

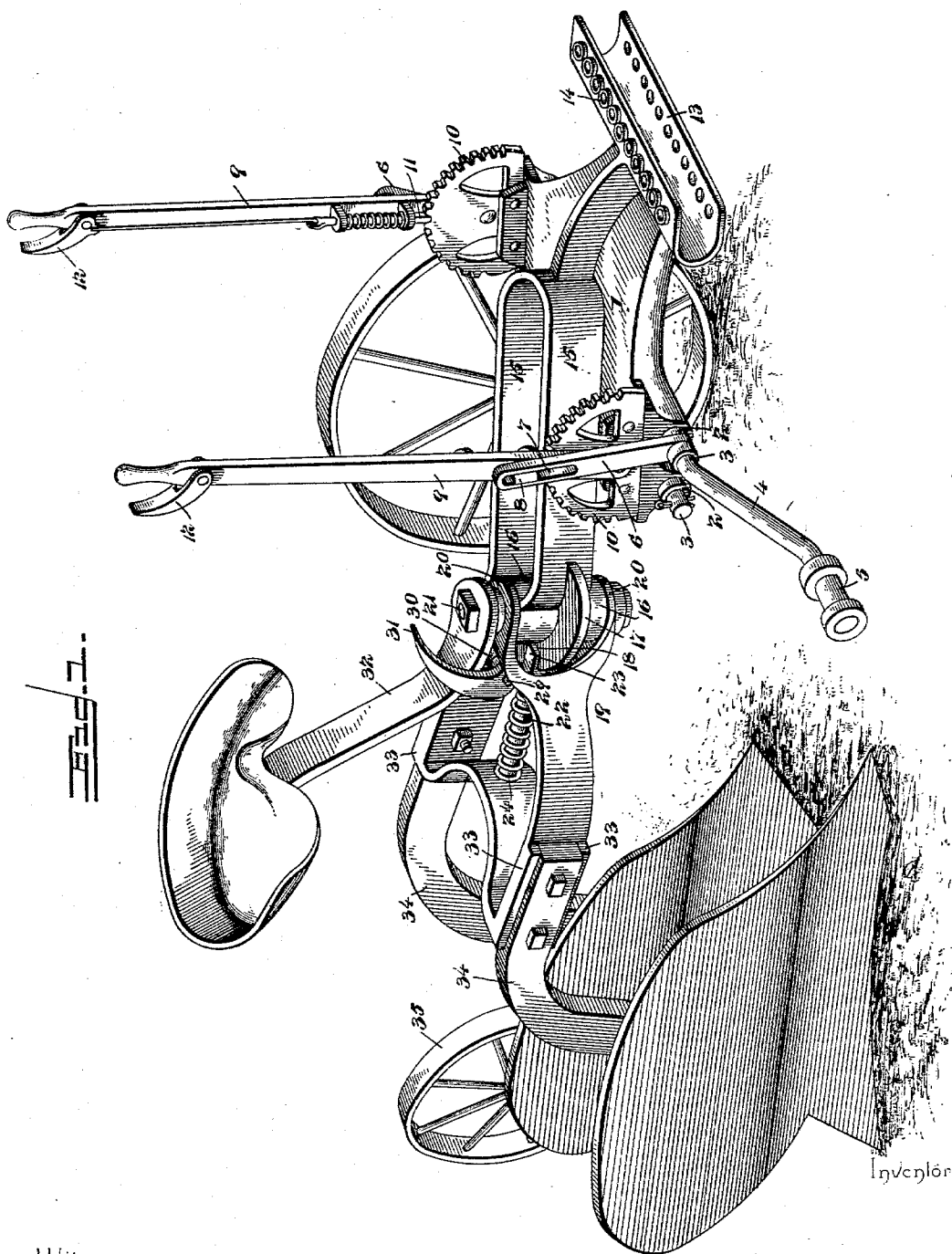
(No Model.)

2 Sheets—Sheet 1.

A. F. JACKSON.
GANG OR SULKY PLOW ATTACHMENT.

No. 562,832.

Patented June 30, 1896.



Witnesses
E. H. Stewart,
R. M. Smith

By *his* Attorneys Ambrose F. Jackson
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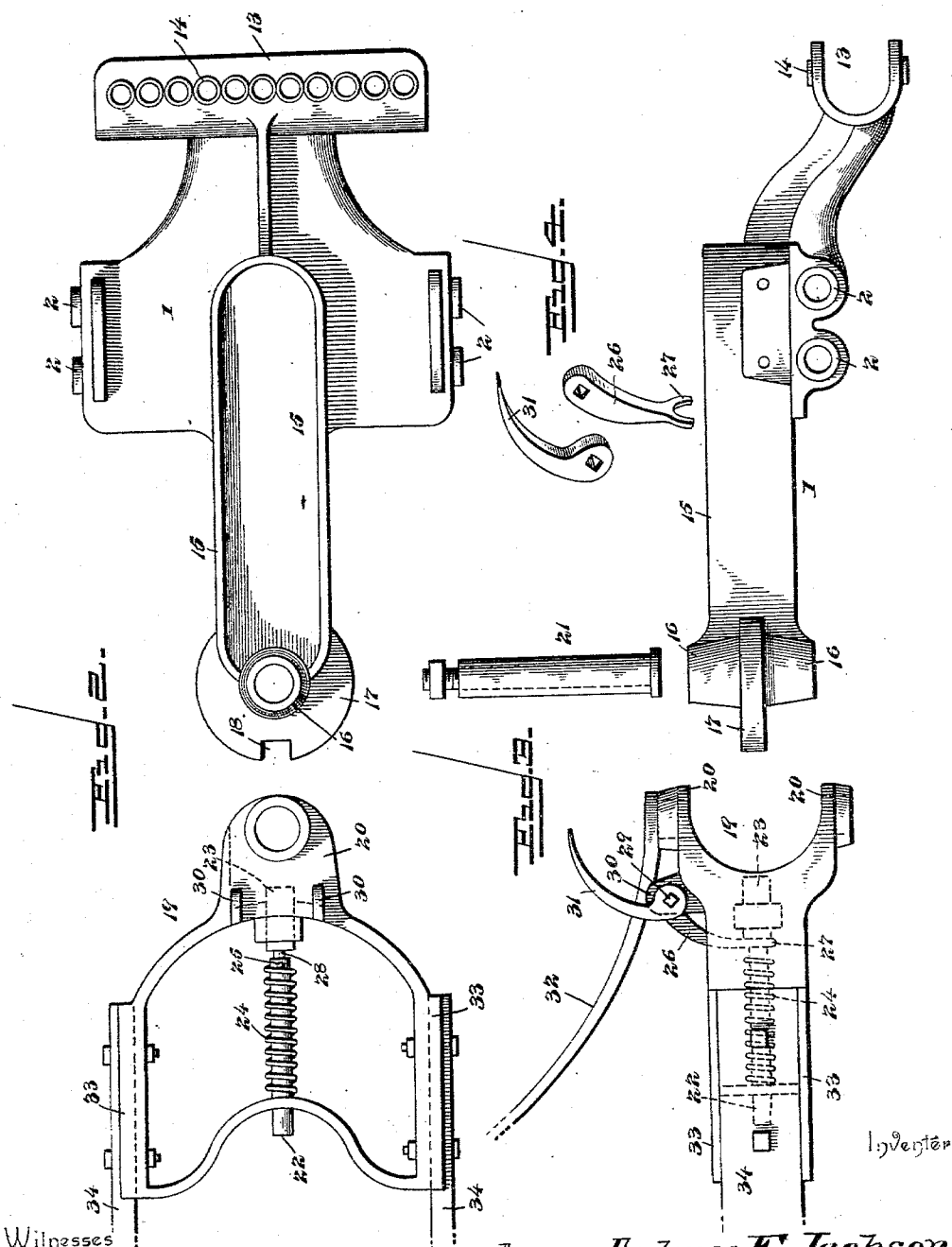
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UNITED STATES PATENT OFFICE.

AMBROSE F. JACKSON, OF OKLAHOMA, OKLAHOMA TERRITORY.

GANG OR SULKY PLOW ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 562,832, dated June 30, 1896.

Application filed June 14, 1895. Serial No. 552,820. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE F. JACKSON, a citizen of the United States, residing at Oklahoma city, in the county of Oklahoma and Territory of Oklahoma, have invented a new and useful Gang or Sulky Plow Attachment, of which the following is a specification.

This invention relates to an improvement in wheeled or sulky plows.

The object of the present invention is to provide a sulky-plow with novel means whereby the turning of corners is facilitated, the plow retained in proper working position in the ground, and the same prevented from tilting sidewise and twisting itself out of the ground in a manner well understood.

The invention also has for its object to provide means arranged within reach of the driver's foot whereby the plow-beam, which is pivoted to the main frame and normally held in rigid relation thereto, may be released, so as to swing at an angle to said frame and allow the plow to turn a corner without the same being twisted out of the ground.

Other objects and advantages of the invention will appear in the course of the subjoined description.

The invention consists in certain novel features and details of construction and arrangement of parts as hereinafter fully described, illustrated in the drawings, and finally embodied in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a sulky-plow constructed in accordance with this invention, the adjacent ground-wheel being omitted to better illustrate the construction thereof. Fig. 2 is an enlarged plan view of the machine-frame and the head of the beam attachment, said parts being uncoupled and slightly removed from each other. Fig. 3 is a side elevation of the parts shown in Fig. 2, said parts also being shown in the same relation. Fig. 4 is a detail perspective view of the foot-lever and forked arm, by means of which the sliding spring-actuated bolt or latch-finger is operated.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates the main frame of a sulky-plow,

which is preferably made from a single casting, and provided in the process of manufacture with suitable eyes or integrally-formed sleeves 2, for the reception of the axles 3, upon which the supporting or ground wheels are journaled. The axles 3 are two in number, one for each supporting-wheel, and are extended in parallel relation to each other and transversely of and beneath the main frame, as indicated in Fig. 1. Each axle, just outside of the main frame, is provided with an angular bend forming a crank-arm 4, having a stud or journal 5 at its free end, upon which one of the machine-wheels is journaled. Each axle is also provided, preferably at the end adjacent to its crank-arm 4, with a slotted crank-arm 6, rigidly secured thereto and projecting upwardly.

7 indicates a longitudinally-elongated slot formed in the crank-arm 6, said slot being adapted to receive a sliding block 8, having a swiveled connection with a tilting lever 9, pivoted at its lower end to a segmental rack 10, bolted or otherwise secured to the machine-frame at one side, as shown in Fig. 1. The teeth of the segmental rack 10 are arranged in the arc of a circle struck on the center of the tilting lever 9 as a center, and the lever 9 is provided with the usual spring-actuated thumb-latch 11 and thumb-lever 12, whereby the tilting lever may be released from the rack, moved or vibrated into any desired position, and held in such position by the engagement of the latch 11 with said segmental rack. The object of this construction is to elevate and lower one or the other of the ground or supporting wheels for the purpose of adapting the plow to operate upon a hill-side or for adapting one of the wheels to run in a furrow previously made. By this construction the frame of the machine may be elevated or lowered for the purpose of giving the points of the plows an upward or downward inclination, thereby regulating the depth to which said plows may penetrate the soil.

It will be understood that by reason of the tilting lever 9 being mounted upon a different center from the axle 3, the block 8 will slide within the slot 7 of the crank-arm 6 as the lever is vibrated, thereby causing said crank-arm to be simultaneously vibrated for par-

tially rotating its respective axle 3, for the purpose above stated.

13 designates a transversely-extending clevis formed integrally with the machine-frame and provided with a series of perforations 14 for the reception of a suitable pin providing for the attachment of a whiffletree in a manner that will be readily understood by those conversant with the art to which this invention appertains.

15 designates an upwardly-projecting flange, which is given a substantially elliptical contour and forms a tool box or receptacle, in which may be stored or carried the tools and extra parts for adjusting and repairing the machine while in the field.

At the rear end of the main frame, and formed integrally with the tool box or receptacle 15, is a vertical sleeve or collar 16, which is made of considerable depth in order to afford a strong connection between the main frame of the machine and the head of the plow-beam. Arranged centrally of said sleeve or collar 16, and extending the greater portion of the distance around the same, and terminating in the tool-box, is an annular flange 17, provided with a rearwardly-opening notch 18, the purpose of which will appear.

19 designates the plow-beam head, which may be made in any desired form such as will adapt it to the improvements herein contemplated. Said head is provided with an oppositely-disposed forwardly-projecting pair of ears 20, which are provided with vertically-aligning perforations and arranged a sufficient distance apart to receive the collar or sleeve 16 of the main frame. When such sleeve or collar is introduced between the perforated ears or lugs 20 of the head 19, a bolt 21 is passed through the same, which couples the machine-frame and beam-head together, as shown in Fig. 1.

22 designates a sliding bolt or latch, which is arranged to slide horizontally through perforations in the front and rear walls of the head 19, said bolt or latch being provided with a square head 23 of a size corresponding to and adapted to engage the rearwardly-opening notch 18 in the annular flange 17, surrounding the bearing-sleeve of the main frame.

24 indicates a spiral spring, which is disposed around the bolt or latch 22 and interposed between a pin or projection 25 on said bolt or latch and the rear wall or other convenient fixed point on the plow-beam head, whereby the normal tendency of the bolt or latch is forward to engage the notch 18. In order to overcome the normal tendency of the bolt or latch 22, and to throw the same out of engagement with the notch 18, when desired, I provide an arm 26, having a bifurcated or forked lower end 27 engaging a groove 28 in said bolt or latch. The arm 26 is mounted at its upper end upon a short transverse shaft 29, mounted in a stationary lug 30, formed

on the plow-beam head. The opposite end of said shaft 29 carries a foot-lever 31, which curves upwardly and forwardly, as shown, and is arranged in convenient position to be operated upon by the foot of the attendant. When said lever is pressed upon by the foot, the forked arm 26 will operate to withdraw the sliding bolt or latch 22 from the notch 18, and thus allow the beam-head to swing relatively to the machine-frame. As the beam-head swings, the squared end of the sliding bolt or latch will ride upon the periphery of the annular flange 17, and upon the return of the frame and beam-head into normal alignment, the end of the bolt or latch will spring into and engage said notch, thus holding the parts in line until it is again desired to turn a corner. The object in mounting the forked arm 26 and foot-lever 31 upon opposite ends of the short transverse shaft 29 is to dodge or escape the seat standard or spring 32, which is arranged centrally of the head 19.

The head 19 is further provided at each side with laterally-projecting flanges 33, arranged in pairs, as shown, and adapted to receive the horizontally-extending ends of a pair of plow-beams 34, said plow-beams being retained in place by means of bolts, as shown. The plow-beams 34 are provided with the usual downwardly-extending arms to which the plow-points or moldboards are secured, and one or both of the plows may be supported at the rear by means of a trailer-wheel 35.

From the foregoing description it will be apparent that one or the other of the supporting-wheels may be elevated or lowered, as desired, for adapting the plow to be operated upon a hillside, or both of the wheels may be simultaneously raised or lowered for giving the desired tilt or inclination to the points of the plows for regulating the depth to which said plows shall penetrate the soil.

It will be apparent that when a corner in the field is reached and it is desired to turn the plow either half-way or entirely around the driver, by pressing his foot upon the lever 31, may withdraw the sliding rod or latch 22 and thereby permit the plow-beams to swing with relation to the machine-frame. By means of this construction the draft is applied to the plow-beam at the pivotal connection between the beam-head and the machine-frame, or approximately in vertical line with the plow-points, instead of considerably in advance of said points, as in the construction where a rigid plow-beam is employed. By reason of this arrangement the plows are enabled to readily swing around without the tendency to twist themselves out of the ground, a tendency which is always present in plows of the ordinary construction.

It will be apparent that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what

is claimed as new, and desired to be secured by Letters Patent, is—

1. In a sulky-plow, the combination with the frame thereof, of the head to which the plow-beam is secured having a pivotal connection with said frame, a sliding spring-actuated bolt or latch carried by one of said members and adapted to engage a notched flange on the other member, and a foot-lever arranged within reach of the driver's foot while in his seat, said lever being in engagement with the sliding bolt or latch and adapted to withdraw the same from its engagement with the other member, substantially as described.
2. In a sulky-plow, the frame thereof and the plow beam or head having a pivotal connection with each other, a sliding spring-actuated bolt carried by the plow beam or head and adapted to engage the frame of the machine, in combination with a foot-lever mounted upon a short transverse shaft journaled in the plow beam or head, and a forked arm also mounted upon said shaft and engaging said spring-actuated bolt or latch, substantially as and for the purpose specified.
3. In a sulky-plow, the main frame thereof provided at its rear end with an annular flange arranged in a horizontal plane and provided with a notch or depression therein, in combination

with a plow-beam head coupled to the machine-frame by means of a vertical bolt or pivot, a horizontally-sliding spring-actuated bolt or latch adapted to engage said notched flange, and a foot-lever provided with a forked arm for engaging said sliding bolt or latch and withdrawing the same from engagement with the notched flange, substantially as specified.

4. In a sulky-plow, the combination with the machine-frame, of a carrying-wheel axle having a swinging crank-arm upon the outer end of which the carrying-wheel is journaled, a supplemental crank-arm having a rigid connection with said axle and formed with a longitudinal slot, and a latch-lever having intermediate its ends a block or projection in sliding engagement with said supplemental crank-arm and pivoted to swing upon a different center therefrom, said parts being combined and arranged, substantially as set forth.

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

AMBROSE F. JACKSON.

Witnesses:

LYMAN ALLEN,
J. H. BLAIR.