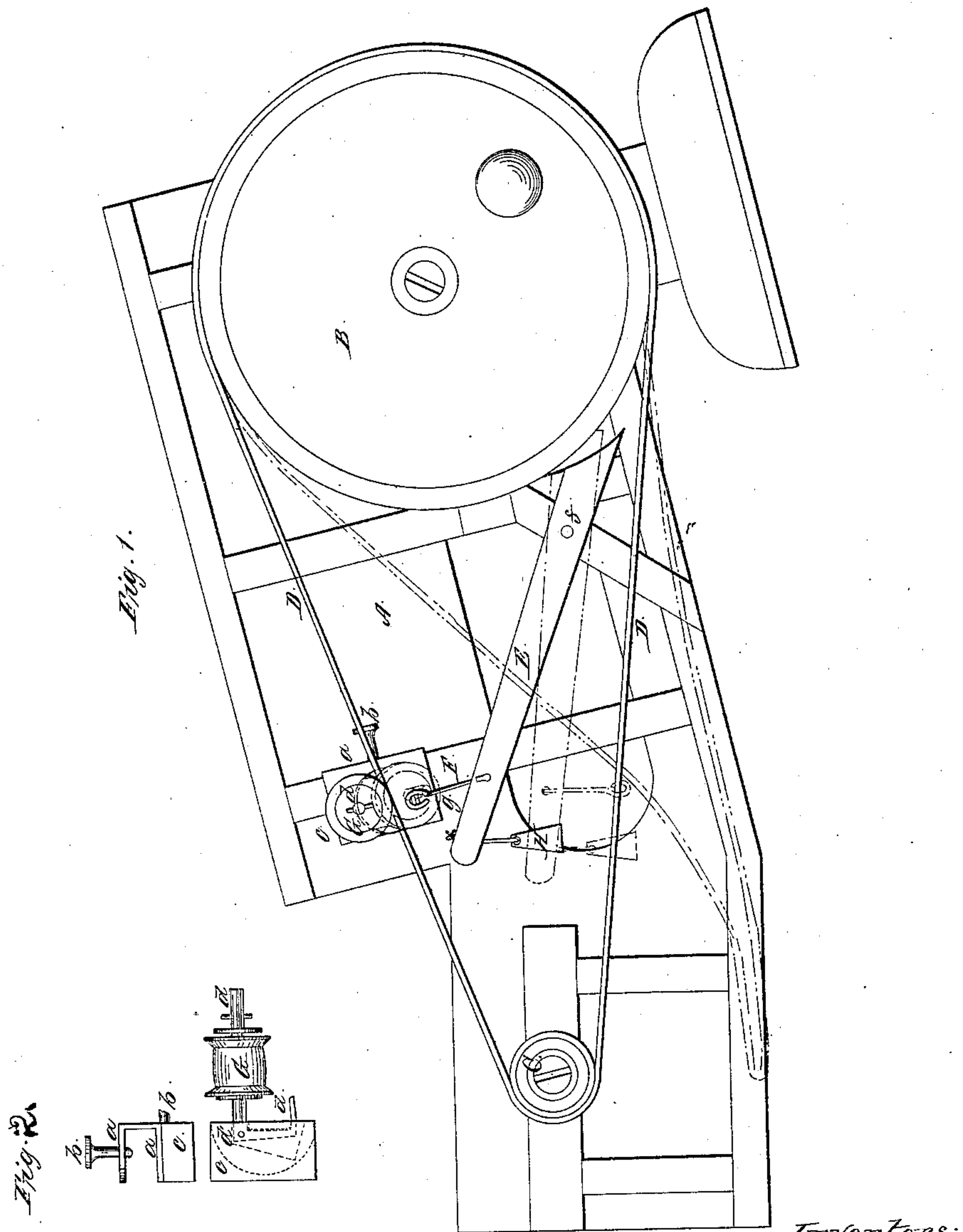


Hull & Anderson,

Horse Power.

N^o 58,547.

Patented Oct. 2, 1866.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN HULL AND WILLIAM P. ANDERSON, OF HACKETSTOWN, N. J., ASSIGNORS TO THEMSELVES AND HENRY J. HULL, OF SAME PLACE.

IMPROVEMENT IN HORSE-POWER BRAKES.

Specification forming part of Letters Patent No. 58,547, dated October 2, 1866.

To all whom it may concern:

Be it known that we, JOHN HULL and WILLIAM P. ANDERSON, of Hackettstown, Warren county, and State of New Jersey, have invented a new and useful Improvement in Horse-Power Brakes; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use our said invention or improvements without further invention or experiment.

The nature of our invention and improvements consists in the construction of a device so arranged in its application to the side of a movable inclined horse-power platform as to be supported by the belting in such a manner that, in the event of the same slipping off from the fly or machine wheel, the device will fall by its own gravity, and in so doing will release a brake connecting with a hooked lever of the device by a rod; and the said brake, having a weight attached thereto, will be immediately brought down firmly against the fly-wheel by the said weight, thus checking and stopping any further movement of the platform. The facility and rapidity with which the brake is brought to bear on the fly-wheel by the weight immediately upon its release are such as to prevent an increased velocity of any consequence to the platform, which is much to be desired. The delay occasioned sometimes before the brake is interposed to stop the platform often exposes the horses treading the same to great injury. The device will obviate this to a considerable extent, the stoppage of the platform being accomplished instantaneously by the brake.

One feature of our improved device is in its adjustment on the standard of the side of the platform, after it has been applied thereto, by a thumb or other suitable screw, so that in the event of the belting flapping about, which frequently causes it to come off from the wheels, the device is moved down on the standard, and a pulley or flanged roller which the device is provided with is brought to bear on the belting, which thereby tightens the same, it being done without stopping the operation of the machine, and thus enabling the work to be finished, when the belting is

tightened by being taken up in the usual manner. At the present time, when the flapping about of the belting is discovered, and for fear that it may slip off from the wheels, the operation of the machine has to be stopped in order that it may be fixed, thus causing loss of time and trouble in the midst of the operation, whereas by the straining of the pulley or flanged roller on the belting, so produced by the adjustability of the device, as above described, the fixing of the belting is deferred until the proper time for making repairs generally, when the work has been performed.

Our improved device is illustrated in the accompanying drawings by the following figures, viz:

Figure 1, a side view of one side of a movable inclined horse-power platform, showing the application of the device thereto; Fig. 2, view of the device removed from the side of the platform, showing more clearly its manner of construction; Fig. 3, top view of the device.

Like letters in all figures of the drawings indicate like parts.

A represents the side of a movable inclined platform; B, the fly-wheel for operating the platform; C, the machine or pulley wheel for operating the machine; D, the belting embracing the two wheels; E, the brake.

The device consists of a box, *a*, constructed of cast-iron and open on one side, (see Fig. 3,) this side of which fits onto the standard F, which standard supports the side of the platform, and is there held by a thumb or other suitable screw, *b*. (See Fig. 1.)

The side piece or block *c* of the box is constructed of wood—it may be of metal if deemed necessary—and is fastened by screws or bolts to the side of the box. This block has a sufficient depression made on the side next to the box, before it is joined thereto, to receive the shaft or rod *d*, which is so constructed as to terminate in the form of a hooked lever, at right angles to the same, (see Fig. 2,) that part of which seen in dotted lines being introduced into the depression thus made, and secured therein by a pivot, *d'*, passed through it and the block. On the shaft is a flanged roller, G, of a suitable size, and secured thereto by metallic washers and pins. The depression in

the block above referred to is so constructed, as will be seen in dotted lines, (see Fig. 2,) as to permit a free play to the hooked-lever part of the shaft operating on the pivot, sufficiently when the roller drops (see red lines in Fig. 1) to release the brake-rod from its connection with the lever.

The device as thus constructed is applied to the standard F (see Fig. 1) immediately over the belting, and adjusted thereon to suit the movement of the belting by a suitable screw, *e*, passed through the side of the box and against the standard. This method of applying the device and holding the same to the standard by the screw may be deviated from if found not to be substantial or suitable enough.

The flanges on the roller, as herein mentioned, serve as guides to a great extent in preventing the belting from slipping off the wheels.

The outer pin on the shaft to keep the roller thereon is placed at such a distance therefrom as to allow a sufficient lateral play to the roller, so as not to interfere with a free and easy movement of the belting thereunder.

The brake E is affixed to a small pivot or shaft, *f*, which is attached to a beam suitably arranged on the side of the platform near the fly-wheel. It has a rod, *g*, secured near the end of it, and so linked at its end as to receive the hooked lever through the link, which lever projects sufficiently from an aperture through the box to receive and hold the brake-rod thereon when the brake has been lifted up out of the way of the fly-wheel. (See the projection of the lever clearly in Fig. 2.)

Operation: Before the machine is put in motion, the brake is raised up out of the way of the fly-wheel, and suspended from the lever by the rod, as above referred to. As soon as the belting slips off from the fly or machine wheel, the flanged roller which rests thereon immediately drops, which movement throws the hooked lever down; consequently the brake-

rod slips therefrom, and the weight H attached to the brake carries it down with such rapidity as to apply the end of it firmly to the fly-wheel, so that any further movement of the platform is immediately arrested.

The operation of the device and brake is indicated by the red lines in Fig. 1.

The object of this device, as has been stated, is to accomplish in the most expeditious manner the stoppage of the platform the moment the belting is off from the wheels, so that the time intervening between the same will be scarcely sufficient to allow the movement of the platform to become accelerated—at least, of any consequence—it being of the utmost importance to obtain this desired result, in order to prevent any derangement to the machinery or injury to the horses, which we claim that this device will do in an effectual manner.

Having thus fully described our invention, what we claim therein as new, and desire to secure by Letters Patent, is—

1. The hooked-lever shaft *d* and flanged roller G thereon, operating relatively to the belting D for the release of the brake E in its connection with the lever by the rod *g*, substantially in the manner and for the purpose set forth.

2. The brake E and weight H combined, operating automatically by the dropping of the flanged roller when the belting slips off from the wheel, substantially in the manner and for the purpose as herein set forth.

3. The construction of the box *a*, block *c*, hooked-lever shaft *d*, and flanged roller G, as arranged and applied to the standard F of the side of the platform, substantially in the manner and for the purpose specified.

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Witnesses:

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