

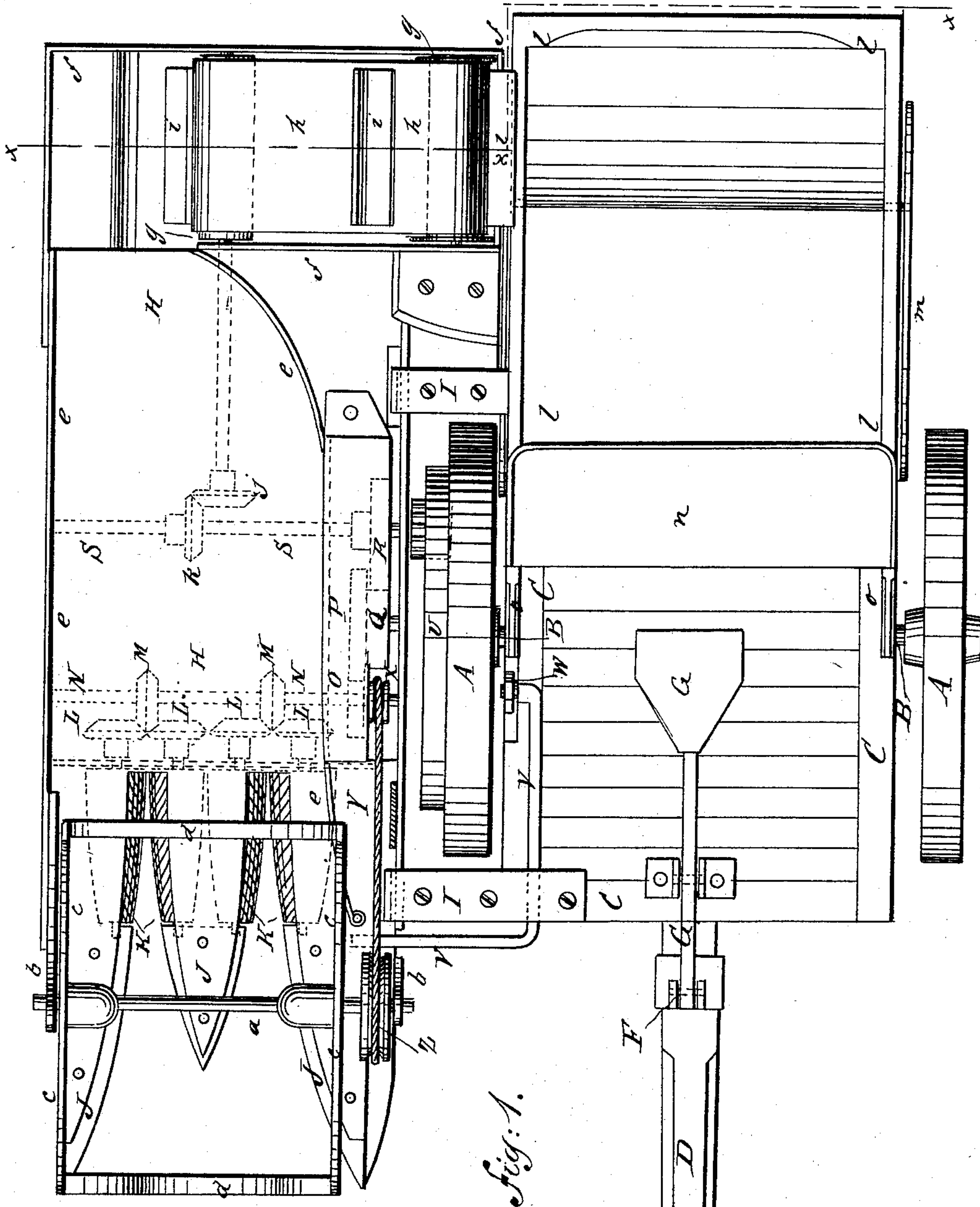
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4 Sheets—Sheet 1.

S. E. FERGUSON.
CORN HARVESTER.

No. 348,730.

Patented Sept. 7, 1886.



WITNESSES:

Chas. Vida
C. Pedgwick

INVENTOR:

S. E. Ferguson
BY *Munn & Co*
ATTORNEYS.

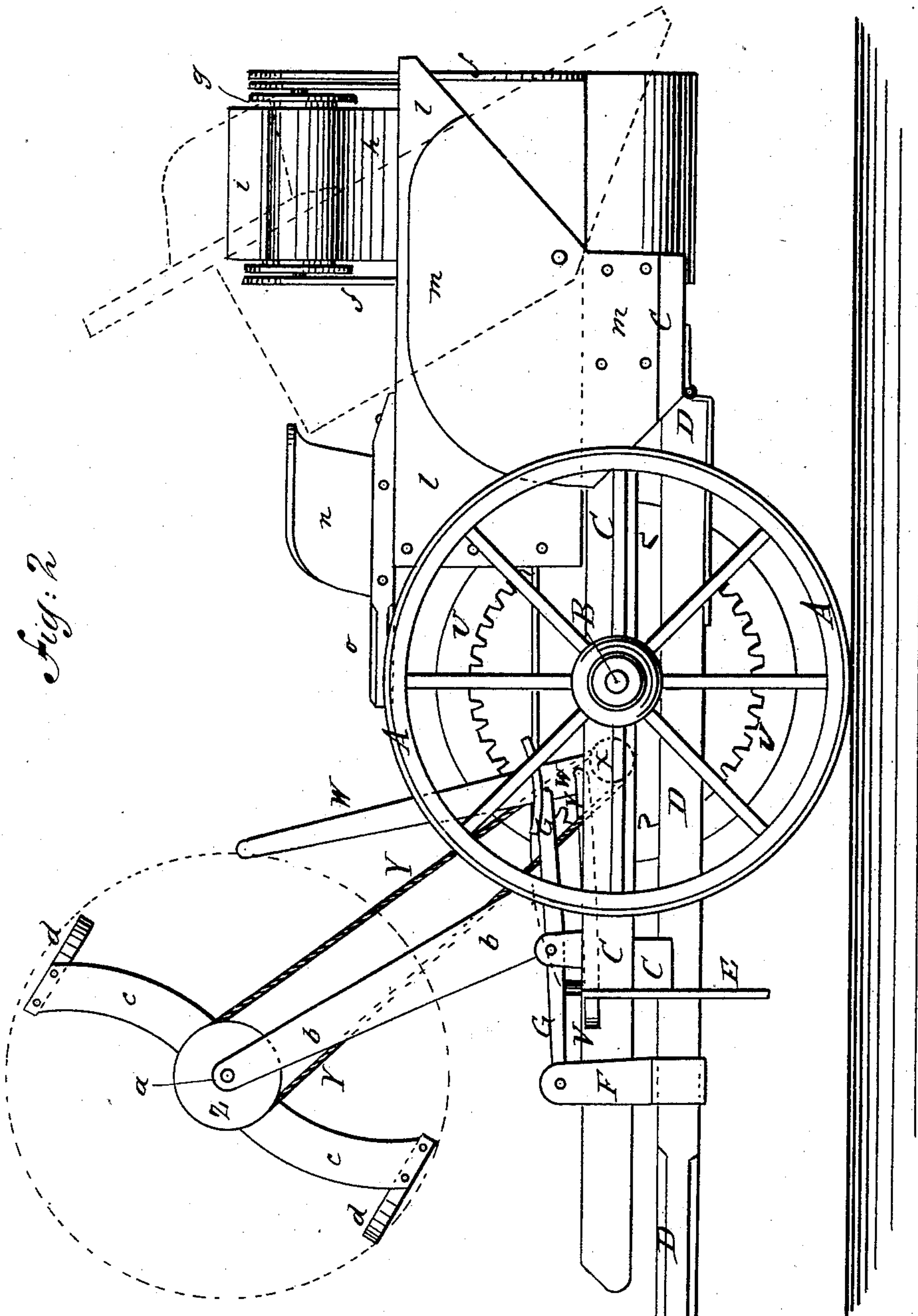
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CORN HARVESTER.

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Patented Sept. 7, 1886.



WITNESSES:

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C. Sedgwick

INVENTOR:

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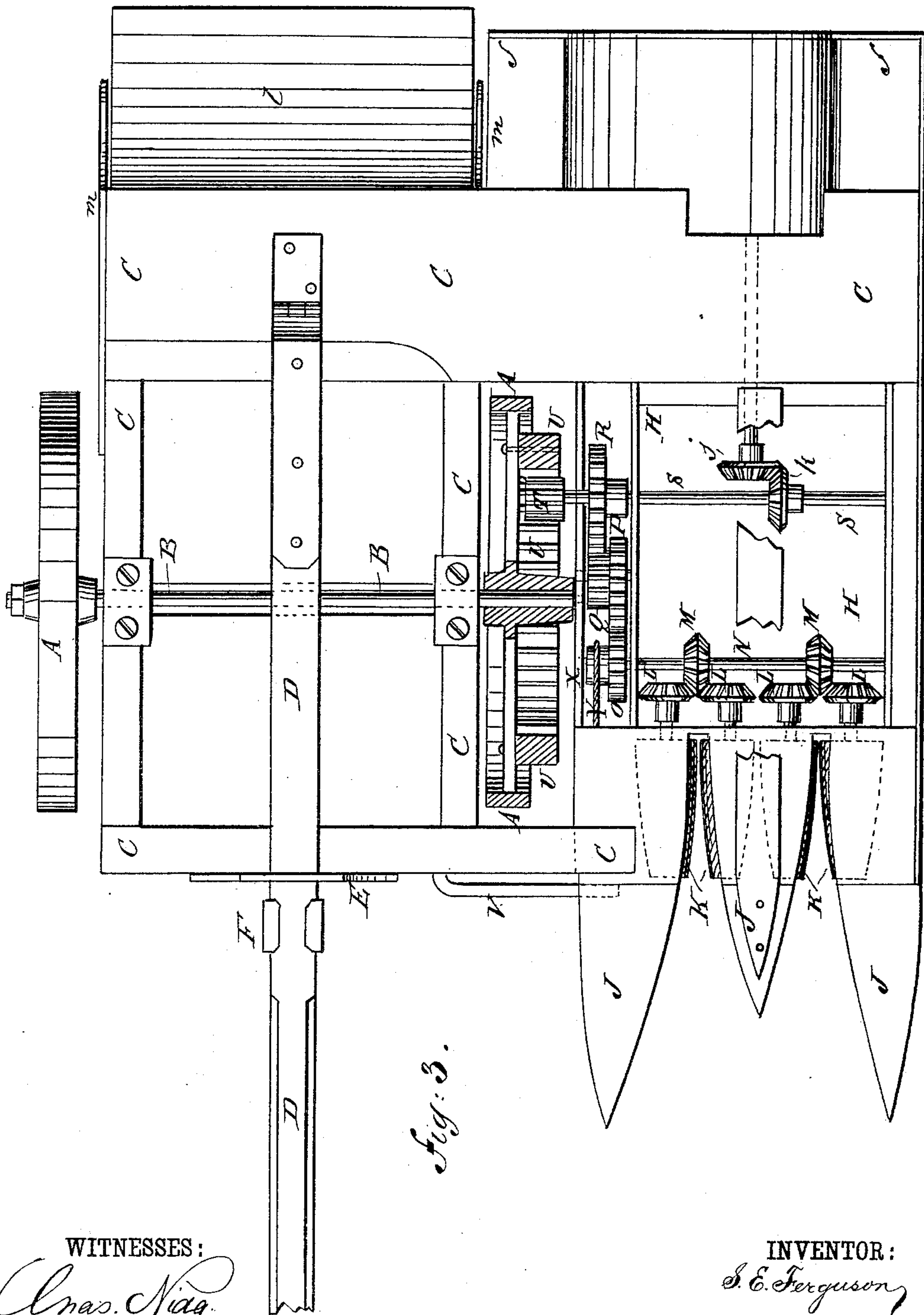
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CORN HARVESTER.

No. 348,730.

Patented Sept. 7, 1886.



WITNESSES:
Chas. Nida
C. Bedquick

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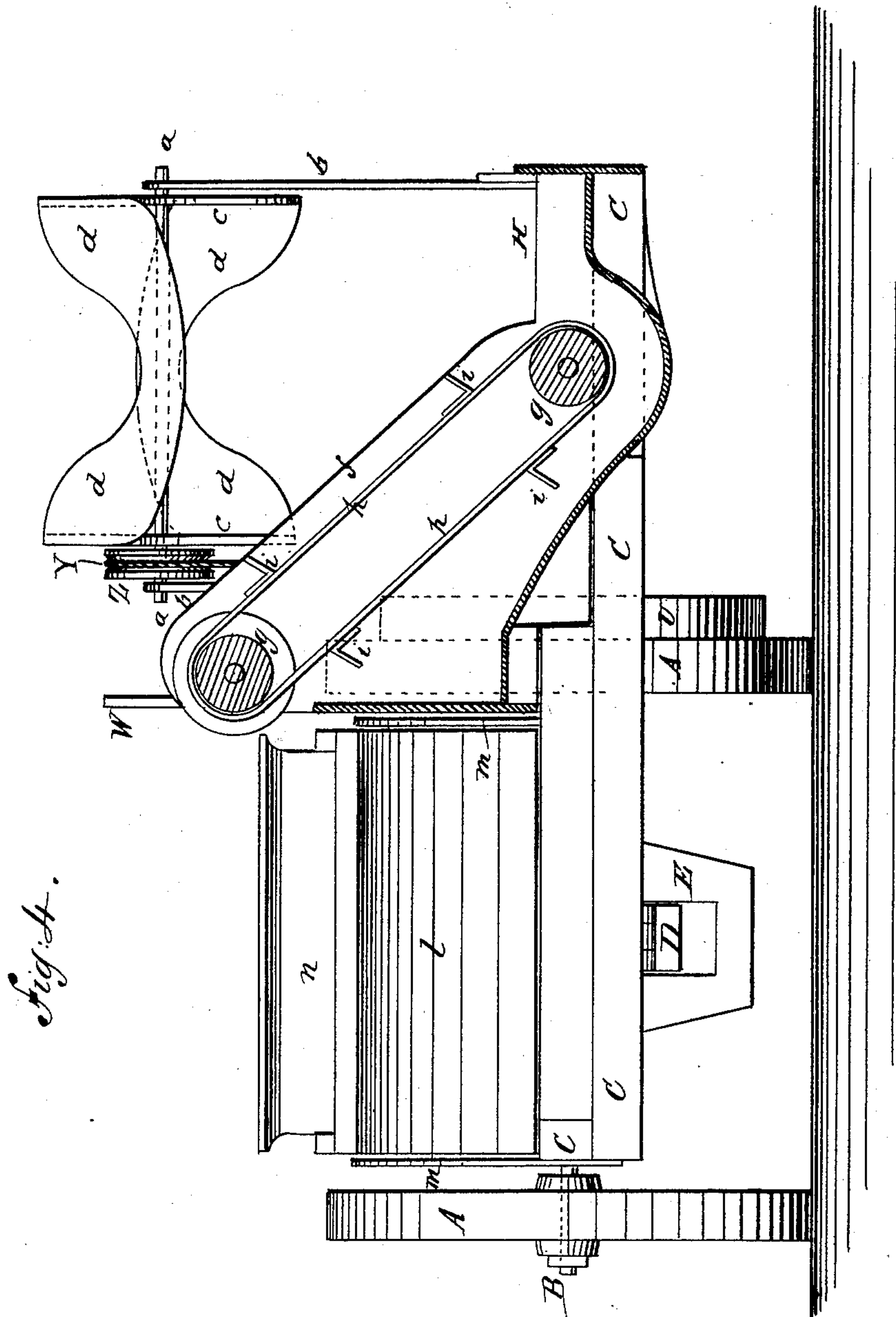
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S. E. FERGUSON.
CORN HARVESTER.

No. 348,730.

Patented Sept. 7, 1886.



WITNESSES:

Chas. Nida
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INVENTOR:

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UNITED STATES PATENT OFFICE.

SYLVESTER E. FERGUSON, OF EUREKA SPRINGS, ARKANSAS.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 348,730, dated September 7, 1886.

Application filed August 11, 1885. Serial No. 174,118. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER E. FERGUSON, of Eureka Springs, in the county of Carroll and State of Arkansas, have invented
5 a new and useful Improvement in Corn-Harvesters, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification,
10 in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of one of my improved corn-harvesters. Fig. 2 is a side elevation of the same. Fig. 3 is a bottom view
15 of the same, partly in section and part being broken away. Fig. 4 is a rear elevation of the same, partly in section, through the line *x x*, Fig. 1.

The object of this invention is to provide
20 corn-harvesters constructed in such a manner as to remove the ears from the stalks and deposit them in a receiving-box as the machine is drawn along the rows of corn, the stalks being left in the field.

25 The invention consists in the construction and combination of various parts of the machine, as will be hereinafter fully described, and then pointed out in the claim.

30 A represents the drive-wheels, the axle B of which revolves in bearings attached to the frame C.

35 To the rear cross-bar of the frame C is hinged the rear end of the tongue D, by means of which the machine is drawn and guided. The tongue D passes through a vertical guide-slot in a bar or plate, E, attached to the front cross-bar of the frame C.

40 To the tongue D, at the forward side of the front cross-bar of the frame C, is attached a short standard, F, to the upper end of which is pivoted the forward end of a foot-lever, G. The foot-lever G is fulcrumed to a support attached to the front cross-bar of the frame C, and its rear end extends back into such a position that it can be readily reached and operated by the driver from his seat to raise and lower the forward end of the frame C.

45 H is a platform, the rear end of which rests upon the extended rear cross-bar of the frame C. The inner side of the forward part of the
50 platform H rests upon the extended end of the

forward cross-bar of the frame C. The platform H is kept in place by the guide-bars I, attached to the frame C, and the outer ends of which are bent downward and engage with the
55 inner bar of the frame of the platform H.

To the forward end of the platform H are attached guide-fingers J. The rear parts of the guide-fingers J are made hollow, and within them are journaled the cone-like iron rollers
60 K, the faces of which are corrugated spirally. The sides of the rollers K project beyond the sides of the guide-fingers J, and are at such a distance apart as to grasp the stalks that enter the spaces between the said guide-fingers and
65 draw the said stalks downward, pinching off the ears. The rollers K are arranged in pairs, a pair for each space between the fingers J, and to the rear journal of each roller K is attached a beveled gear-wheel, L. The gear-
70 wheels L of each pair of rollers K, mesh into the teeth of a double-beveled gear-wheel, M, so that the rollers of each pair will be revolved in opposite directions and toward each other, so as to draw the stalks downward between
75 them. The double-beveled gear-wheels M are attached to a shaft, N, journaled to the frame of the platform H, and to it, near its inner end, is attached a small gear-wheel, O, the teeth of which mesh into the teeth of a larger
80 gear-wheel, P, journaled in the said frame of the platform H. With the large gear-wheel P is rigidly connected a smaller gear-wheel, Q, the teeth of which mesh into the teeth of a larger gear-wheel, R, attached to the shaft S. 85
The shaft S revolves in bearings in the frame of the platform H, and to its inner end is attached a small gear-wheel, T, the teeth of which mesh into the teeth of the internally-toothed gear-wheel U, attached to the drive-
90 wheel A, so that the rollers K will be revolved by the revolution of the said drive-wheel A. By this construction of gearing the rollers K will be driven at great speed by the slow revolution of the drive-wheel A. 95

To the forward inner corner of the frame of the platform H is rigidly attached the end of a bar, V, which extends along the front bar of the frame C, is bent to the rearward at right angles, and to its rear end is pivoted the lever W. 100
The lever W is pivoted at its lower end to the frame C, and its upper end extends up into

such a position that it can be readily reached and operated by the driver from his seat. With this construction, by operating the lever W the platform H can be moved forward and back to throw the gear-wheel T into and out of gear with the gear-wheel U, to start and stop the gearing that drives the rollers K.

To the inner end of the shaft N is attached a small pulley, X, around which passes an endless belt, Y. The belt Y also passes around a larger pulley, Z, attached to the inner end of the reel-shaft *a*, which revolves in bearings in the upper ends of the posts *b*. The lower ends of the reel-posts *b* are attached to the forward corners of the platform H.

To the shaft *a* are attached the centers of the reel-arms *c*, the outer ends of which are connected by the reel-bars *d*. The reel-bars *d* are concaved upon their forward sides, so as to collect the upper ends of the cornstalks and force them to the rearward as the said stalks are passing into and through the spaces between the rollers K.

The platform H is designed to have a downward and rearward inclination, so that the ears of corn as they are pinched from the stalks will fall upon the said platform and slide back to its rear end. As the ears of corn slide back along the platform H, they are guided by flanges *e* to the outer part of the rear end of the said platform, where they fall into the well of the elevator.

The frame *f* of the elevator is attached to the frame C of the machine, and to the upper and lower parts of the said elevator-frame are journaled rollers *g*, around which passes an endless belt, *h*, provided with plates or carriers *i*, to take the ears of corn from the elevator-well and carry them up the elevator, the said well being so formed that the ears will be in the said well transversely of the belt *h*, so that they will be readily taken up by the plates or carriers *i*.

To the extended inner journal of the lower

roller *g* is attached a beveled gear-wheel, *j*, the teeth of which mesh with the teeth of a beveled gear-wheel, *k*, attached to the shaft S, so that the said elevator will be driven by the mechanism that drives the conical rollers K.

From the upper end of the elevator the ears of corn fall into the receiving-box *l*, which is hinged at the rear edge of its bottom to the rear cross-bar of the frame C or to guide-plates *m*, attached to the frame C, and between which the said receiving-box rests and moves. The rear side of the receiving-box *l* is inclined, as shown in Fig. 2, so that the ears of corn will readily pass out of the said receiving-box when tilted.

To the top of the forward side of the receiving-box *l* is attached the driver's seat *n*, so that the weight of the driver will assist in holding the said box in place when the machine is in use.

To the forward corners of the receiving-box *l* are attached handles *o*, for convenience in tilting the said box. With this construction, when the receiving-box *l* is filled the operating mechanism can be thrown out of gear, and the machine drawn to any desired place, and the ears discharged into any desired receiver; or the ears can be discharged in heaps in the field and afterward collected.

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

In a corn-harvester, the combination, with the frame C and the platform H, of the elevator *f g h i* and its driving mechanism, and the receiving-box *l*, hinged at its rear bottom edge and provided with handles at its top forward corners, and having the driver's seat mounted upon its top forward side, substantially as herein shown and described.

SYLVESTER E. FERGUSON.

Witnesses:

HARVEY KARNES,
GEORGE W. LYNN.