W. H. KENYON.

Corn-Harvesters.

No. 134,678. Patented Jan. 7, 1873.

Fig 1.

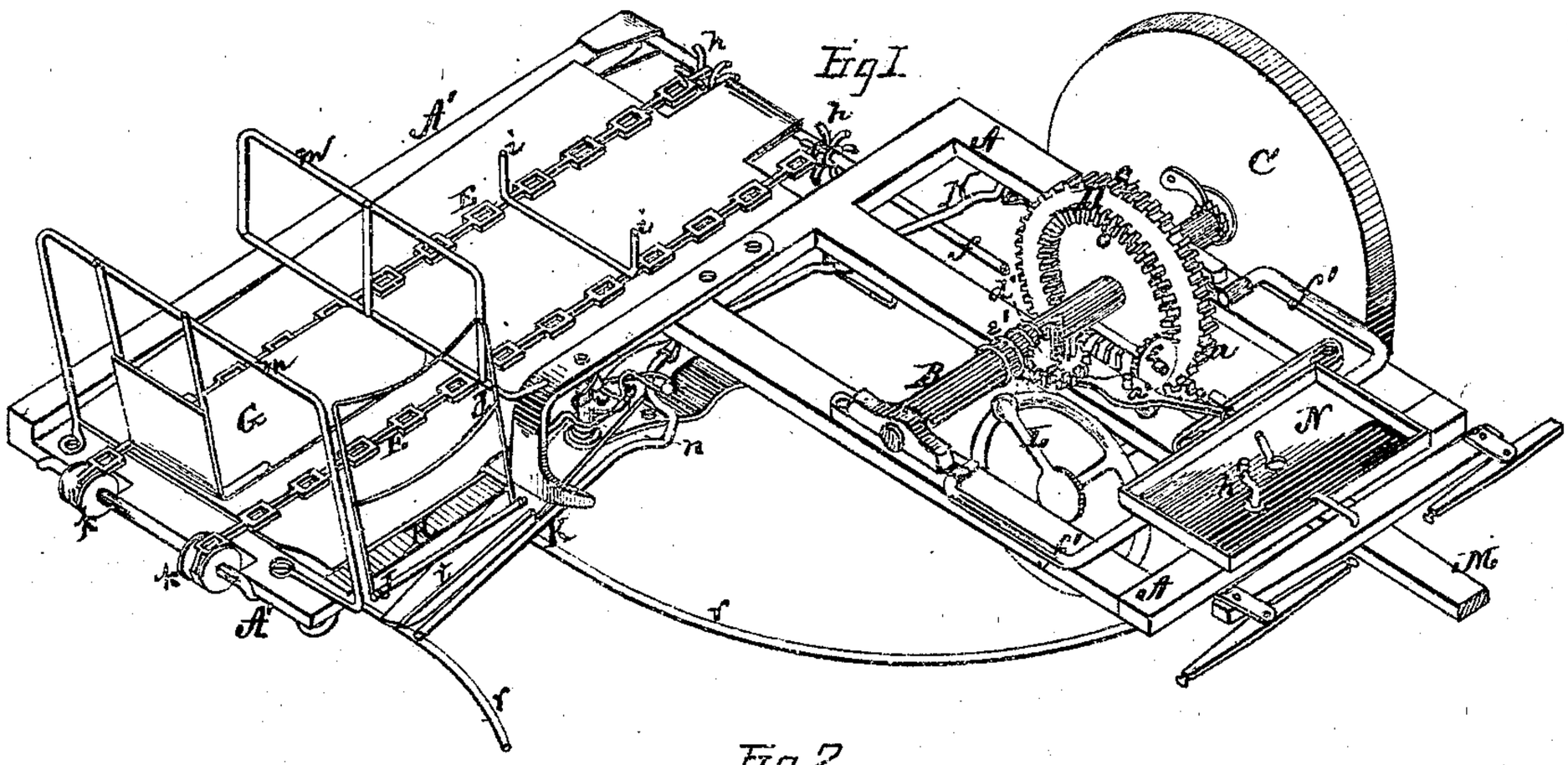


Fig. 2.

Fig. 5.

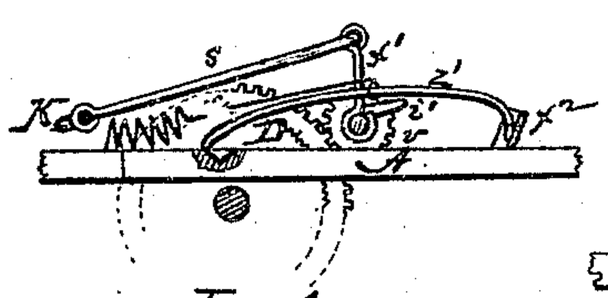
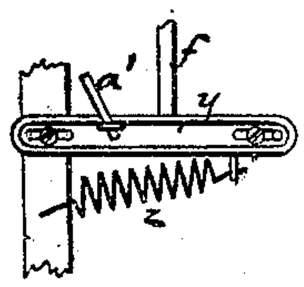


Fig. 4.



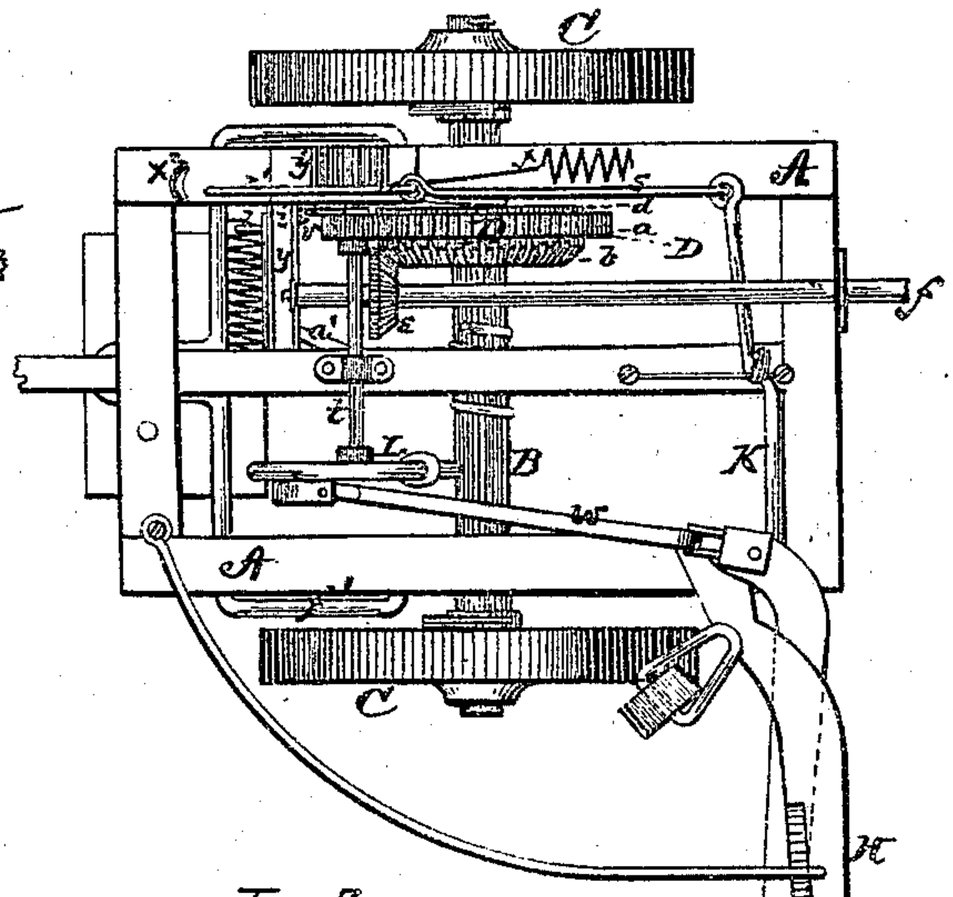
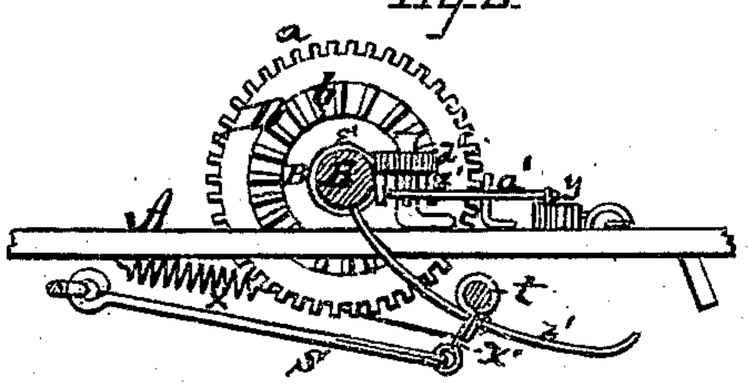


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM H. KENYON, OF NORTH PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN CORN-HARVESTERS.

Specification forming part of Letters Patent No. **134,678**, dated January 7, 1873.

To all whom it may concern:

Be it known that I, WILLIAM H. KENYON, of North Providence, in the county of Providence and in the State of Rhode Island, have invented certain new and useful Improvements in Corn-Harvesters; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a corn-harvester, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view of my entire machine. Fig. 2 is a bottom view of the main frame with the parts attached thereto. Figs. 3 and 4 are detached views of certain parts thereof. Fig. 5 represents a detached view, showing the mechanism for throwing the wheels in and out of gear.

A represents a frame of suitable dimensions, suspended in journal-boxes from the axle B, upon each end of which is a driving-wheel, C, with ratchet and pawl arrangement, so that when moving forward the axle B will be revolved, but when moving backward the wheels will turn on the axle. To the rear end of the frame A is attached another frame, A′, which is let down below the main frame, supported on a caster-wheel, and extending on one side of the main frame a suitable distance. On the axle B is secured a wheel, D, which is provided with straight cogs *a* on the periphery and beveled cogs *b* on one side, while on the side opposite to said beveled cogs is a shoulder or offset, *d*, all around a suitable distance inward from the periphery. The beveled cogs *b* of the wheel D gear with and operate a miter-pinion, *e*, on a shaft, *f*, which extends longitudinally through the frame A and along the inner edge of the frame A′. On this shaft *f* are placed two spoke-wheels, *h h*, at or in the edge of said platform A′, and around said wheels pass two endless chains, E E, longitudinally around said platform and around pulleys *k k*, placed in the outer edge of the same. On these chains are secured fingers *i i* to draw the cornstalks off in bunches as they are cut. Above the chains E E, at the outer end of the frame or platform A′, is secured a shelf, G, for the corn to fall on, so that while the fingers *i i* on the chains are drawing off one bundle the corn that is being cut in the meantime will not be scattered along the chain. On that part of the frame A′ which projects beyond the main frame A are two wire guards, *m m*, to one of which the shelf G is attached. In front of this part of the frame is attached a stationary knife, H, against which operates the movable knife or cutter I. This movable cutter is pivoted on a vertical shaft or pin, *n*, and works like one jaw of a pair of shears. Upon the same shaft or pin *n* is pivoted a wire frame, J, which works on the movable knife I, and is to keep the corn from falling when cut. This frame is not fastened to the knife, but is made to stop by a catch, *p*, when shut up, just long enough to push the corn off which might be standing on the movable knife, and then be brought back part way and fall on the ground when it opens. In front of the knives H I are wire guards *r r* to conduct the cornstalks to the knives, and on top of said guards rests the outer end of a lever, K, which is pivoted on the under side of the main frame A. This lever is extended across under and to the opposite side of the main frame, and at this end it is connected with a rod, *s*, which runs forward of the driving-axle. This rod *s* is in turn connected to a short arm, x^1, which encircles the outer end of the shaft *t*. The outer end of the latter shaft is journaled in a box, *y′*, provided with a slot, so that the said shaft can be moved backward and forward for the purpose of allowing its pinion *v* to gear with the cogs *a* of the wheel D, or to be thrown out of gear, as desired. Connected to the short arm x^1 is a trip-rod, *z′*, and also a coil spring, *x*. The under side of the frame is provided with a catching-recess for the rear bent end of said rod *z′* to take into; and the forward end of this rod is protected by a fender, x^2. When the end of this trip-rod is in the recess of the frame the spring *x* is distended, the shaft *t* forced forward, and

the pinion *v* out of gear. The pinion *v* is provided with a pin, *i'*, which at the proper time comes in contact with the shoulder *d* on the wheel D, and pushes the pinion away from said wheel, and hence the operating mechanism is thrown out of gear.

In operation, when the machine starts, it is set out of gear. As soon as the standing corn comes in contact with the lever K, between the guards *r r*, this lever will turn on its pivot and raise the end of the trip-rod out of its recess in the frame, so that the spring *x* will throw the pinion *v* in gear with the wheel D, which causes the shaft *t* to revolve, and thereby close the movable knife onto the stationary knife, cutting off the corn. As soon as the corn is cut off the pin *i'* strikes the shoulder *d* on the wheel D and throws it out of gear, so as to be ready to be acted on by the next stalk of corn. The movable knife is then opened by the fly-wheel L being properly weighted, as shown, so as to turn to a certain point and no further.

The front end of the shaft *f* is supported in a sliding bar, *y*, moved by a spring, *z*, so as to throw the pinion *e* out of gear with the cogs *b* on the wheel D. The pinion *e* is thrown in gear at the proper time so as to turn the chains E E one-half around the frame and platform A' by means of a lever *a'* pivoted on the main frame A, one end of said lever being connected with the slide *y*, and the other end operated by one or more pins, *b'*, extending downward from the under side of a pinion, *d'*, which gears with and is moved by a worm, *e'*, on the axle B. This pinion should be provided with a hand-lever to lift it up away from the worm when desired.

M represents the tongue, which is attached by means of a metal frame, *f'*, on each side of the main frame A immediately in front of the axle B, thus drawing the machine from its center. On the inner end of the tongue M is a small platform, N, to which the driver's seat is attached, and through which passes a screw, *h'*, with a crank on its upper end. This screw passes into the frame A, and is for the purpose of raising and lowering the frame at pleasure.

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

1. The combination of the movable knife I, wire frame J, and catch *p*, all constructed and arranged to operate substantially as and for the purposes herein set forth.

2. The combination of the stationary knife H, movable knife I, pitman *w*, weighted fly-wheel L, shaft *t*, and gears *v* and D *a*, all substantially as and for the purposes herein set forth

3. The lever K, operated by the standing corn and connected with the shaft *t*, for throwing the pinion *v* in gear with the cog-wheel D *a*, as herein set forth.

4. The pin or arm *i'* on the pinion *v*, operating, in connection with the shoulder *d* on the wheel D, for throwing said pinion out of gear with the cogs *a* on the wheel, as herein set forth.

5. The arrangement of the frame and platform A' with pulleys *k k*, wheels *h h*, endless chains E E with arms *i i*, guards *m m* and *r r*, and shelf G, all substantially as and for the purposes herein set forth.

6. The combination, with the shaft *f* and pinion *e*, of the slide *y*, spring *z*, lever *a'*, and one or more pins, *b'*, on the pinion *d'*, said pinion being operated by the worm *e'* on the axle, for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of October, 1872.

WM. H. KENYON.

Witnesses:
JOHN C. PURKIS,
S. W. KENYON.