

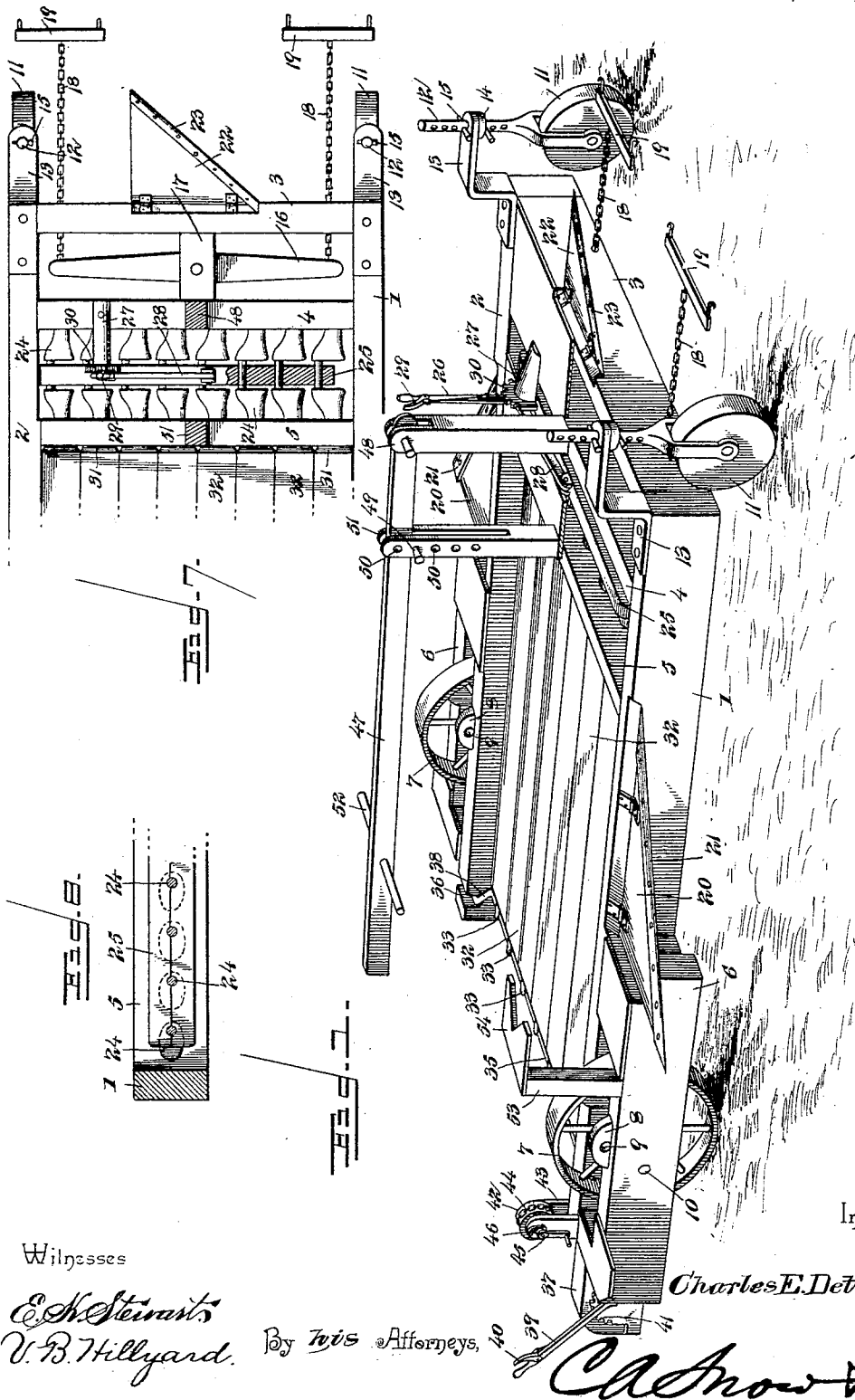
(No Model.)

2 Sheets—Sheet 1.

C. E. DETLING.
CORN HARVESTER.

No. 569,549.

Patented Oct. 13, 1896.



Inventor

Charles E. Detling

Witnesses

E. H. Stewart
V. B. Hillyard.

By *his* Attorneys,

C. A. Snow & Co.

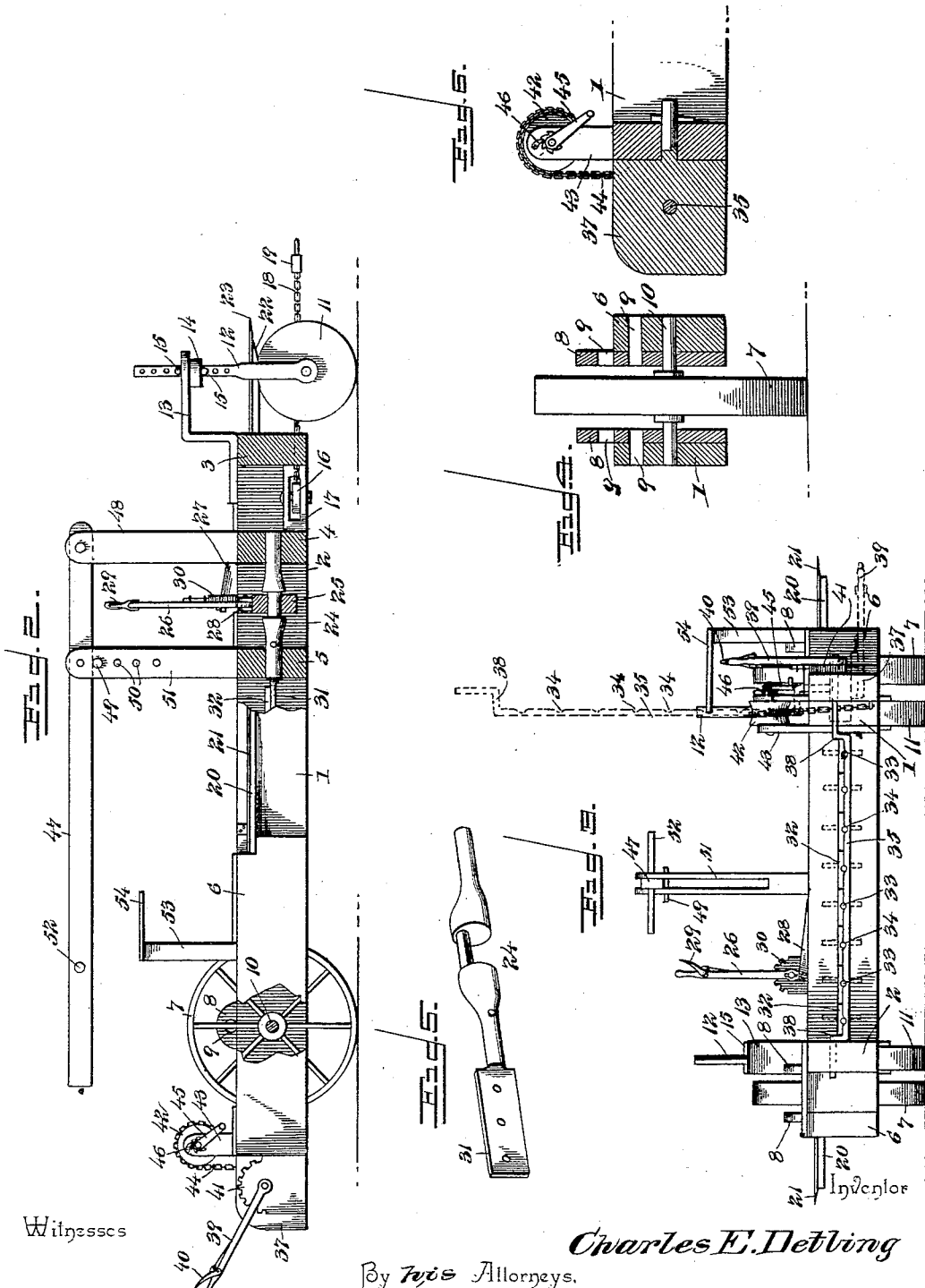
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UNITED STATES PATENT OFFICE.

CHARLES EDWARD DETLING, OF ANSONIA, OHIO.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 569,549, dated October 13, 1896.

Application filed November 29, 1895. Serial No. 570,485. (No model.)

To all whom it may concern:

Be it known that I, CHARLES EDWARD DETLING, a citizen of the United States, residing at Ansonia, in the county of Darke and State of Ohio, have invented a new and useful Corn-Harvester, of which the following is a specification.

This invention relates to corn-harvesters, and aims to provide a machine for cutting three rows of stalks at a time and carrying a sufficient number to form a shock of required size, and to provide means for conveniently and quickly depositing the shock upon the ground after the same has been formed and bound.

The improvement consists in certain details of construction, novel features, and peculiar combinations of the parts which hereinafter will be more particularly described, illustrated, and claimed, and for a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a machine constructed in accordance with this invention. Fig. 2 is a side elevation thereof, parts being broken away. Fig. 3 is a rear elevation showing the supporting-bar for the rear ends of the slats elevated by dotted lines. Fig. 4 is a detail view in section of the means for raising and lowering the rear ground-wheels. Fig. 5 is a detail view of one of the crank-shafts to which the slats are attached. Fig. 6 is a detail view of the swiveled block to which the slat-supporting bar is attached. Fig. 7 is a top plan view of the front portion of the machine, parts being broken away. Fig. 8 is a detail view showing the manner of connecting the crank-shafts in series.

Similar reference-numerals denote corresponding and like parts in all the figures of the drawings.

The framework comprises longitudinal

beams 1 and 2, a front cross-beam 3, and parallel cross-beams 4 and 5 in the rear of the cross-beam 3, the several cross-beams 3, 4, and 5 being connected at their ends to the longitudinal beams in such a manner as to provide a substantial frame for supporting the operating parts. Short beams 6 extend parallel with the longitudinal beams and are spaced therefrom a sufficient distance to admit of the free workings of the ground-wheels 7. Vertically-disposed plates or castings 8 are secured to the longitudinal beams and the beams 6, and are formed with openings 9 in transverse alinement, and which receive the pins 10, upon which the ground-wheels 7 are mounted. By adjusting the pins 10 to any one of the series of openings 9 the rear end of the frame can be adjusted vertically, as will be readily understood.

The front end of the frame is mounted upon pilot or caster wheels 11, whose shanks 12 are journaled in the forwardly-extending portions of brackets 13, secured to the front end of the frame, and these caster-wheels are adjustably connected with the brackets to admit of the front end of the frame being adjusted vertically, so as to cut the stalks at the required distance above the ground. To attain this result, the shanks 12 are provided with a series of openings and are supplied with collars 14 and pins 15, and the forwardly-extending portions of the brackets 13 are held between the said collars 14 and pins 15, as will be readily comprehended.

The doubletree 16 has connection with a block 17, secured at its ends to the cross-beams 3 and 4, and short chains 18 have connection with the ends of the doubletree and pass through openings in the cross-beam 3, and are provided at their front ends with singletrees 19, to which the horses or team are attached in the usual way for drawing the machine over the field.

Similar triangular-shaped wings 20 have connection with the longitudinal beams and are located in the angles formed between the longitudinal beams and the front ends of the short beams 6, the latter butting against the rear ends of the wings 20 and bracing them against the strain incident to the cutting of the stalks. Blades 21 are attached to the outer or front inclined edges of the wings and

project beyond the latter a sufficient distance to perform the work in an effective manner. The wings 20 are hinged at their inner sides to the longitudinal beams, so as to be turned
 5 into a vertical position or folded when the machine is not in use or is being moved from one place to another. A third wing 22 is hinged to the cross-beam 3 at a central point, and its front edge inclines rearwardly and to
 10 the right and is provided with a blade 23 for cutting the middle or intermediate row of stalks.

A series of crank-shafts 24 are disposed in parallelism and are journaled in the cross-
 15 beams 4 and 5, the crank portions operating in the space formed between the said cross-beams 4 and 5 and being connected in series by means of a bar 25, so that upon operating the latter all the crank-shafts will be simul-
 20 taneously moved and in the same direction. For convenience in operating the bar 25 a lever 26 is provided and is fulcrumed upon a block 27, attached to the cross-beam 4, and is connected with the bar 25 by means of a
 25 link 28. This lever is supplied with the usual hand-latch 29, which is adapted to engage with the toothed segment 30, provided on the block 27, so as to hold the crank-shafts in the required adjusted position. The rear jour-
 30 nals of the crank-shafts are extended beyond the cross-beam 5 and are flattened, as shown at 31, and these flattened shanks 31 have the front ends of a series of slats 32 fastened thereto either by bolts, rivets, or in any de-
 35 sired manner.

The slats 32 are of such a width that their longitudinal edges will touch when the slats are turned into a horizontal position, thereby forming a platform for sustaining the shock
 40 during its formation. Journals 33 are formed at the rear ends of the slats 32 and obtain a bearing in notches 34 of a supporting-bar 35, located at the rear end of the frame, and supported at one end in a notch 36 in the
 45 top side of the beam 1 and at its opposite end by means of a swiveled block 37, having connection with the right-hand portion of the frame in any of the usual ways, so as to ad-
 50 mit of the block 37 turning to bring the bar 35 into a vertical position when required. The supporting-bar 35 is formed at its ends with cranks 38, which obtain bearings in the notch 36 and the block 37. Hence upon turn-
 55 ing the bar 35 upon the crank-arms 38 its horizontal portion will be withdrawn from engagement with the journals 33 and thereby release the rear ends of the slats and admit of the block 37 being turned so as to bring
 60 the bar 35 into an upright position and out of the path of the shock, to be deposited upon the ground. The right-hand end of the supporting-bar is provided with a lever 39, to admit of the bar being conveniently and readily turned upon its crank-arms, and this
 65 lever 39 is supplied with the ordinary hand-latch 40, which is adapted to engage with a toothed segment 41, formed upon the adja-

cent side of the block 37, so as to hold the bar 35 in any desired position.

For convenience of turning the block 37
 70 upon its journal, so as to bring the bar 35 into an upright position, a drum 42 is located at the rear right-hand corner of the frame and is mounted in standards 43, and a chain or cable 44 has connection at one end with
 75 the drum 42 and at its lower end with the swiveled block 37, so that upon winding the chain or cable upon the drum the block 37 will be turned and the desired result attained. The drum is rotated by the usual
 80 crank 45 and is held from turning back by the ordinary ratchet and pawl 46, as will be readily understood.

An arm 47 extends horizontally and longi-
 85 tudinally over the platform provided by the series of slats 32 and is pivoted at its front end to a post 48, and is supported in an approximately horizontal position by means of a pin 49, passing through one of a series of
 90 openings 50 in the branches of a post 51, located in the rear of the post 48. A cross-arm or pin 52 is located near the rear end of the arm 47 and is intended to support the shock during its formation.

A temporary holder or support is located
 95 immediately in the rear of the right-hand wing 20, and consists of a post 53 and a plate 54, secured to the upper end of the post and notched in its front edge, so as to receive and support an armful of stalks while the
 100 right-hand man is attending to the operation of the lever 39 and the drum 42.

To the successful operation of the machine it is necessary that a man or attendant be provided for each of the three wings 20 and
 105 22, and as the machine is drawn over the field each gathers the stalks cut by the respective blades or cutting mechanism, and after an armful of stalks has been gathered by each the machine is stopped and the attendants
 110 deposit the same upon the platform and against the arm 47 and the pin 52, after which the machine is again started until a second armful is gathered by each, when the operation of placing the stalks upon the platform is
 115 repeated. The machine is started a third time, and after each man or attendant has gathered a third armful the operation of placing the same upon the platform is repeated and the machine is brought to a standstill.
 120 By this time a sufficient quantity of stalks has accumulated upon the platform to form a shock, which latter is bound in the usual way. The left-hand man now draws the pin 52, and the forward man removes the pin 49
 125 and operates the lever 26 so as to turn the slats 32 to bring their flat sides in a vertical direction, and the right-hand man operates the lever 39 to withdraw the supporting-bar 35 from engagement with the journals 33 and
 130 rotates the drum 42 so as to elevate the said bar 35 and withdraw it from the path of the shock. The team is now started and the slats will be withdrawn from engagement with the

shock, leaving the latter standing upon the ground. The reverse of the operation just described will bring the parts into a normal or working position, when the machine will
5 be in readiness to repeat the operation just described.

Having thus described the invention, what is claimed as new is—

1. In a corn-harvester, the combination of
10 longitudinal beams, slats extending parallel with the beams and forming a platform between them, means connected with the front ends of the slats for simultaneously turning them either into a vertical or horizontal position,
15 a bar for supporting the rear ends of the slats and having crank-arms at its ends, one of the crank-arms being held in a notch in a longitudinal beam, and a block forming a bearing for the other crank-arm and jour-
20 naled to the opposite longitudinal beam, whereby the supporting-bar can turn upon its crank-arms to free the rear ends of the slats and can move with the said block to a vertical position, substantially as and for the
25 purpose set forth.

2. In a corn-harvester, the combination with a series of slats forming a platform, and means for turning the slats into a horizontal or a vertical position, of a supporting-bar for sus-
30 taining the slats at one end and having crank-terminals, a block forming a bearing for one

of the crank-terminals, and a lever secured to the terminal of the supporting-bar jour-
naled in the block, and having a hand-latch to engage with a toothed segment to secure
35 the supporting-bar in the located position, substantially as set forth.

3. In a corn-harvester, the combination with longitudinal beams, slats forming a platform
40 between the beams, and means connected with the front ends of the slats to turn them into a horizontal or a vertical position, of a supporting-bar having crank-arms at its ends and adapted to engage with the rear ends of the slats, one of the crank-arms entering a
45 notch in a longitudinal beam, a block journaled to the opposite longitudinal beam and receiving the other crank-arm, a lever secured to the latter crank-arm and having a hand-latch to engage with a notched segment
50 of the block, a drum, and a chain or cable connecting the drum with the block for turning the supporting-bar into a vertical position, substantially as and for the purpose set forth.

55 . In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES EDWARD DETLING.

Witnesses:

WM. YOCKEY,
J. N. RIEGEL.