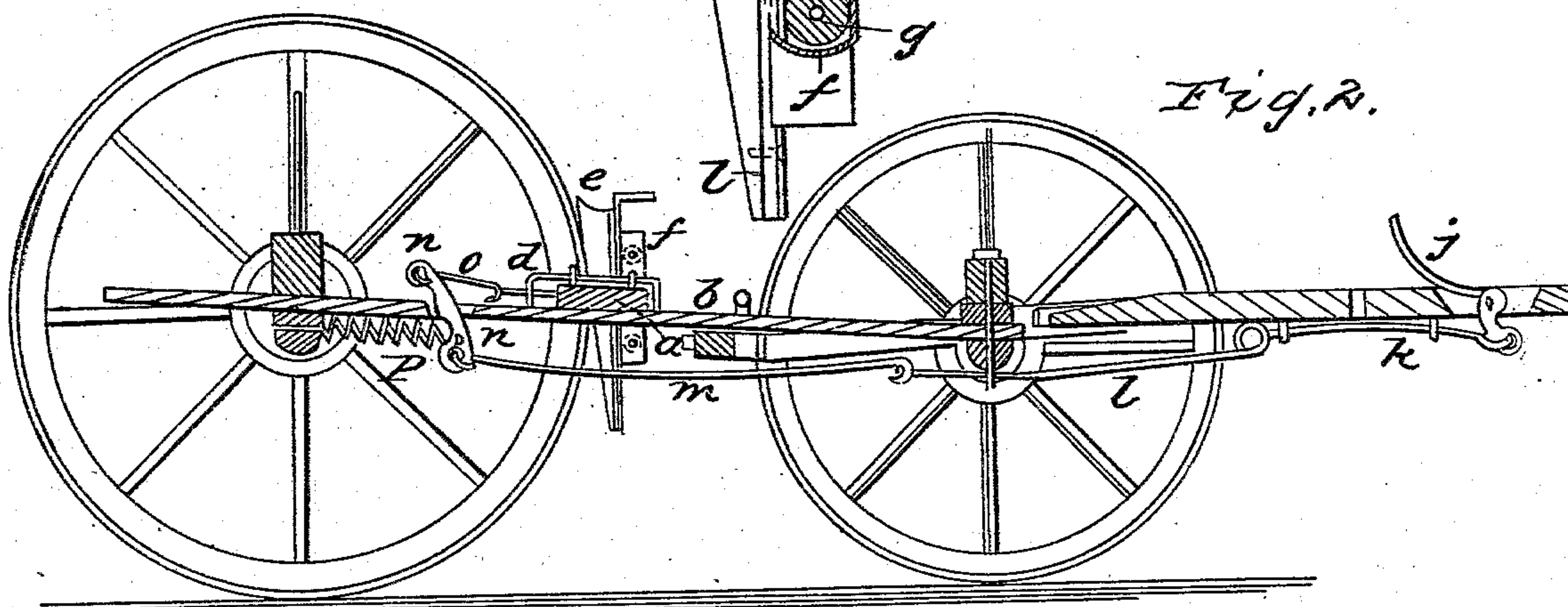


Fig. 2.



Witnesses
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SIMEON R. BOLTON, OF PRESCOTT, WISCONSIN.

Letters Patent No. 83,032, dated October 13, 1868.

IMPROVED WAGON-BRAKE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SIMEON R. BOLTON, of Prescott, in the county of Pierce, and State of Wisconsin, have invented a new and useful Improvement in Wagon-Brakes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a bottom view of a wagon, having my improved brakes applied thereto.

Figure 2 is a view from a section through the line *x x*, fig. 1.

Figure 3 is a detail section of the shoe and shoe-box. Similar letters of reference indicate like parts.

The object of this invention is to provide a simple and efficient braking-apparatus for vehicles.

It consists of the braking-mechanism herein set forth.

In the drawings, *a* is a brake-bar, arranged cross-wise of the reach-pole *b*, and attached to the guide-iron *d*, affixed to the reach by means of staples, so as to permit the said brake-bar a short travel to and from the hind wheels of the vehicle.

This brake-bar bears at its extremities the brake-shoes *e*, so that when the brake-bar is moved toward the hind wheels, the brake-shoes will bear upon the tires of the said wheels, and produce the proper braking effect. The shoes are not firmly affixed to the brake-bar, but are formed with a dovetailed tongue, which works in corresponding slotted blocks *f*, affixed firmly to the brake-bar, as shown.

The shoes thus attached are enabled to slide upward freely when the vehicle is backed, for the friction of the tire against the face of the said shoes will tend to lift them, and the face of the shoes being bevelled downward, will tend to loosen their contact with the wheels when so lifted.

By this construction, the shoes are prevented from exerting a braking effect when the vehicle is backed; for, by the backing-operation, the brake-bar is thrown backward to bring the shoes in contact with the wheels, precisely in the same manner as it is thrown backward to effect the braking or locking of the vehicles when going down a declivity.

The shoes are wedge-shaped, as shown, and lift vertically, when actuated to do so by the friction of the wheels in backing; but the forward motion of the cam-wheels tends to increase the braking effect, by drawing the shoes downward and wedging them firmly between the wheels and the blocks *f* on the brake-bar.

The sliding or lifting connection of the shoes may be obtained in any suitable manner; but I prefer to use a box-shaped plate *f*, (see fig. 3,) containing two rollers, *g g*.

The rear edges of the box-shaped plate are bent to enter the lateral grooves on the tongue *i* of the shoe, as shown.

Affixed to the tongue is a plate, *h*, having its upper end-bend horizontal, to cover the upper end of the cavity of the plate, and exclude dirt from the tire that might otherwise get therein.

The brake-bar is actuated toward the hind wheels by means of the device which connects it with the neck-yoke of the team.

These devices are—

First, a lever, pivoted in the end of the tongue.

Second, a rod, *j, k*, attached to the lower end of the lever, and driving along the under side of the tongue.

Third, the link *l*, enclosing the king-bolt, as shown, and attached to the rod *k*.

Fourth, the rod *m*, joined to the link *l*, and to a lever, *n*, pivoted in the reach-pole, the upper end of which lever is connected with the brake-bar by a short rod, *o*. The lever *n* is placed beyond the brake-bar, and acts to draw it toward the wheels.

I desire to be understood as not limiting myself to the precise arrangement of the rods and levers, as the brake-bar may be actuated by any of the tongue-connections heretofore used for actuating brake-bars. Nor do I wish to claim broadly the lifting-shoes, for various forms of such have been made.

The operation of my brake is as follows:

The team, in holding back when descending a declivity, bring the neck-yoke to act against the upper end of the lever *j*, pulling it backward, which action throws the upper end of the lever *n* backward, drawing the brake-shoes against the wheels. When the level road is reached, and the holding-back strain is removed from the tongue-lever, a spring, *p*, arranged to act against the lever *n*, in the manner shown, throws it perpendicular, thus moving the brake-shoes from contact.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The brake-shoe *e*, constructed as described, with its rear face inclined downward, and sliding by the dovetailed edge *i* and bent plate *h* upon the rollers *g* in the box *f*, all arranged as described, for the purpose specified.

2. The arrangement of the bent lever *j*, connecting-rods *k l m*, lever *n*, spring *p*, rod *o*, guide-iron *d*, brake-bar *a*, box *f*, and sliding shoe *e*, all operating as described, for the purpose specified.

3. The arrangement of the brake-bar *a*, sliding by means of staples upon the guide-iron *d*, the box *f*, rollers *g*, and sliding shoe *e*, as herein described, for the purpose specified.

The above specification of my invention signed by me, this 6th day of July, 1868.

SIMEON R. BOLTON.

Witnesses:

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