

(No Model.)

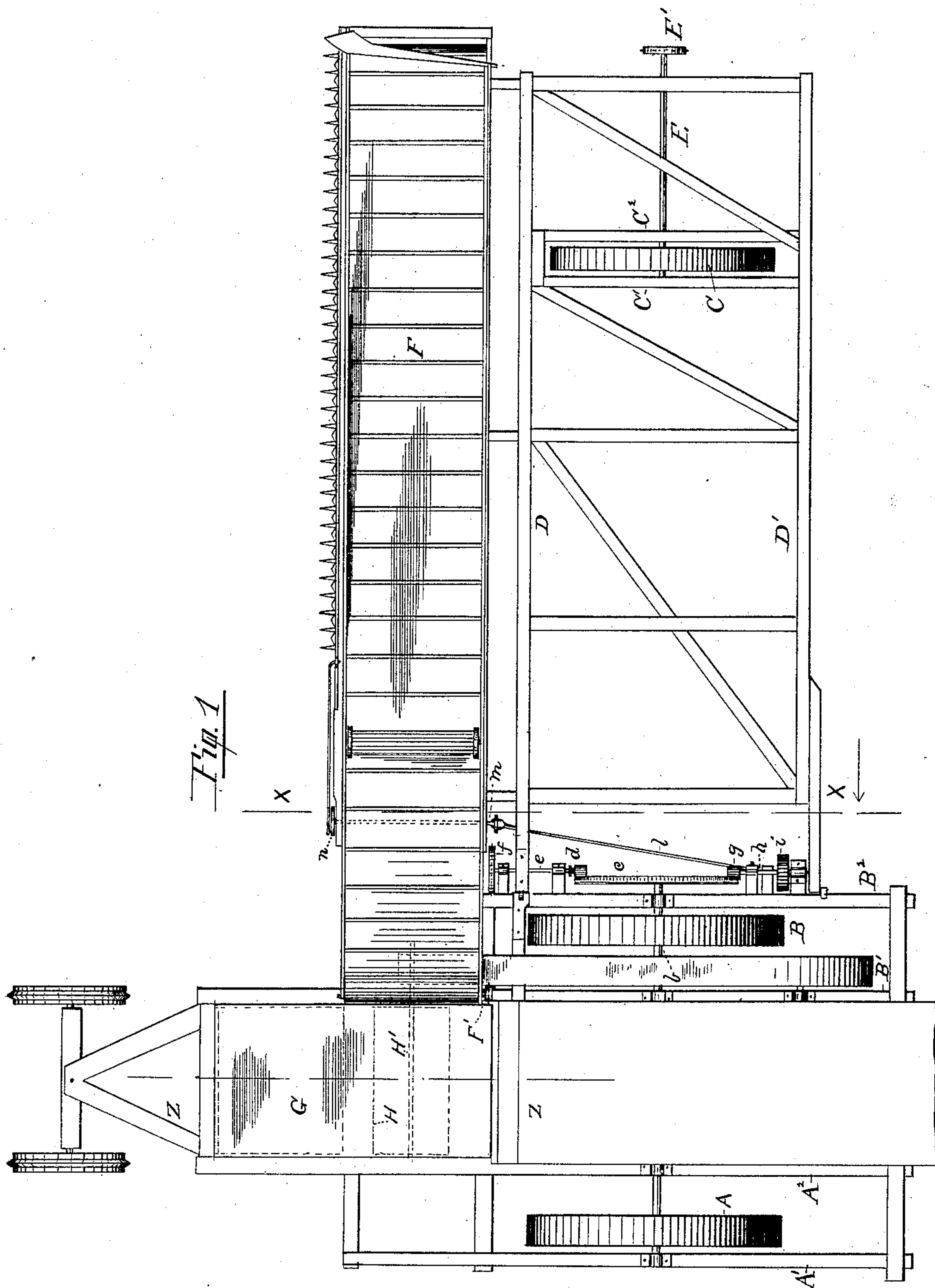
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D. YOUNG.

HARVESTER.

No. 353,344.

Patented Nov. 30, 1886.



Witnesses

Eliza B. Stowe,

Alfred B. Grandwell

Inventor.

David Young.

By Joshua B. Webster Atty.

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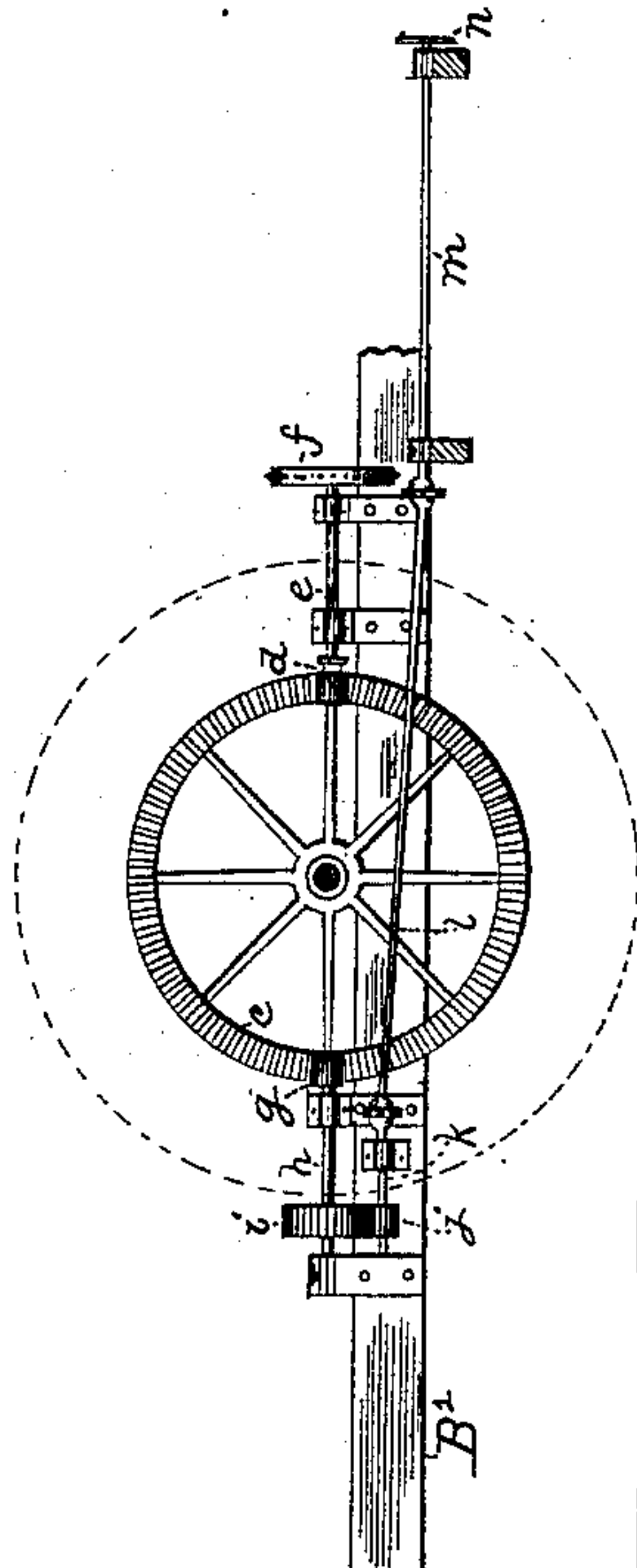
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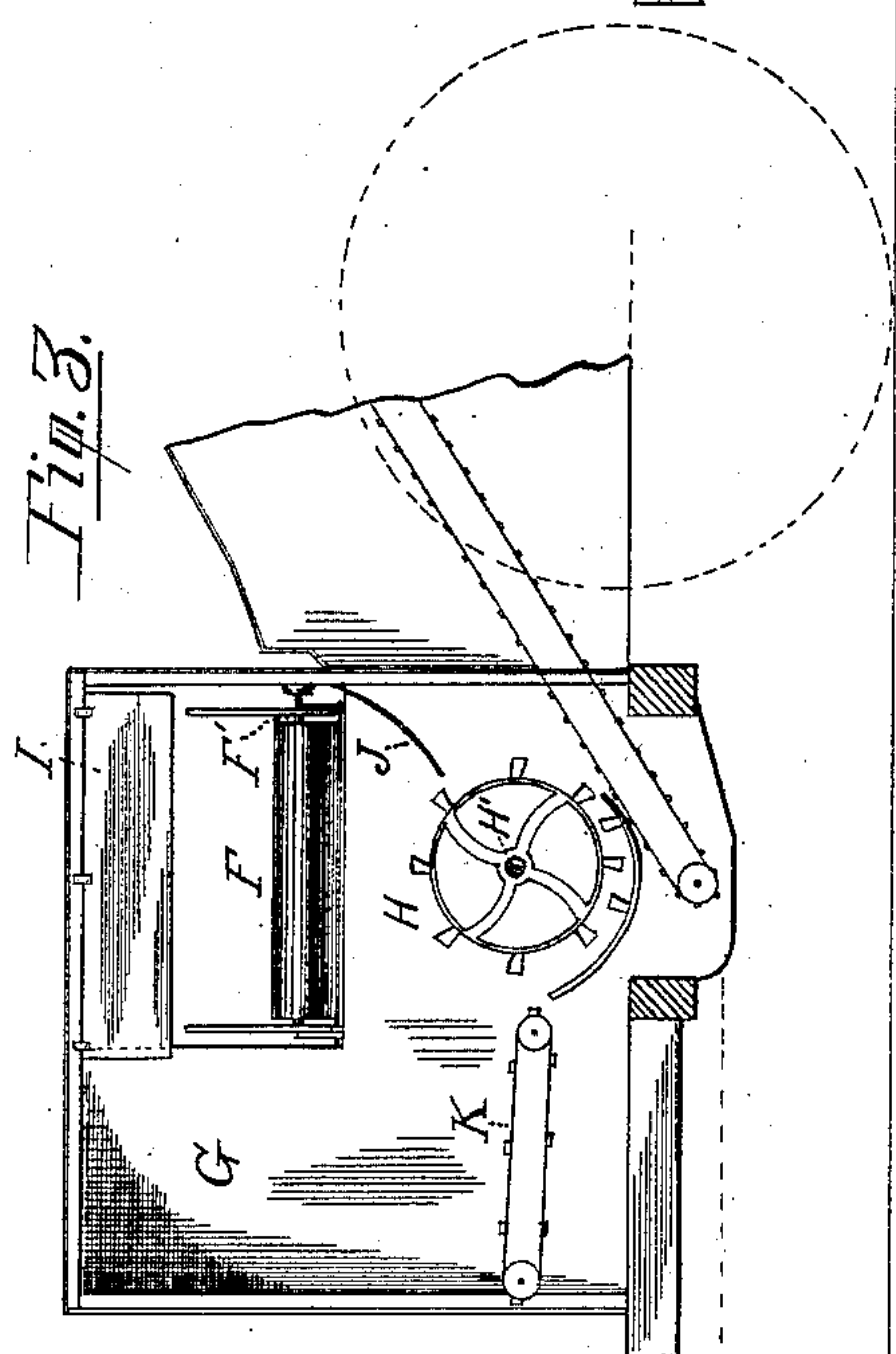
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*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

DAVID YOUNG, OF STOCKTON, CALIFORNIA.

## HARVESTER.

SPECIFICATION forming part of Letters Patent No. 353,344, dated November 30, 1886.

Application filed October 16, 1885. Serial No. 180,043. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID YOUNG, a citizen of the United States, residing at Stockton, in the county of San Joaquin and State of California, have invented certain new and useful Improvements in Harvesters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in harvesters; and it consists in, first, a combined header and thrasher, the thrashing-machine mounted upon suitable bearings, the wheels having the header-frame hinged to and projecting from one side, with its outer end supported upon a single wheel journaled in the longitudinal beam of the header-frame, a supplemental frame containing the draper and attached to the front of the main header-frame, a connecting-gearing actuating the sickle and draper, comprising the axle, beveled gear-wheel, pinions which mesh with the bevel gear-wheel, shafts upon which these pinions are placed, sprocket-wheel placed upon one of the shafts, a gear-wheel placed upon one of the shafts, provided with pinions, a second shaft, tumbling-rod, the shaft connected to one end of the tumbling-rod, and the crank-pulley; second, the combination of the feeding-box, feeder, cylinder, board, gate, and conveyer, the latter being in a direct line with the shaft and the cylinder, and discharging the grain directly upon the cylinder, as will be more fully described hereinafter.

Figure 1 is a plan of the machine. Fig. 2 is a section through line  $xx$ , Fig. 1, showing the gearing which actuates the sickle and draper. Fig. 3 is a vertical section of the feeding-box and cylinder, &c., through line  $zz$ , Fig. 1.

A and B are the main bearing-wheels, mounted in a suitable frame-work, consisting of the longitudinal beams  $A'$  and  $A''$ , to which are secured the journal-bearings of the axle of the wheel A, and of the longitudinal beams  $B'$  and  $B''$ , to which are secured the journal-bearings of the axle  $b$  of the wheel B. These

longitudinal beams have suitable cross-beams at front and rear bolted or otherwise secured to them. The front end of this frame-work is supported by guide-wheels, from the axle of which the tongue (not shown) extends for the purpose of attaching a team for drawing it about the field.

To the above frame-work is secured the thrashing and separating mechanism in its various details.

The header portion of the apparatus consists of a frame-work composed of main cross-beams  $D D'$ , joined together by suitable longitudinal beams, and having the inner ends of the beams  $D$  and  $D'$  hinged to the side of the beam  $B''$  of the thrasher-frame, so that the outer end of the header-frame may move up and down about the hinges to suit uneven grounds over which the machine may pass.

The outer end of the header-frame is supported upon a wheel, C, whose axle E has its journal-bearings secured to beams  $C'$   $C''$ . The axles of the wheels A B C are all in a direct line, so that by such construction the frame-work of the machine may be more compact and the machine make necessary turns in a smaller space.

The draper F is located, as usual, in a suitable frame-work suspended from the front of the beam D of the frame of the header, the cutting and finger bar being parallel with its front. The cut grain is deposited upon the draper, and is conveyed and discharged directly upon the cylinder H, the shaft  $H'$  of which is in a direct line with the draper, and is located within a feeding hopper or box, G, at the front of the trunk which contains the works of the separator and thrasher.

A self-feeder, K, is located in front of the cylinder within the feeding-box G, and aids in supplying the straw to the cylinder as it is delivered from the draper. A guide feeding-board, J, is located at the rear of the cylinder within the box G, and deflects the grain toward the front of the cylinder, and prevents it falling back of it.

The cylinder, it will be observed, is of what is called an "undershot" pattern. As the grain enters the feeding-box G, its flow from the draper is controlled by a swinging horizontal gate, I, suspended from the roof of the



hopper G over the discharging end of the draper. The thrashed grain is conveyed rearwardly after leaving the cylinder by suitable belts and apparatus, and the process of  
5 separating, cleaning, sacking, &c., continued in any desired manner.

The cutting and conveying mechanism is driven from the axle *b* of the wheel B. A large bevel gear-wheel, *c*, is fixed to the axle  
10 *b*, and engages at its front with a pinion, *d*, upon a shaft, *e*, having a sprocket-wheel, *f*, fixed at its forward end, and which may be connected by a chain belt with a sprocket-wheel on the end of a shaft, *F'*, which turns  
15 the draper F. At its rear the gear *c* engages with a pinion, *g*, fixed upon the front end of a shaft, *h*, upon the rear end of which is fixed a spur-gear wheel, *i*, engaging with a pinion, *j*, beneath it, fixed to a shaft, *k*, which is suit-  
20 ably connected by a tumbling-rod, *l*, with a shaft, *m*, beneath the draper F, which has a crank-pulley, *n*, upon its end, which, by a suitable connecting-pitman, actuates the knife.

The reel is driven by a sprocket-wheel, *E'*,  
25 upon the outer end of the shaft E of the wheel C.

By this simple combination the entire header mechanism is actuated directly from the large wheel *c*, insuring a steady and regular motion.  
30 By the use of the gear-wheel *i* a quicker motion is given to the sickle than is required by the draper, whose motion is governed alone by the pinion *d* engaging with the gear-wheel *c*.

I have not shown the gearing, shafting, and  
35 pulleys which actuate the thrasher and separator works, as any desired style may be employed, although I preferably use that shown

in my application for a patent upon a traveling thrasher filed December 29, 1884, and bearing Serial No. 151,422.

I do not desire to limit myself to the precise construction and arrangement of the parts hereinbefore set forth, as it is obvious that many modifications may be made therein without departing from the spirit of my invention.

Having thus described my invention, I claim—

1. In a combined header and thrasher, the thrashing-machine mounted upon suitable bearing-wheels having the header-frame  
50 hinged to and projecting from one side, with its outer end supported upon a single wheel journaled in the longitudinal beams *C' C'* of the header-frame, a supplemental frame containing the draper attached to the front of  
55 the main header-frame, and connecting-gearing actuating the sickle and draper, comprising the axle *b*, bevel gear-wheel *c*, pinion *d*, shaft *e*, sprocket-wheel *f*, pinion *g*, shaft *h*, gear-wheel *i*, pinion *j*, shaft *k*, tumbling-rod *l*,  
60 shaft *m*, and crank-pulley *n*, substantially as set forth.

2. The combination, substantially as described, of the feeding-box G, feeder K, cylinder H, board J, gate I, and conveyer F, the  
65 latter being in a direct line with the shaft *H'* of the cylinder H, and discharging the grain directly upon the cylinder.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID YOUNG.

Witnesses:

ELIHU B. STOWE,  
JOSHUA B. WEBSTER.