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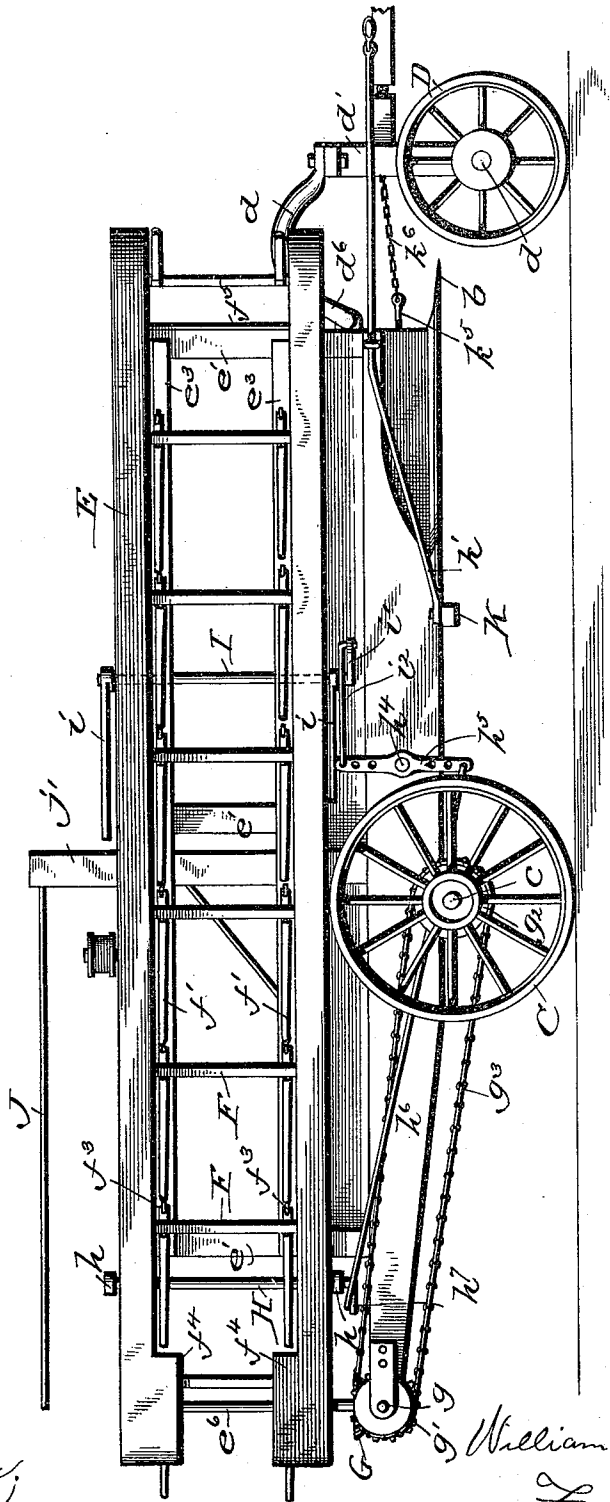
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W. W. CONDIT.
CORN HARVESTER.

No. 512,280.

Patented Jan. 9, 1894.

Fig. 1—



Witnesses
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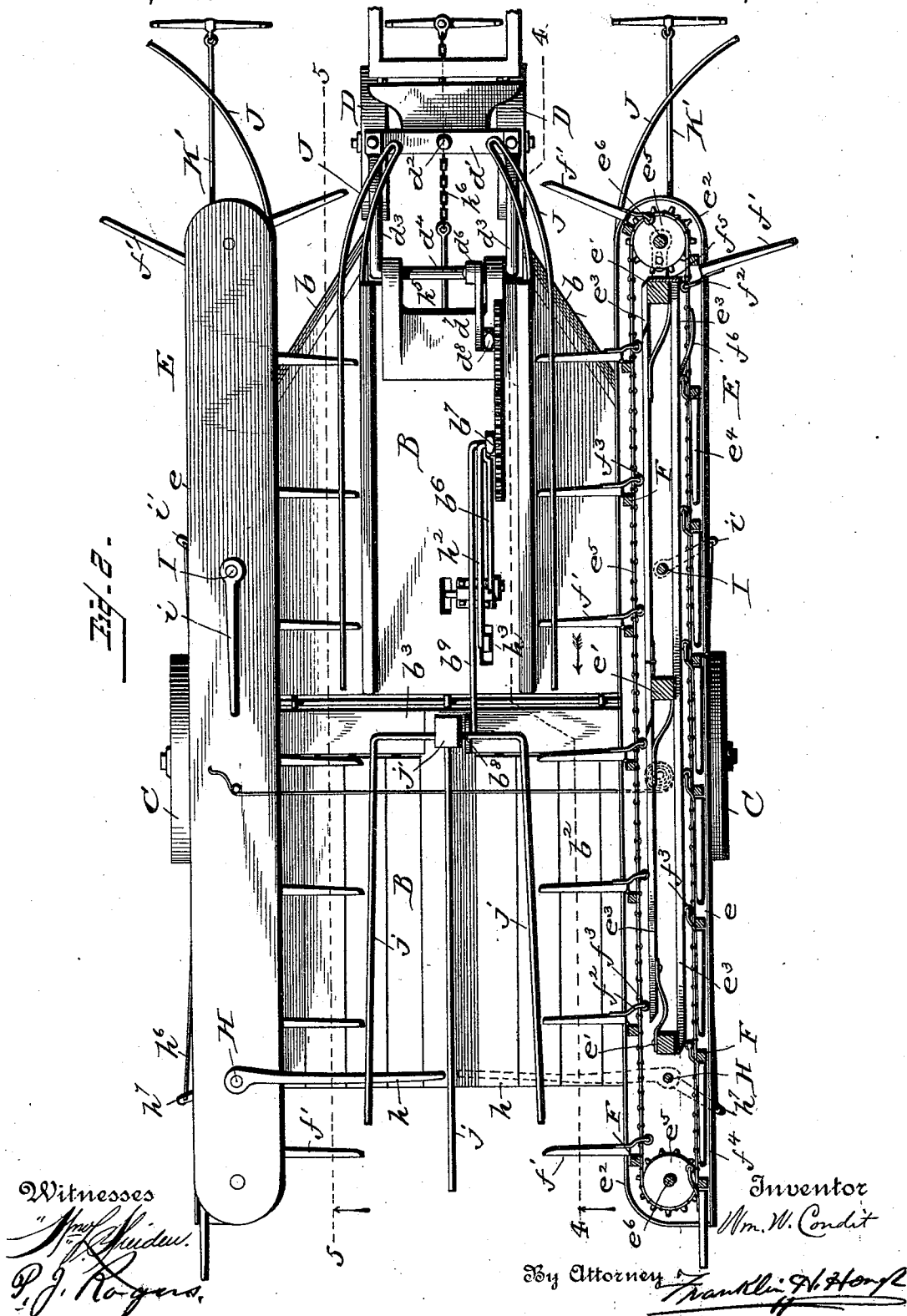
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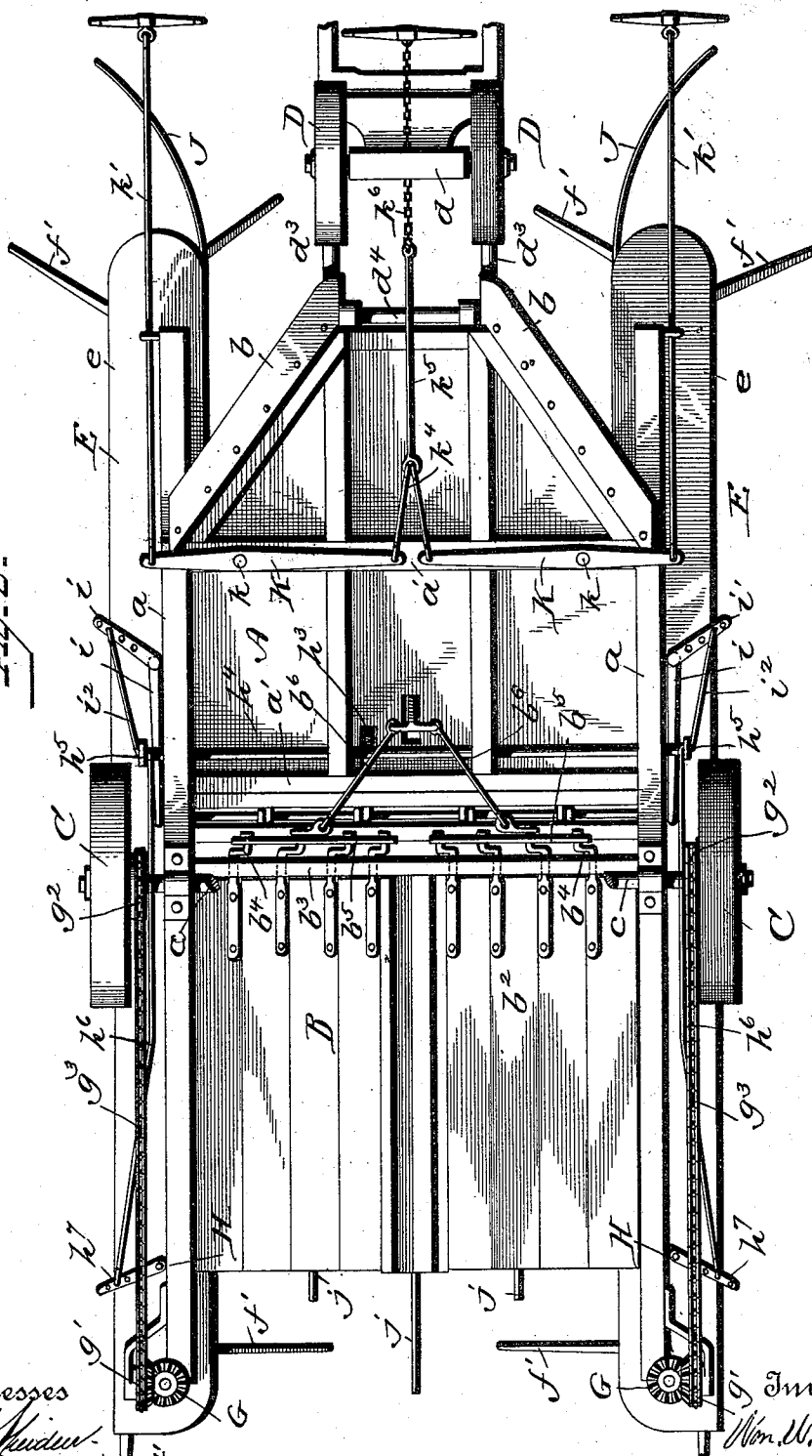


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Fig. 3.



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(No Model.)

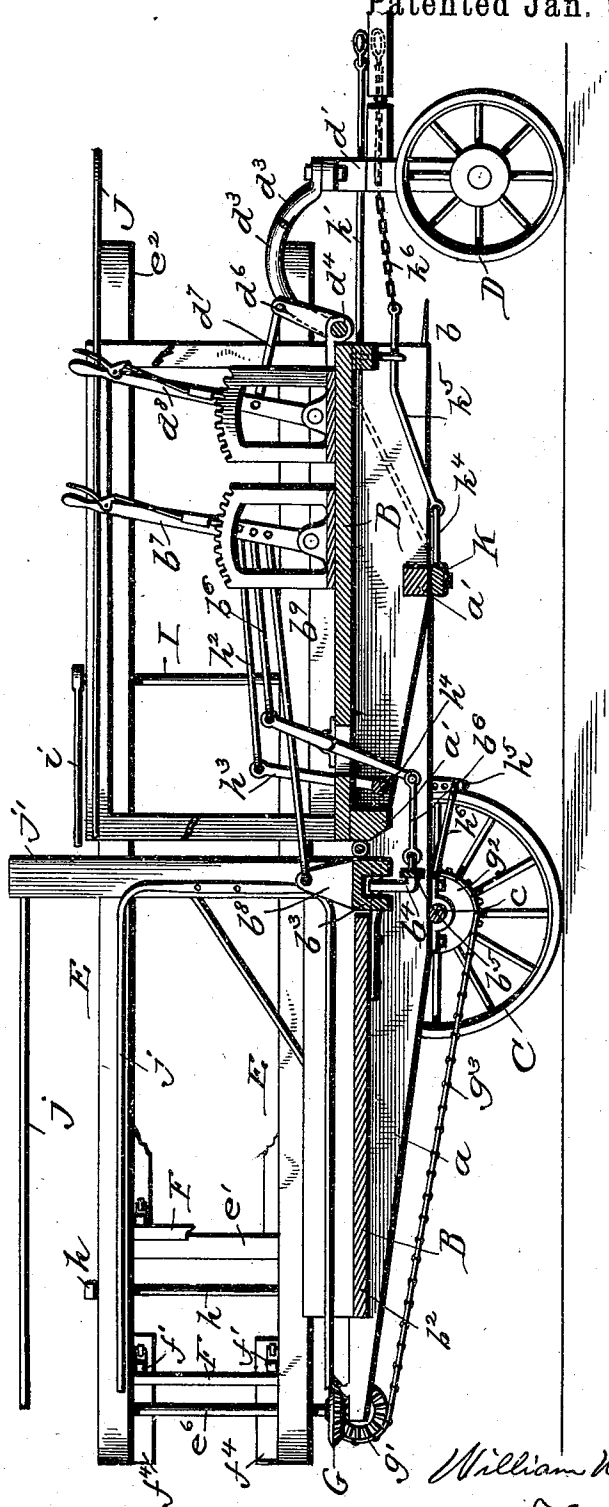
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Fig. 4-



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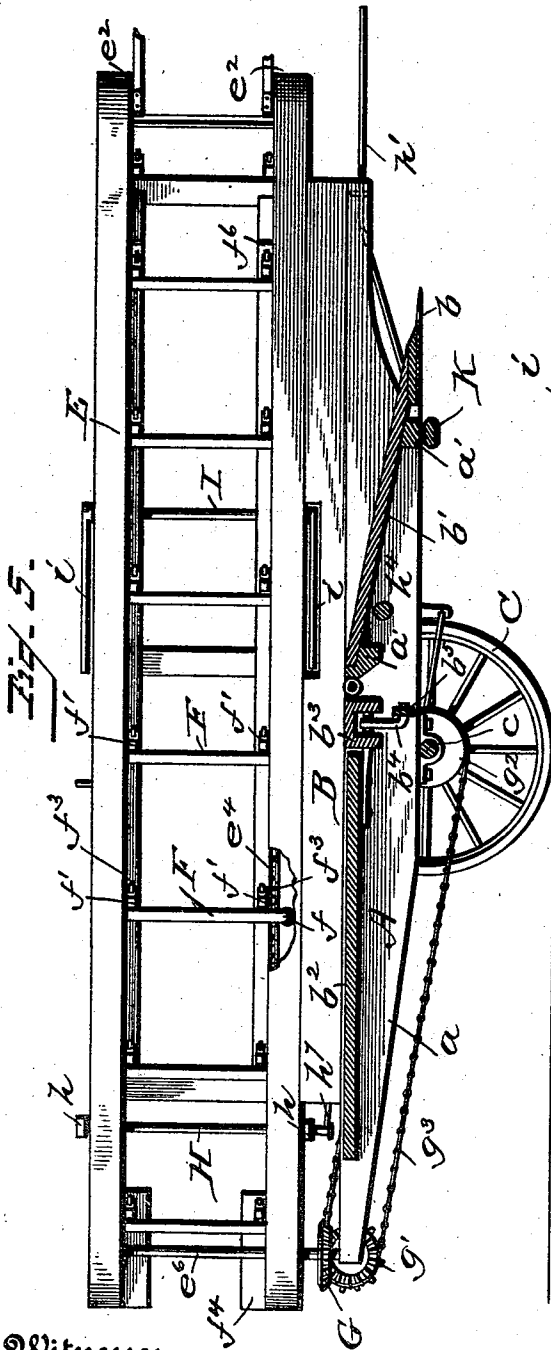
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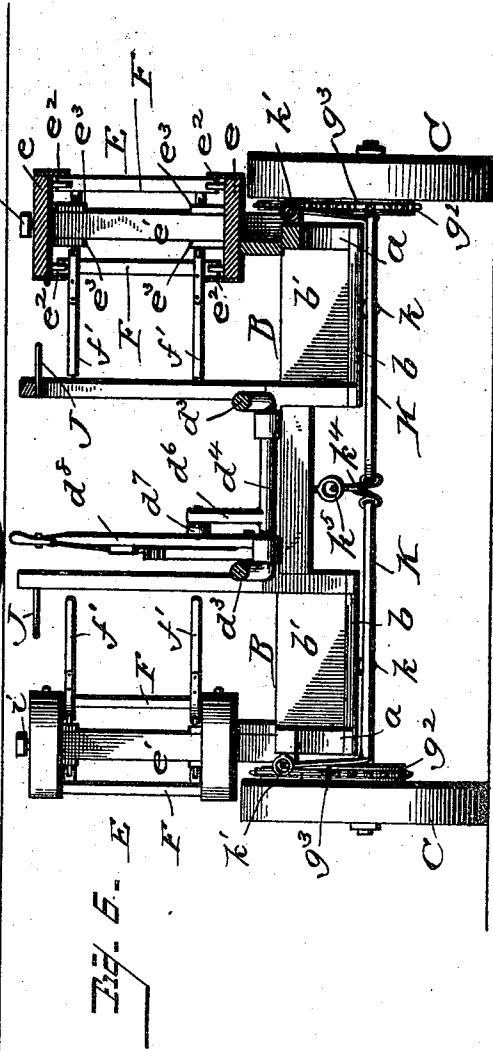
W. W. CONDIT.
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(No Model.)

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W. W. CONDIT.
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Fig. 7.

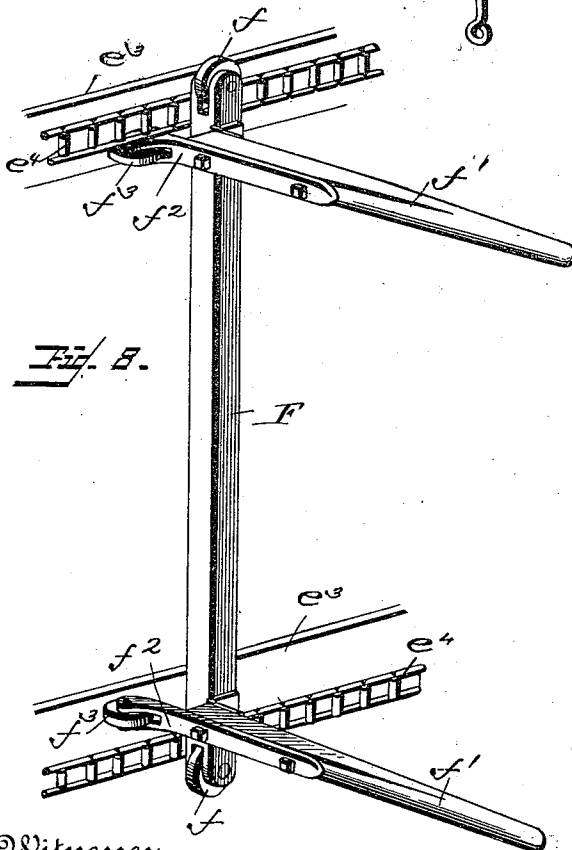
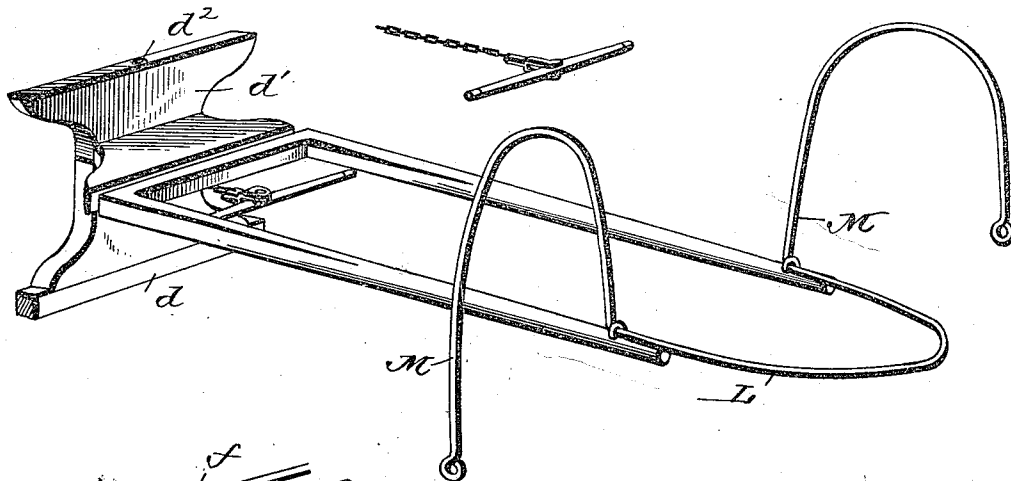
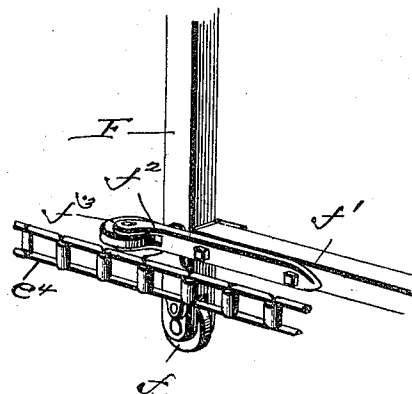


Fig. 8.

Fig. 9.



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UNITED STATES PATENT OFFICE.

WILLIAM W. CONDIT, OF BATTLE CREEK, IOWA.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 512,280, dated January 9, 1894.

Application filed November 29, 1892. Serial No. 453,461. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. CONDIT, a citizen of the United States, residing at Battle Creek, in the county of Ida and State of Iowa, have invented certain new and useful Improvements in Corn-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 of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in corn-harvesters, and it relates more particularly to that class of harvesters in which provision is had for cutting more than a single row of corn at a time, and in which provision is also had for shocking and binding.

The object of the invention is to generally improve upon the construction, and render more efficient in operation this class of machines.

To these ends and to such others as the invention may pertain, the same consists in the peculiarities of construction, and in the novel combination, arrangement and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claims.

The invention is fully illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which drawings—

Figure 1, is a side elevation of my improved corn harvester. Fig. 2, is a plan view partly in section. Fig. 3, is a bottom plan view. Fig. 4, is a longitudinal section on the line 4, 4 of Fig. 2. Fig. 5, is a longitudinal section on the line 5, 5 of Fig. 2. Fig. 6, is a front view partly in section. Fig. 7, is a detail view of the thills and the yokes attached thereto for dividing and straddling the rows. Figs. 8 and 9, are detail views of the carrier chain and the carrier-bar with its arms.

Referring now to the details of the drawings, A designates the frame of the machine, composed of the longitudinal side bars a con-

nected by cross-bars a' , as best shown in Fig. 3.

B designates the platform along which the corn is carried after being cut and upon which it rests while being tied into shocks. This platform is divided near its center. The forward portion is secured rigidly to the frame of the machine and carries at its front end the inclined knives b for cutting the corn. The knives b are placed on a lower plane than the platform and that portion of the latter extending backward from the knives, is inclined upward to the plane of platform, as shown at b' . (See Figs. 5 and 6.) The rear portion of the platform B, is composed of a series of longitudinal slats b^2 pivoted at their front ends to the cross-bar b^3 and provided with crank-arms b^4 which are connected by bars b^5 . Rods b^6 connect the bars b^5 with the hand lever b^7 by means of which the slats may be opened and closed by the operator. The cross-bar b^3 is pivoted at its front side to one of the cross-bars a' and is provided near its center with the arm b^8 which is connected by rod b^9 with the hand lever b^7 , by means of which the rear portion of the platform may be tilted, as clearly shown in Fig. 4.

C, C designate the main supporting wheels, revolving on the shaft c which is secured to the under side of the platform B near its center.

D, D, designate the front or guide wheels which revolve on the short shaft d , which is pivoted to the bolster d' at d^2 and adapted to turn in the well known way for guiding the harvester.

In order to raise or lower the front of the platform B to vary the distance of the knives from the ground, the front end of the platform is connected with the bolster d' by two forwardly extending arms d^3 secured to the shaft d^4 mounted in bearings secured to the forward end of the platform B. The shaft d^4 is provided with a lever arm d^5 connected by link d^7 with the hand lever d^8 which is provided with the usual segmental rack and locking device. By this arrangement, (as clearly shown in Fig. 4), the front of the platform carrying the knives can be raised or lowered, as necessity requires.

I will now describe the mechanism for car-

rying the corn from the knives to the rear end of the platform where it is bound into shocks. E, E designate the carrier frames one upon each side of the platform B, above the main wheels C, C. These frames are composed of the upper and lower horizontally extending boards *e*, *e* connected by the vertical beams *e'*. The boards *e* are provided along their edges with flanges *e*² which, with the longitudinal strips *e*³ secured to the vertical beams *e'* form channels in which travel the upper and lower carrier chains *e*⁴ which pass around sprocket wheels *e*⁵ on the vertical shafts *e*⁶ at each end of the carrier frame. F, F designate the carrier bars which connect the upper and lower carrier chains at suitable intervals and are provided at their ends with friction rollers *f*. Hinged to these bars near their upper and lower ends are the carrier arms *f'* arranged to swing horizontally and provided near their pivoted end with backwardly extending curved arms *f*² carrying rollers *f*³ which are adapted to engage the strips *e*³ (see Fig. 2), and hold the carrier arms rigidly in position for conveying the corn to the rear of the platform in the direction indicated by the arrow. When the carrier-arms have reached the rear end of the platform and turn the sprocket wheels *e*⁵, they come in contact with the flange or projection *f*⁴ (see Figs. 1, 2 and 5), which folds them back into a position parallel to the carrier chain. When they again approach the front end of the platform, the rollers *f*³ come in contact with the stop or projection *f*⁵, which, assisted by the spring *f*⁶ throws the carrier arms into position for engagement with the corn. The rear shaft *e*⁶ is provided at its lower end with a bevel gear G which meshes with a similar gear on the short shaft *g* provided with a sprocket-wheel *g'* connected with a sprocket wheel *g*² on the main shaft, by a sprocket chain *g*³. By this arrangement motion is imparted to the carrier mechanism just described. Near the rear end of the carrier frames E, E, are the vertical shafts H, H provided at their upper and lower ends with arms *h*, *h*, which normally project across the path of the corn as it is carried back by the carrier arms and it is against these arms that the shock is formed. A reel of twine is secured to the top of the carrier frame and the end of said twine is carried across and temporarily secured to the opposite frame. As the corn is carried back it unwinds the twine from the reel and when sufficient corn has been packed against the arms *h*, *h*, to form a shock the operator cuts and ties the twine, thus binding the shock together. The arms *h* are now thrown backward by means of the lever *b*⁷ on the platform B through the medium of the rod *h*² lever arm *h*³, shaft *h*⁴, lever *h*⁵, rod *h*⁶ and crank *h*⁷ on the lower end of the shaft H, and the shock is allowed to slide off the platform B, which latter has been tilted at its rear end by the means hereinbefore described. While the shock is being

tied, it is necessary that the feed of corn to the rear end of the platform should be temporarily checked. For this purpose arms *i*, *i* normally lie out of the path of the corn, they are carried by the vertical shaft I having at its lower end a crank *i*⁷ connected by the rod *i*² with the upper arm of the lever *h*⁵ before mentioned. It will be seen that while the shock is being formed against the arms *h*, the arms *i* are swung out of the path of the corn. When however the arms *h*, *h* are thrown back and the shock is being bound, the same movement of the lever *h*⁷ throws the arms *i*, *i*, across the path of the corn, and its progress is temporarily stopped. It is necessary for the carrier arms *f'* to fold back while passing the partially formed shock. For this purpose the longitudinal strips upon which the rollers *f*³ travel, are formed in sections, which are supported by springs as shown in Fig. 2. These springs are sufficiently strong to hold the carrier arms in position for carrying the corn, but when the said arms come in contact with the shock, the springs are compressed and the carrier arms are permitted to fold back sufficiently to pass the shock.

J, J are guide rods for directing the corn to the knives, and *j*, *j* are similar rods secured to a vertical post *j'* for holding the shock in position while it is being formed.

K, K are the draft equalizing levers pivoted at *k*, *k*, to the under side of the platform B. To the outer ends of these levers are attached the draft bars *k'* which pass through eyes on the side bars *a* and are provided with the usual singletrees. The inner ends of the levers K are connected by links *k*⁴ with the central draft bar *k*⁵ connected by the chain *k*⁶ with the central single tree. The thills are connected at their front ends by the projecting guard I, which divides the rows of corn and guides them into position.

M, M are yokes secured to the thills and adapted to straddle two rows of corn being cut. The outer ends of said yokes are attached to the hames or bits of the two side horses to keep them in position. It will be seen that as the three horses walk abreast a clear passage way is left for two rows of corn to pass to the knives. Obviously, the number of knives may be increased, if desired.

The operation of the invention is as follows:—The standing corn, after being guided to the knives by the guide-rods, and cut, is conveyed in an upright position to the rear end of the platform where it is stacked against the arms *h*, *h*. When a sufficient quantity has been collected to form a shock, it is bound securely by the operator who then throws the lever *b*⁷ which simultaneously releases the arms *h*, *h*, throws the arms *i* into position to check the feed of the corn, opens the slats and tilts the rear end of the platform and the completed shock slides to the ground. The lever *b*⁷ is then operated to bring the parts back into their former position, when the operation is repeated.

Having thus described my invention, what I claim to be new, and desire to secure by Letters Patent, is—

1. In a corn-harvester, in combination with the two cutting devices arranged side by side, the divider carried by and connecting the ends of the thills, and provided with yokes, substantially as described.
2. In combination with the two cutting and carrying mechanisms, arranged side by side, and the binding platform, and the divider consisting of a wire guard connecting and carried at the front ends of the thills, and provided with yokes substantially as described.
3. In combination with the fixed front platform and the tilting binding platform composed of longitudinally rocking slats, the operating lever having connections with both the platform and the slats, to simultaneously tilt the former and rock the latter, substantially as and for the purpose described.

4. In a corn-harvester, in combination with the carrier mechanism, the pivoted binding platform composed of longitudinally pivoted slats, the pivoted arm to stand cross-wise of said platform, and the single lever connected with the said platform to tilt the same, with the slats thereof to rock them and with the pivoted arm to move it to and from its cross-wise position, as and for the purpose described.

5. The combination with the thills, of a projecting, tapered guard H connecting the forward ends of the thills and extending upward to form the yokes M, M, substantially as shown and described, and for the purpose specified.

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

WILLIAM W. CONDIT.

Witnesses:

S. W. KINER,
CARRIE SWEETMAN.