

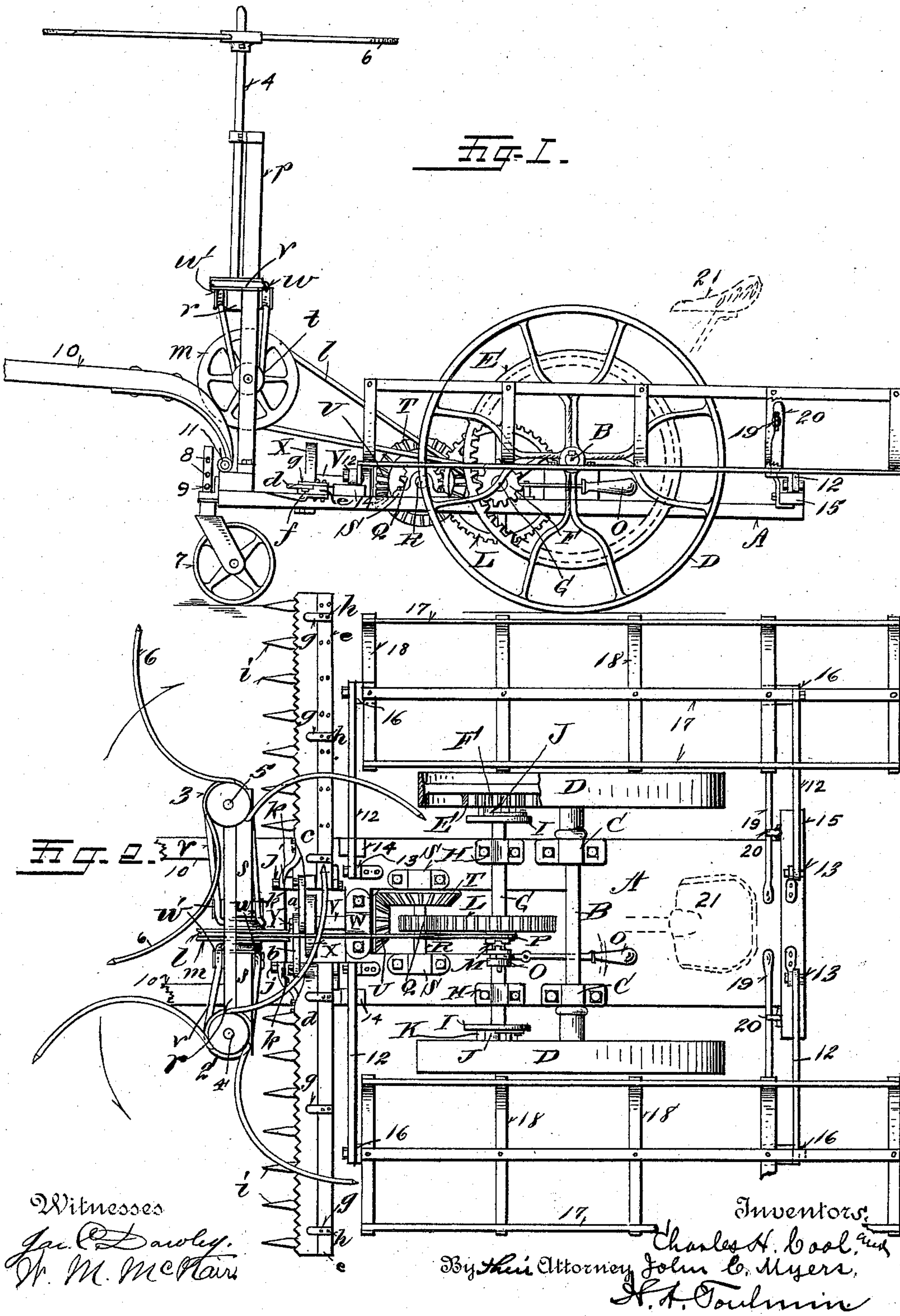
(No Model.)

2 Sheets—Sheet 1.

C. H. COOL & J. C. MYERS.
CORN HARVESTER.

No. 535,613.

Patented Mar. 12, 1895.



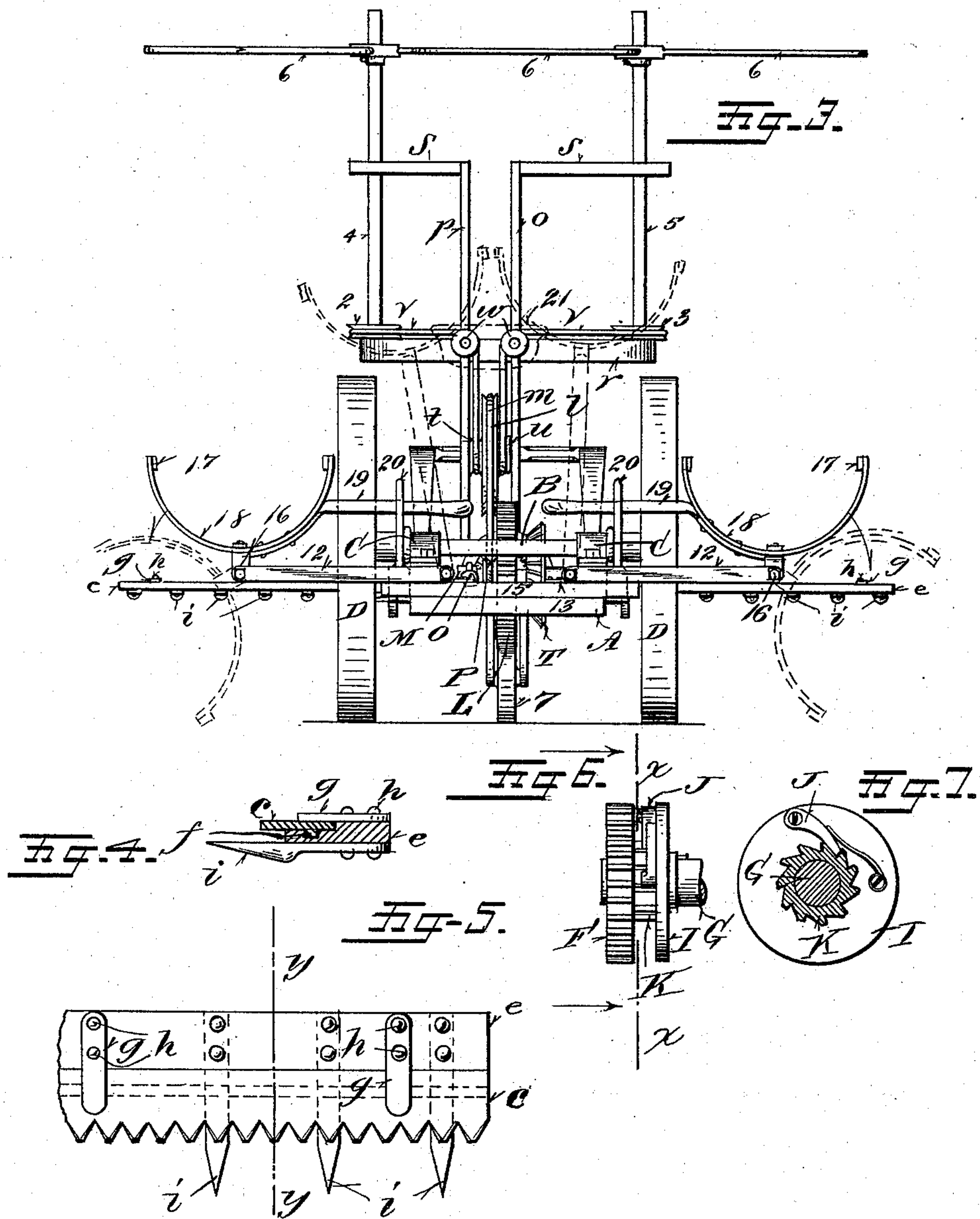
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Witnesses
Jas. P. Dawley.
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Inventors.
Charles H. Cool, and
John C. Myers.
By their Attorney,
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UNITED STATES PATENT OFFICE.

CHARLES H. COOL AND JOHN C. MYERS, OF SPRINGFIELD, OHIO.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 535,613, dated March 12, 1895.

Application filed June 27, 1894. Serial No. 515,808. (No model.)

To all whom it may concern:

Be it known that we, CHARLES H. COOL and JOHN C. MYERS, citizens of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Corn-Harvesters, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in corn harvesters, and the several peculiar features and objects which we have in view will be hereinafter fully described, and such features particularly pointed out in the claims.

15 In the accompanying drawings on which like reference letters and numerals indicate corresponding parts: Figure 1, is a side elevation of our improved machine; Fig. 2, a plan view thereof; Fig. 3, a rear elevation of the same; Fig. 4, a cross sectional view of the cutting apparatus; Fig. 5, a plan view of a portion thereof; Fig. 6, a detail elevation of the driving shaft, its pinion and clutch mechanism; and Fig. 7, a sectional view on the line 20 *x x* of Fig. 6 looking in the direction of the arrow.

25 A main frame or platform A is mounted upon an axle B by means of clips C, which axle is supported in ground wheels D. Each of these wheels carries an internal gear wheel E with which mesh pinions F loosely mounted on the driving shaft G having bearings in clips H. Keyed or otherwise secured to the shaft 30 G are disks I carrying spring-held pawls J. See Figs. 6 and 7 particularly. These pawls engage with ratchets K formed on or connected to the pinions F so that when the pinions are rotated the ratchets K press against the pawls J and rotate the driving shaft G, when 40 the machine is driven forward. When the machine is backed the ratchets K escape past the pawls J in the usual manner. A driving gear wheel L is loosely mounted on the driving shaft G but clutched and unclutched therewith by means of clutch mechanism M and a lever O. A grooved pulley P is carried by this driving gear wheel. This wheel L meshes 45 with a pinion Q on a shaft R having bearings in clips S and carrying a miter gear wheel T which meshes with a miter pinion U on the shaft V having a bearing in a clip W.

The clips S and W are supported by the frame or platform A. A disk X is carried by the shaft V and has a wrist-pin Y which operates a pitman *a*, and a pitman *b*, connected to knife bars *c* and *d* respectively, which are preferably formed, though not necessarily, each of a single blade after the fashion of a saw with suitable teeth to cut the corn stalks. 55 These cutter bars or saw blades are fitted upon a rabbeted bar *e*, grooved to receive a web or bead *f* on the lower side of the cutter-bar or saw, which acts to confine it in place. Plates *g* engage the upper surface of the cutter bar 60 or saw and assist in keeping it in place, these plates being held to the bar *e* by screws or bolts *h*. The bars *e* also carry the usual guards or fingers *i* between which the stalks enter and are cut by the cutter-bars when reciprocated through the mechanism just described. 65 70

The bars *e* are pivoted at their inner ends to the frame or platform A, by a bolt or pin *j* and eyes *k* secured to the frame or platform. 75 So held at their inner ends these bars *e* rest upon the platform to prevent them from dropping down below a horizontal position. When the machine is not in use or when driven through gates, or when packed for shipment, 80 these bars with the cutting bars or saws which they carry may be stood in a practically vertical position and made fast to some part of the machine for convenience.

Referring back to the grooved pulley P, 85 which is carried by the driving gear wheel L, it will be seen that it drives a belt *l* which runs over and rotates a grooved pulley *m*, mounted in a frame composed of two uprights *o* and *p*, with a lower cross piece *r* and upper 90 lateral branches *s*. This grooved pulley *m* carries smaller grooved pulleys *t* and *u*, over which pass belts *v*, which belts are guided by guide pulleys *w* and *w'* suitably supported by the uprights *o* and *p*. These belts *v*, of which 95 there are two, operate pulleys 2 and 3, which are respectively carried by the reel shafts 4 and 5, mounted in the cross beam *r* and the lateral branches *s*. These shafts carry reel arms 6 which are preferably somewhat curved 100 as shown so as to properly take in the standing corn stalks and draw them rearward in readiness to fall into the carriers, to be presently described. Of course, these reel arms

may be of other shape, but that illustrated is preferred. Thus it will so far have been understood that through the ground wheels D the cutter bars or saws are imparted reciprocating motion, while these reels are given rotary motion, but in contrary directions.

The forward end of the machine is supported by a suitable caster wheel 7, whose shank has a series of perforations 8, so that the height of the forward end with the platform may be varied with respect to the ground by inserting the pin 9 in one or the other of the holes.

A pair of thills 10 are pivoted to the main frame as shown at 11, so that the machine is free of horse-motion, and yet is supported firmly, while adjustable at its forward end to vary the height of the cut.

Referring now to the stalk receivers, it will be seen that we pivot to the platform or frame A bars 12. Clips 13 carry the pivots to these bars. They rest upon the platform or directly upon blocks 14 and a cross-beam 15. These pivoted bars are in pairs at either side, and to the outer ends of each pair is pivoted the receiver proper, as seen at 16, in Fig. 3 particularly. These receivers each consist of several longitudinal strips 17 and curved cross pieces or bows 18, and to each receiver is fastened a handle 19 which engages with a notched post 20 to hold the receivers in position to receive the stalks as they are swept back toward them by the reels preparatory to, and during the act of cutting the stalks. When a sufficient number of stalks have accumulated the operator takes hold of the handles 19 and dumps the stalks upon the ground by tipping the receivers to the position shown in dotted lines in Fig. 3.

If desired, in shipping, going across the field or through gates, or into a barn, the receivers may be folded up and inward, just as has been described in respect to the cutting mechanism. The pivots of the bars 12 permit of this, and Fig. 3 shows the carriers in such position, where they are made fast by any convenient means, as by a cord or a string. Thus while our improved machine is wide enough for the purpose intended when the cutting mechanism is in cutting position and the receivers in receiving position, it may be narrowed by folding up the parts mentioned. The machine is designed to be drawn by one horse and to be operated by one operator. Of course more than one draft animal may be used, and for that matter more than one operator may be employed.

The operation of the machine will be sufficiently understood from the foregoing description when taken in connection with the following remarks, namely, that when driven across the field the reel arms rotate each from the center outward, which center is between the rows, pass into the standing corn and draw the stalks rearward and in line with the receivers. As the cutting mechanism reaches the stalks they are severed and by this time, or before or after this time, are freed from the reel arms in a position where they will fall into the receivers, where they accumulate and from which they are dumped in the manner described.

As the receivers stand behind the cutting mechanism and as the receivers are pivoted, as shown and described, they are capable of dumping the stalks on the ground that has been passed over and at a place which will not interfere either with the still standing corn or with the place where the wheels will travel on the return cut.

A seat 21 is located at a convenient place for the operator to reach the handles 19.

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

1. In a corn harvester, the combination with the main frame and its supporting wheels, of a receiver outside of each wheel, arms pivoted to and supported by the main frame, a pivotal connection between said arms and the receivers proper, and a device to actuate and lock each receiver.

2. In a corn harvester, the combination with the main frame and its main supporting wheels, of receivers located outside of each wheel, arms pivoted to and supported by the main frame, and a pivotal connection between said arms and the receivers proper, and a device to dump and lock each receiver, and cutter mechanism consisting of a finger bar, with a reciprocating toothed blade, pivoted to the frame near each side and at the forward end, said cutter mechanism extending in front of, and laterally as far as, the said receivers, the receivers and the cutter mechanism being adapted to be folded inward and upward and substantially within the main frame.

In testimony whereof we affix our signatures in presence of two witnesses:

CHARLES H. COOL.
JOHN C. MYERS.

Witnesses:

W. M. MCNAIR,
JAS. C. DAWLEY.