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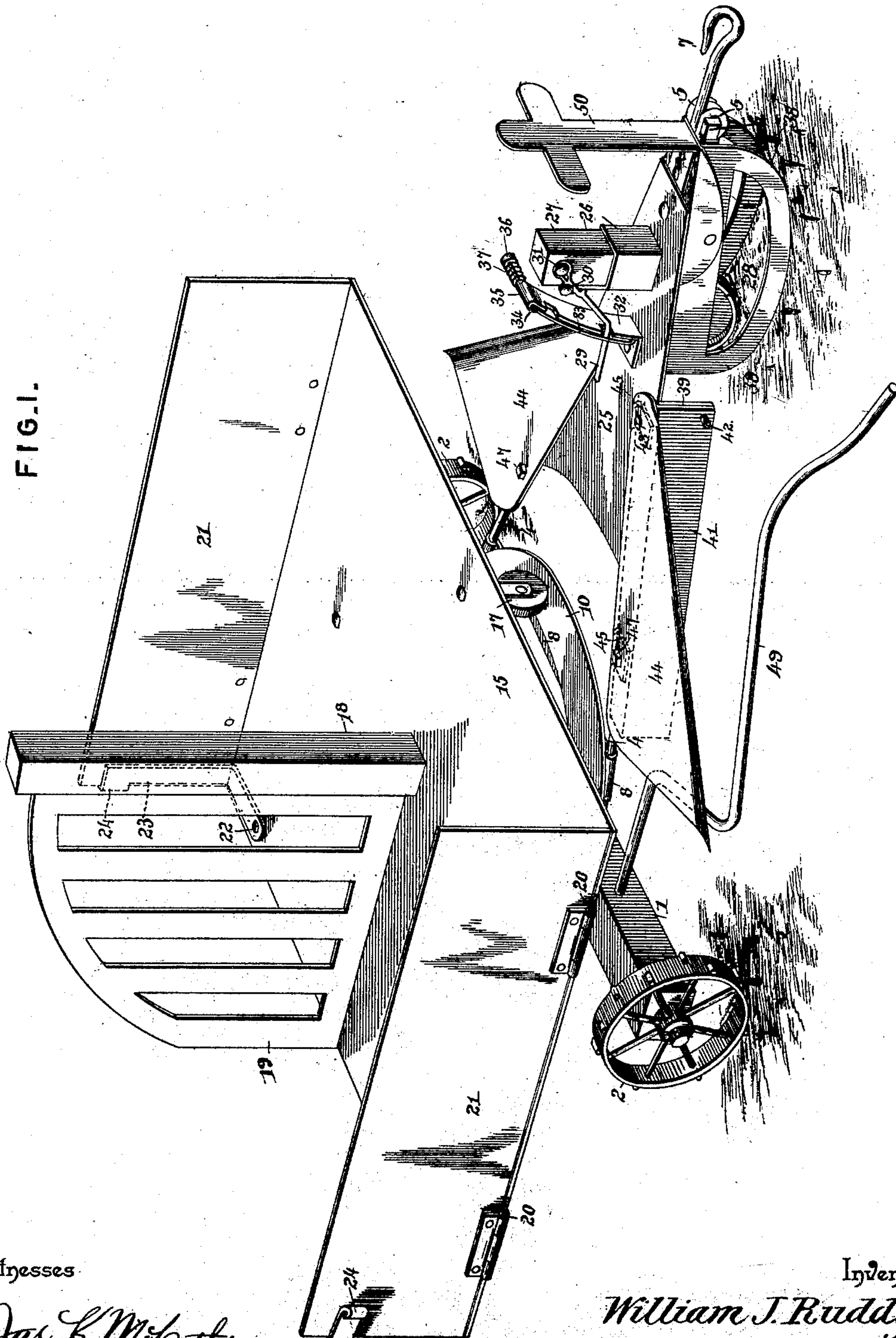
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W. J. RUDDY.
CORN HARVESTER.

No. 505,559.

Patented Sept. 26, 1893.

FIG. 1.



Witnesses

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By *his* Attorneys,

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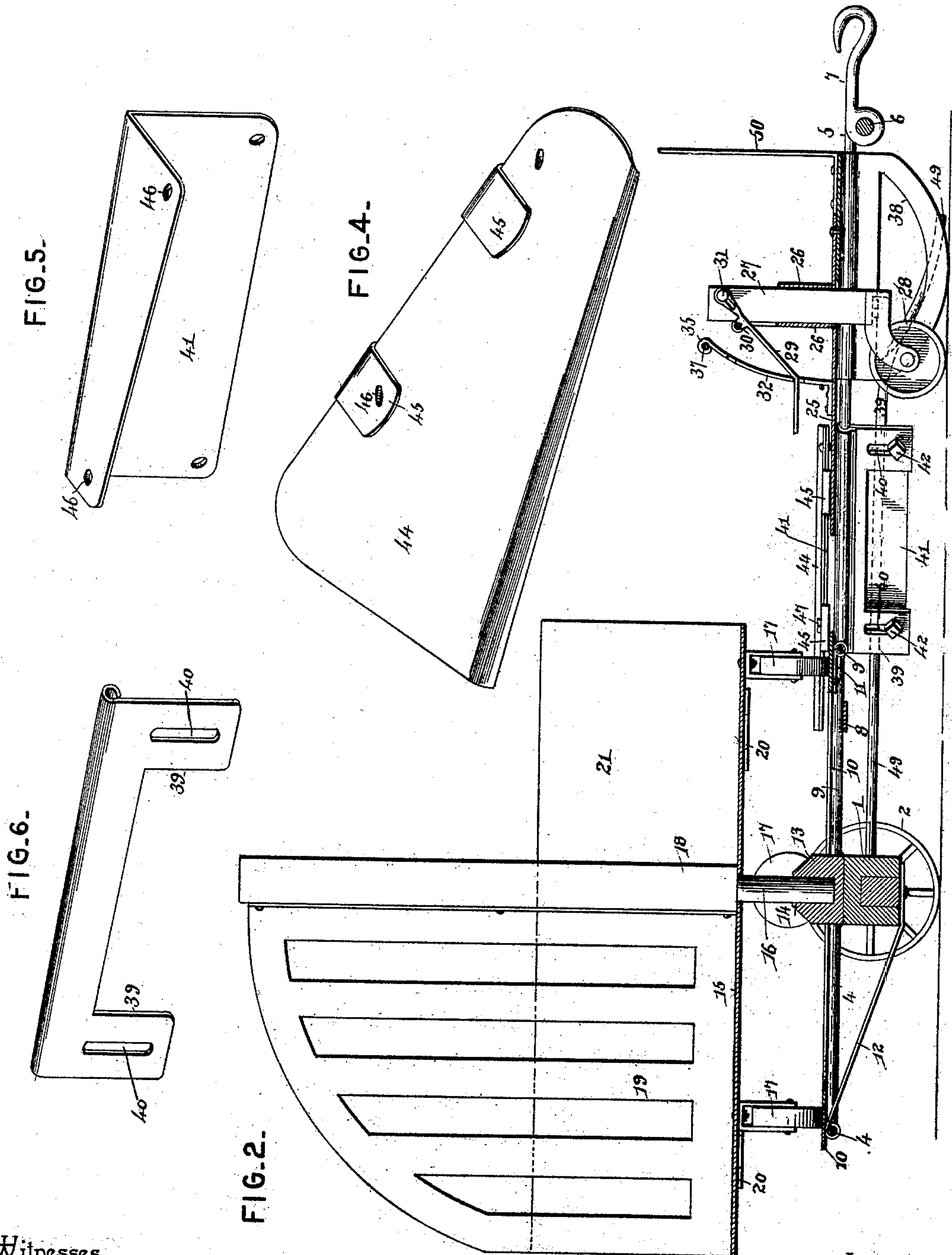
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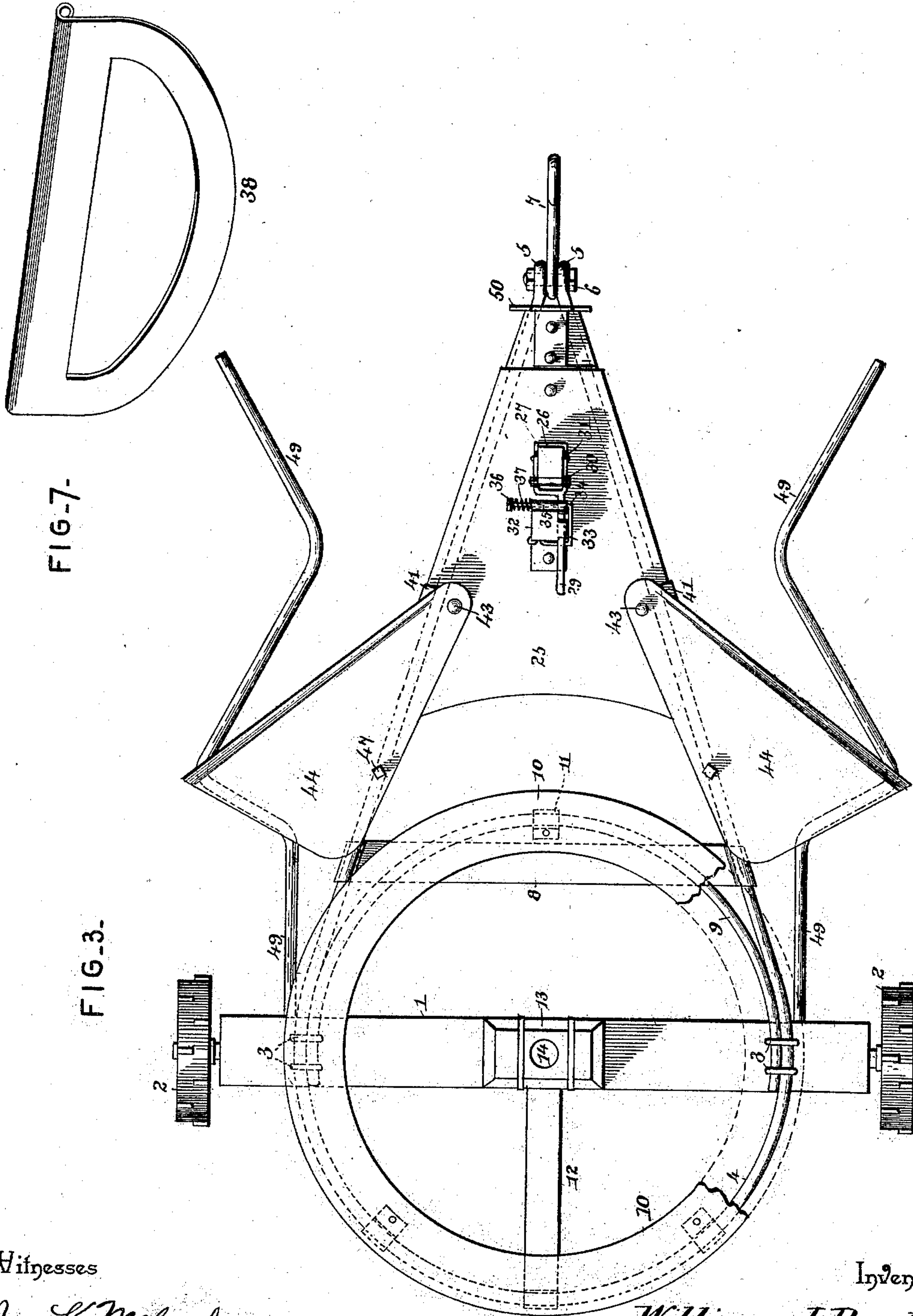
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UNITED STATES PATENT OFFICE.

WILLIAM J. RUDDY, OF ROBERTS, ILLINOIS.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 505,559, dated September 26, 1893.

Application filed November 19, 1892. Serial No. 452,522. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. RUDDY, a citizen of the United States, residing at Roberts, in the county of Ford and State of Illinois, have invented a new and useful Corn-Harvester, of which the following is a specification.

My invention relates to improvements in corn harvesters; the objects in view being to provide a machine of durable, simple, and economical construction adapted to cut simultaneously two rows of corn and to accomplish the same in an efficient manner; that shall be light of draft and which will run steadily; and so constructed as to readily discharge the corn when cut at a convenient point.

With these objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a corn-harvester embodying my invention. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a top plan view, the table being removed. Fig. 4 is a detail in perspective of one of the knives or cutters, the same being inverted. Fig. 5 is a detail in perspective of one of the knife carrying adjustable inverted L-shaped plates. Fig. 6 is a perspective view of the slotted hanger for supporting the same. Fig. 7 is a detail in perspective of one of the runners.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention, I employ a transverse axle 1, the same being provided at its ends with bearings, for the accommodation of ground-wheels 2, which support the main portion of the weight of the machine.

Secured to the axle 1 by means of clips 3, in this instance, is a bowed steel-frame 4, the same being preferably tubular and that portion thereof lying in rear of the axle being semicircular. From the axle forward the terminals of the tubular frame converge and are straight, meeting at a point some distance in advance of the axle, where they terminate in eyes 5, through which a bolt 6, is passed. This bolt also passes through a draft-link or hook 7, that terminates at its rear end in an eye, which is embraced by the eyes of the steel-frame. The opposite sides of the steel-frame

a short distance in advance of the axle, are connected by a transverse metal-strip 8, which renders the steel-frame rigid and prevents the same from vibrating. This strip also serves as a support, for a semicircular frame 9, which is located in front of the axle and forms a continuation of the rear bowed portion of the frame 4. Upon this frame 9 and the rear bowed portion of the frame 4 there is supported a circular track 10, which upon its under side is connected to the frames 4 and 9 by means of clips 11. An inclined brace 12, is secured to the axle 1 and at its upper rear end to the circular track 10.

At its center the axle is provided upon its upper side with a raised bearing-block 13, which is provided with a central socket 14. A rectangular table 15, surmounts the block, and is provided at its center upon the under side with a depending pivot-stud 16, which enters the socket 14 of the block 13, said block serving to elevate the platform a short distance above the circular track 10.

Arranged in a circle and at equidistant points upon the under side of the table 15, is a series of loose caster-wheels 17, and the same are designed to travel upon the circular track 10 as the table revolves. A post 18, rises from the table at the center thereof, or a slight distance in advance of the same, and from said post there extends to the rear edge of the table a partition 19, whereby the table is subdivided, all for a purpose hereinafter obvious. The opposite edges of the table have hinged thereto, at 20, sides 21, that are capable by reason of such connection, of being lowered so as to contact with the ground at their free edges or elevated to a vertical position.

To the table at each side of its center and near its rear corner there are pivoted at 22, L-shaped standards 23, and each standard is provided at its upper end with a keeper 24, which when the standard is swung to its outermost position and the side 21 adjacent thereto is raised to a vertical position, will engage with the rear edge of the side and thus lock the same in said vertical position. It will be seen that when the sides 21 are elevated the corn-stalks lying upon the table are prevented from falling therefrom, and that by moving the standards 23 slightly to

one side the sides 21 are released, may be swung down, and yet the stalks while accessible from the ground by the operator, are prevented from leaving the table through the medium of the aforesaid standards 23.

Supported upon the terminals of the frame 4 near their front ends is a platform 25, and in the center of the same over the opening therein a hollow standard 26, is located. In this standard 26 there is mounted for reciprocation a vertical post 27, and the same depends below the platform where it terminates in a caster wheel 28. A lever 29 is fulcrumed at 30 upon the extension of the standard 26 immediately in rear of the post 27, said lever being bifurcated at its front end and connected by a transverse bolt or pivot 31 with the upper end of the post 27. A locking-standard 32, rises from the platform in rear of the post and standard, and has one of its edges notched to receive the lever aforesaid. A rod 33, has its lower end connected to the standard 31 and its upper end extended parallel to the notched edge of said standard, the upper end of the rod being bent at a right-angle, as at 34, and passed through an eye 35, with which the upper end of the standard is provided. Beyond the eye the rod is provided with a head 36, and a coiled spring 37 is interposed between the head and the eye, and serves to draw the rod inwardly or toward the notched edge of said locking-standard whereby the lever is locked in any of its adjusted positions, but may be immediately thrown out by hand and readjusted by giving the same a lateral spring or pressure sufficient to overcome the spring and compel the rod to yield thereto.

Depending from the terminals of the frame 4 immediately in rear of the front ends thereof and at opposite sides of the caster, is a pair of curved runners 38, said runners converging toward their front ends, as shown, and being designed to prevent any vibrations or unsteady travel of the machine.

Immediately in rear of the runners and extending from the same terminals, is a pair of slotted hangers 39, which near their opposite ends are provided with vertical slots 40. Inverted L-shaped plates 41, are located upon the slotted hangers and are connected thereto by means of set-screws 42, which pass through the slots and through the plates 41. By means of this connection it will be seen that the inverted L-shaped plates are capable of vertical adjustment. To the front end of each of these inverted L-shaped plates there is pivoted, as at 43, a triangular knife 44, whose front or slanting cutting-edge is preferably slightly upturned, whereby a shear-cut up as well as sidewise is secured, and the knives may be forced through the stalks with greater ease, requiring less draft, and securing better results. The rear inner corners of the knives are provided upon their under sides with keepers 45, extending thereunder, and when the knives are swung out upon their piv-

ots, the said keepers engage with the edges of the inverted L-shaped plates, which thus form stops to prevent further outward movement of the knives. The upper or horizontal portions of the plates, the keepers, and the knives are provided with registering perforations 46, and through the same pass locking-pins 47. By removing these locking-pins the knives may be swung inward upon the platform and out of operative position, such being useful when the machine is being transported to and from the field of operation, and when said field has been reached the knives may be swung outward, their keepers immediately engaging with the upper horizontal portions of the inverted L-shaped plates, as shown by dotted lines, Fig. 1, at which points of their adjustment they are locked by the pins before mentioned.

A pair of arms 49, is secured to the axle immediately below the circular track, extend forward until vertically below the rear ends of the knives, then converge to points opposite the front ends of the knives, where they diverge and are declined whereby they are adapted to gather any standing stalks as well as those that may have become depressed or fallen to the ground. This completes the construction of the machine, with the exception of the standard 50 which surmounts the platform at the front end thereof and to which the lines may be secured.

The operation may be briefly stated as follows:—When going to or from the field of operation the driver raises the lever and thus raises the platform so that the runners are out of contact with the ground. It will be obvious that the machine may now be readily transported from field to field or along a road. When the point of operation has been reached, a reverse or forward movement of the lever releases the platform permitting it to fall or be lowered so that the runners are in contact with the ground, the knives are swung outward upon their pivots and locked, and the machine is ready to begin operation. The machine is drawn along between two rows of standing corn, the horse walking between the rows, and two operators upon the platform, one at the side of each knife. The stalks are guided to the knives by reason of the inclined sides of the platform and by the guide-arms which, as before stated, pick up any stalks that may have been depressed, and being presented to the cutting edges of the knives, are, as heretofore indicated, severed, falling into the arms of the operators who stand ready to receive them. As the stalks fall into their arms and their arms becoming full they are from time to time deposited, butt-end forward, upon the table and the operation is continued until a sufficient quantity of stalks have thus been collected when the machine is stopped and the operators leave the platform, swing the locking-standards 23 slightly to one side, permitting the leaves or sides of the table to fall and giving

access to the pile of stalks that are thus confined now merely by the standards 23. Notwithstanding the presence of the standards the stalks may be readily removed and the shocks formed in the usual manner. When the table has been emptied the leaves or sides are re-elevated or locked, the operators resume their positions upon the platform, and the machine again started. When the end of the row is reached and it is desired to turn the machine, the lever is operated so that the platform is elevated, removing the runners from the ground. The runners it will be noted converge, and I have found by experience that such an arrangement serves to steady the machine, avoiding all jerking, horse-motion, and unsteady movement so that when in operation the arrangement of the runners and the disposition given the cutting-edges of the knives serves to produce a machine that will run smoothly and steadily. It will be noted also that in the formation of the shocks the table may be turned so as to deliver the same at any point, either at the sides or rear of the machine. The partition located upon the table serves the useful function of preventing the commingling of the stalks and consequently their tangling, as would be the case where the same were collected in any great body or number.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. In a corn harvester, the combination with a framework, of cutters arranged upon the same, a flat rectangular platform arranged in rear of the cutters and adapted to oscillate or partially horizontally rotate, and opposite vertical hinged sides for the platform, and locking devices for the sides substantially as specified.

2. In a corn harvester, the combination with a table, of opposite hinged sides, and L-shaped standards pivoted to one edge of the table and having their vertical portions provided with keepers for engaging the edges of the sides and locking the same in a vertical position, substantially as specified.

3. In a corn harvester, the combination with an axle and its ground-wheels, of a platform, cutters carried by the platform, a table mounted in rear of the cutters, and a pair of converging runners for supporting the platform, substantially as specified.

4. In a corn harvester, the combination with a V-shaped frame, a platform supported thereon, cutters at opposite sides of the platform, and runners depending from the sides of the frame and converging, of a table supported in rear of the platform and cutters, substantially as specified.

5. In a corn harvester, the combination with an axle, a V-shaped platform located in front of the same and connected therewith and provided with an opening, of runners depending from the platform and converging toward their front ends, opposite cutters at the sides of the platform, a table in rear of the cutters, a post extending through the opening in the platform, a lever fulcrumed in rear of the post and connected therewith and adapted to raise and lower the same, and a caster-wheel carried by the lower end of the post, substantially as specified.

6. In a corn harvester, the combination with a framework, depending slotted hangers and an inverted L-shaped plate having bolts passing therethrough and through the slots in the hangers, of a cutter pivoted at its front end on said plate and having its rear or inner edge provided with a keeper for engaging the front edge of the plate, perforations formed in the cutter, plate, and keeper, and a removable pin for engaging the perforations, substantially as specified.

7. In a corn harvester, the combination with an axle, its ground-wheels, the platform in front of the same, and the opening therein, of a hollow stand mounted over the opening, a post located in the standard a caster-wheel at the lower end of the post, a bifurcated lever fulcrumed on the hollow standard and pivoted at its front end to the post, a locking standard arranged in rear of the post and having notches and at its upper end an eye, a rod embracing the lever, secured at its lower end to the locking-standard and at its upper end passed through and beyond the eye and terminating in a head, and a coiled spring encircling the rod between the eye and head, substantially as specified.

8. In a corn harvester, the combination with an axle, of a metal frame bowed into semicircular form in rear of the axle and connected therewith and having its front terminals converging and bolted together at their front ends, a draft-hook connected with the bolt, a platform supported by the terminals, cutters at the opposite sides of the platform, a semicircular frame located between the terminals and connected to the axle, a circular track supported by the semicircular frame and the bowed portion of the main frame, a bearing-block mounted upon the axle at the center of the track, a table having a depending stud bearing in the block, and caster-wheels upon the under side of the table and adapted to ride upon the track, substantially as specified.

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

WILLIAM J. RUDDY.

Witnesses:

E. J. REINHARDT,
MAGGIE ANDERSON.