

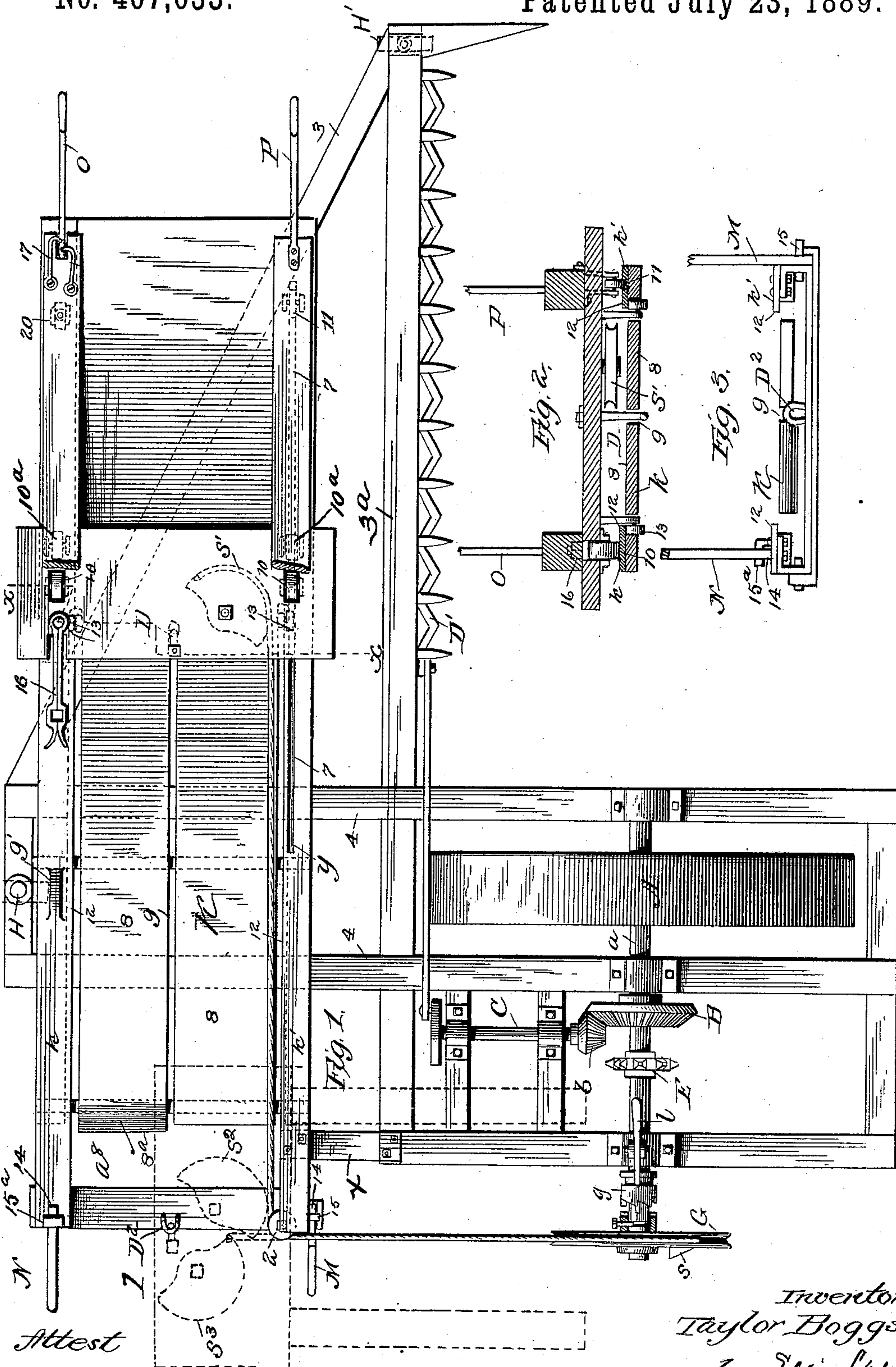
(No Model.)

2 Sheets—Sheet 1.

T. BOGGS.
CORN HARVESTER.

No. 407,633.

Patented July 23, 1889.



Attest

J. L. Middleton
Notary Public

Inventor
Taylor Boggs
by Ellis L. May
Atty.

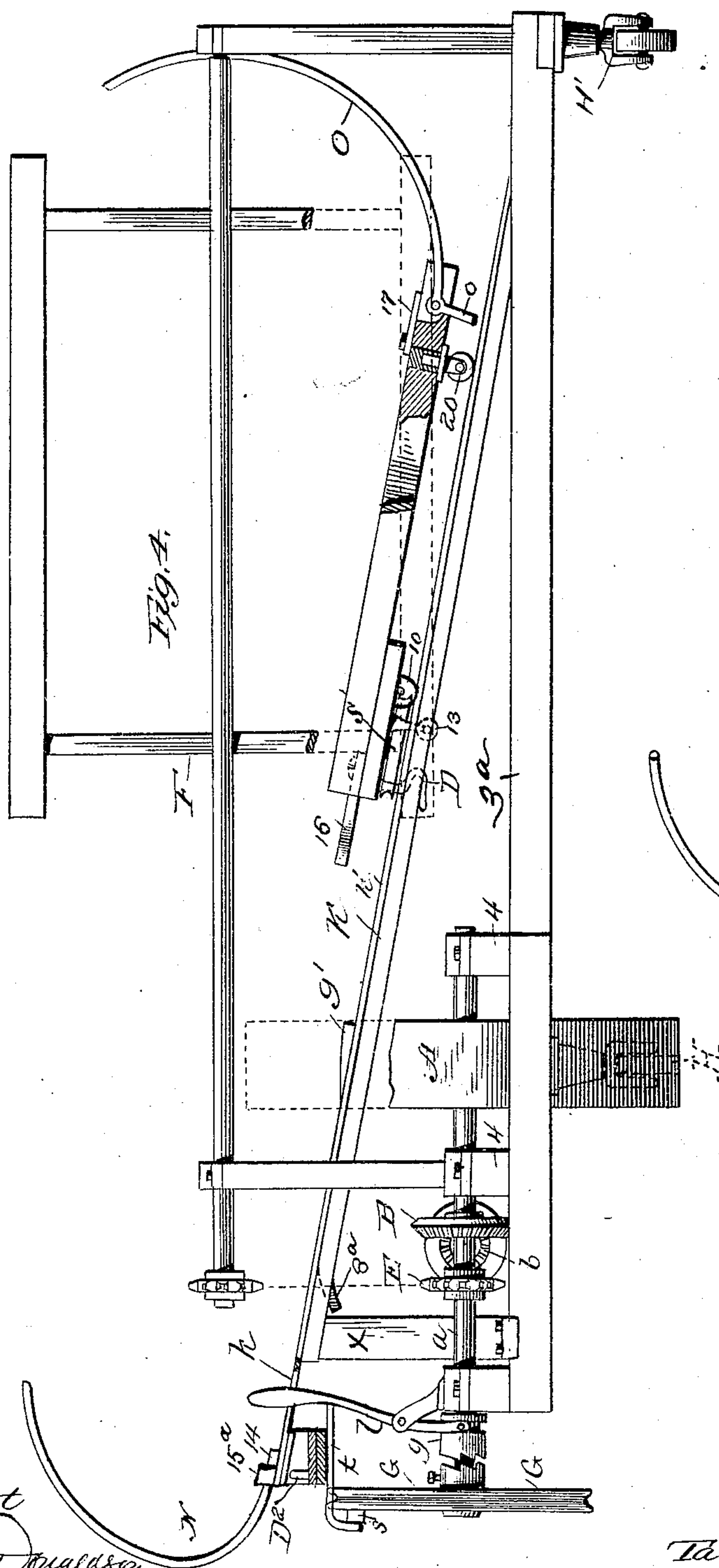
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UNITED STATES PATENT OFFICE.

TAYLOR BOGGS, OF DELAWARE, OHIO.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 407,633, dated July 23, 1889.

Application filed September 24, 1888. Serial No. 286,198. (No model.)

To all whom it may concern:

Be it known that I, TAYLOR BOGGS, of Delaware, in the State of Ohio, have invented a new and useful Improvement in Corn-Harvesters; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improved machine for harvesting corn with the stalk. It is designed to harvest the standing corn by cutting and bunching into shocks.

The invention is fully illustrated in the accompanying drawings, in which—

Figure 1 represents a plan view of my machine, partly broken away. Fig. 2 is a section through the track-frame and table on line xx of Fig. 1, the front supporting-rollers under the stubble end of the table being omitted to show the roller behind them. Fig. 3 is an end view of the track-frame from the point 1, Fig. 1. Fig. 4 is a front elevation of the machine with parts removed and parts in section or broken away. Fig. 5 is a detail view of one of the shock-holding arms.

In the drawings, A represents the supporting and driving wheel, fixed to a shaft or axle a , which has its bearings in a main frame. (Shown clearly in the plan view.) On this axle is a bevel-gear B, which meshes with a bevel-pinion b on the shaft C, having on its rear end a crank-disk and wrist-pin, which is connected to the pitman that works the sickle D' . On the same axle, just outside the bevel-gear, is a sprocket-wheel E, connected by a chain to another on the reel-shaft, carrying the reel F. A clutch g is splined on the axle near its end and outside of the frame, which clutch is operated by a hand-lever l , pivoted on the frame and extending upward in position convenient to the reach of the attendant. Loose on the end of the axle is a grooved wheel G, the inner end of the hub of which is formed with clutch projections or teeth fitted to those of the clutch. The wheel carries in its peripheral groove a rope, one end of which is fixed in the groove, and which runs therefrom over a pulley 2 on the track-frame, and thence laterally to the table.

The table-frame or platform extends transversely in the rear of the main or wheel frame, and also in the rear of the sickle. It consists

of the rear extensions of the beams of the wheel-frame, the front sill 3^a , and the beam 3, the whole being carried on a caster-wheel H. Another caster-wheel H' supports the grainward end of the table-frame, and a supporting-post x is located at the stubbleward end of the track-frame, the lower end of which is secured to the wheel-frame 4 4, Figs. 1 and 4. On the frame is a track-frame K, inclined upward from the grainward to the stubbleward or delivery end. This has a rear track-iron k , made plain, and a front track-iron k' , with a groove 7. The track-frame is boarded over, forming a floor 8 8, to near the delivery end of the frame, and in this is a central slot 9, running longitudinally of the frame. The groove in the track terminates at a point y to allow the moving table or carriage to swing, as hereinafter explained. This moving table has wheels 10 (and supplemental wheels 10^a , if desired) resting on the tracks and a wheel 11 running in the grooved track. The track-irons project and thus provide flanges 12, underneath which run holding-down wheels 13, carried on standards extending down from the stubble end of the table or carriage. The rope is attached to the stubble end of the carriage or moving table through a segment S' . The segment is on the lower face of this table in the position shown in Fig. 1, the point of attachment of the rope being that farthest away from the front of the moving table. The rope, when drawn upon by the wheel, draws the moving table or carriage laterally from the position shown in Fig. 1 to the end of the tracks. When in the place shown in full lines, Fig. 1, the table is in position to receive the stalks falling from the sickle and as they are bent down by the reel. The position of the segment when the table is drawn to the stubble end of the frame is shown by dotted lines S^2 in close proximity to the pulley-sheave 2, and it will be seen that when the rope is drawn upon the segment will be turned, carrying the table with it to the position shown by dotted lines S^3 , a quarter-turn. The clutch is thrown into gear with the wheel-hub when the operator sees that the carriage or moving table is loaded sufficiently. The gathering and holding of the bundle of stalks or shock require,

arms. Two of these are placed in the extreme stubble end of the track-frame, as shown in Figs. 1 and 4. They are marked M and N. As shown in Fig. 4, they are removably placed by means of square shanks 14, as shown in Fig. 5, which slide under a rod 15 and a hook 15^a, respectively, and they are held by frictional contact between the rod and hook and the cross-bar and track-iron underneath.

The other pair of arms O P is placed on the grainward end of the table. One of these P is fixed. The other is pivoted, as shown in Fig. 4, and it has a projection or spur *o* extending down below the plane of the table and in range with the projection or stop *g'* on the track. When ready to receive the stalks of corn, the arm is extended, as shown in Fig. 4. When the table is full and moved, these arms gather the load and carry it away, and as the moving table with its arms approaches the arms on the frame the stalks are gathered together, and this is the more effectually done by means of the stud or spur, which strikes the stop and throws forward the arm O, thus closely grasping the shock at the top and holding it while the table is turned. It has been explained that the arms on the frame are held removably. The forward arm M is knocked out by the moving table striking it or by the excessive pressure of the shock, and when so knocked out it falls to the ground. The other arm N has the square shank before mentioned, and is caught by a pair of spring-jaws 16, forming a catch on the forward end of the turning table. These release it from the track-frame and hold it.

The arm O is provided with catches 17, two or more, set one in advance of the other. These catch the arm as it is thrown forward by the stud or spur and stop and hold it in its forward position, which is greater or less, according to the size of the shock. The arm is thrown forward suddenly and receives considerable impetus when its pin or stud *o* strikes the stop, and this impetus will be resisted in proportion to the size of the shock, thus causing, as stated, the arm to assume the different positions to be acted upon by either one or the other of the catches. The next operation is the turning of the moving table when it has reached the end of the frame.

It will be noticed that the rear wheel on the table farthest back at 20 is swiveled, and when the table reaches the end of the frame, the wheels being then out of the grooved track, it may run in a circle or laterally on the boarded floor. The supporting-wheel on the front side runs out of its groove at the proper times, as also do the holding-down wheels, the boards of the floor 8 8 being shorter than the track-frame for this purpose, leaving an open space *a*⁸, and one of the boards having an inclined end 8^a, for allowing the rear holding-down wheel 13 to ride upward and upon the floor. On the front end of the moving table is a hook or stop D in line with the slot, and

also in line with a stop or staple D² on the edge of the track-frame, and when the table has reached the limit of its direct movement the hook engages with the staple, and the rope continuing, causes the table to swing around on this hook and make a quarter-turn, in which position the butts of the stalks will point stubbleward, and the stalks themselves will lie longitudinally of the track-frame. While in this position the table is tilted stubbleward—that is, the then stubbleward edge is depressed manually and the stalks are delivered butts down and gathered into a shock upon the ground.

In order that the wheel may not overdraw upon the rope, a cam *s* is set on the outside of the wheel, which strikes on an arm *t* of the lever, which is bent down to be in range with the cam when the parts of the clutch are in engagement, and this at the proper moment pulls over the lever and releases the clutch. When the shock is delivered, the parts are replaced and the operations renewed. The machine is adapted in size to cut two rows.

While I have described the table as laterally movable, it will be understood that I do not wish to limit myself to the movement of the table being at a right angle to the line of draft.

I claim—

1. In a corn-harvester, the combination of a main frame, a driving-wheel, a sickle, a movable table on the frame, and automatically-operating devices for first moving the table laterally and then pivotally, substantially as described.

2. In a corn-harvester, the combination of a main supporting-frame, a main driving-wheel, a sickle, a laterally-movable table supported on the frame arranged to receive the shock of corn, and driving-connections between the movable table and the main driving-wheel, whereby said table may be moved to deliver the shock upon the ground, substantially as described.

3. In a corn-harvester, the combination of a main supporting-frame, a main driving-wheel, a sickle, a movable table in rear of the sickle for receiving the shock of corn, driving-connections between the movable table and the main driving-wheel, and an automatic clutch in said connection, substantially as described.

4. In a corn-harvester, the combination of a main frame, the driving-wheel and axle, the movable table in rear of the sickle for receiving the shock of corn and supported on the frame, a wheel loose on the axle of the main wheel and having clutch projections, a clutch splined on the axle, and a rope attached to the wheel and the movable table, substantially as described.

5. In a corn-harvester, the combination of the main frame and driving-wheel, the movable table, driving-connections therefrom to the main driving-wheel, and the stop projections D D², which stop the table and on

which the table is caused to have pivotal movement by the driving-connections, substantially as described.

6. In a corn-harvester, the combination of the main driving-wheel and frame, the sickle, the laterally-movable table supported on the frame, driving-connections from said table to the main driving-wheel, a clutch in said connection, and means for automatically operating said clutch, substantially as described.

7. In a corn-harvester, the combination of the main supporting-frame and driving-wheel, a sickle, a laterally-movable table on the frame, driving-connections from the table to the main driving-wheel, the segment on the table forming a part of said connections, the stops $D D^2$, adapted in connection with the segment and driving-connections to cause pivotal movement of the table, and a track on the frame adapted to control the movement of the table and prevent its pivotal movement until the stops $D D^2$ engage with each other, substantially as described.

8. In a corn-harvester, the combination of the main frame and driving-wheel, the sickle, a laterally-movable table, driving-connections between said table and the main driving-wheel for moving the table laterally, means for causing pivotal movement of the table, and a track extending laterally of the frame and arranged to prevent displacement or pivotal movement of the table until it reaches the end of its lateral movement, substantially as described.

9. In a corn-harvester, the combination of the main frame and driving-wheel, the sickle, the laterally-movable table on the frame, driving-connections from the driving-wheel to the table, means for causing pivotal movement of the table, the tracks $K K'$, the latter having a groove, and the roller on the table moving in said groove, substantially as described.

10. In a corn-harvester, the combination of

the main frame, wheel, and sickle, the movable table arranged to receive the shock of corn, said table carrying a movable arm for engaging and holding the corn, means for automatically moving the arm during the movement of the table, and automatic means for holding the arm in its adjusted position, substantially as described.

11. In a corn-harvester, the combination of the main frame and driving-wheel, the sickle, and movable table for receiving the corn-shock, the said table having a movable arm for engaging and holding the shock, a cam or projection on the frame for engaging said movable arm and operating it, and a holding-catch on the table for retaining the arm in its moved position, substantially as described.

12. In a corn-harvester, the combination of the main frame and driving-wheel, the sickle, the movable table, the movable arm carried thereby, and the catch on the table for holding said arm in its moved position, substantially as described.

13. In a corn-harvester, the combination of the main frame and driving-wheel, the sickle, the movable table, the arms carried by said table for engaging the shock, and the removable arms at the delivery end of the frame, substantially as described.

14. In a corn-harvester, the combination of the main frame and driving-wheel, the sickle, the movable table, the movable arm thereon, the removable arm at the delivery end of the frame, and a catch on the table adapted to engage and hold said arm to confine the top of the shock, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

TAYLOR BOGGS.

Witnesses:

WALTER DONALDSON,
WALTER P. KEENE.