

J. Peirson.

Mower.

N<sup>o</sup> 7481

Fig. 1.

Patented Jul. 2, 1850.

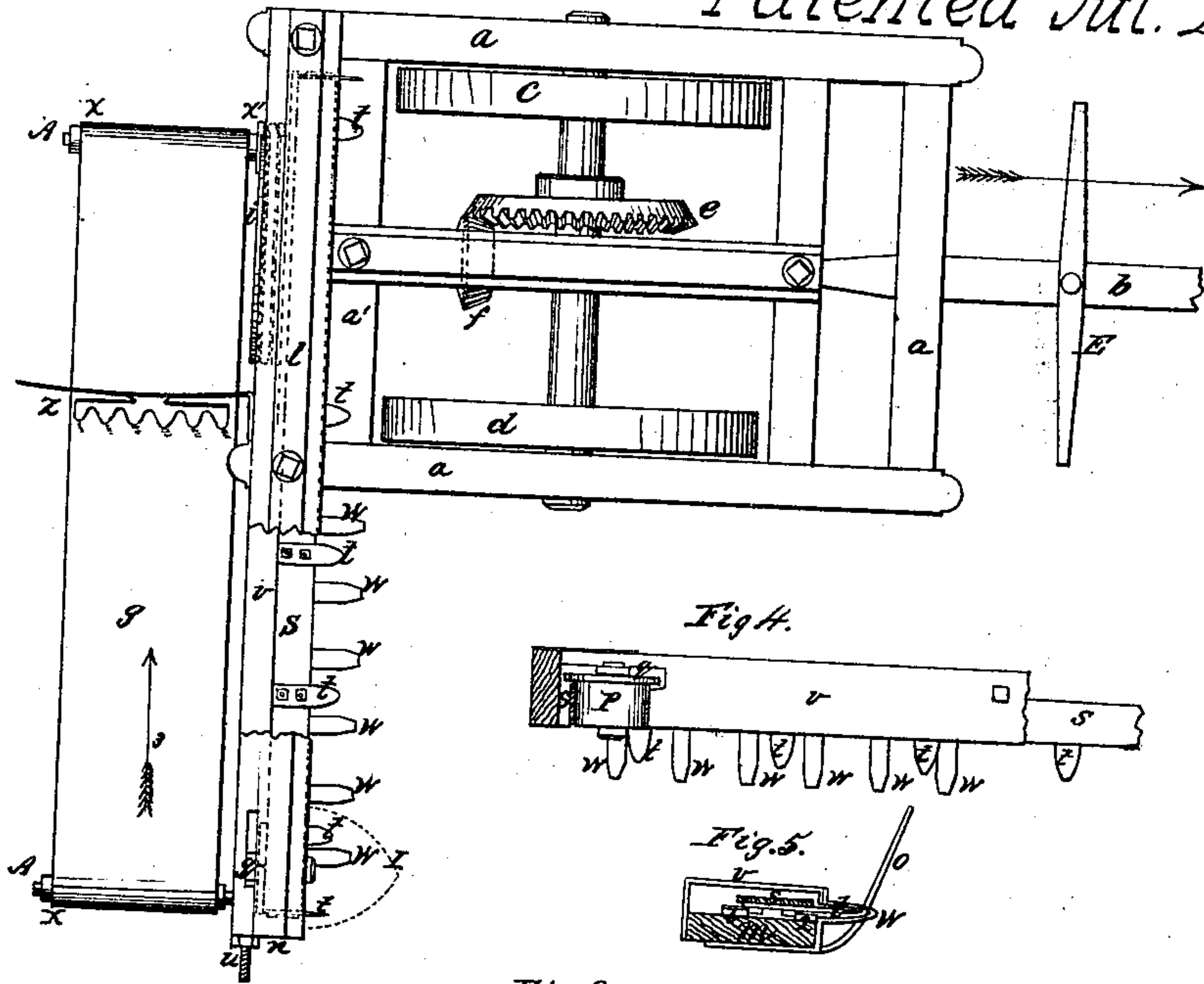


Fig. 4.

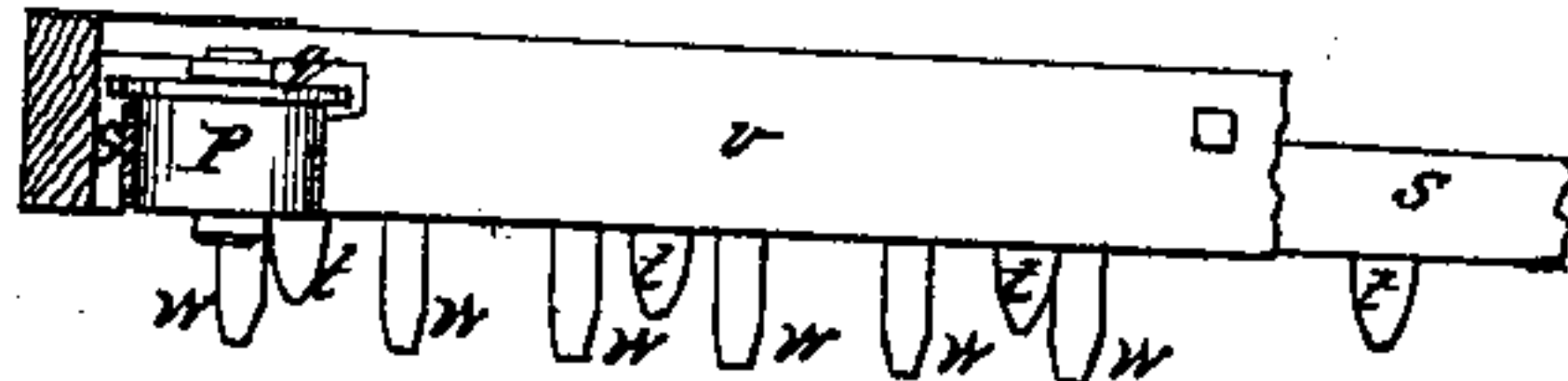


Fig. 5.



Fig. 2.

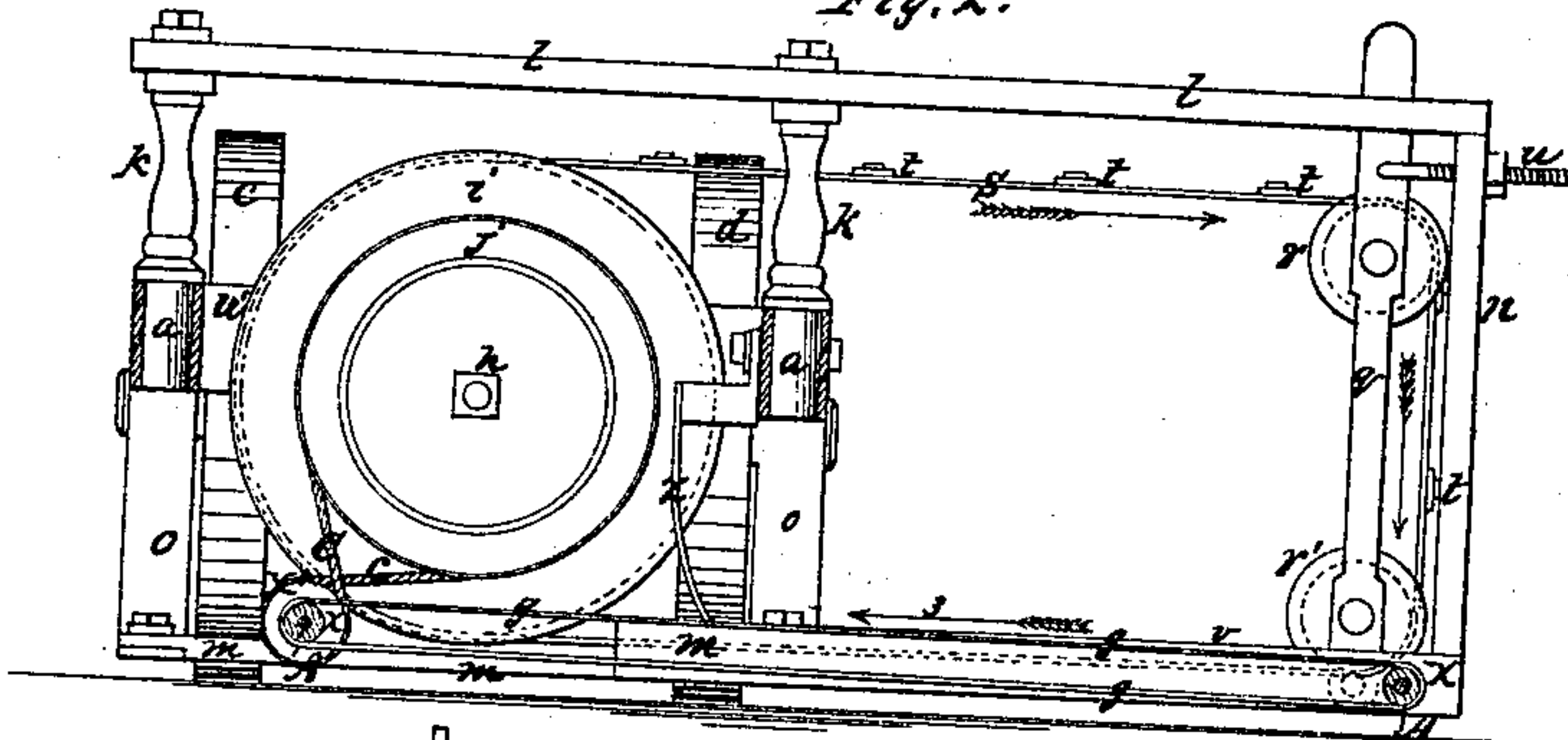
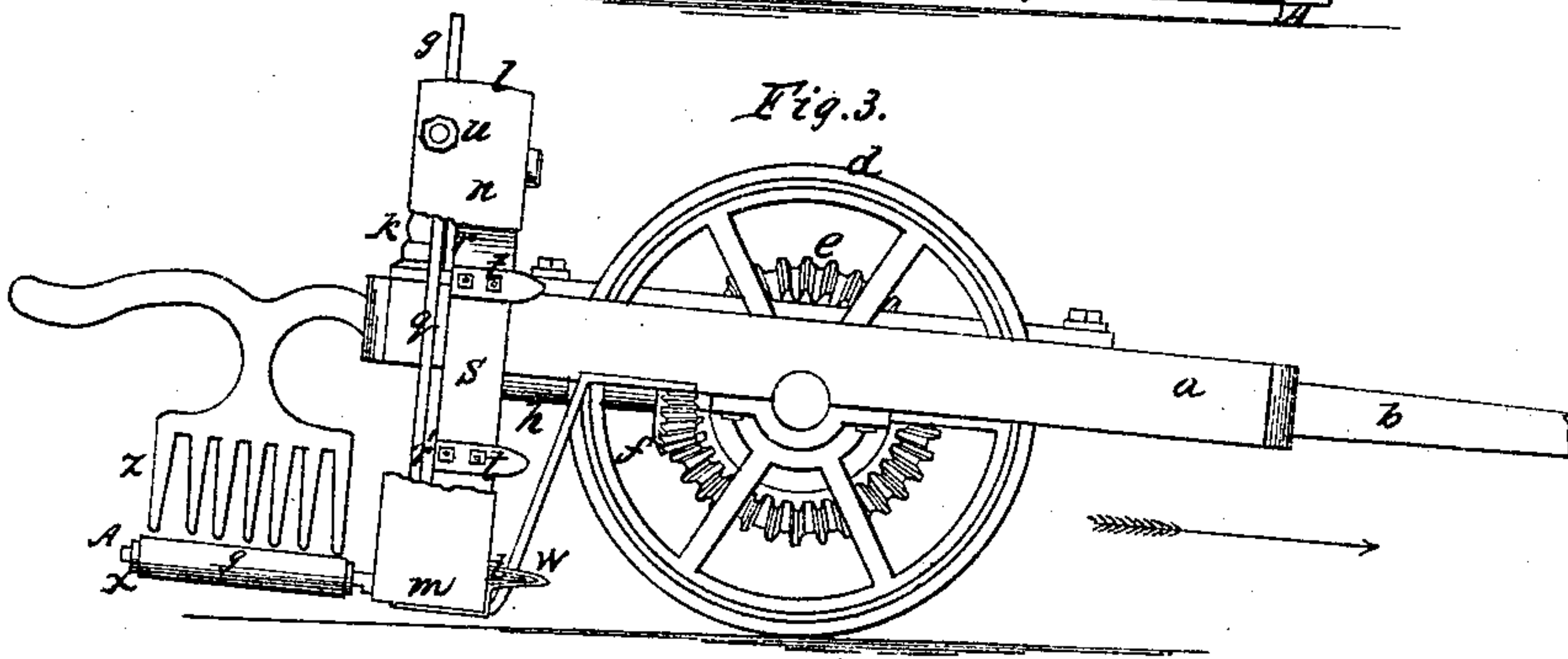


Fig. 3.





# UNITED STATES PATENT OFFICE.

JACOB PEIRSON, OF WILMINGTON, DELAWARE.

IMPROVED ARRANGEMENT OF CUTTERS IN A GRAIN AND GRASS HARVESTER.

Specification forming part of Letters Patent No. 7,481, dated July 2, 1850.

*To all whom it may concern:*

Be it known that I, JACOB PEIRSON, of Wilmington, in the county of Newcastle and State of Delaware, have invented new and useful Improvements in Mowing and Reaping Machines; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation thereof, reference being had to the annexed drawings.

I effect a continuous motion for the cutters by the use of an endless band or belt revolving in a vertical plane in place of the objectionable chain arrangement moving horizontally, as is sometimes employed, and thereby combine the advantages of steadiness and rapidity incident to the continuous cutters with the simplicity and durability of the reciprocating ones. I have also made provision for giving to the driver complete control of the delivery of the cut grain in gavels.

In the annexed drawings similar letters refer to corresponding parts in all the figures.

Figure 1 is a top or bird's-eye view of the machine. Fig. 2 is a rear elevation. Fig. 3 is an elevation of the right side of the machine. Fig. 4 is a top view of a portion of the cutter-belt and its appurtenances. Fig. 5 is a transverse section of the same.

The frame *a*, pole *b*, running-wheel *c*, driving-wheel *d*, bevel-gearing *e f*, endless delivery-apron *g* do not differ materially from mechanism heretofore employed in this connection.

To the hindmost cross-rail, *a'*, of the frame is journaled the rear extremity of the pinion-shaft *h*, which projects back of the rail *a'* sufficiently to carry a couple of pulleys, *i j*, which actuate the cutting and delivery apparatus, in the manner hereinafter described.

Extending upward from the rear end of the frame are two iron columns, *k*, and to the top of these is bolted a rail, *l*, which extends horizontally some distance to the right of the posts. Parallel with and directly under this rail *l*, and but a short distance above the ground, is another rail, *m*, whose right extremity is supported and stayed by a post, *n*, connecting it with the rail *l*. The middle and left extremity of the rail *m* are supported by iron hangers *o o*, extending downward and rearward from the underside of the frame to which they are bolted.

Pivoted at its lower extremity to the rail *m*, near its right end, and confined above within a groove, *p*, is a bar, *q*, from which project the

journal-pins of two guide or carrying pulleys, *r r'*, around which and the pulley *i* is passed a continuous belt of leather, *s*, armed at equal distances with cutters *t*, each being attached to the belt by a couple of bolts. The belt, having been placed upon the pulleys, is made taut by means of the screw-bolt *u*, which draws back the upper end of the pivoted bar *q* in the arc of a circle, at the same time drawing back the pulley *r*. These cutters in their lower position rest upon a couple of iron bars, *1 2*, fastened to the top of the rail *m* at such a distance apart as to allow of the passage of the bolt-heads of the cutters between them, and these bolt-heads by this means serve to maintain the cutters in a direct course while in action or parallel to the ways.

A metallic plate, *v*, is fastened to the back of the rail *m*, rises vertically, is then bent at right angles and extends horizontally, is then turned down vertically, being extended over the rail, and forming a sheath or cover from the grain, and also an attachment for the pointed guards *w*, which are placed somewhat closer together than the cutters *t* on the endless belt *s*.

From the rail *m* also project the journal-pins *A* of two rollers, *X*, upon which the endless delivery-apron *g* is stretched. One of these rollers has a pulley, *x'*, which communicates by a cord, *e*, with the pulley *j* on the pinion-axle *h*, as aforesaid.

The cutters may be sharpened on both edges, and be reversed on the belt when one edge is worn out.

The operation is as follows: The machine being advanced in the usual way by horses being attached to the whiffletree *E*, the rotation of the driving-wheel *d* will communicate motion through the gearing *e f* to the pulleys *i j*, and thence to the endless belt *s* and apron *g* by means of the crossed band *c*, and the pointed guards *w* (which are made in the usual manner) will collect the grain, which will be rapidly severed by the cutters *t*, and falling over onto the apron *g* is by it carried leftward in the direction of the arrow 3 until it reaches the rake or arrester *z*, which being elevated at proper intervals by the driver, the grain is deposited by gavels at the left-hand extremity of the apron.

As is usual in this class of reaping-machines, the team walks alongside the standing crop, keeping it uniformly to the right. The arm to

which the rake-handle is affixed is pivoted to the rear part of the frame in any convenient position, so as to bring the points of the rake-teeth near the surface of the revolving endless apron, to arrest the motion of the straw thereon until a sufficient quantity is collected to form a gavel. This rake may be raised and lowered by means of a cord and pulley, or a lever, or by any convenient means. There may also be a sheet-iron guard secured to the post *n* and rail *m*, meeting at a point in front of the teeth to divide the grain and shield the lower carrying-pulley, as shown by the dotted lines *l* in Fig. 1.

Having thus fully described the nature of

my improvements in mowing and reaping machines, what I claim therein as new and original, and desire to secure by Letters Patent, is—

The arrangement, substantially as herein described and represented, of cutters bolted to an endless belt, *s*, revolving in a vertical orbit, and moving on a rail, *m*, guarded and disposed after the manner described.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

JACOB PEIRSON.

Witnesses:

WM. P. ELLIOT,  
LUND WASHINGTON.