B. Wieland,
Mower.

No. 47,351 — Patented April. 18. 1865

Fig. 1.

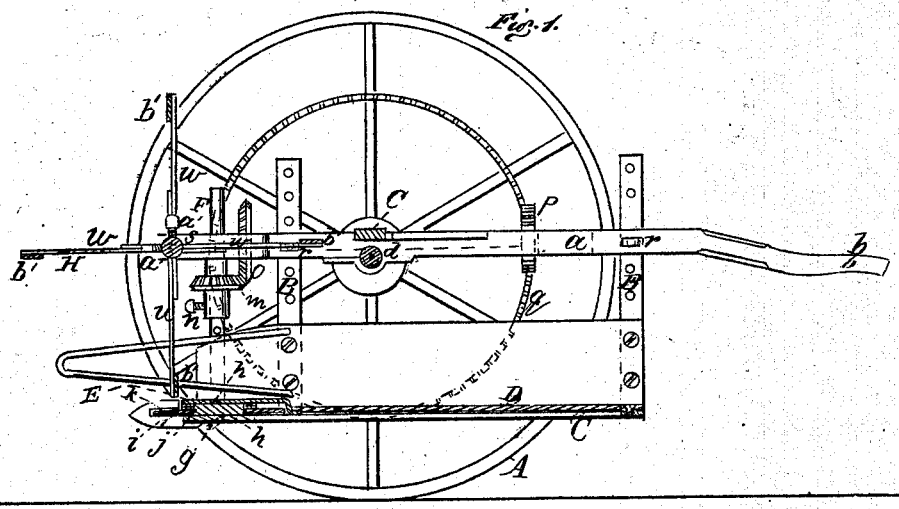
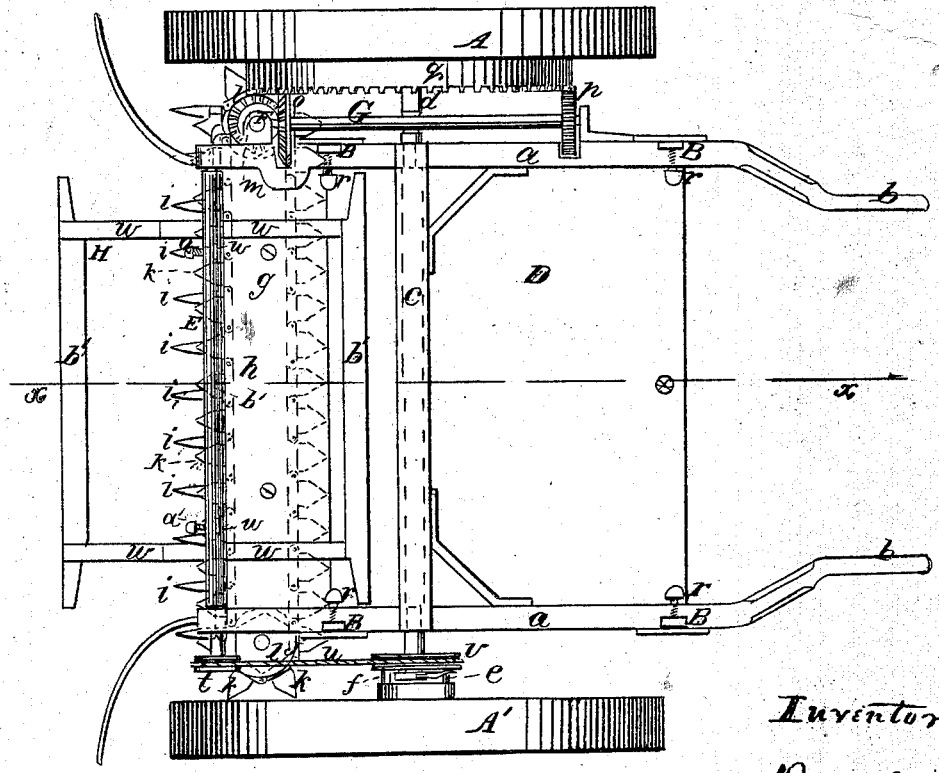


Fig. 2.



Witnesses { Wm. F. McNamara, J. P. Hall.

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UNITED STATES PATENT OFFICE.

BENJAMIN WIELAND, OF ORANGEVILLE, ILLINOIS.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **47,351**, dated April 18, 1865.

To all whom it may concern:

Be it known that I, BENJAMIN WIELAND, of Orangeville, in the county of Stephenson and State of Illinois, have invented a new and Improved Grain and Grass Harvester; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a side sectional view of my invention taken, in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate like parts.

This invention relates to a new and improved grain and grass harvester designed for manual operation.

The framing of the machine consists of two parallel bars, *a a*, the back ends of which serve as handles, as shown at *b b*. The bars *a a* are connected by a cross-bar, *c*, underneath which is an axle, *d*, having wheels A A′ on its ends, which wheels support the machine. The wheel A is attached permanently to its axle *d*, while the wheel A′ is placed loosely upon it, so as to turn independently of the axle when the machine is backed, but engages with the axle when the machine is shoved forward by means of a pawl, *e*, and ratchet *f*.

B B B B represent four uprights, which pass through loops or mortises in the bars *a a*, two uprights passing through each bar *a*. To the lower ends of the bars B a frame, C, is attached, on which the platform D is secured, and at the front part of the frame C there is a sickle-case, *g*, formed of two parallel horizontal plates, *h h*, to the lower one of which fingers *i* are attached.

E represents the sickle, which is composed of an endless chain, *j*, each link having a cutter, *k*, attached to it of **V** form. The chain *j* works around two polygonal pulleys, *l l*, one at each end of the case *g*, the sides of the pulleys *l* being equal in length to the links of the chain *j*. By this arrangement the chain is effectually prevented from slipping on the pulleys *l l*.

The cutters *k* project through the front side of the case *g*, and work through the fingers *i*, and the sickle is operated by having the pulley *l* at the right-hand side of the machine provided with a shaft, F, which extends upward, and has a pinion, *m*, upon it, which is secured to the shaft F by a set-screw, *n*. This pinion *m* gears into a wheel, *o*, on a horizontal shaft, G, at the right-hand side of the machine, said shaft having a pinion, *p*, on its back end, into which a toothed rim, *q*, attached concentrically to the wheel A, gears.

The uprights B are secured in the bars *a a* of the framing of the machine by means of set-screws *r*.

H is a reel, the shaft *s* of which has its bearings in the front ends of the bars *a a*, said shaft having a pulley, *t*, at one end of it, around which a belt or cord, *u*, passes from a pulley, *v*, on the axle *d*. The arms *w* of the reel H overlap each other and pass through the shaft *s*, and are secured by set-screws *a′*, the arms having the usual beaters, *b′*, attached to their outer ends. By this arrangement it will be seen that the reel may be increased or diminished in diameter as may be required, and this varying of the diameter of the reel is necessary in order to compensate for the varying height of the sickle, which may be raised and lowered by loosening the set-screw *r*, so as to raise and lower the uprights B.

In order to convert the device into a mowing-machine, the platform D is simply removed and also the reel.

The machine as a whole is extremely simple, may be constructed at a small cost, and operated by hand with ease.

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

The combination of the adjustable platform D, uprights B, and the endless sickle, constructed as described, and operated through the medium of the spur-wheel *q*, pinion *p*, bevel-gearing *o m*, shaft F, and polygonal pulley, as described and represented.

BENJAMIN WIELAND.

Witnesses:

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