

J. H. BEAM.
Mowing Machine.

No. 113,134.

Patented March 28, 1871.

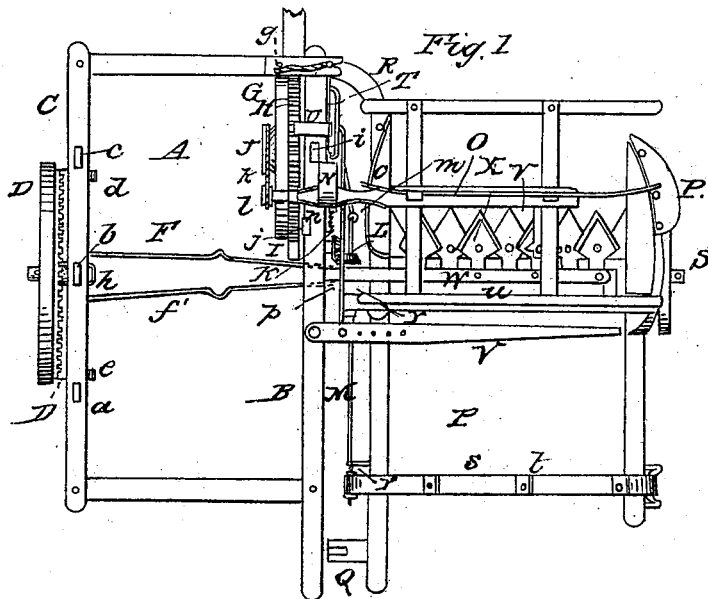


Fig. 2

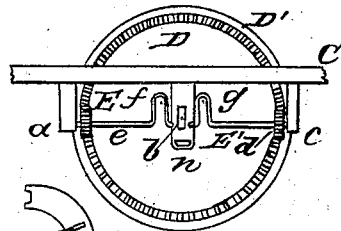
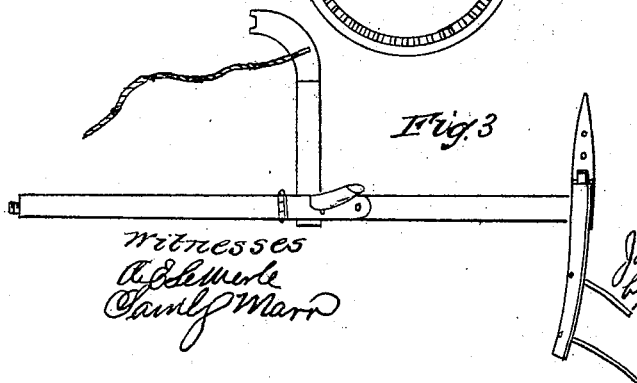


Fig. 3



Witnesses
A. B. Mearns
Sam'l Marr

Inventor
Jacob H. Beam
by R. B. Mearns & J. H. Mearns
Attys

UNITED STATES PATENT OFFICE.

JACOB H. BEAM, OF SPRINGFIELD, ILLINOIS.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **113,134**, dated March 28, 1871.

To all whom it may concern:

Be it known that I, JACOB H. BEAM, of Springfield, in the county of Sangamon, and in the State of Illinois, have invented a new and useful Improved Grain-Harvester; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a top-plan view of my device; Fig. 2, an inside elevation of the principal traction and driving wheel; and Fig. 3, a plan view of the finger-bar, shoe, and track-clearer for mowing.

Letters of like kind denote similar parts in each figure.

The nature of my invention relates to side-cutting two-wheeled harvesters using pivoted shear-cutters, and capable of being converted readily into mowing-machines; and consists in the combination and arrangement of its several parts, constructed as hereinafter described and set forth.

In the drawing, A represents the frame, rectangular in form, of greater length than width, with its outer side piece, B, projecting a little to the rear of the inner side piece, C. This inner side piece has projecting below it three hangers, *a*, *b*, and *c*, of which *b* is the center. To the hanger *b* a shaft is secured, upon which the main traction and driving wheel D rotates upon the outside of the frame and close to it.

The wheel D has upon its inner face, near its edge, a circular cog-gear, D', the teeth of which mesh with pinions *d* and *e*, secured upon the outer ends of the two main driving-shafts E and E', which extend horizontally across the inner central face of said wheel. The shaft E rotates in the hangers *a* and *b*, and the shaft E' in the hangers *b* and *c*. The shaft E has a crank, *f*, and the shaft E' a crank, *g*, each near its inner end. Upon the cranks *f* and *g* the pitmen F and F' are pivoted, and extend horizontally across the frame, and are connected with their respective cutter-bars.

To the bottom of the hanger *b* a hook, *h*, is secured, for the purpose of attaching the finger-bar for mowing.

To the under side of the forward end of the side piece, B, a hanger, *i*, is secured, having a shaft, upon which the smaller traction and driving wheel G turns, which wheel is upon

the inside of the frame A. This wheel has upon its face nearest the frame, and close to the edge thereof, a circular cog-gear, H, the teeth of which mesh with the pinion I, rotating a shaft passing through a hanger, *j*, upon the under side of the side piece, B, in rear of the hanger *i*.

Upon the outside of the wheel G' a grooved drum, J, is secured, a cord, *k*, around which, and around a drum, *l*, upon the end of the reel-shaft, gives motion to the reel.

Upon the outside of the standard *j*, and upon the outer end of the shaft turned by the pinion I, is a bevel-pinion, K, which meshes with another bevel-pinion, L, secured upon a shaft, M, running along by the side of the platform-frame, and turning in proper brackets secured thereto. The forward end of this shaft is hooked into one of a series of holes in a lever, U, described hereinafter, by which its position may be adjusted, and it may be thrown into and out of gear at the will of the driver. This shaft has, also, near its forward end, a shackle, *m*, in order that it may turn freely.

A standard, N, is attached to the outside of the side piece, B, by a set-screw or equivalent device, which standard rests above the frame A and supports the reel-shaft O, which rotates within it, near its upper end.

The bottom of the reel-standard is provided on its inside with teeth, which fit into a corrugated toothed rack, *n*, properly secured to the outside of the side piece, B. The reel-shaft is also supported in position by a curved brace secured to the reel-standards, the ends of which brace embrace said reel-shaft and allow it to turn within them. To this reel-shaft is attached any proper reel.

The platform P, made in any usual manner, is attached near its rear end to the main frame A by a slotted metallic strap, Q, provided with a set-screw, so that it may be adjusted vertically, and at its front end by a double-hinged strap, R, secured to the front under side of the main frame.

The platform-frame has upon its inner side a proper shield, *o*, to prevent the grain from getting into the gears, and upon its outer side a divider, *p*. Upon its outside it has also a carrying-wheel, S, turning upon a shaft secured to a hanger, which is vertically adjustable by any proper means.

A curved brace, T, provided with numerous holes, is secured to the front outside end of the side piece, B, and the lower outside of the hanger *i*, with its curved portion bent downward. To some one of the holes in this brace the lever U is pivoted, which, rising up is bent inwardly, so as to be within convenient reach of the driver.

To the lower part of the lever is attached the shaft M, before described, and to the upper part of it a rod, *p'*, adjustably connected with a cut-off, V, which moves back and forth over the platform.

Upon the top and front end of the side piece, B, a claw, *g*, is secured, into which a knotted rope, *q*—the lower end of which is attached to the strap R—being placed, serves to regulate the vertical adjustment of the front of the platform P and the height of the cutting apparatus.

The shaft M, before described, has upon it two or more drums, *r*, carrying rake-bands provided with risers *t*, passing across and around the platform, connected together by bars placed near each other, which bars are not shown in drawing, for the purpose of moving the grain when cut and lying upon the apron.

The pitman F is pivoted loosely upon the upper cutter-bar, W, and the pitman F', in the same way, upon the lower cutter-bar, one of which moves in one direction, while the other moves in the opposite direction.

The cutters X are in the shape of a spear-head, and are pivoted in their centers upon the finger-bar *u*. The fronts of these cutters are sickle-edged, and so arranged that their sharp edges cross each other with a drawing cut. They may, if necessary, be provided with fingers *v*, and secured upon the rivets upon which the cutters are pivoted, and upon the finger-bar, in any suitable manner.

When it is desired to use the machine for mowing, the platform, cutting apparatus, reel, and sweep-bar may be readily removed, and the frame shown in Fig. 3, having a proper finger-bar, divider, track-clearer, and connecting-straps, may be attached instead.

Having thus fully described my device, what I claim as my invention therein is—

The combination of the traction-wheel G, provided with cog-gear H, the pinions I, K, and L, the shaft M, provided with the shackle *m*, the drums *r*, rake-bands *s*, rod *p'*, cut-off V, and lever U, all constructed and arranged substantially as described and shown, for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of July, 1870.

J. H. BEAM.

Witnesses:

GEO. O. MARCY,
J. M. HOWARD.