

D. J. Powers.
Harvester Dropper.

N^o 82872

Patented Oct. 6, 1868.

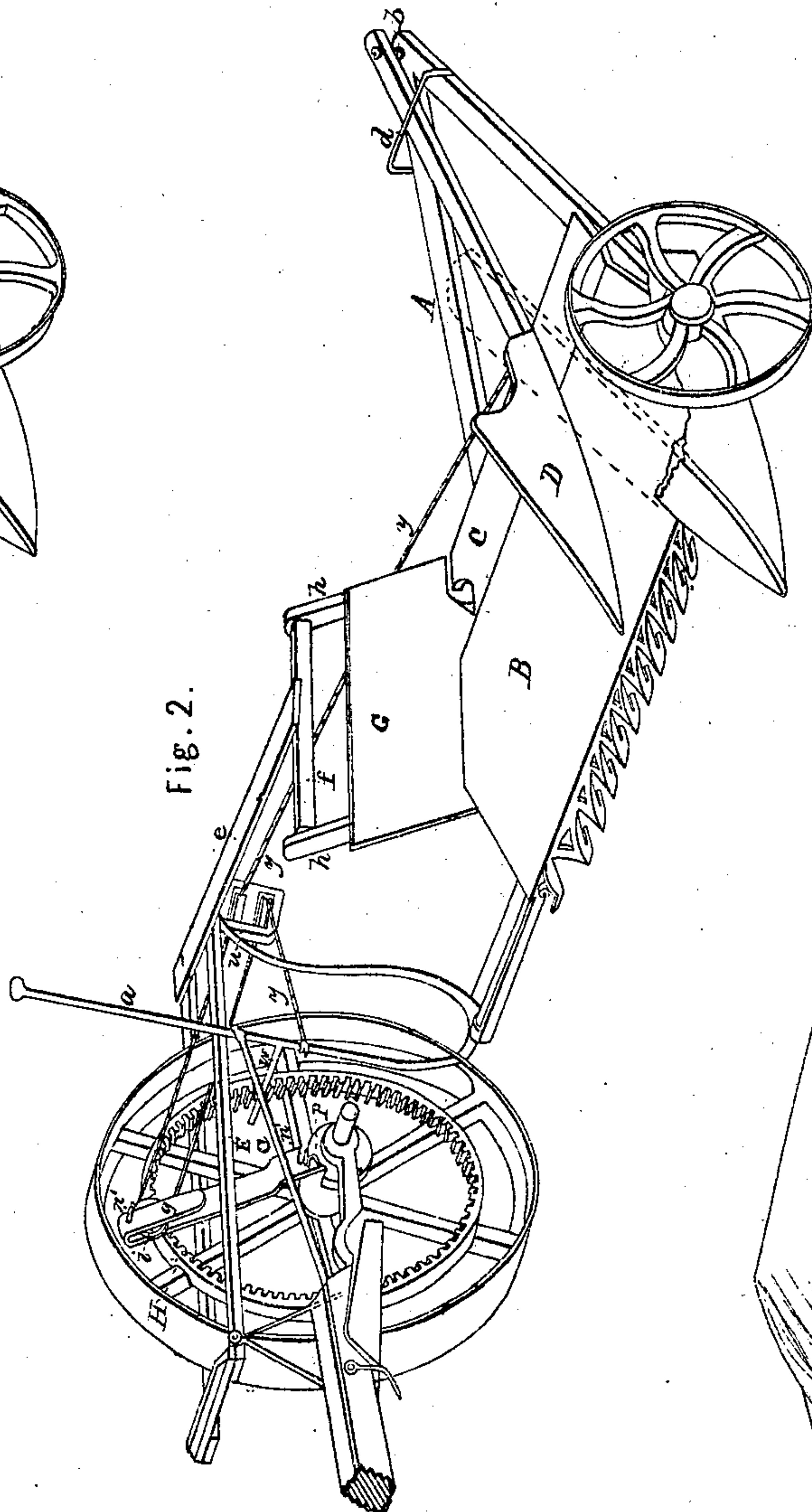
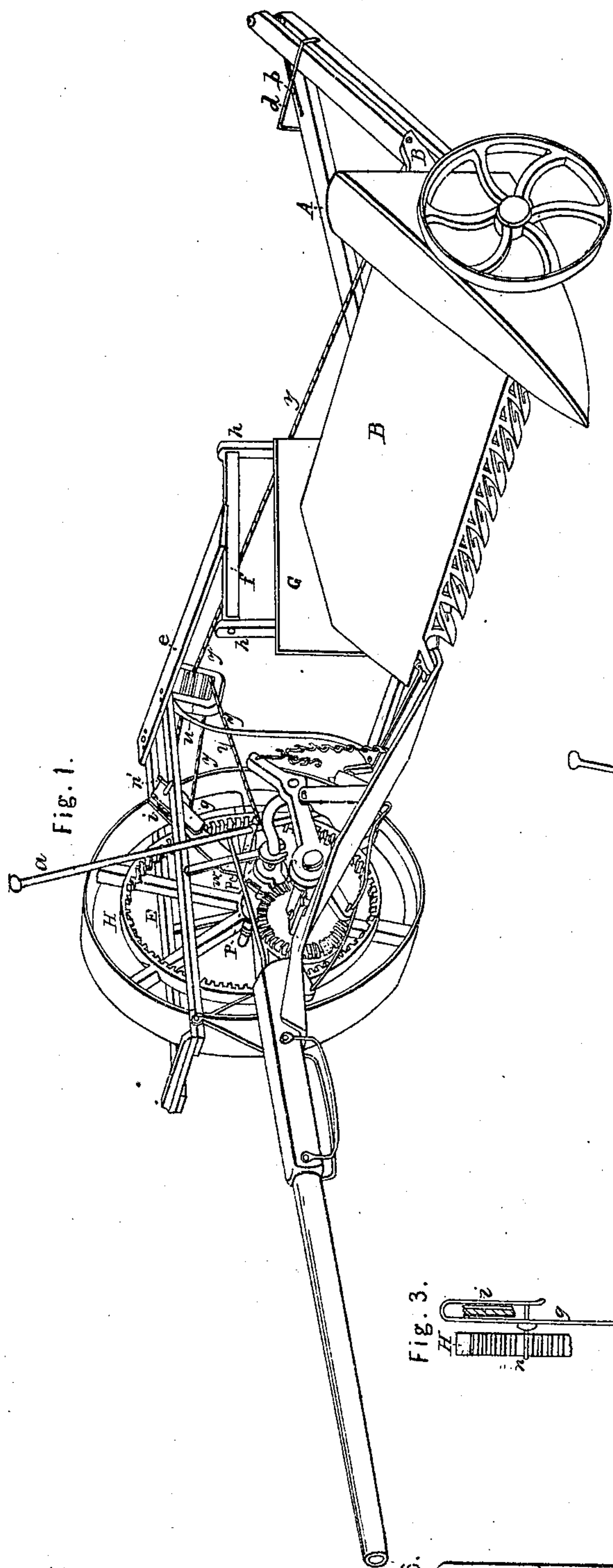


Fig. 3.

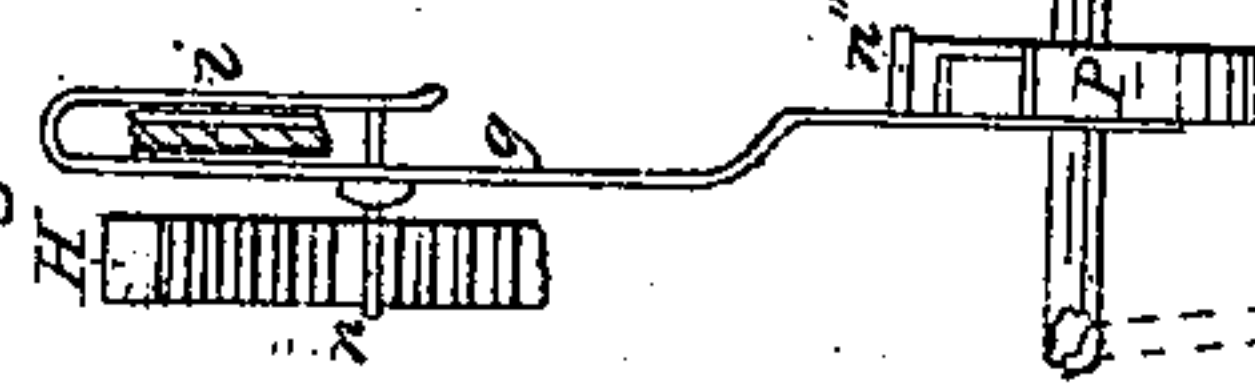


Fig. 4.



Fig. 5.

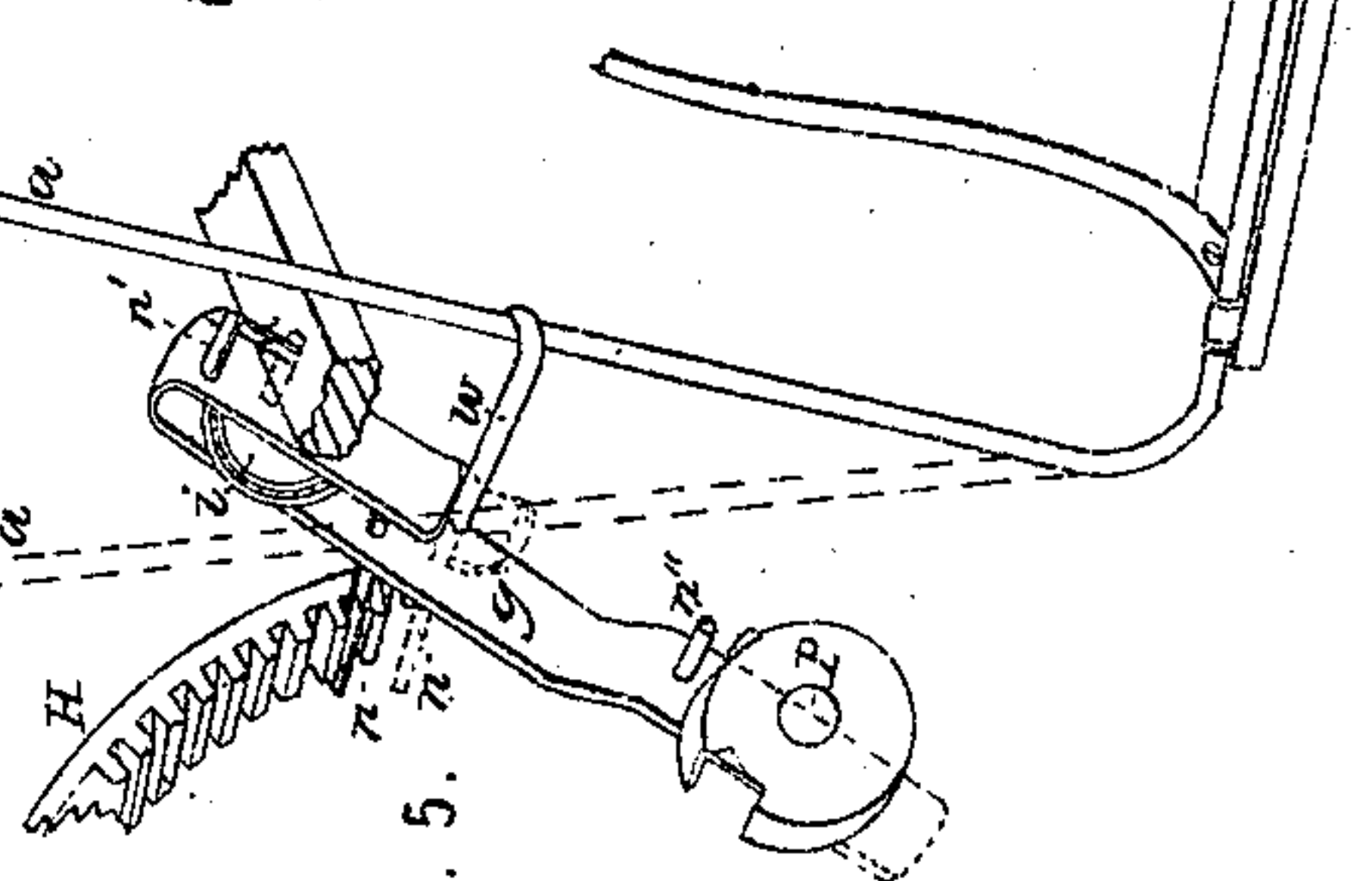
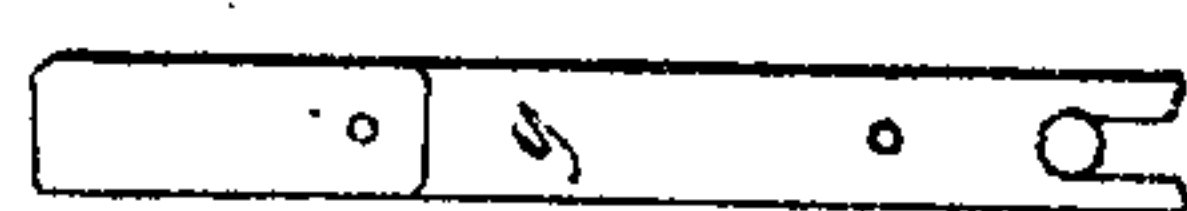


Fig. 6.



Witnesses.

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United States Patent Office.

D J. POWERS, OF MADISON, WISCONSIN.

Letters Patent No. 82,872, dated October 6, 1868; antedated September 28, 1868.

IMPROVEMENT IN HARVESTER-RAKES.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, D. J. POWERS, of Madison, in the county of Dane, and State of Wisconsin, have invented certain new and useful Improvements in Reaping-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figures 1 and 2, are perspectives.

Figure 3, a side view of the sweep-lever.

Figure 4 a plan of the cam-wheel.

Figure 5 a perspective, showing the mode of operating my devices by means of the sweep-lever, cam-wheel, hand-lever, and inside cog-wheel; and

Figure 6 a perspective of the sweep-lever, detached.

The nature of this invention consists in the employment of a hinged, pivoted, or yielding platform, located in the rear of the cutter-bar, in combination with a gaveler or rake, operating substantially as herein set forth.

There are certain other novel features embodied in this invention, the peculiarities of which will be hereinafter fully set forth.

To enable others skilled in the art to make and employ my invention, I will now describe its construction and operation.

I would at first observe, that my devices may be applied to reapers in ordinary use, a full description of the machine shown in the drawings will therefore be omitted, except so far as necessary to illustrate the workings of my invention.

A represents a V-shaped frame, so bolted or otherwise secured to the rear of the finger-bar that it will accommodate itself to any unevenness of ground.

B is a platform, hinged or pivoted also to the rear of the finger-bar.

a designates a lever, the lower portion of which is turned at right angles, and secured to the under side of platform B.

c represents an India-rubber or metal spring, (I prefer rubber,) one end of which is attached to a support in front, and the other to lever *a*.

It will be observed that the pressure of this spring will draw the lever *a* forward, and thus keep the platform B in an inclined position, as represented in fig. 1. This feature of the invention will be more particularly referred to hereafter.

C represents a fixed or stationary platform, so located upon the frame A, that when the yielding platform B is pressed down to the same plane, there will be no intervening space between them.

D is the gaveler, pivoted to the outer end of frame A, and provided with spring *b*, by means of which it is forced back in position when operated, as will be presently seen.

d represents a wire staple or loop, secured to frame A, and serves to prevent the gaveler from rising above the level of the platform, when clearing fallen grain therefrom.

E is the frame, upon which the driver's seat may be mounted. At the rear end of this frame is secured the projecting support *e*, to which is attached the arm *f*.

G designates a wooden or metal apron, provided with the back braces *h h*; said braces are pivoted to the arm *f*, thus allowing the apron to swing freely.

As represented in the drawing, the apron is placed in an oblique position to the platforms, and the ends of said platforms are bevelled to a like angle.

H designates the inside cog-wheel for conveying motion to the knives.

g represents a sweep-lever, its upper part being turned downward, so as to form a loop, (as seen in fig. 5;) between the sides of this loop the pulley *i* is confined.

The foot of lever *g* is slotted, as shown in fig. 6, and rests upon the axle of the driving-wheel. Said lever is

provided with three pins, n , n' , n'' , the object of n being to engage the cog-wheel H when necessary, that of n' to act as a stop to the sweep-lever, and n'' to retain n in gear with cog-wheel H a sufficient length of time to enable the gaveler to sweep across the platform. This feature of the invention will be more fully understood when the operation of the machine is given.

p designates a circular device, permanently secured to the brace or support in which the inner end of the large driving-wheel rests; this device, for want of a better name, I denominate a cam. It is circular in form, with a flange formed around it by its rim being turned at right angles towards the driving-wheel. On the periphery of this rim or flange I cut two slots. It will be particularly observed that the distance between these slots must be adapted to the distance that the gaveler must travel over the platform.

u represents a block provided with two pulleys; said block is secured to the frame E.

w is an arm attached to lever a , for the purpose of operating the sweep-lever.

y is a cord, one end being attached to the gaveler, it is then conducted to the rear of the swinging-apron, will rest against it, then around the upper pulley in block u , around pulley i in sweep-lever, then back over the block u , and thence to lever a , to which it is secured.

The operation of my machine is as follows:

As the grain falls, when being cut, upon the yielding platform, said platform, by the weight of the grain, is pressed down; as it falls, the lever a is pressed or forced backwards, thus causing the arm w to lift the sweep-lever up until pin n' engages cog-wheel H, and at the same time pin n'' is relieved from the slot in cam p the cog-wheel, as it revolves, carries sweep-lever forward until pin n'' reaches the other slot, when immediately it drops, thus relieving pin n' from the cog, and the lever flies back to its original position through the action of the spring at the outer end of the gaveler.

It will be seen that the action of the gaveler and swinging-apron is simultaneous with that of the sweep-lever, for, as the cord is tightened, the gaveler sweeps across the platform and clears it of the fallen grain, at the same instant the swinging-apron is pressed up to meet the gaveler at the end of the platform, thus collecting the grain into bundles, ready to be bound by hand or machinery.

I wish it particularly observed, that the moment the gaveler relieves the yielding platform, said platform E instantly assumes an inclined position, thus shielding the gaveler from the fallen grain on its return home.

The size of the gavels may be regulated by the adjustment of the spring on the lever.

It will remain optional with the driver to operate the gaveler and swinging-apron either by means of hand lever a , or by the means just described.

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

1. The combination of a hinged, pivoted, or yielding platform, located in the rear of the cutter-bar, with a gaveler or rake, operating substantially in the manner for the purpose described.

2. The combination of lever a , cam p , and sweep-lever g , operating substantially as specified.

3. The combination of the lever a , yielding platform B, and spring c , so arranged that the driver, while in his seat, may adjust the spring and regulate the size of the gavel, substantially in the manner and for the purpose set forth.

4. The combination of gaveler D with swinging-apron G, when said apron and gaveler are arranged to be operated by means of cord y and sweep-lever g , all being arranged and operated in the manner and for the purpose set forth.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

D. J. POWERS.

Witnesses:

T. H. ALEXANDER,

EDM. F. BROWN.