

Sheet 1 of 2 Sheets.

C. W. & B. F. Witt.

Harvester Dropper.

N<sup>o</sup> 80694

Patented Aug. 4, 1868.

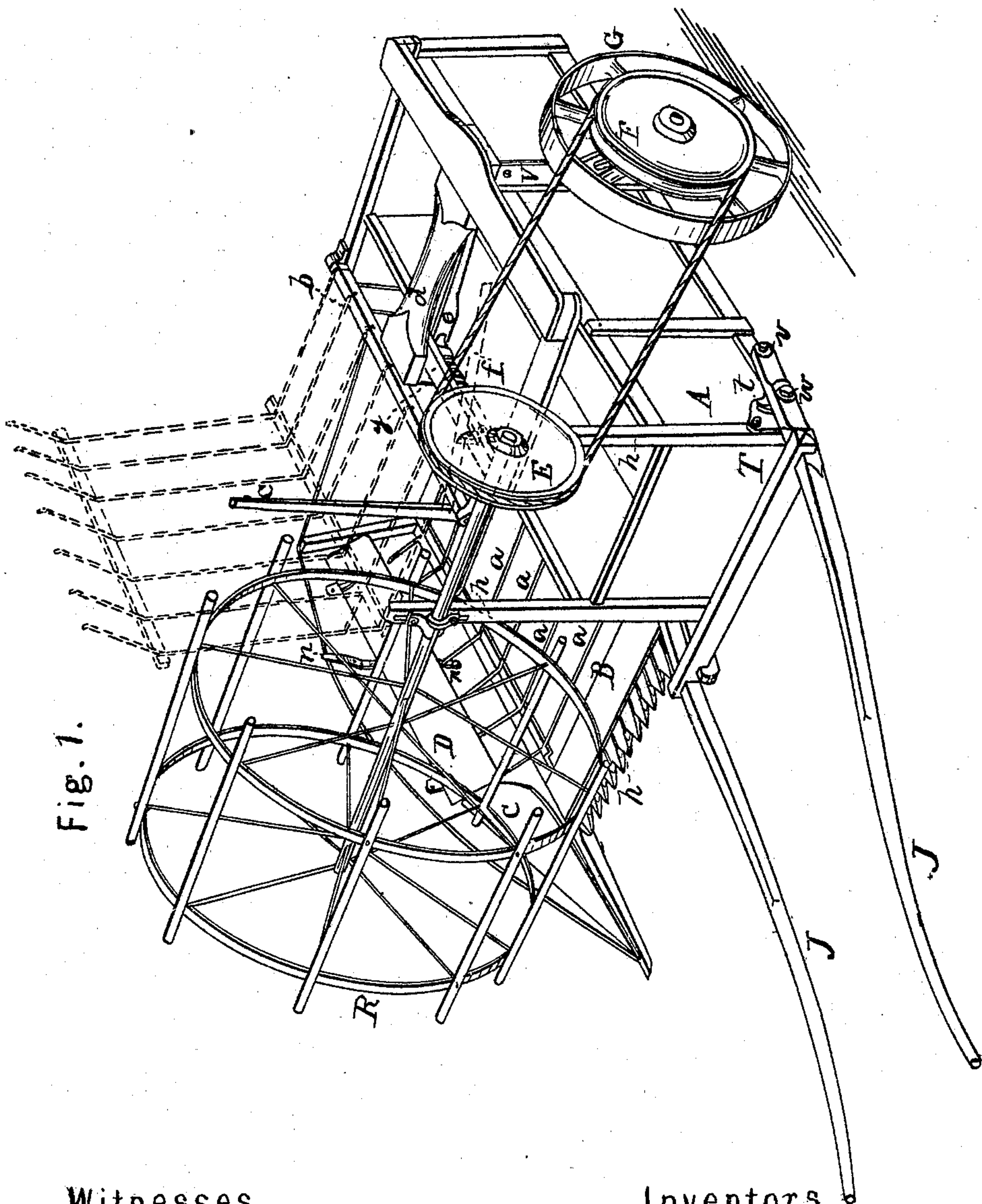


Fig. 1.

Witnesses.

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by Dodge & Munn  
their attys.

Sheet 2. 2. Sheets.

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Fig. 4.

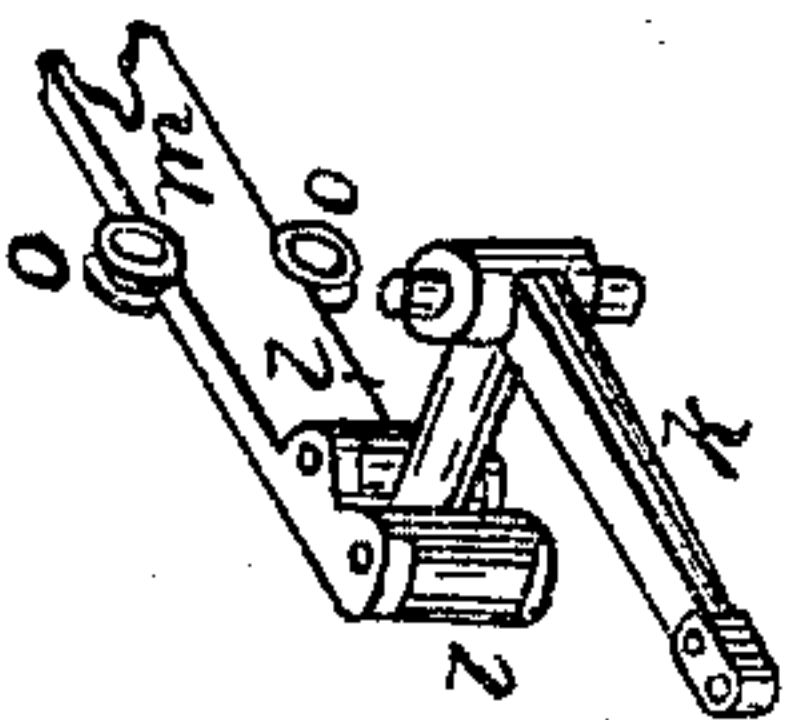


Fig. 5.

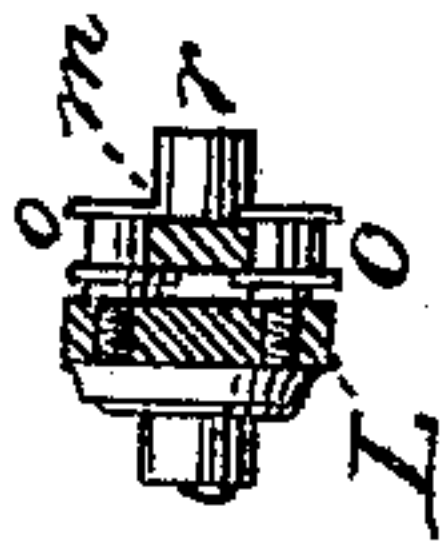


Fig. 3.

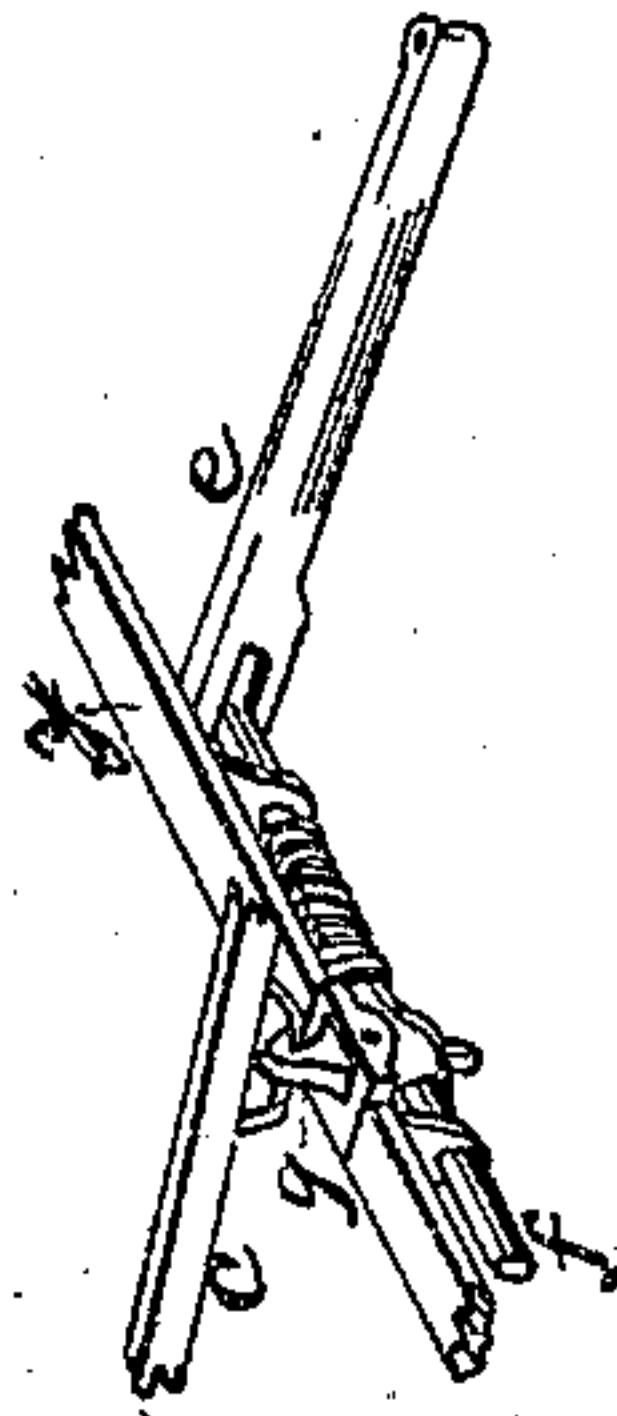
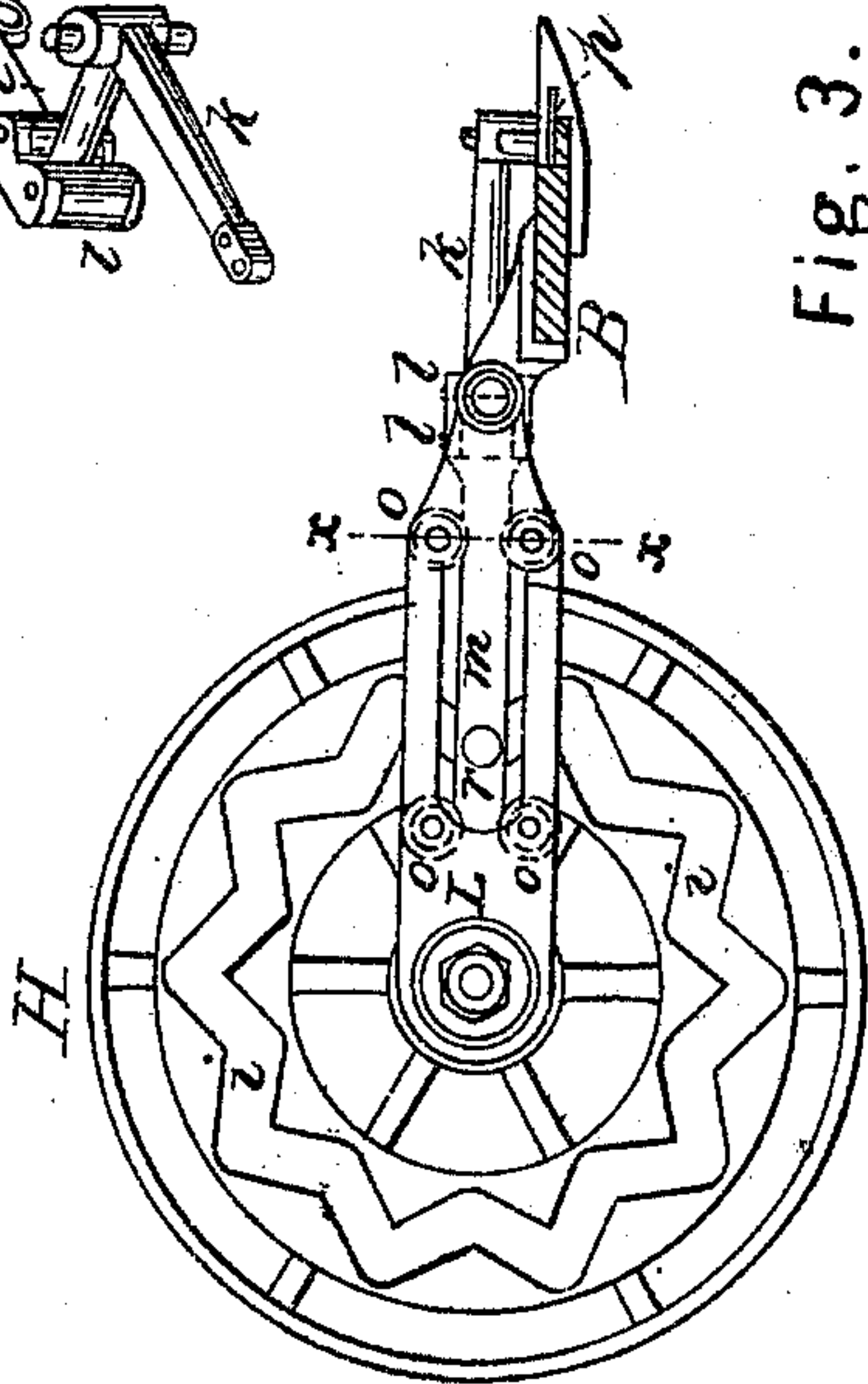


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 80,694, dated August 4, 1868.

*To all whom it may concern:*

Be it known that we, C. W. WITT and B. F. WITT, of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Harvesters; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use our invention, we will proceed to describe it.

Our invention relates to that class of harvesters which are intended to be operated by a single horse, and in which the grain is to be bound as fast as it is cut; and our invention consists in a novel construction of the various parts of the machine, as hereinafter explained.

Figure 1 is a perspective view of the machine complete. Figs. 2, 3, 4, and 5 are views of various parts, shown more in detail.

With small farmers it is desirable to have a harvester that can be operated with less force and with a less number of hands than those generally in use, and which, at the same time, can be afforded at a less cost. To produce such a machine is the object of our invention.

In constructing our machine, we build a box-frame, A, and mount it on two wheels, like a cart. These wheels, of which G, Fig. 1, represents the outer one, and H, Fig. 2, the inner one, are attached to the body A by means of vertical plates V, which have a slot in their lower portions, by which they can be adjusted so as to raise or lower the body of the machine, as may be desired.

To the front of the body A is secured a pair of thills or shafts, J, their rear ends being pivoted on a bolt or rod at *v*, and there being a metal plate, T, secured to the body A at each front corner, this plate having a slot, *t*, in it, through which and the shaft a bolt, *w*, passes, by which the shafts are locked rigidly to the body A, and by which means the front end of the machine can be raised or lowered, at pleasure, to regulate the height of the cut.

A platform, B, projects rigidly from the side of the body A, and has an ordinary sickle or

cutter secured at its front end, as shown in Fig. 1. At the farther extremity of the platform is located a side board, C, upon the inner face of which is pivoted an apron, D, this apron being hinged at its upper edge in such a manner that it can be readily turned up or down. A spring, *n*, is secured to the side board C, both above and under the apron, in such a position that when the apron is turned down it will rest upon the lower one, and when turned up it will strike against the upper one, and by it be thrown down again.

To the side of the body A next to the platform we pivot a rake or device for gathering the grain into a sheaf, this rake consisting of a journal or bar, *b*, as shown in Fig. 1, and having attached to it rigidly a series of rods, *a*, so bent as to extend from the top of the body A down to the platform, where they are united by a cross-bar, extending thence across the platform, where they are united by another cross-bar, and have their ends bent upward far enough to engage under the lower edge of the apron C. To the head or bar *b* a lever or handle, *c*, is attached, by which the rake can be tipped up, as shown in Fig. 1. Across the center of the box A is located a bar, *d*, astride of which the operator is to stand, and which serves as a seat or rest, on and by which he steadies and holds himself in position, the sheaf of grain being delivered on its front or inner end when the rake is tilted, and where it is held and bound by the operator. A bar, *y*, extends from the bar *c*, along the edge of the box A, toward its front end, and underneath it is located a sliding bolt or bar, *f*, as shown more clearly in Fig. 3, the bar *f* operating a catch, *g*, which hooks into a staple on the under side of the lever *c*, and which serves to hold the rake up, when tilted, until it is released by the operator. To enable him to release it without using his hands for that purpose, the rear end of the rod *f* is connected to another bar, *e*, which is located just under or partially under the seat *d*, and is so arranged as to permit of its being shoved sidewise by the pressure of the operator's leg, and thereby draw back the bolt *f* and unlock the catch *g*, thus permitting the rake to fall back on the platform, a spiral or other spring being arranged to move the bolt *f* and catch



*g* in the opposite direction as soon as it is released from pressure by the operator.

The sickle is operated from the inner wheel *H*, which has a cam-groove, *i*, formed on its side, as represented in Fig. 2. Upon the journal of this wheel is secured a plate, *L*, which extends to the front of the machine, where it is secured by a joint, so as to permit the rear end to be raised or lowered with the wheel *H* when the latter is adjusted, as previously stated. Upon the side of this bar *L* facing the wheel are secured two pairs of grooved rollers, *o*, as represented in Figs. 2 and 5, between which is placed a bar or rod, *m*, of proper width to play freely in the grooves of the rollers *o*, and having at the proper point on its inner face a pin or stud, *r*, with a friction-roller to fit in the cam-groove *i* in the side of the wheel *H*. At its front end there are secured to it two vertical rollers, *l*, as shown in Fig. 4, placed sufficiently far apart to permit the end of an elbow-lever, *k*, to be inserted between them, the opposite end of said lever *k* being connected by a pitman-rod to the sickle, the elbow-lever *k* being mounted in suitable bearings on the inner side of body *A*.

A reel, *R*, is mounted upon posts *h* at the front corners of the body *A*, as represented in Fig. 1, the bearings of said reel being adjusted vertically by means of slots in the posts. The reel is driven by a pulley, *E*, on its outer end, which receives motion by a cord passing over a similar pulley, *F*, secured upon the side of the outer wheel *G*, as shown clearly in Fig. 1.

In operation, the machine is to be drawn by a single horse, which, if well trained, will be controlled by the operator, but may be driven by a boy seated in the front end of the box.

When a sufficient quantity of grain has been cut for a sheaf, the operator tilts the rake, the horse being checked at the time, and brings the grain up before him on the bar or seat *d*, where he stands with a band prepared, ready to bind it. The rake is released the

instant the sheaf is delivered to the operator, and falls back onto the platform, ready to receive the freshly-cut grain as the machine again moves forward.

As the rake falls into position, its outer end depresses the apron *C*, which rests against the spring *n* below, this spring yielding sufficiently to permit the end of the rake to pass by the apron, which is instantly forced out by the spring, so as to cover the end of the rake, and thus direct any grain that may fall against the apron down upon the rake. By these means we produce a machine that is simple and cheap, and that is specially suited to the wants of small farmers, and which, if desired, can be made larger.

In case of necessity, several of these small and cheap machines may be used, and made to perform as much work as the larger and more expensive ones, used in less number, and are far more convenient for small jobs.

By means of the box *A*, all the grain that is shelled by the binding and handling of the sheaf is saved, and this, in the case of fully-ripe grain, is an important item.

Having thus described our invention, what we claim is—

1. The tipping-rake, when constructed and arranged to receive the grain as it is cut, and deliver it to the binder, substantially as described.

2. The box *A*, with the seat or binding-table *d*, in combination with the tipping-rake, substantially as described.

3. The combination of the reciprocating bar *m* and plate *L*, having the grooved rollers *o* arranged thereon, to form the supports of the bar *m*, all substantially as set forth.

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Witnesses:

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