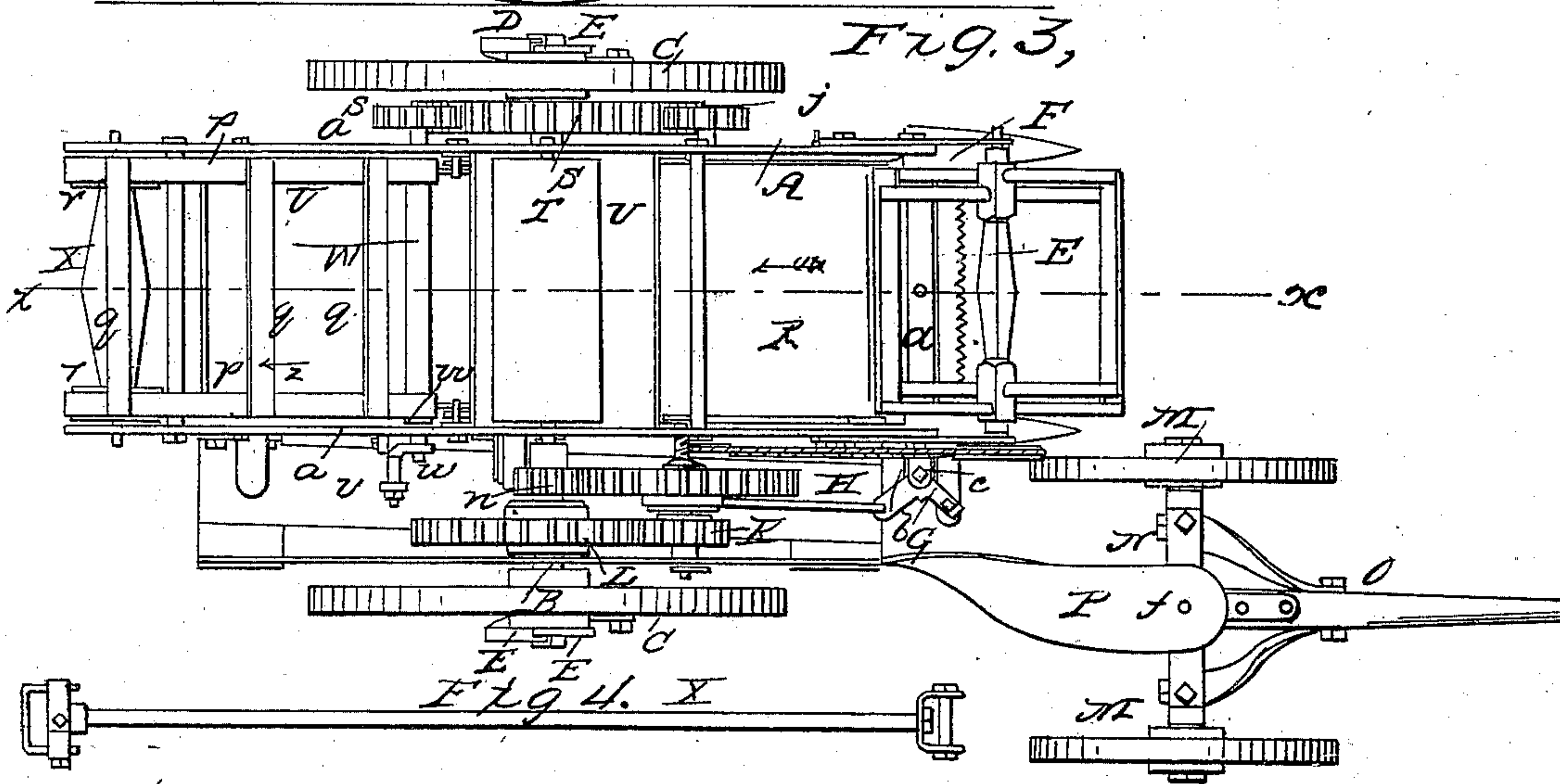
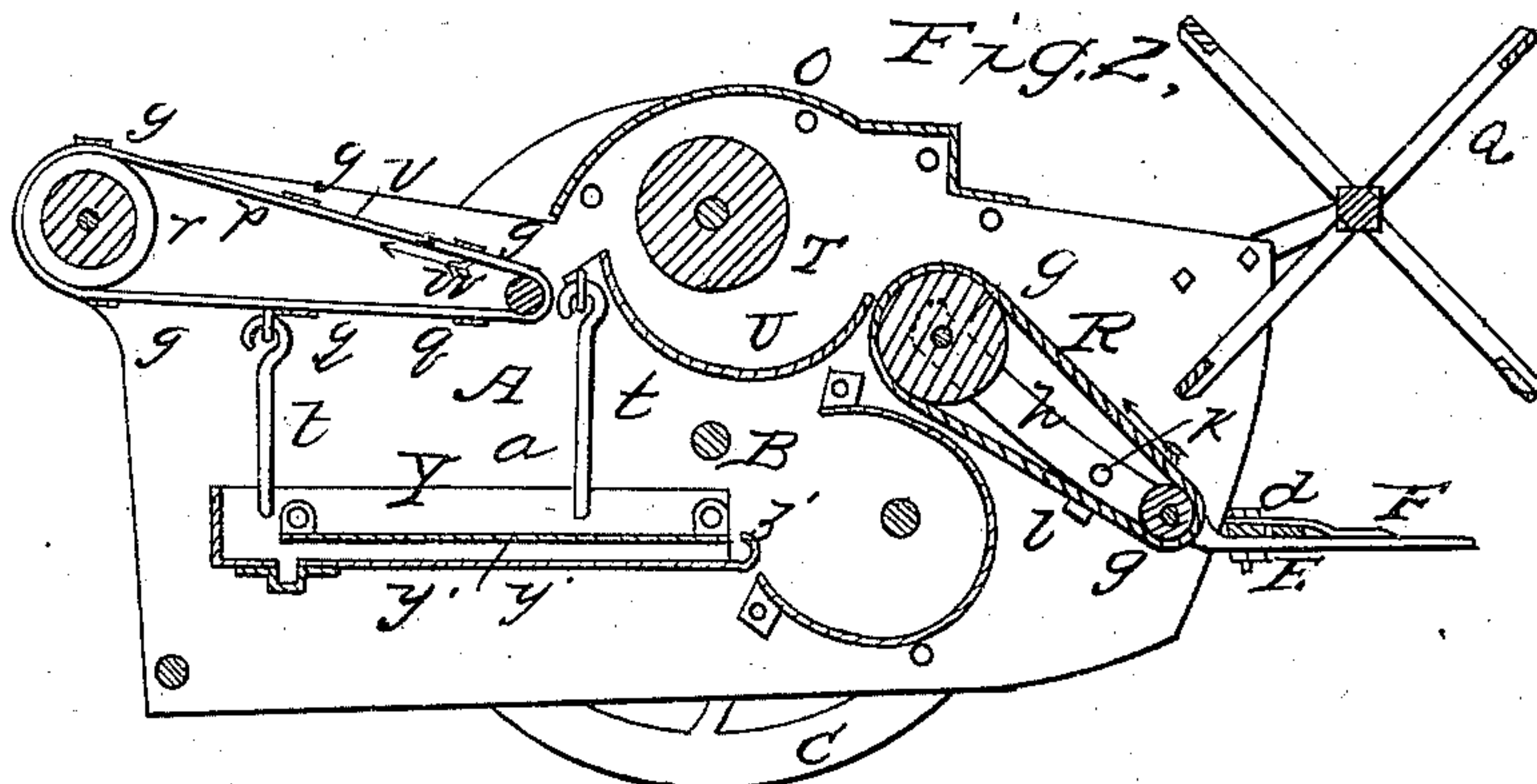
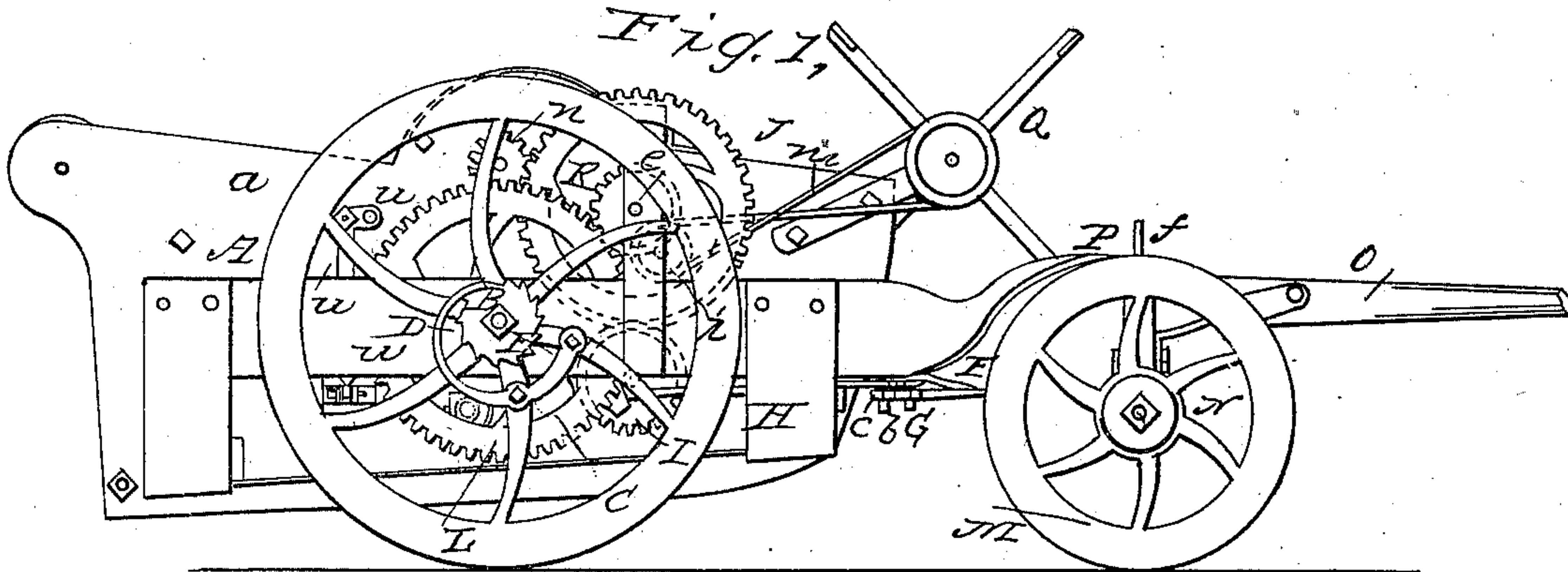


Harvesting Machine.

No. 42,197.

Patented April 5, 1864.



Witnesses:
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UNITED STATES PATENT OFFICE.

W. H. JORDAN, OF ROSEVILLE, INDIANA.

IMPROVEMENT IN HARVESTING-MACHINES.

Specification forming part of Letters Patent No. 42,197, dated April 5, 1864.

To all whom it may concern:

Be it known that I, W. H. JORDAN, of Roseville, in the county of Park and State of Indiana, have invented a new and Improved Harvesting-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention; Fig. 2, a side sectional view of my invention, taken in the line *x x*, Fig. 3; Fig. 3, a plan or top view of the same; Fig. 4, a detached view of a shaft pertaining to the same.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and improved machine for cutting standing grain and thrashing it simultaneously.

The object of the invention is to obtain a simple and efficient machine for the purpose specified, and one which will admit of the thrashing apparatus being used separately when required.

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

A represents the frame of the machine, composed chiefly of two upright parallel plates, *a a*, through which an axle, B, passes transversely and is allowed to rotate freely.

C C are the wheels of the axle, the former being placed loosely on the latter. Each wheel C has a pawl, D, attached to its outer sides, and these pawls engage with ratchets E, which are secured one on each end of the axle B. The ratchets E have their teeth inclined in a backward position, as shown clearly in Fig. 1, so as to admit of the pawls D slipping over them as the machine is backed, and thereby prevent the rotation of the axle B, the latter being rotated as the machine is drawn forward in consequence of the pawls engaging with the ratchets when the wheels C are turned in a forward direction.

At the front end of the frame A there is a reciprocating sickle, E, which is fitted and works in two shoes, F F—one at each side of the frame A. To one end of the sickle E there is connected the front end of a bent lever, G, the fulcrum *b* of which passes through a brack-

et, *c*, at one end of a bar, *d*, which is directly back of the sickle E. The back end of the lever G is connected by a pitman, H, with a toothed crank-wheel, I, which is at one side of the frame A, and gears into a wheel, J, on a shaft, *e*, said shaft also having a pinion, K, upon it, which gears into a toothed wheel, L, on the axle B. By means of this gearing, the pitman H, and bent lever G a reciprocating motion is communicated to the sickle E as the machine is drawn along or moved in a forward direction, the sickle being rendered inoperative when the machine is backed, in consequence of the axle not being turned, as previously alluded to.

The front end of the machine is supported by a pair of wheels, M, to the axle N of which the draft-pole O is attached, the latter having an upright king-bolt, *f*, secured to it, which passes up through a hole in the front end of a bar, P, attached to the right-hand side of the frame A. The wheels M are at the right-hand side of the sickle E, so that the former cannot in the least interfere with the operation of the latter, (see Fig. 3,) and the axle N is allowed to turn freely by means of the king-bolt connection, so as to admit of the machine being properly guided and turned.

At the front part of the frame A there is a reel, Q, which may be constructed in the ordinary way, and arranged in relation with the sickle E as usual.

R is an endless inclined apron, which is placed in the frame A, directly back of the sickle E, and works over two rollers, *g g*, as shown clearly in Fig. 2. These rollers *g g'* have their journals fitted in bars *h*, which are attached to the inner surfaces of the plates *a a*. The journals of the upper roller, *g*, pass through the plates *a a*, and a pulley, *i*, is attached to one of said journals, and a toothed wheel, *j*, is attached to the other. The shoes F F of the sickle E, as well as the bar *d*, are attached to the front parts of the bars *h*, and said sickle may be raised and lowered by raising or lowering the front ends of the bars *h*, the latter being retained at the desired point by bolts *k*, which pass through curved slots *l* in the plates *a* and into the bars *h*. By this means the sickle may be raised or lowered to cut the grain at the desired height from the

the surface of the ground, and at the same time a proper relative position at all times obtained between the sickle and the apron R.

Motion is communicated to the reel Q from the pulley *i* by means of a belt, *m*.

The wheel *j*, which is one of the journals of the upper roller, *g*, of the endless apron R, gears into a toothed wheel, S, on the axle B, and by means of this gearing motion is communicated to the apron R, said apron moving in the direction indicated by the arrow 1.

In the upper part of the frame A there is placed a thrashing-cylinder, T, which may be constructed in the usual way, and directly below the thrashing-cylinder there is a concave, U, the latter being directly back of the upper roller, *g*, of the endless apron R, as shown clearly in Fig. 2.

The thrashing-cylinder is rotated by a pinion, *n*, which is on one of its journals, said pinion gearing into the wheel J on a shaft, *e*. The thrashing-cylinder is covered by a cap, *o*, as shown in Fig. 2.

Vis a discharging-apron, which is constructed of two endless belts, *p p*, having slats *x q* attached to them at proper and equal distances apart. The belts *p p* pass around a shaft, W, in the frame A, directly back of the concave U, and also pass around two pulleys, *r r*, on a shaft, X, in the rear end of the frame A. Motion is given this discharging-apron in the direction indicated by arrow 2 by means of a pinion, *s*, on one of the bearings of shaft W, gearing into the wheel S on the axle B.

Underneath the discharging-apron V there is suspended a shoe, Y. This shoe is suspended by rods *t* from each side *a* of the frame A, so arranged that the shoe may have a lateral swinging motion, and this motion is communicated to it by means of a crank, *u*, at one end of the shaft W of the apron V, and a pitman, *v*, which connects said crank with a bent lever, *w*, attached to one side of the shoe Y, and having its fulcrum in one of the sides *a* of the frame A. The shoe Y has two bottoms, *y y'*, with a space between them, and the lower bottom, *y'*, is provided with two lateral discharge-spouts, *z z'*, one, *z*, being at the outer and the other, *z'*, at the inner end of the

shoe, said shoe being somewhat inclined, its inner end being the lowest. As the machine is drawn along the cut grain is made, under the action of the reel Q, to fall upon the endless apron E, which carries it up between the thrashing-cylinder T and concave U, where the grain is thrashed from the straw and both discharged upon the slotted apron V, which discharges the straw from the rear end of the machine, the grain passing down through said apron and into the shoe Y. The better quality of the grain will fall through the inner part of the apron V and upon the upper bottom, *y*, of the shoe Y, and will be discharged from the spout *z'* at the inner end of the shoe, while the poorer quality of grain will fall through the outer part of the apron and into the spout *z*. Thus it will be seen that the grain may be cut and thrashed simultaneously, or at one operation, and the straw left upon the field in a proper condition for binding.

The thrashing device may be used separately at any time by detaching the pitman H from the bent lever G and removing the belt *m* from the shaft of the reel Q, so as to render the sickle and reel inoperative, and then elevating the machine on a proper support, so that the wheels C may clear the ground; or detaching the wheels and apply power through the medium of a rod, X, with the axle B. By this arrangement the thrashing device may be used separately and operate equally as well as any of the ordinary stationary machines devised for that purpose.

I do not claim the thrashing-cylinder T and concave U separately, nor do I claim separately the endless aprons R V; but,

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

The arrangement of the cutting mechanism, apron R, and arms *h* with the thrashing-cylinder T, apron V, and shoe Y, all in the manner herein shown and described.

W. H. JORDAN.

Witnesses:

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