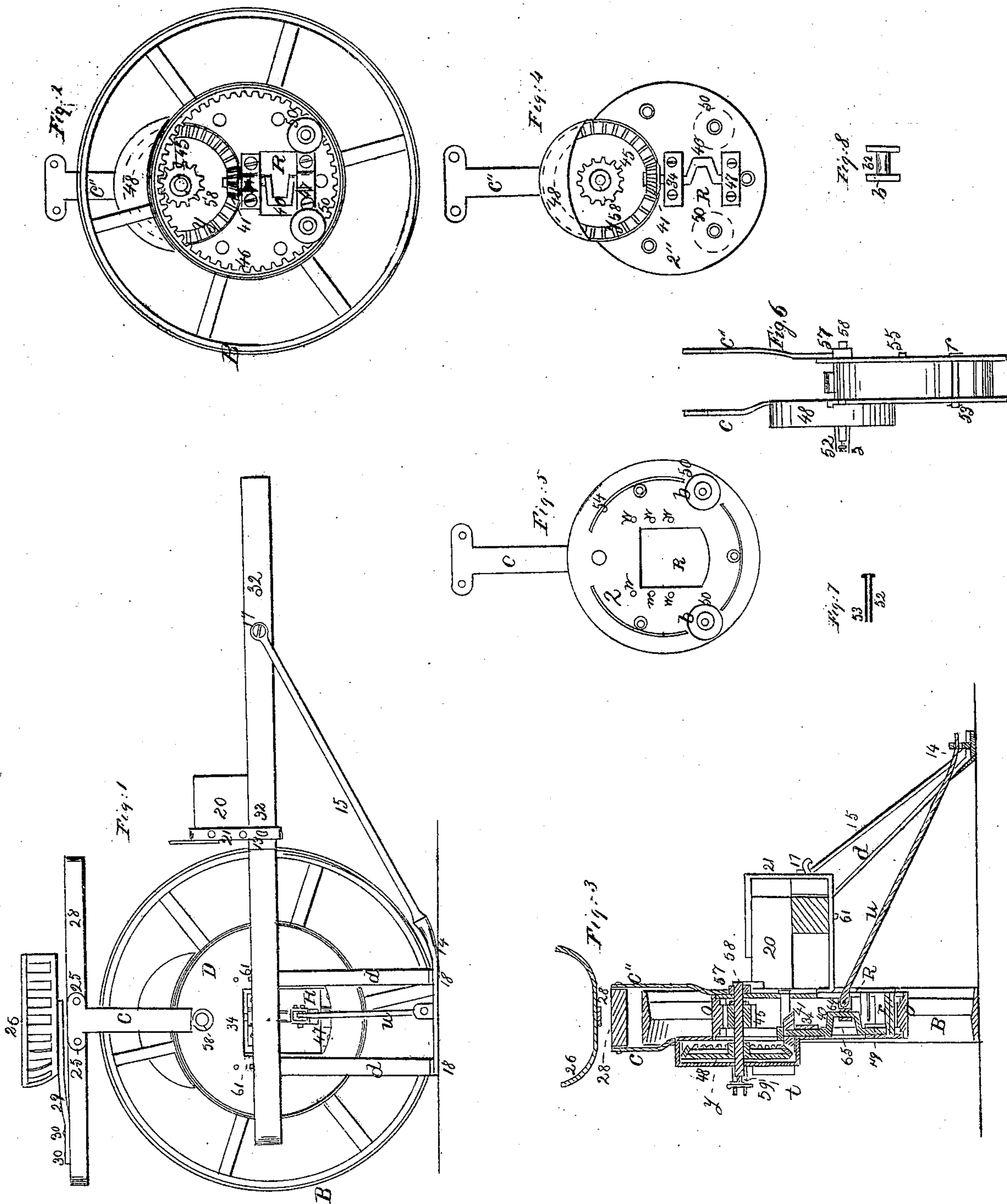


H. Pease.  
Mower.

N<sup>o</sup> 67.211.

Patented Jul. 30. 1867.



Attest

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HENRY PEASE, OF BROCKPORT, NEW YORK.

Letters Patent No. 67,211, dated July 30, 1867.

## IMPROVEMENT IN HARVESTERS.

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, HENRY PEASE, of Brockport, in the county of Monroe, in the State of New York, have invented a new and improved Reaping and Mowing Machine; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a side view of my improvement.

Figure 2 is a side view of the ground-wheel with the hub D removed to show the gearing, crank-shaft, and rollers *b b*.

Figure 3 is a cross-section view of my improvement.

Figure 4 is a view of plate 2'' and shows the inside.

Figure 5 is an inside view of plate 2.

Figure 6 is a view of the hub D detached.

Figure 7 is a view of one of the hollow bearings *r*.

Figure 8 is a view of the grooved roller *b*, giving view of one of the two rollers *b b*.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

D represents a cast-iron hub which is formed or made of two circular plates, 2 2'', as shown at fig. 4 and fig. 5. Plate 2 has a rim or projections, 54, of the proper depth to receive the rim *o* of the ground-wheel B, when the two plates 2 and 2'' are bolted together with the bolts 55 55, as shown at 55, fig. 6. The hub D has an opening or hole, R, for the pitman *u* to pass through, as shown at R, fig. 1, fig. 3, fig. 4, and fig. 5. The hub D is made to contain the gearing that gives motion to the crank-shaft 40. The crank or crank-shaft 40 runs in boxes 34 and 47 which are bolted firm to the plate 2'', as represented at 34 and 47, fig. 4. The hub D also contains the rollers *b b*, which rollers *b b* are located in the hub D, as indicated by the circular dotted lines 50 50, as shown at fig. 4 and fig. 5. The hub D has two projections, *c' c*, to support the seat-board 28 by means of the bolts 25 25. 48 is a chamber to receive the bevel-wheel *y*, as shown at fig. 6 and fig. 4 and fig. 2. The hub D has boxes 52 and 57 to receive the bevel-wheel shaft 58. The box 52 has a pin-hole, as indicated by the dotted lines, as *s*, fig. 6, drilled to match or correspond with the groove *t* in the shaft 58 for the pin 59. The pin 59 is for the purpose of holding the bevel-wheel *y* in or out of gear with the bevel-pinion 41, as may be desired, and is explained as follows: The pin 59 is passed down through the hole *s* and past the end of shaft 58 when it is desired to have the bevel-wheel in gear with the pinion 41; when out of gear the pin is passed down in the groove *t*. Plate 2 has six holes *w* to receive the bolts *m*. The hub D has arms *d d* running outwards and downwards to the shoe 14. The shoe 14 is bolted firm to the arms *d d* with bolts 18 18. The jointed pole 32 is bolted to the arms *d d* by bolts 16 16. The ground-wheel B has a rim, *o*, of the proper diameter and width to receive the hub D, as shown in the drawings at fig. 3. The rim *o* has cogs or teeth which gear in the pinion 45. The pinion 45 is made fast to the shaft 58. The rim *o* is made wider than the cogs 46, so as to form a path for the grooved rollers *b b*. The form of the rollers *b b* is shown at *b*, fig. 8. The rollers *b b* are made with a groove, 62, of the proper width and depth to clear the teeth 46 and allow the rollers *b b* to travel on the rim *o*, as shown in the drawings at fig. 3.

The arrangement of the gearing that drives the pitman *u* is plainly shown in the drawing, as represented at fig. 2 and fig. 3, and further explained as follows: The internal gear or teeth 46 are made to drive the pinion 45. The pinion 45 gives motion to the bevel-wheel *y*. The bevel-wheel *y* gives motion to the bevel-pinion 41. The bevel-pinion 41 is made fast to the upper end of crank-shaft 40. The pitman *u* is fastened to the crank-shaft 40 by means of the bolt 64. This bolt 64 passes through the upper end of the pitman *u* and through the pitman-box 65, in the usual manner.

One object of my improved hub D is to secure the gearing in such a manner as to be secure from dirt, thereby making it more durable than the common opened-gear machines. Also, it is safer for the person attending the machine, as the gearing is covered up, which is not the case with the common machines. With my hub D I am enabled to get the principal weight of the gearing directly on the ground-wheel B, which is very important, as it allows me to use less weight to give the ground-wheel the proper traction to drive the gearing than is commonly employed. My improved hub D also allows me to place my gearing and crank-shaft

further away or from the shoe 14 where the cutting apparatus is attached, as I am enabled to pass the pitman *u* directly through the hub D by means of the opening or pitman-passage R, and in such a manner as to allow me to place the shoe 14, pitman *u*, and crank-shaft 40 on a line with the centre (crosswise) of the ground-wheel B, as plainly shown at fig. 3; thereby I am enabled to use a long pitman to bring the shoe 14 closer up to the ground-wheel B, all of which is very desirable, as it makes the machine less cumbersome and allows the shoe 14 to follow the ground. My improved hub D is applicable for one or two-wheel machines, and may be applied to a reaping and mowing machine with two wheels by any experienced mechanic. Hub D, when used with one wheel, enables me to dispense with the ordinary frame, as I use the hub D to support the driver's seat 26. Also to contain the gearing, and, by means of the arms *d d* which are bolted firm to the hub D, to carry the shoe 14, as shown in the drawings at fig. 1 and fig. 3, thereby decreasing expense to the manufacturer. The hub D is carried by the rollers *b b* which travel on the rim *o* of the ground-wheel B, and shown at fig. 3. The rollers *b b* have hollow bearings *r*, as shown at fig. 3. Fig. 7 shows one of the hollow bearings detached. 53 is a hole to receive a pin to secure the hollow bearing in place. 52 is an oil-hole, and shown at fig. 7. 15 is a draw-bolt to support the shoe. One end is made fast to the shoe 14 and the other end works on the joint-bolt 17. 21 represents a strap of iron, forms the socket or slot for the jointed pole 32 to work in for the purpose of raising or lowering the front of the shoe 14, so as to change the cut as desired. Any common cutting apparatus may be used, and may be bolted to the shoe 14 in the ordinary manner. 20 is a foot-block for the driver. 13 is a pin to hold the jointed pole 32 at the point desired. 30 30 are bolts to hold the seat-spring 29 firm to the seat-board 28.

My improvement also consists in the construction of the hub D in such a manner as to allow me to pass the pitman *u* through the ground-wheel B. It also consists in giving motion to the pitman *u*, passing through the hub D and ground-wheel B, by means of gearing or bevel-wheel *y*, located on the opposite side of the ground-wheel B to that occupied by the shoe 14, as fully explained.

#### *Operation.*

Motion is given to the ground-wheel B. Motion is communicated to pinion 45, from the internal gear 46 to the bevel-wheel *y*, from bevel-wheel *y* to bevel-pinion 41, which causes the crank-shaft 40 to rotate, thereby giving the proper motion to the pitman *u*.

#### *Claim.*

After having thus described my invention, what I desire to secure by Letters Patent, is—

1. The hub D, in combination with the pitman *u*, crank 40, bevel-wheel *y*, bevel-pinion 41, rollers *b b*, seat-supports *c c'*, arm or arms *d d*, pitman-passage R, and ground-wheel B, substantially as described and for the purpose set forth.
2. The hub D, in combination with the arms *d d*, pitman *u*, and pitman-passage or opening R, substantially as described and for the purpose set forth.
3. The hub D, in combination with the rollers *b b*, pitman *u*, hollow bearings *r r*, and pitman-passage or opening R, substantially as described and for the purpose set forth.
4. The double or grooved rollers *b b*, in combination with the hub D and tread-rim *o* and internal gear 46, substantially as described and for the purpose set forth.

HENRY PEASE.

Witnesses:

DANIEL HOLMES,  
C. DIMMICK.