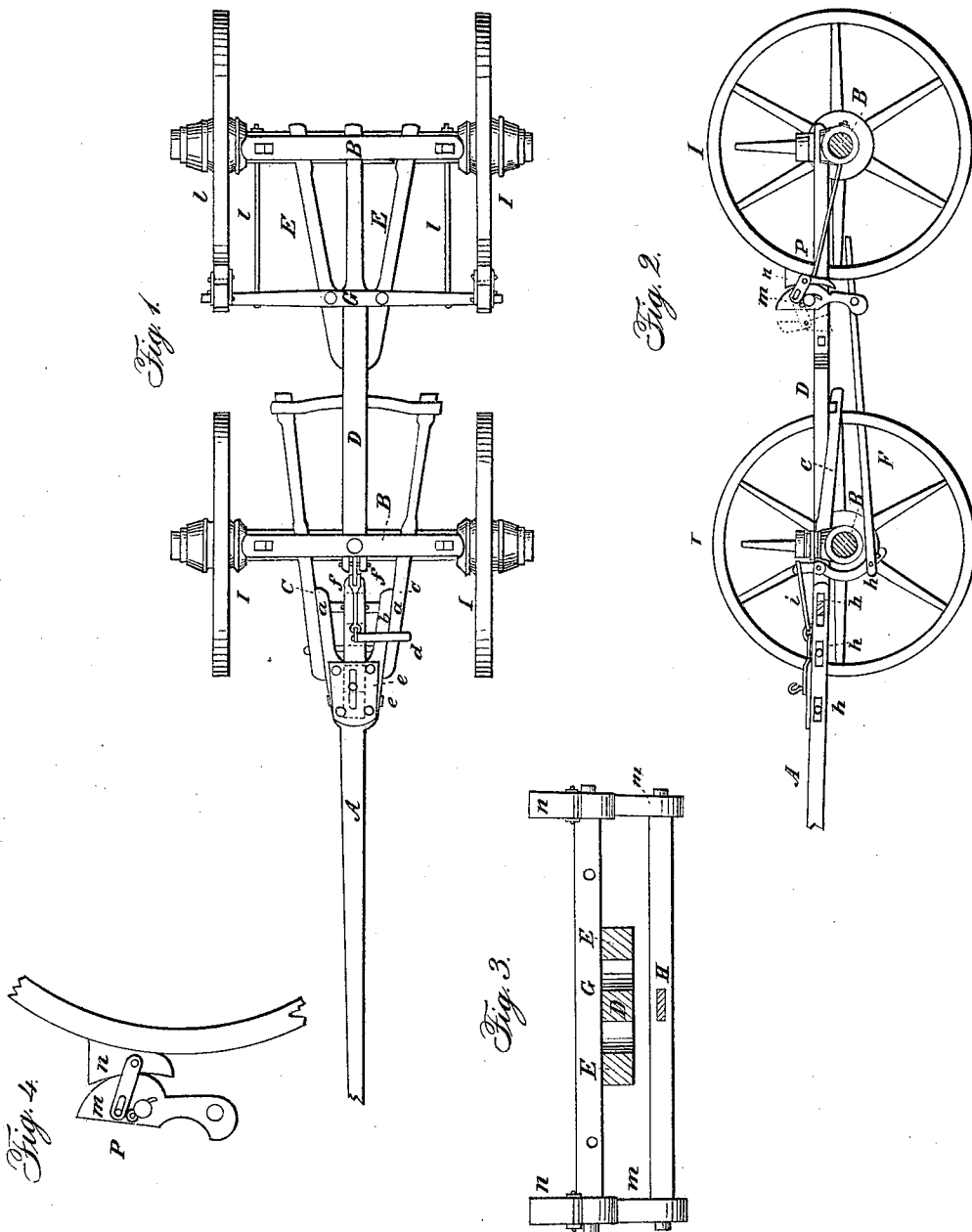


B. S. HEALY.

Wagon-Brake.

No. 25,115.

Patented Aug. 16, 1859.



UNITED STATES PATENT OFFICE.

B. S. HEALY, OF COHOCTON, NEW YORK.

SELF-ACTING WAGON-BRAKE.

Specification of Letters Patent No. 25,115, dated August 16, 1859.

To all whom it may concern:

Be it known that I, B. S. HEALY, of Cohocton, county of Steuben, State of New York, have invented certain new and useful
5 Improvements in Wagon-Brakes, of which the following is a full, clear, and exact description, reference being made to the accompanying drawing, forming part of this specification, in which—

- 10 Figure 1 represents a side elevation of a wagon with my improved brake applied thereto. Fig. 2 represents a plan of the same. Fig. 3 represents a sectional elevation of the same on the line *x x* of Fig. 2.
15 Fig. 4 represents the brake and shoe on an enlarged scale.

The self acting brake as usually constructed and arranged for wagons with a single pole or tongue, is operated by the
20 backward movement of the tongue, or by the movement of rods or other mechanical device extending forward to the end of the tongue, either on the upper or under side. When the tongue is arranged to operate the
25 brake, it is generally pivoted to, and between a pair of inclined bars (called the hounds) extending forward of the front axle of the wagon, and arranged so as to slide backward and forward on this pivot
30 and between the hounds.

In wagons where a forked tongue is used (which is the usual construction in most heavy wagons) the sides of the fork are made of the requisite inclination to fit accurately between the hounds to which it is
35 hinged, therefore with this arrangement of the pole, when it slides backward between the hounds in order to operate the brake, a space is left between the hounds and the forked pole, which permits the pole to vibrate laterally between the hounds, so that
40 it affords little or no aid in guiding and steadying the wagon when the brakes are applied.

45 The object of one part of my invention is to remedy this defect; the object of another is so to arrange the brakes that the friction of the wagon wheels on the brake blocks constitutes a power to press the brakes with
50 greater force against the wheels.

My invention for effecting these objects consists in so arranging the straight part of the tongue of the wagon, that it may
55 slide backward and forward between its forks, and thus operate the brake without

the forks becoming loose in the hounds; and also in connecting a movable wedge with the brakes, in such manner that when the brake is brought up to the wheel, the wedge is forced, by the friction of the wheel, between
30 the brakes and its own periphery, thus the wheel becomes the operating power to the brakes.

In the drawings my invention is shown as applied to a double wagon with a forked
35 pole or draft bar. Such as is in general use.

B represents the axles of the wagon. I the wheels. C the forward hounds. E the back hounds. D the reach connecting the axles. A the pole or tongue by which the
70 wagon is drawn and guided. (*a*) the forks of the pole, hinged to the hounds in the ordinary manner by a bolt (*d*) passing through the hounds and through the forks,
75 holding the forks from sliding backward or forward but allowing the forks with the tongue a free vertical movement.

A cross bar (*b*) connects the rear end of the forks; and to the front end is bolted a plate (*c*) which prevents the forks from
80 spreading or contracting. The tongue (A) is connected with the forks by the cross bar (*b*) at the rear end, and a bolt (*e*) at the front end, which pass through elongated slots (*h*) (*h'*) in the pole. A similar slot
85 (*h'*) is also made through the pole for the bolt (*d*) which confines the forks to the hounds.

The rear end of the pole is held from moving laterally by pins (*f*) through the
90 cross bar (*b*) on either side of the pole. By this arrangement, it will be seen, that while the pole is free to slide backward between the hounds, the forks of the pole remain stationary, and thus the forked tongue
95 is held from swaying laterally in the hounds, so that in all positions it is equally effective to guide the wagon.

A short crooked lever (*g*) pivoted to the front end of the reach is connected at its
10 upper end by means of a link (*i*) with the pole and pivoted at its lower end to a bar (F) which extends back and is connected with the brake arm (H) on the under side of the reach. A cross bar (G) bolted to the
10 rear hounds, just forward of the hind wheels, is also connected by rods (*l*) with the hind axle. To the ends of this cross bar the brakes (*m*) are pivoted in a vertical position and above their center, and their 11

lower ends are pivoted to the brake arm (H), so as to turn on the cross bar as a center.

5 Brake blocks, or shoes (*n*) are hinged to the brakes by a link (*r*) pivoted to the shoe at one end, and connected with the brakes by a bolt passing through a slot in the opposite end of the link. This link permits the shoe to move freely between the face of the
0 brake and the tire of the wheel, and allows it to be turned over and thrown on the opposite side of the brake when not in use.

In pivoting the brake in a vertical position to a rigid bar, and connecting the shoe and brake with each other, by means of a link attached to the brake above its center of motion, and to the shoe when in contact with the wheel, below its point of attachment to the brake, it will be seen that when
0 the brake is applied, the friction of the wheel on the face of the shoe draws it down between the wheel and the brake, and the wheel in drawing the brake block down—it being connected by the link with the brake—
5 also draws the brake toward itself, instead of forcing it back as heretofore. Thus the wheels form a power by which the brakes are operated, and caused to act with additional force to arrest the wagon. The strain
0 on the brake, instead of being transferred to the tongue as heretofore, is thrown on the

unyielding cross-bar—thus the strain is, in a great measure removed from the neck yoke of the team.

I do not confine myself to the precise form 35 or forms, arrangement or arrangements of the parts as described, as they may be varied and still the wheels, cause the brakes to turn toward themselves, and press with greater force against their periphery. 40

Having thus described my improvements in wagon brakes, what I claim therein as new and desire to secure by Letters Patent, is—

1. The combination of a forked pole, arranged substantially as described, with the hounds—whereby the pole is free to slide in its forks, and operate the brakes, without moving the forks backward in the hounds. 45

2. In combination with brakes pivoted to a fixed bar as described I claim, the brake blocks arranged and connected with the brakes as set forth, whereby the friction of the wheels on the blocks draws the brakes toward and causes them to press with
55 greater force against the wheels.

In testimony whereof I have subscribed my name.

B. S. HEALY.

Witnesses:

F. SOUTHGATE SMITH,
THOMAS DONN.