

A. QUIMBY.
Wagon Brake.

No. 106,406.

Patented Aug. 16, 1870.

FIG. 2.

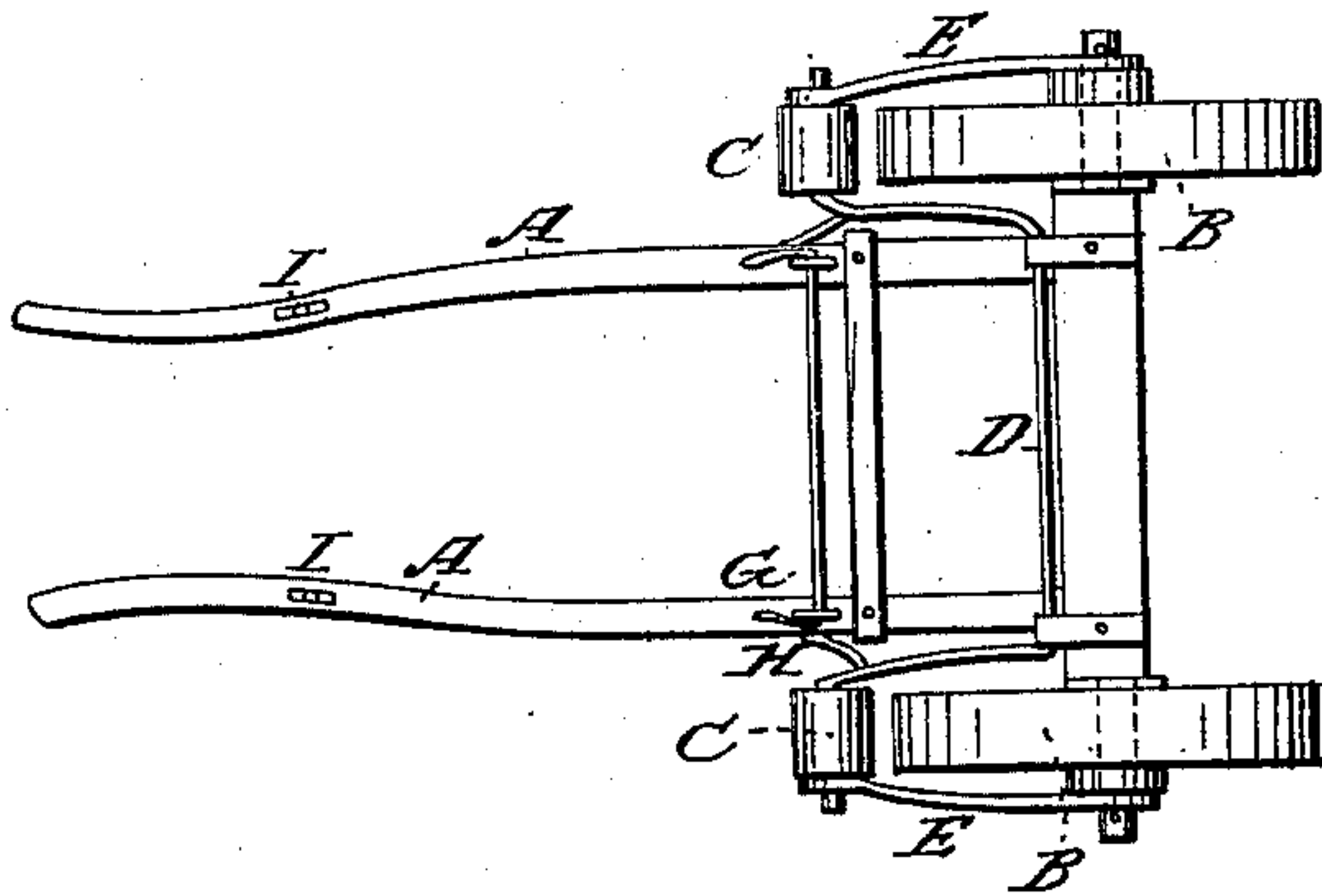
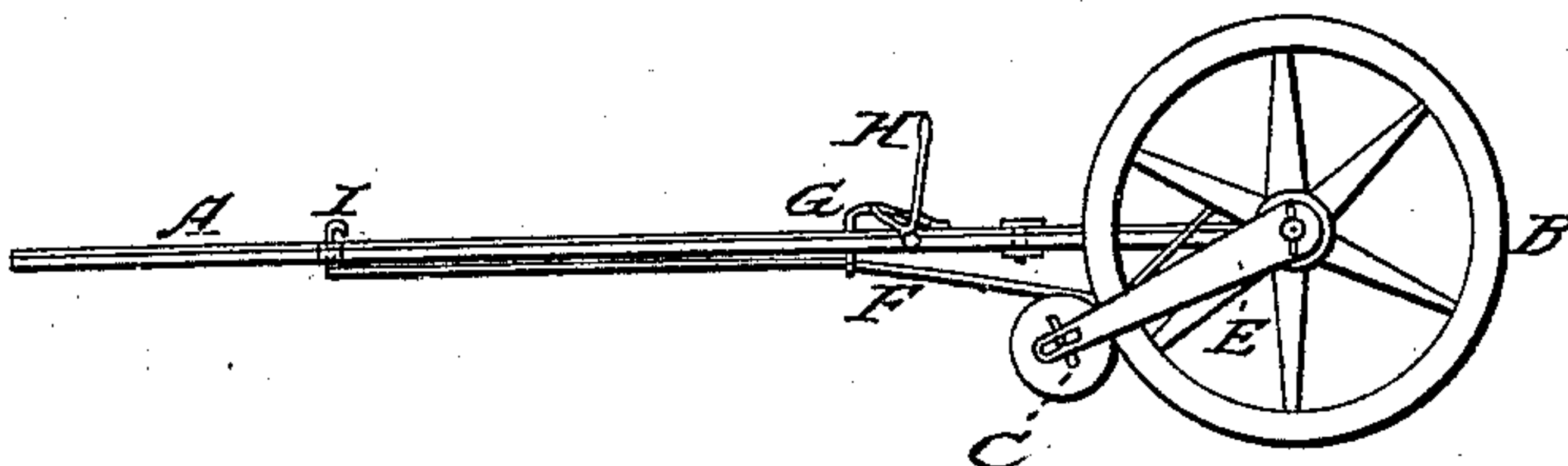


FIG. 1.



WITNESSES:

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ASAHEL QUIMBY, OF SALEM, MASSACHUSETTS.

Letters Patent No. 106,406, dated August 16, 1870.

IMPROVEMENT IN WAGON-BRAKE.

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

I, ASAHEL QUIMBY, of Salem, in the county of Essex and State of Massachusetts, have invented certain Improvements in Wagon-Brakes, of which the following is a specification.

The first part of my invention relates to that class of wagon-brakes in which the horse or power used to propel the vehicle is made to play an important part in the operation of braking, and is accomplished by means of connecting-rods placed on the under side of each shaft, which are in communication with the saddle-strap of the horse's harness; also, with friction-pulleys placed in front of the face of each wheel, at such an angle that the wagon-wheels shall not override them, however great their velocity at the time of braking.

The second part consists in suitable means of regulating the action of the brakes by means of a lever, the handle of which is within easy reach of the driver at all times, and which raises or lowers two bolts passing through slots from the upper to the under side of each shaft, and which shut into eyes or slots formed in the connecting-rods. These bolts, when lowered, effectually prevent the horse from acting on the brakes, and thereby keep the friction-pulley at a proper distance from the wheels of the vehicle.

Figure 1 is a side elevation of a vehicle embodying my invention.

Figure 2 is a plan of the same.

A A are the shafts of a wagon.

B B are the forward wheels.

C C are the friction-pulleys, which are suspended by means of the rod D, slotted guard E, and connecting-rods F F.

D is a rod, extended across the front of the axle, bent at a right angle at each end; passing down the outside of each shaft in an oblique direction, it is again bent at a right angle, and forms the shaft of each friction-pulley. This rod is suspended from the front of the axle by means of bands or bolt-eyes. This rod plays the important part of a support for the pulleys C C.

E E are guards, placed outside the wagon-wheels, to prevent any external violence from displacing the pulley-shaft, and rendering its operation inefficient. It also serves as a support, and is slotted, to allow the free play of the shaft; as the pulley is raised or lowered from the wheel, the other end of the guard is run onto the wagon-axle, and held in place by the linch-pin.

F F are connecting-rods, which operate the brakes. The forward end of these rods are bent at right an-

gles, pass up from the under side through slots in the shafts of the wagon, and form the hooks for attaching the saddle-straps of the harness to. As the rods pass along the under side, they are carried through bolt-eyes, to steady them, and, near their center, either are slotted, or an eye is formed, to receive the bolts G G; thence being carried along, they are bent obliquely, and again, at a right angle, they enter the sides of the rod D. Thus, when forcing the rods backward, it raises or lowers the rod D, and, with it, the pulleys C C.

G G are the bolts, which, passing down through each shaft, entering the eyes of the connecting-rods, lock and prevent any further movement of the brakes. These bolts are formed by the ends of a rod bent at right angles, and which passes across from the top side of one shaft to the other. This is retained in place by bolt-eyes secured to the top of each shaft. The bolts are operated by the lever H, which is used by the driver to raise or lower them at his pleasure.

The lever H is secured to the side of the shaft by a bolt entering the shaft, and forming a fulcrum.

I I are slots made in the shafts, to allow the passage of the connecting-rods upward, to which are attached the ends of the saddle-strap.

J J are bolts giving support to the rods F F.

The action of the brake above described is as follows:

The horse, being secured to the shafts of the wagon by means of his saddle-strap and the hooked ends of the rods F F, (no breeching-strap being necessary,) draws forward the vehicle as easily as any other; he also backs it the same; but, whenever the lever H releases the bolts G G, the slightest backward motion of the horse, or as in a descending grade, the vehicle is thrown forward upon the horse, the pulleys are driven firmly against the face of the wheels, forming a constant resistance to the progress of the team, until the driver releases the same.

Having thus described my invention,

I claim and desire to secure by Letters Patent—

The combination of the lever H, bolts G G, and rods F F, the whole operated substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ASAHEL QUIMBY.

Witnesses:

OSCAR SIMONDS,

RICHARD J. P. GOODWIN.