M. C CHAMBERLIN

Wagon-Brake.

No. 17,493. Patented June 9, 1857

Fig. 3.

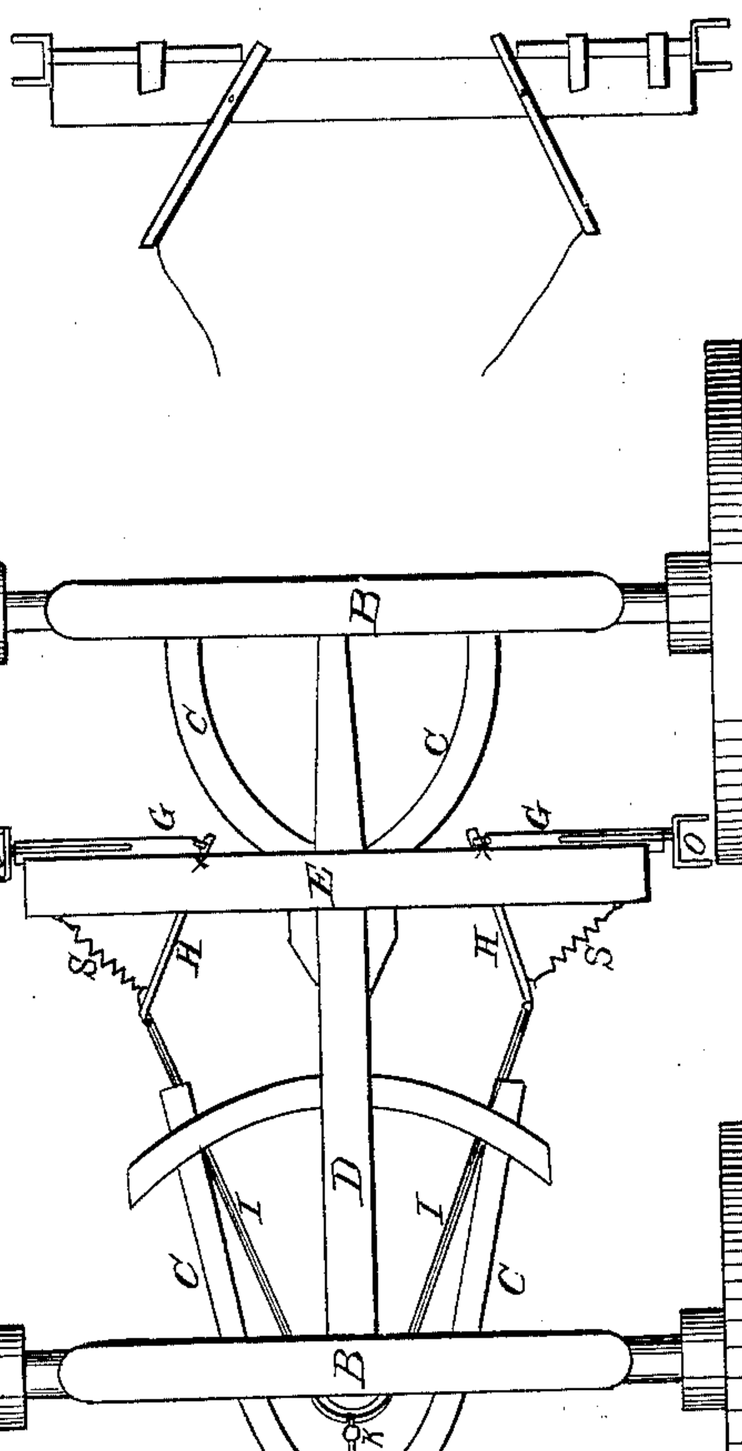
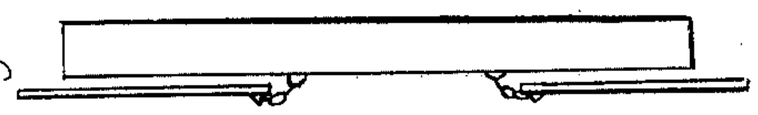


Fig. 1

Fig. 4



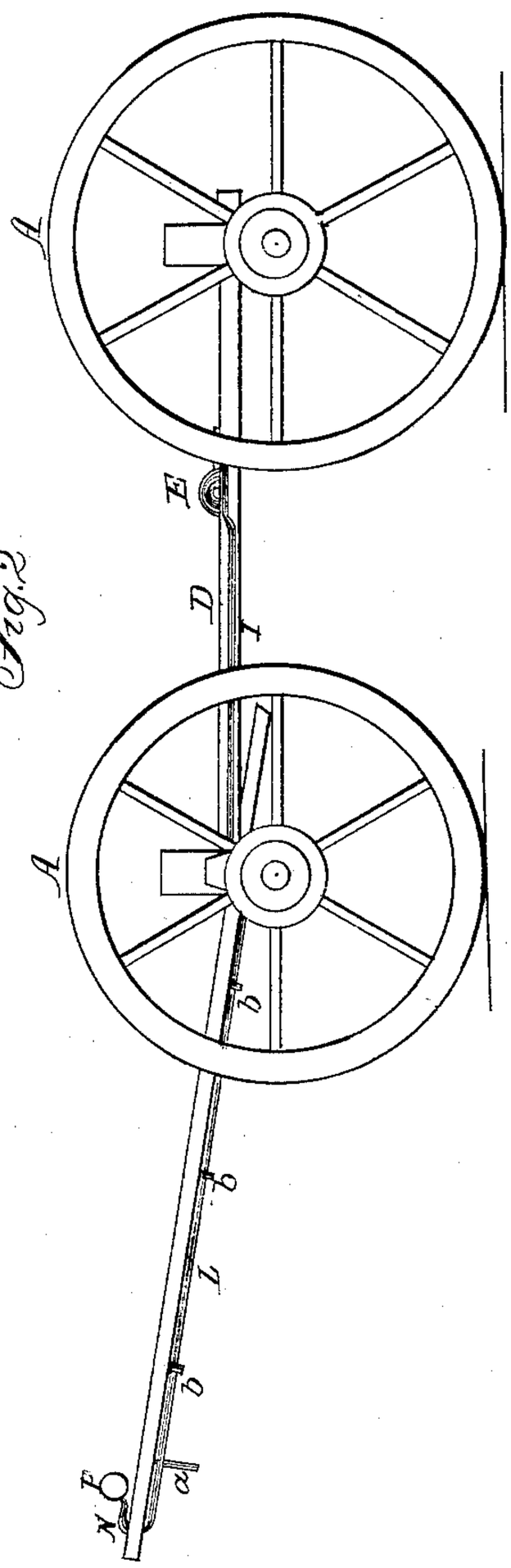


Fig. 2

UNITED STATES PATENT OFFICE.

M. C. CHAMBERLIN, OF JOHNSONSBURG, NEW YORK.

SELF-ACTING WAGON-BRAKE.

Specification of Letters Patent No. 17,493, dated June 9, 1857.

To all whom it may concern:

Be it known that I, M. C. CHAMBERLIN, of the town of Johnsonburg, in the county of Wyoming and State of New York, have invented certain new and useful Improvements in Self-Acting Brakes for Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to an accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in the peculiar arrangement, of my brake bars, slotted arms, and lever attached as will be hereinafter described for the purpose of constructing a self acting brake for vehicles.

In the accompanying drawings which make a part of this specification Figure 1 is a plan view, Fig. 2 is a side elevation, Fig. 3 is a bottom view of the bearer showing the attachment of the bars to the bearer and the position of the levers, Fig. 4 shows a means of attaching the slotted arm to the brake bar.

In Fig. 1 A, are the wheels, B, the axletrees, C, the hounds, D, the reach, E, the bearer for the brake bars, F, the tongue, G are the brake bars, O are the slotted arms, H are levers attached at one end to the brake bars, S are spiral springs connecting the levers H to the bearer E, I is a rod attached at each end to one of the levers H and running around the front end of the reach, K is a short chain connecting rod I to rod L seen in dotted line running under the tongue, N is a chain connecting the other end of rod L to the neck yoke, M is a pulley, P the neck yoke, and *q* a ring attached to the neck yoke which works over the end of the tongue.

In Fig. 2 A are the wheels, D the reach, I rod attached to the levers seen in Fig. 1, L rod running under the tongue. *a*, is a pin in the tongue. *b* are loops for holding up the rod L and keeping it in its position. N is a chain for connecting rod L to the neck yoke. P, P the neck yoke.

It will be seen by referring to Fig. 1 that the arms attached to the brake bars have slots in their ends into which the felly and tire enter; when they are shoved up to the wheel—one arm of the slot extending over the tire and the other catching the spoke close up to the felly prevents the wheel from revolving.

In the operation of my invention it will be seen that the slotted arms only touch the wheel when the vehicle is going down hill or backing; in either instance the bearing on the neck yoke is the same—whether the wagon presses against the horse, or the horse against the wagon; consequently the same motion is given to the levers, and brake bars in either instance. In going down hill the vehicle presses against the horse. This brings the weight of the vehicle on the neck yoke, consequently operating chain N which runs over pulley M, rod L, chain K, rod I, and levers H which having a pivot in the bearer E for a fulcrum press against the ends of brake bars G which are thus moved with slotted arms O up to the wheel. The wheel is received between the two arms of the slot. The motion of the wheel being forward the pressure is downward but as the slotted arm rests upon the brake bar it will not give; consequently the wheel must cease to revolve. When the vehicle is backed, although the pressure on the neck yoke and its attachments are the same, still the wheel revolves in a different direction, thus operating the slotted arm upward, instead of downward. The slotted arm is attacked to the brake bar as seen in Fig. 4 or any desirable means, at the extremity opposite the slot and as it is not attached at any other point, it is allowed to play upward and permit the spokes to pass. The springs S serve to draw back the lever (H) and relieve the wheel from the slotted arm (O)—levers H being attached to brake bars G as seen at X X in any convenient manner.

It will be seen that the difficulty arising in ordinary self acting brakes is obviated. This brake operates to stop the wheel when they have a forward motion as in going down hill and do not stop them when backing the vehicle.

I am aware that a brake block has been used which wedges between the bearer and the wheel and serves to retard the forward motion at the same time allowing the wagon to back without any inconvenience, but this does not always stop the motion and thus wears out the tire. The arm being slotted in my invention and fitting the size of the rim of the wheel catches the spoke at the point where it joins to the felly, in such a manner—owing to the bearing of the two arms of the slot on the tire, and felly that

it will be impossible to injure the spoke or felly.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is—

The arrangement of brake bars G, slotted arms O and levers H when used for self acting brakes for vehicles, all operating in the manner and for the purpose herein set forth and described.

M. C. CHAMBERLIN.

Witnesses:

JOHN MCCRAY,

GEORGE M. DIXON.