J. W. BEALE.

Wagon-Brakes.

No. 151,463. Patented June 2, 1874.

FIG. 1

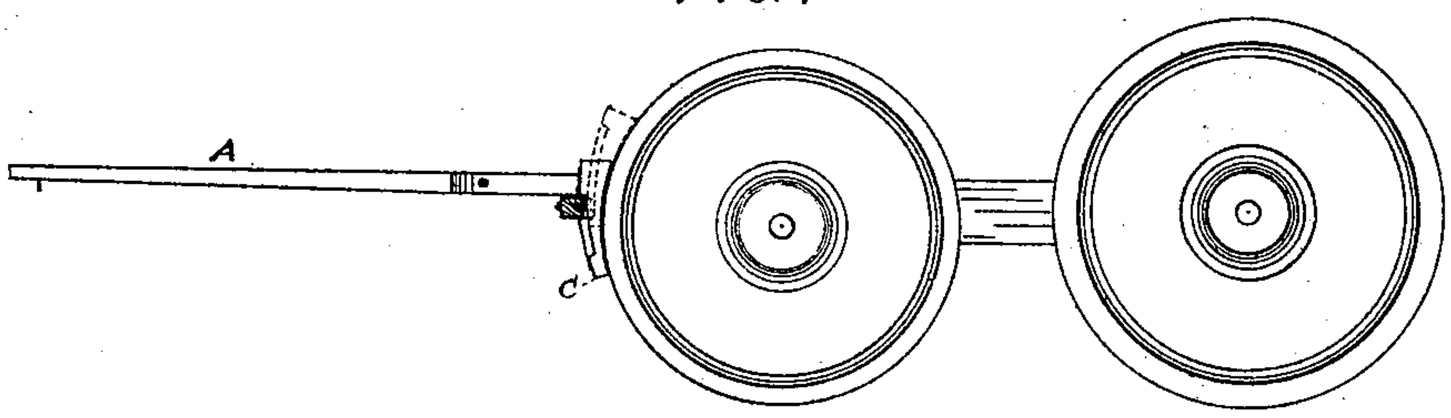


FIG. 2

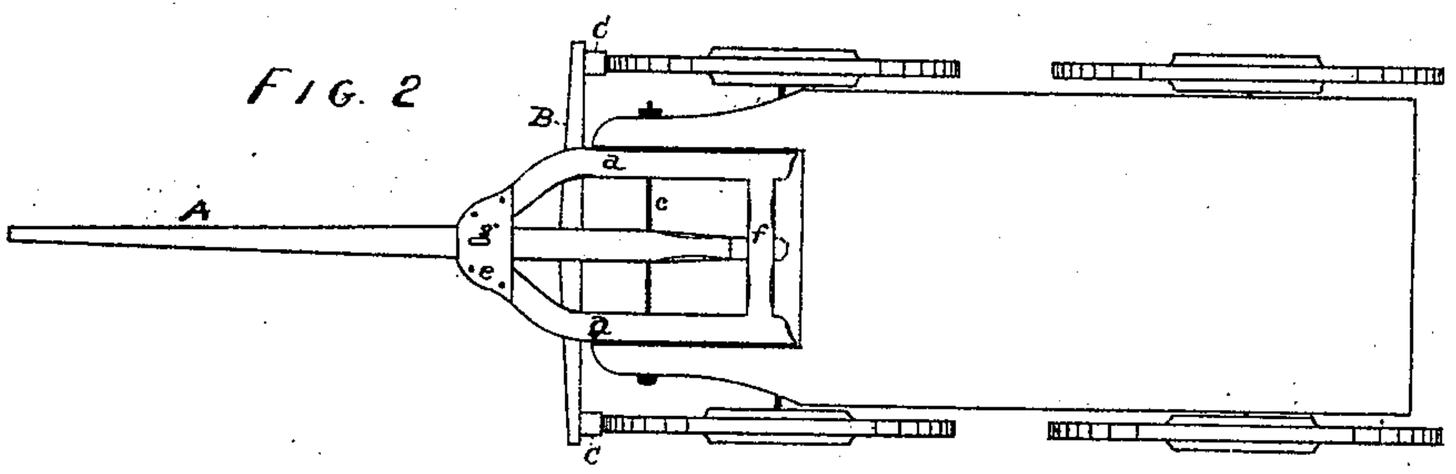


FIG. 3

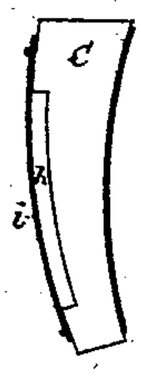


FIG. 4

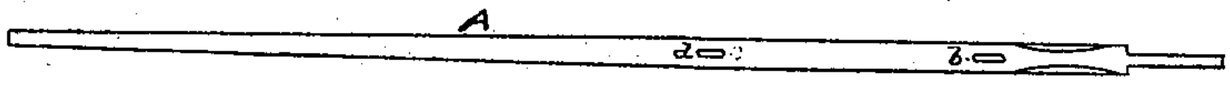
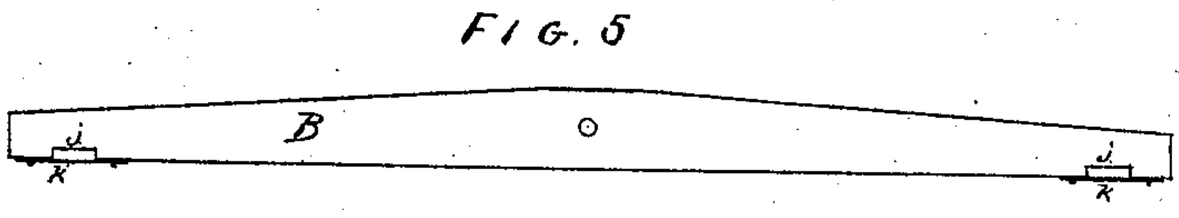


FIG. 5



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES W. BEALE, OF COLESVILLE, NEW YORK.

IMPROVEMENT IN WAGON-BRAKES.

Specification forming part of Letters Patent No. **151,463**, dated June 2, 1874; application filed July 14, 1873.

To all whom it may concern:

Be it known that I, JAMES W. BEALE, of Colesville, Broome county, State of New York, have invented certain Improvements in Wagon-Brakes, of which the following is a specification:

This invention relates to that class of brakes which automatically engage with the wheels by the gravitation of the wagon when descending an inclined plane; and consists in the combination and arrangement of a sliding tongue with a cross-bar attached forward of the front wheels, which cross-bar is provided with curved wedge-shaped adjustable shoes or brake-blocks, in such a manner that when the vehicle is on a down-grade said shoes shall have a tendency to wedge in between the wheels and the ends of the cross-bar, and also to allow of their disengagement when on a level, or when the vehicle is moved back; the object of the invention being to provide a more simple, cheap, and reliable brake than others now in use, and that shall recommend itself to the public.

Figure 1 in the accompanying drawing is a side elevation of vehicle embodying my invention. Fig. 2 is a plan of the same. Fig. 3 is one of the brake-shoes detached, showing the manner of connecting it with the brake-bar. Fig. 4 shows the tongue detached. Fig. 5 is the brake-bar removed.

A is the tongue or pole of the wagon, which is fitted between the hounds *a a* in such a manner as to allow of a sufficient longitudinal movement to engage and disengage the brakes with the wheels. To accomplish this a slot, *b*, is made through the tongue A for the passage of the cross-bolt *c*, and a slot, *d*, for a bolt to hold it in place under the plate *e*, which plate connects the front ends of the hounds *a a*. The inner end of the tongue is fitted to work in a slot in the cross-piece *f* of the hounds. The hole *g* for the evener-bolt is also a slot, extending vertically through the tongue, so that when the tongue is in position it may be moved, longitudinally, an inch or more. B is the brake-bar, which is attached to the tongue in front of the forward wheels. To the ends of this brake-bar are attached the shoes C C, which are made in the form of a curved wedge, as shown by Fig. 3, the inner curve fitting the surface of the wheel in the usual manner, while the curve on the outside of the shoe extends outward from the lower end, so as to increase the thickness at the upper end an inch or more. An open slot, *h*, is made on the outside face of the shoe, which is inclosed by a metallic strap, *i*, which is bent to correspond with the curve of the face of the shoe and attached to it. A notch, *j*, is made in the ends of the brake-bar B for the strap *i* to traverse in, which strap and shoe are prevented from getting out of place by a plate, *k*, which passes through the slot *h*, and riveted to the end of the brake-bar, as shown by Fig. 5. This allows of an upward movement of the shoe C, as shown by dotted lines in Fig. 1, and a consequent disengagement with the wheels when the vehicle is moved back. When the vehicle descends a grade, the backing of the team engages the brakes C C with the front wheels in proportion to the gravitating force of the wagon, and when on a level or an up-grade the brakes are disengaged by the simple forward slide of the tongue between the hounds *a a*. The wedge-shaped shoe increases the friction on the wheel when the wagon is on a down-grade, and when backing the teams on a level the change of the motion of the wheel relieves it from the pressure of the brake, as before described.

I do not claim the curved wedge-shaped shoes C C broadly, nor the peculiar method which I have adopted for attaching them to the brake-beam; but I believe that my combination of parts is not only new, but much more simple and effective than any heretofore devised.

I claim as my invention—

A brake adapted to be applied to the front wheels of a wagon, and consisting of a sliding tongue, a transverse brake-beam rigidly attached to the tongue, and brake-shoes C, attached to the ends of the brake-beam, the shoes being free to brake or release the wheels by a forward or backward movement of the wagon, respectively, all combined substantially as set forth.

JAMES W. BEALE.

Witnesses:
G. W. MONROE,
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