(No Model.) 3 Sheets—Sheet 1.

C. SCHRYVER.

CORN HARVESTER.

No. 452,805. Patented May 26, 1891.

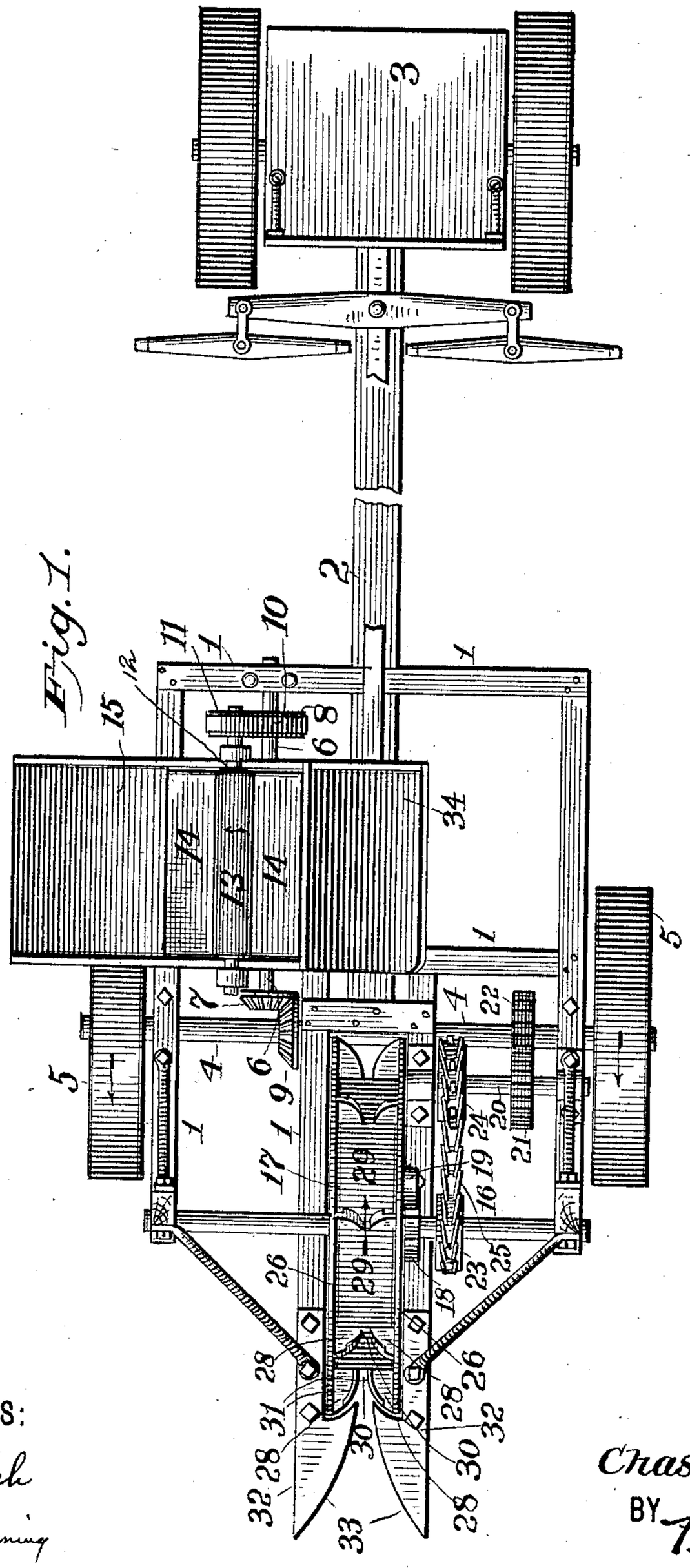


Fig. 1.

WITNESSES:

J. F. Finch

Edward H. Fleming

INVENTOR

Chas. Schryver

BY F. W. Smith Jr.

ATTORNEY

(No Model.) 3 Sheets—Sheet 2.

C. SCHRYVER.

CORN HARVESTER.

No. 452,805. Patented May 26, 1891.

Fig. 5.

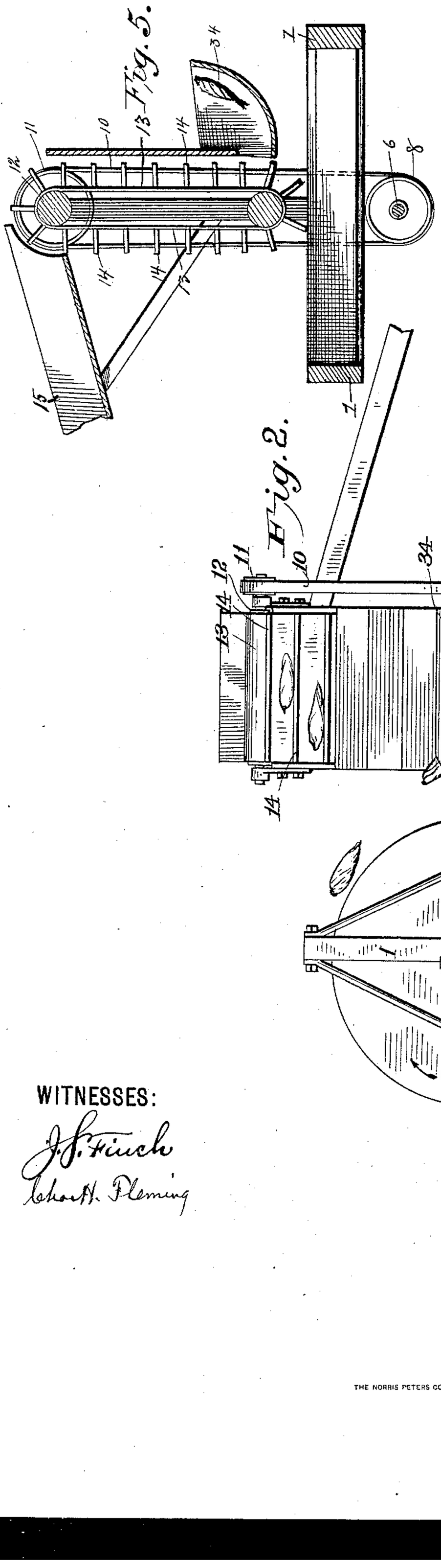
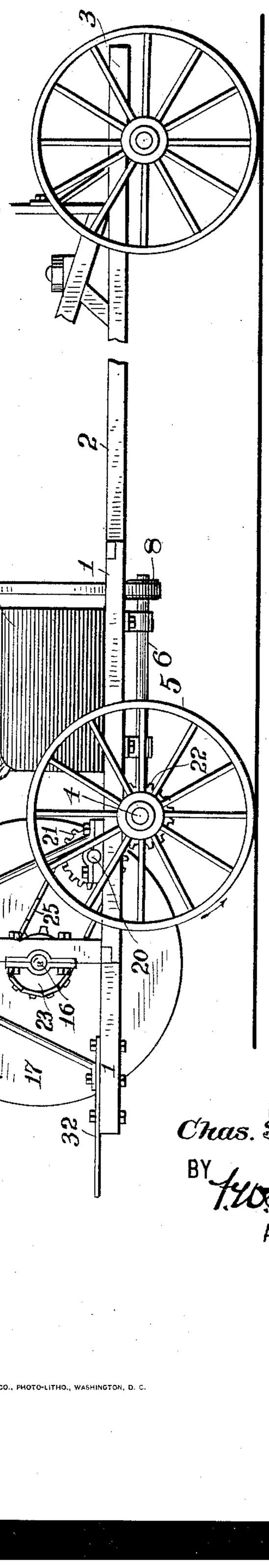


Fig. 2.



WITNESSES:

J. S. Finch

Robert H. Fleming

INVENTOR

Chas. Schryver

BY T. O. Smith Jr.

ATTORNEY

(No Model.) 3 Sheets—Sheet 3.

C. SCHRYVER.

CORN HARVESTER.

No. 452,805. Patented May 26, 1891.

Fig. 3.

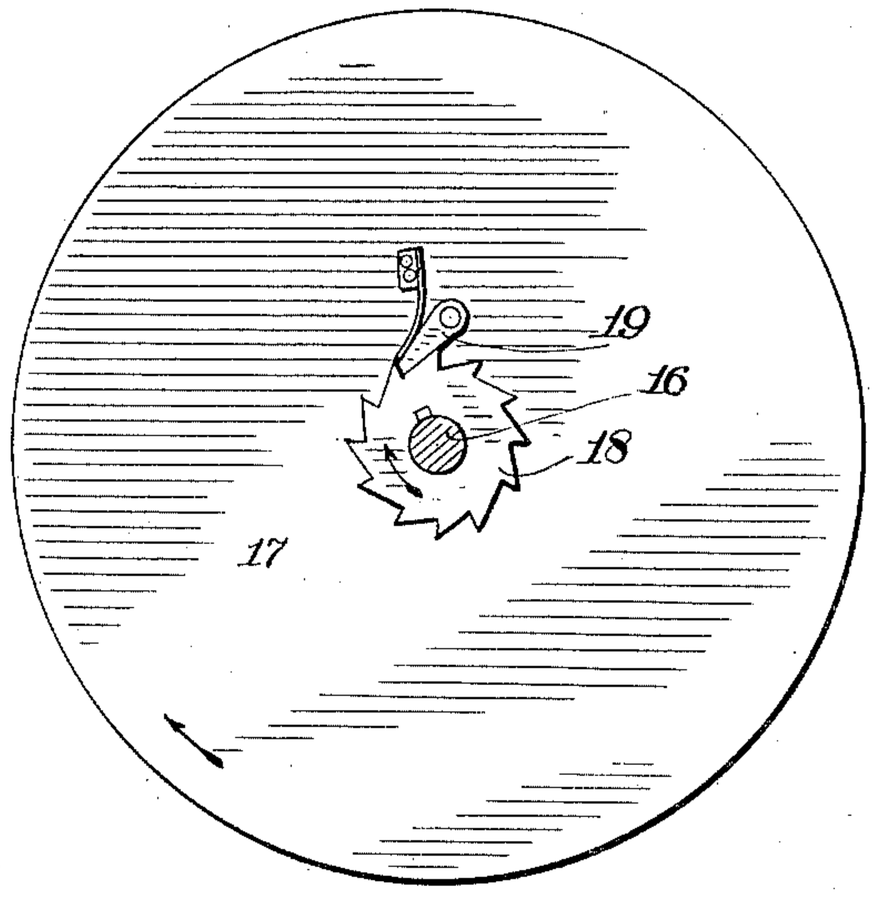
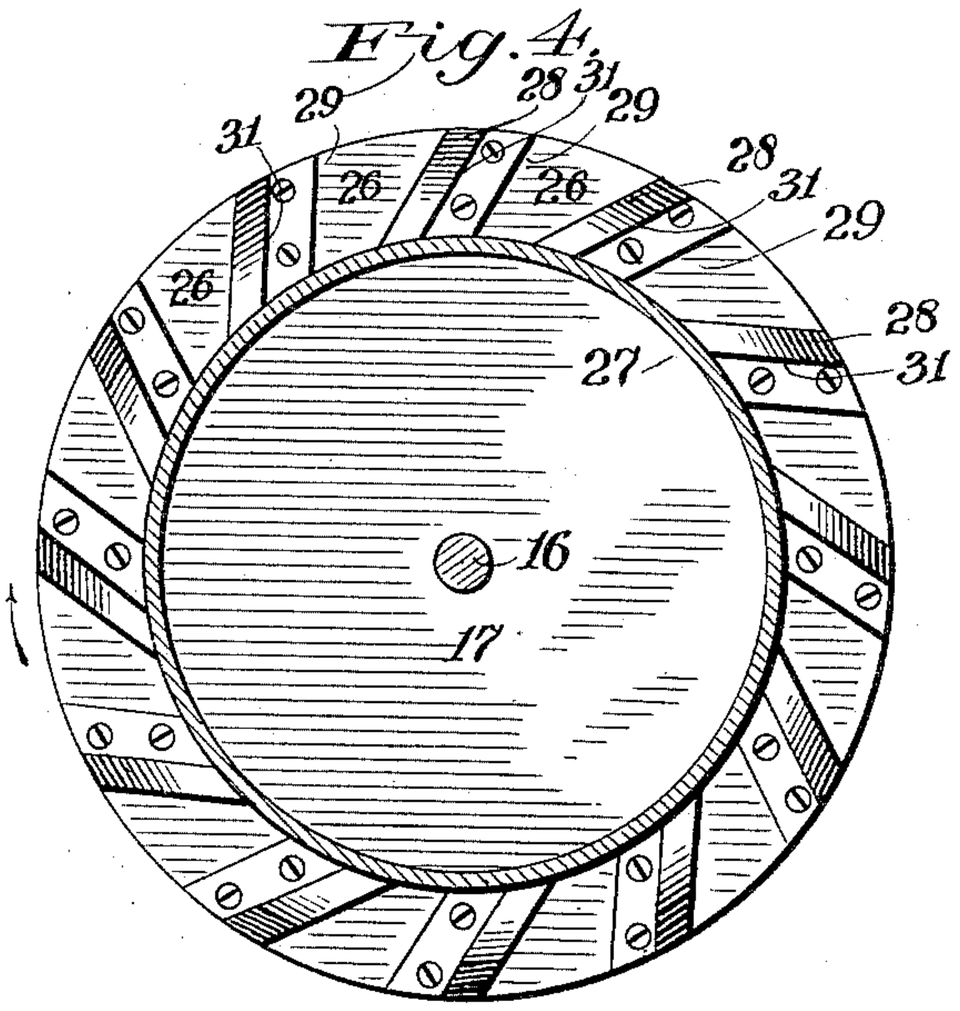


Fig. 4.



WITNESSES:

J. S. Finch

Chas. H. Flemming

INVENTOR

Chas. Schryver

BY F. W. Smith Jr.

ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES SCHRYVER, OF RICH HILL, MISSOURI.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 452,805, dated May 26, 1891.

Application filed January 13, 1891. Serial No. 377,638. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SCHRYVER, a citizen of the United States, residing at Rich Hill, in the county of Bates and State of Missouri, have invented certain new and useful Improvements in Corn-Harvesters; and I do hereby 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.

My invention has reference to corn-harvesters, and has for its object great efficiency and simplicity; and it consists in the construction and arrangement of parts such as will be hereinafter fully set forth, and specifically be designated by the claims.

In the accompanying drawings, Figure 1 is a plan view of my harvester; Fig. 2, a side elevation; Fig. 3, a detail side elevation of the gathering-wheel, showing particularly the pawl-and-ratchet connection through which motion is communicated to said wheel; and Fig. 4 a detail sectional elevation of the gathering-wheel. Fig. 5 is a sectional view taken through the center of roll 12, showing the arrangement of the corn-receiver and the endless belt and shelves.

Similar numerals denote like parts in the several figures.

The running-gear of the harvester, the elevator supported thereby, and the means by which the elevator is actuated from the forward axle of such gear are all old and well known, and I will therefore not enter into any description of the same, but will merely refer to them by way of explanation of the means which I employ to sever the ears of corn from the stalk and deposit them within the elevator-bin.

1 is the skeleton body of my improved harvester, to which is secured the pole 2 of the driver's truck 3. Journaled in said body is an axle 4, at the extremities whereof are the wheels 5 of the running-gear.

6 is a short shaft, which is also journaled on the body 1, and has mounted on its inner and outer ends, respectively, the beveled gear 7 and pulley 8. The gear 7 meshes with the beveled gear 9 on the axle 4, while the pulley 8 is belted by belt 10 to the usual pulley 11, which actuates the elevator-roll 12.

The elevator mechanism consists merely of an endless apron 13, carrying shelves 14, on which the ears of corn are deposited, and as the apron travels over the roll 12 the ears will be dumped on the inclined chute 15, whence they slide into the usual wagon driven alongside of the elevator.

16 is a shaft journaled in the front of the body 1, and loosely mounted on this shaft is the gathering-wheel 17.

18 is a ratchet-wheel rigid on the shaft 16, and 19 is a spring-pawl pivoted on the side of the wheel 17 and adapted to engage with said ratchet, whereby a rigid connection is established between the wheel 17 and shaft 16, so that it will be readily understood that rotary motion is communicated to said wheel from the shaft 16 through the medium of said pawl and ratchet.

20 is a short shaft journaled in the body 1, and having secured thereon the gear 21, which meshes with the gear 22 on the axle 4.

Secured on the shafts 16 and 20, respectively, are sprocket-wheels 23 24, and around these wheels is a sprocket-chain 25.

Motion is imparted to the axle 4 by the travel of the wheels 5 along the ground, and thence through the gears 22 21 and sprocket-wheels 24 23 to the shaft 16, and the speed of the latter may be increased or decreased by substituting gears or sprockets of different relative diameters.

The sides 26 of the gathering-wheel extend beyond the body 27 thereof, and between these sides are secured the knives 28, which sever the ears from the stalk. These knives are secured in pairs to the sides 26, the distance between such pairs being such that pockets 29 are formed between adjacent pairs sufficiently large to contain the ears of corn, for the purpose presently set forth. The knives of each pair are opposite to each other, and the contour of their neighboring edges is such that a V-shaped space 30 separates them.

31 are the cutting-edges of the knives.

Secured to the body 1 are guide-arms 32, which extend forward beyond the gathering-wheel and on each side thereof. The inner edges 33 of these arms flare outwardly and lead directly into the space between the sides of the gathering-wheel, so that it will be readily understood that said arms will gather the stalks and lead them directly to that point

where the revolving knives will cut the ears from the stalks. The V-space 30 between the knives insures the proper delivery of the stalks to the cutting-edges 31, whereby the ears are severed. As the harvester advances the arms 32 will present the stalks to the action of each pair of knives as the latter are successively brought into operative position by the revolution of the gathering-wheel. As the ears are severed from the stalk they drop into the pockets 29, whence they are thrown into the elevator-bin 34. Should the harvester running-gear stop while the knives were in the act of cutting off ears, there can be no mutilation by partial cutting, since the gathering-wheel will by its own impetus make a sufficient number of revolutions to both completely sever the ears which are within the field of the knives and to throw such ears in the elevator-bin.

I claim—

1. In a corn-harvester, a rotatory gathering-wheel having in its periphery a series of cutting-knives arranged in pairs, the knives of each pair being opposite each other and having a V-shaped space between them, substantially as set forth.

2. In a corn-harvester, a rotatory gathering-wheel having in its periphery pockets and cutting-knives alternately arranged, substantially as set forth.

3. In a corn-harvester, a rotatory gathering-wheel having its sides extended, whereby a peripheral space is formed, and cutting-knives secured in pairs at intervals within said space, substantially as shown and described.

4. In a corn-harvester, the combination, with the gathering-wheel having in its periphery cutting-knives and pockets, of the guide-arms extending beyond said wheel on each side thereof and having flared inner edges which lead to said knives, substantially as set forth.

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

CHARLES SCHRYVER.

Witnesses:
M. O. SOUTHWORTH,
C. S. LONG.