

J. F. Coalbington,
Harvester.

N^o 79,551.

Patented July 7, 1868.
Fig. 1.

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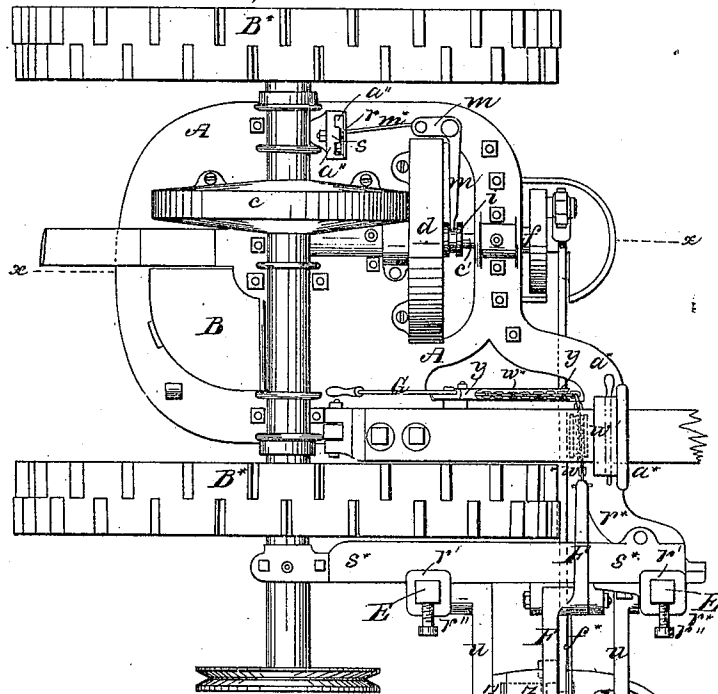
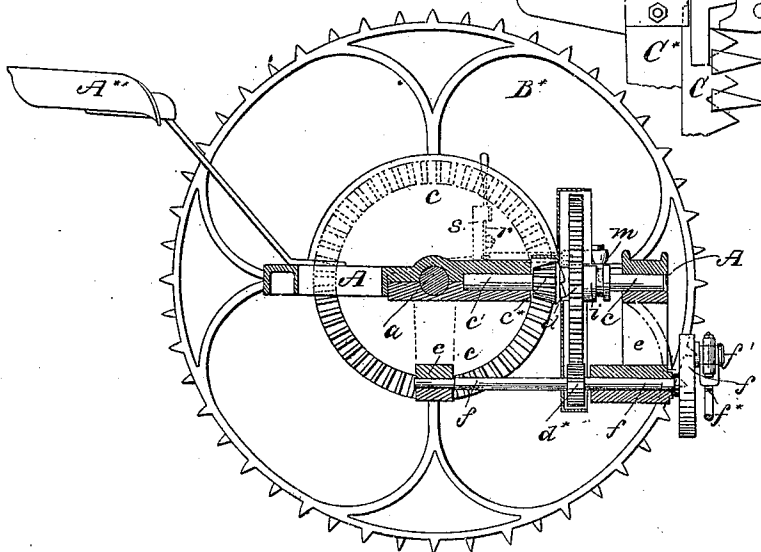


Fig. 2.



Witnesses:

Mooney
a little

Inventor:

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United States Patent Office.

JOHN F. CODDINGTON, OF BOUND BROOK, NEW JERSEY.

Letters Patent No. 79,551, dated July 7, 1868.

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, JOHN F. CODDINGTON, of Bound Brook, in the county of Middlesex, and State of New Jersey, have invented certain new and useful Improvements in Harvesters; 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 portion of this specification, in which—

Figure 1 is a plan view of a harvester constructed according to my invention.

Figure 2 is a vertical longitudinal section of the same, taken in the line *xx* of fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

This invention consists in certain novel means, whereby the construction of harvesters may be to a certain extent simplified and cheapened, and whereby a more facile and efficient operation may be secured than has hitherto been found practicable in mowing and reaping-machinery.

To enable others to understand the construction and operation of my invention, I will proceed to describe it with reference to the drawings.

The shape and configuration of the cast-metal main frame *A* of the machine are shown more fully in fig. 1, three of the corners of this frame being rounded, while the fourth, indicated at *a**, is extended forward, with its two outer edges at right angles to each other, all as represented in fig. 1, just mentioned. This construction of the main frame renders it very compact and strong, and capable of being very easily manufactured.

This frame is further provided with an inner longitudinal portion at or near its centre, which serves to support the seat *A***, and to furnish a journal-bearing for the rear end of the shaft *c'*, which carries the spur-wheel *d*, and bevel-pinion *e''*, in range with and at right angles to the axle *a*. An opening is provided at one of the rear corners of the main frame, and in this opening is placed the tool-box *B*, the outer side of which is of semicircular form, to correspond with the surface of the corner at which it is situated. By arranging the tool-box in this position, it is not only rendered very convenient of access from the driver's seat *A***, but is also caused to occupy space not required for other purposes. Passing transversely through the main frame is the driving and supporting-axle *a*, furnished at its ends with the wheels *B**, connected therewith by pawls and ratchets, in any ordinary or suitable manner; also provided upon the axle *a*, and working through an opening formed at or near one side of the main frame, is a bevel-wheel, *e*, which gears with a bevel-pinion, *e''*, arranged forward of the bevel-wheel just named, and upon a shaft, *c'*, which is situated at right angles to the axle, and works in suitable bearings provided upon the under side of the main frame. Placed loose upon the shaft *c'*, is a spur-wheel, *d*, to which a limited movement upon the shaft may be given by means hereinafter presently described. The inner sides of the pinion *e''* and the spur-wheel *d* are so formed as together to constitute a clutch, which insures the rotation of the spur-wheel by that of the pinion, when the two are brought together and the machine is drawn along.

Projecting downward from the main frame *A*, are two vertical hangers, *e*, formed at their lower ends with bearings, which support a horizontal shaft, *f*, arranged underneath and parallel with the shaft *c'*, and having attached thereto a spur-pinion, *d**, which gears into the spur-wheel *d*. Furthermore, at the forward end of this shaft *f* is provided a crank, *f'*, which, by means of the pitman *f**, operates the sickle *C* on the finger-bar *C**, the latter being thus actuated, as the machine is drawn along, by the power transmitted from the axle *a*, through the several gear-wheels and pinions just hereinbefore described.

By thus arranging the sickle-driving system of gearing wholly in front of the axle, and at one side of the main frame, the gearing is brought into a very compact condition, and also enabled to act with very great directness and consequent efficiency in operating the sickle, as just set forth; and furthermore, the shaft *f* carrying the crank *f'* and other pinion *d**, being arranged directly underneath the shaft *c'*, any lateral movement of such crank-shaft, which may occur from the wearing of its bearings, is prevented from causing the pinion *d** to either jam into or be brought away from the spur-wheel *d*, the position of the teeth of the pinion *d**, in case of such lateral movement on the part of the crank-shaft, being but slightly changed with reference to

those of the spur-wheel. The hub *i*, at the forward side of the spur-wheel, is formed with a circumferential groove, into which extends the forked end of an elbow-lever, *m*, which operates to clutch or unclutch the spur-wheel with or from, as the case may be, the pinion *c**, by moving such spur-wheel longitudinally upon its shaft. The elbow-lever *m* has its innermost arm formed of a spring, *m**, and connected with the lower end of an upright lever, *r*, pivoted to a short upright standard, *s*, at the side of the main frame, in such manner that by moving such lever in one direction, it will operate the elbow-lever *m* to bring the spur-wheel *d* away from the bevel-pinion *c**, to stop the movement of the sickle, and when moved in the opposite direction will bring the spur-wheel inward to clutch with the pinion, to insure the driving or operation of the sickle, as hereinbefore explained. The lever *m* is retained in either position by fitting into notches *a*'', provided at the top or upper end of the standard, so that by the interposition of the spring *m**, the lever *r* may be moved at a time when the clutch will not yield, owing to the tension of the sickle, and said lever having been so moved, the moment the crank-pin arrives at its dead-centre, the wheel will be thrown out of gear by the action of said spring.

Projecting laterally from the corner or portion *a** of the main frame, and in front of the adjacent wheel *B**, is an extension, *r**, extending back from which to the outer end of the axle *a*, is a bar, *s**. The finger-bar *C** is furnished at its inner extremity with two arms *a*, which are pivoted to the lower ends of vertical sliding bars *E*, which work through suitable sockets *r*', formed upon the bar *s**, the sliding bars being prevented from dropping out of the sockets by pins *r*'' passing through holes in their upper ends; this mode of connecting the finger-bar with the main frame, enabling the former to readily adapt itself to the surface of the ground when the machine is in use. Pivoted to the bar *s**, on a pivot longitudinal therewith, is a lever, *F*, the lower end of which is connected by a chain, *w*, with the inner end of the cutter-bar, and the upper end of which has attached to it one extremity of a chain, *w**, which passing inward and downward under a pulley, shown in dotted outlines at *w*', pivoted under the part *a** of the main frame, is attached to the arc-shaped lower portion *y* of a lever, *G*, in such manner that by forcing backward the lever *G*, the chain *w**, acting through the lever *F* and chain *w*, will lift or raise the finger-bar into the vertical or nearly vertical position desirable when the machine is not in use. The sickle *C*, when the finger-bar is in this vertical position, is prevented from slipping longitudinally from the finger-bar by a small transverse sliding piece, *z*, working in a transverse guide at the inner end of the finger-bar, and capable of being pushed inward past the inner end of the sickle, before lifting the finger-bar, to secure the result just mentioned.

What I claim as my invention, and desire to secure by Letters Patent, is--

1. The arrangement of the shaft *c*', carrying the bevel-pinion *c**, and spur-wheel *d*, and the shaft *f*, furnished with the spur-pinion *d**, and crank *f*', at that part of the main frame in front of axle, and between the wheels *B**, and operating in connection with the bevel-wheel *c*, on the axle, and the pitman *f** of the sickle, substantially as and for the purpose specified.
2. The elbow-lever *m*, constructed with a spring or yielding arm, *m**, for operating the sliding-clutch wheel *d*, substantially as set forth.
3. The arrangement of the elbow-lever *m*, circumferentially grooved hub *i*, of the bevel-wheel *c*, lever *r*, and standard *s*, substantially as and for the purpose specified.
4. The transverse sliding piece *z*, arranged at the inner end of the finger-bar *c**, and in relation with the sickle *C*, substantially as and for the purpose specified.

JOHN F. CODDINGTON.

Witnesses:

J. W. COOMBS,
A. LE CLERC.