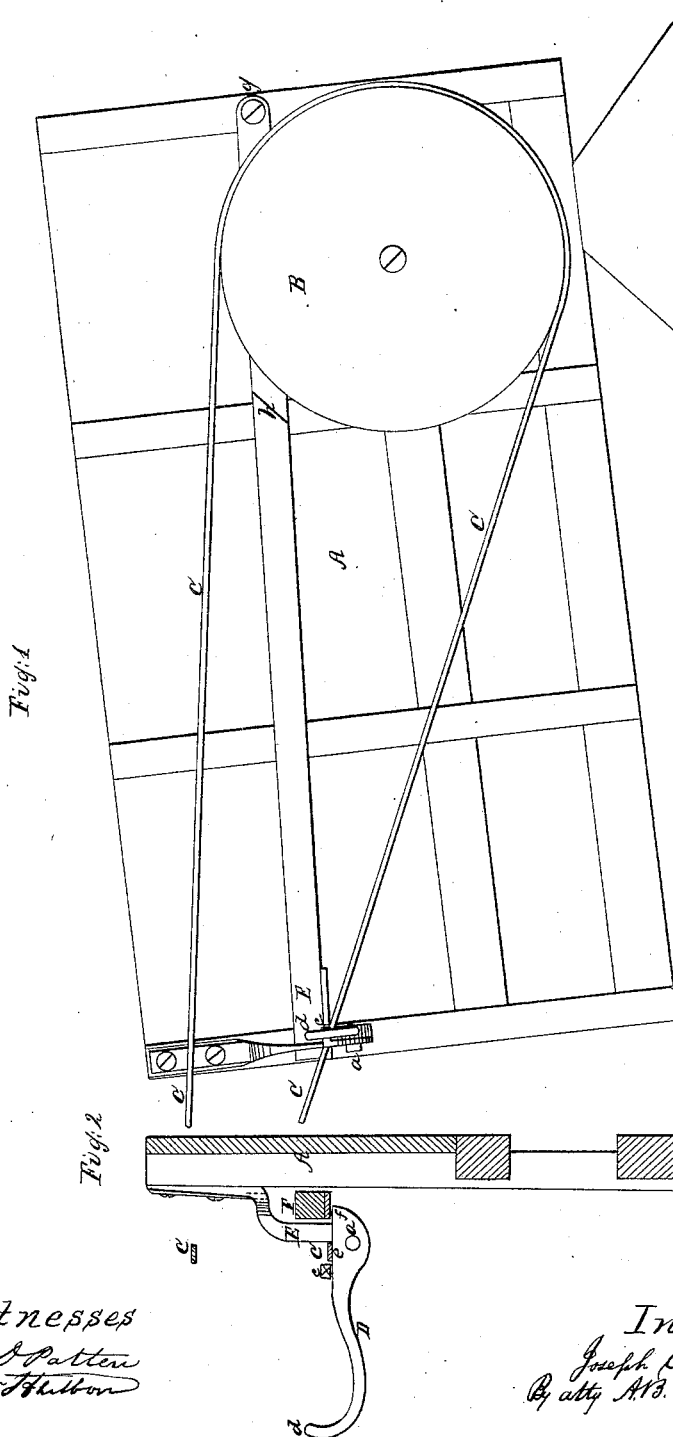


J. C. Bird,

Horse Power.

N^o 45,958.

Patented Jan. 17, 1865.



Witnesses
J. D. Patten
A. H. Hubbon

Inventor
Joseph C. Bird
By atty A. B. Slaughter

UNITED STATES PATENT OFFICE.

JOSEPH C. BIRD, OF RISING SUN, MARYLAND.

IMPROVEMENT IN SAFETY-BRAKES FOR HORSE-POWERS.

Specification forming part of Letters Patent No. 45,958, dated January 17, 1865.

To all whom it may concern:

Be it known that I, JOSEPH C. BIRD, of Rising Sun, in the county of Cecil and State of Maryland, have invented certain new and useful improvements in safety-brakes, to be applied to horse-powers, threshing-machines, and the like, and to be used in connection with a drawing-belt or its equivalent; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a side view of a horse-power or threshing-machine, with the brake in question applied thereto. Fig. 2 represents a vertical transverse section through the same, and showing a side view and elevation of the device for holding and tripping or applying the brake when the driving-belt breaks or flies off, which is a common occurrence.

Similar letters of reference where they occur denote like parts in both the figures.

A lever or trigger held up by the belt, and which trips and applies a brake when the belt gives way or flies off from its pulleys, has heretofore been used, but, from a defect in the arrangement, was liable to fly up by the jar or motion of the machine, and thus apply the brake while the belt was in place and working, and thus do great damage.

The object and purpose of my invention is to counteract this liability of the lever to apply the brake while the belt is in place and working, and thus avoid the liability of injury to the machine or its operations, while at the same time I maintain a positive trip and application of the brake, when the belt parts or flies off; and my invention consists in applying a stop or catch, above which the lever or trigger cannot or will not go, and thus the brake cannot be applied in any other way than by the parting or flying off of the belt, entirely obviating the liability of the jarring of the machine, throwing out or upward the lever or trigger, and thus letting the brake fall upon the pulley or drive-wheel.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A represents a horse-power or threshing-machine frame, on which is the customary pulley or drive-wheel B, from whence the power is taken or transmitted to the part or

thing to be driven by an endless belt, *c*, or its equivalent.

At any point or part of the machine within or approximate to the path of the belt, I arrange a lever or trigger, D, which is pivoted to any suitable support, E, as at *a*, and on this support, or elsewhere within the vibration or path of the lever D, I arrange a stop or catch, *c*, that prevents the lever from rising beyond it.

The belt *c* I have represented as resting upon the trigger at the point *e*, it being for the purpose of preventing the end *d* of the lever from falling or the end *f* from rising, so long as the belt bears or rests thereon or runs near enough thereto to accomplish this end; but the belt may be applied elsewhere to the trigger and accomplish the same purpose. The point *f* of the lever or trigger holds up the end of a brake beam or lever, F, which may be pivoted by its opposite end, *g*, to the frame A, and upon this brake beam or lever there may be a shoulder, *h*, or a brake-block, which, when the lever is allowed to fall, is applied to the perimeter of the wheel B, and thus stops or impedes its motion. So long as the lever D remains in the position shown in Fig. 2, and it will remain there so long as the belt C is in action or place, as it prevents it from swinging in one direction, while the stop *c* prevents it from swinging in the opposite direction, so long will the trigger or lever hold up the brake-beam F, however much the machine may shake or jar by the high speed of its gearings; but should the belt part or fly off from either or both of its pulleys, then the end *d* of the lever D will drop, and its opposite end, *f*, will swing away from the brake-beam F, and allow it to drop and apply the shoulder or block at *h* to the wheel B and stop its motion.

Having thus fully described the nature, object, and purpose of my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

In combination with the trigger or lever D, the stop or catch which prevents it from rising beyond a given point, which would otherwise apply the brake without the parting or flying off of the belt, substantially as herein described.

JOSEPH C. BIRD.

Witnesses:

B. F. THOMAS,
S. I. KRAUSS.