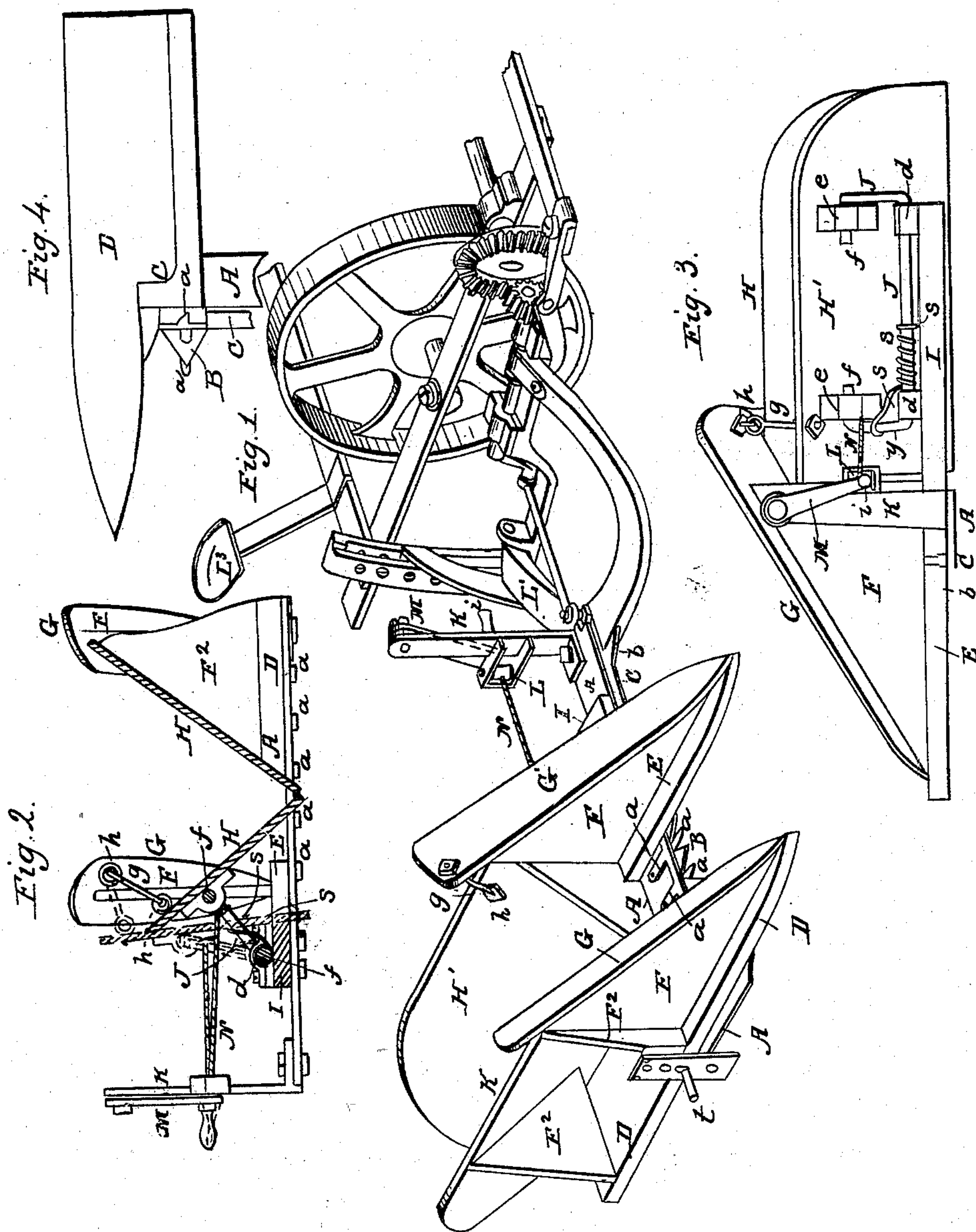


S. JOHNSTON.

Corn Harvester.

No. 36,848.

Patented Nov. 4, 1862.



Witnesses:
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UNITED STATES PATENT OFFICE.

SAMUEL JOHNSTON, OF BUFFALO, NEW YORK.

IMPROVEMENT IN CORN-HARVESTERS.

Specification forming part of Letters Patent No. 36,848, dated November 4, 1862.

To all whom it may concern:

Be it known that I, SAMUEL JOHNSTON, of Buffalo, in the county of Erie and State of New York, have invented a new and useful Corn-Harvesting Attachment for Reapers and Mowers; 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, forming part of this specification, in which—

Figure 1 is a perspective view of my attachment shown connected to a reaper and mowing-machine draft-frame. Fig. 2 is a vertical transverse section of the attachment, seen from the rear thereof. Fig. 3 is an inner side view of the same. Fig. 4 is a plan of the outer platform, D, &c.

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

The nature of my invention consists in a novel construction and operation of one section of the platform or corn-receiver; also, in a combination of the same with the two dividers and the cutting apparatus; and likewise in an adaptation of the finger-beam and a crank-arm on the same, whereby the corn-harvesting attachment is combined with and supported by the inner shoe of the reaper and mower, and its movable section of platform or receiver is operated from the driver's seat of the reaper and mower draft-frame.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is a finger-beam with guard-fingers *a a* on the outer half, or thereabout, of its length.

B is a scalloped sickle or cutter, with the inner half, or thereabout, of the length of the knife-rod C left blank, or without knives upon it, except at its inner extremity, where a single blunt knife, *b*, is attached.

D is a horizontal spear-pointed platform, with right-angle shoulder *c* running from its inner side, as represented.

E is another similar platform, but shorter, and without the shoulder. The platform D bolts firmly upon the outer end of the finger-beam, while E bolts firmly upon the finger-beam at a point near the center of its length.

F F' are triangular-shaped supports extending up from the center of each of the platforms. Two other similar-shaped supports, F²,

but running at right angles to the supports F or F', extend up from the outer platform, D, as represented. The upper inclined edges of the supports F F' are beveled inward, and on these beveled inclined edges flat spear-pointed directing-boards G G' are fastened, so as to stand slightly oblique to the straight path of the machine.

On the supports F² F², which are set a suitable distance apart—one of them just in rear of the support F and the other some distance in rear thereof—a flat-surfaced board, H, is firmly fastened, its position being inclined, and its lower edge extending slightly below the finger-beam and standing about central between the directing-boards G G'. In order to make with this board H and another, H', of similar form, a triangular-shaped receiver for the cut corn, I attach a strong timber, I, to the finger-beam at a point lateral to the inner platform, E, and extend said timber some distance back from the finger-beam. On this timber two journal-boxes, *d d*, are mounted, similar boxes, *e e*, being provided on the under side of the board H'. In the boxes *d d* a swinging angular support, J, is hung, and held in an inclined position by a spring, *s*, and to the right-angle ends or journals *f f* of the support J the board H' is connected through the boxes *e e*, as shown. The board H' is also further supported or suspended by means of a link, *g*, and eyes *h h*. The board thus hung occupies an inclined position, and its lower inner edge abuts against the board H, near the lower inner edge thereof, and is free to be moved toward and from the board H. To move this board from the draft-frame of the harvester, I arrange a vertical standard, K, on the extreme inner attaching end of the finger-beam, and provide on the same a friction-roller, L, and a vibrating crank-arm, M, with its pin *i* shaped to receive the driver's foot. From the lower end of the crank-arm, in contact with the friction-roller, a cord or chain, N, extends to the front arm of the swinging support J and fastens thereto, as represented.

The apparatus thus constructed is bolted by the extended inner end of the finger-beam to a hinge-arm, L', of a harvester-frame, and the blunt tooth *b* of the knife-rod C passes into a horizontal slot of the inner shoe, L², of the

same, as shown. The parts thus united to a grain-harvester frame can be operated just as well as though they were attached to a frame especially constructed for and sold along with it; and, besides this, the crank-arm is brought in such a position relatively to the driver's seat L^3 that the movable part H' of the corn-receiver can be operated by the driver's foot; and, furthermore, the inner shoe of the grain-harvester frame acts as a support to the knife-rod at the point where the pitman attaches. Were it not for this support, the knife-rod would be liable to spring up and become injured during the operation.

The outer side of the corn-harvester platform is provided with an axle, t , on which a small wheel is to be placed for the support of the machine at that point.

The guards on the finger-beam should be very little, if any, longer than the knives, and should have a blunt point.

From the foregoing description, in connection with the drawings, it will be evident that, as the machine moves forward, the inclined beveled directors or gatherers will straighten up the corn and insure its presentation to the cutting apparatus in a proper condition for being cut. They also will give it a proper direction in falling back, and thus insure its falling regularly into the cradle or receiver.

It further will be seen that when a sufficient quantity has been cut and deposited into the receiver, the driver can, by putting his foot upon the pin of the crank-arm and pressing forward, discharge the same in a bundle ready for binding, the pressure of the foot upon the crank-arm overcoming the resistance of spring s and causing the swinging support to assume a vertical position, the assuming of which position causes the movable part of the receiver to move outward and upward until it stands nearly vertical, as illustrated in red lines, the vertical position being produced by the link g , which is connected by eyes to the inner gathering device, and to the upper side of the movable board H' . As soon as the corn is discharged and the foot of the driver withdrawn, the spring s causes the swinging support and link to move the board H' up-

ward and inward and downward until the cradle or receiver is again closed and ready for another supply of cut corn. This action of the spring is due to the fact of its being fastened in the timber I , coiled round the swinging support, and fastened in one of the arms thereof, as represented.

It is important that the movable section should have the motions described in order that the corn may discharge quickly and regularly, and that the discharged bundles shall be cleared by the movable section as it closes above it.

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

1. The combination of the two gatherers, constructed as described, with the cutting apparatus, and the receiver with inclined sides, substantially as and for the purpose set forth.

2. The construction and arrangement of the two inclined oblique wings of a corn-harvester, as herein described.

3. Imparting a swinging outward and upward movement to the movable section of the receiver as it opens to discharge the corn, and a swinging upward and inward motion thereto as it closes, substantially as set forth.

4. The special means set forth for producing said motions of the movable sections of the receiver.

5. In the organization of a corn-harvester, substantially as described, to be operated by the gearing of a grain-harvester machine, I claim extending the finger-beam and knife-rod, without guard-fingers or knives on the extended portion beyond the inner wing of the corn-harvester, so that it may be practically attached to the supporting and driving mechanism of the grain-harvester frame, and when thus attached its finger-beam and knife-rod shall be sustained by the inner shoe of the grain-harvester, and its mechanism for operating the movable section of the corn-receiver shall be in position to be operated by the driver, substantially as herein described.

SAMUEL JOHNSTON.

Witnesses:

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