

(No Model.)

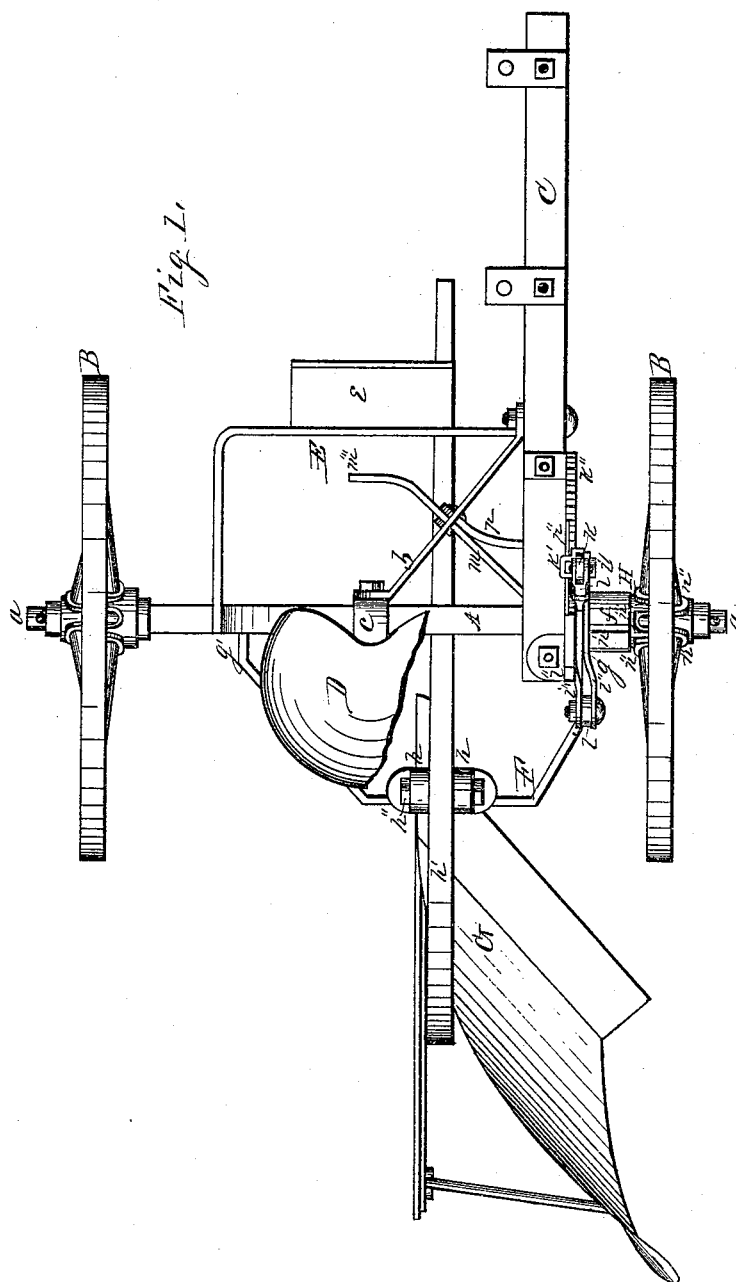
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G. S. BRIGGS.

SULKY PLOW.

No. 262,729.

Patented Aug. 15, 1882.



Witnesses.
F. J. Lorrain
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Inventor.
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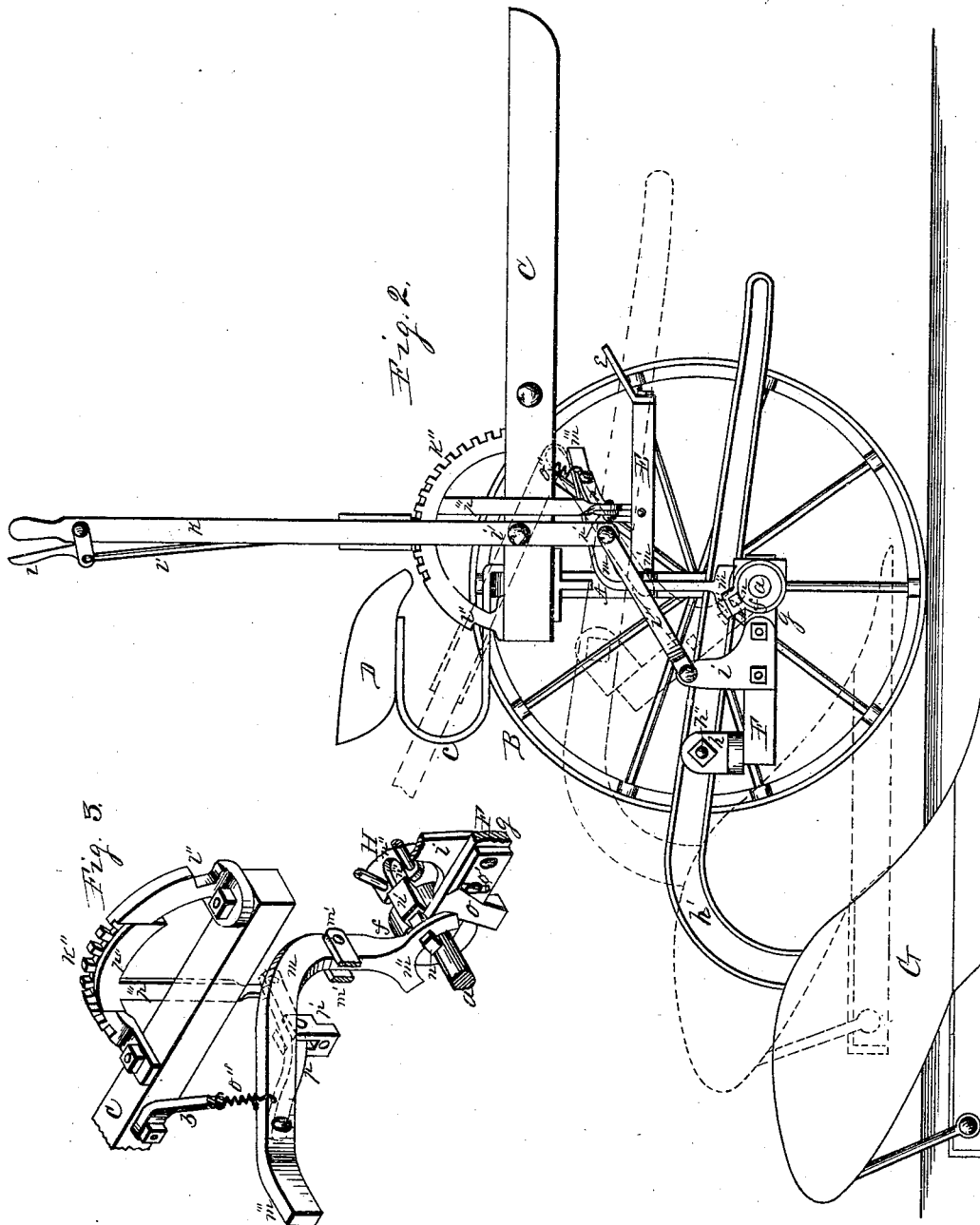
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UNITED STATES PATENT OFFICE.

GEORGE S. BRIGGS, OF ROCKFORD, ILLINOIS.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 262,729, dated August 15, 1882.

Application filed December 12, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. BRIGGS, a citizen of the United States, residing in the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Sulky-Plows, of which the following is a specification.

My invention relates to that class of agricultural implements known in the trade as "sulky-plows," but more particularly to the feature therein known as the "horse" or "power" lift; and it consists in a system of levers in connection with suitable bolt-clutching mechanism with one of the carrying-wheels to employ the power of the team to lift the plow; in mechanism to disconnect the holding-lever from its connection with the toothed segment to permit the plow to rise and to engage the segment at a proper point to hold the plow elevated; in a cam mechanism to disconnect the bolt-clutching mechanism from the carrying-wheel when the plow is elevated, all of which, with the mechanism employed and the application thereof, will be hereinafter more fully described.

In the accompanying drawings, Figure 1 is a plan view of a sulky with plow attached embodying my invention, of which Fig. 2 is a side elevation in which the furrow-wheel is omitted, and Fig. 3 is an isometrical representation of the operating mechanism embodying the main features of my invention.

In the figures, A represents the axle-tree, of arching form, provided with axle-arms *a*, on which are mounted the carrying-wheels B to revolve thereon.

At C is represented a portion of the tongue, suitably fixed to the axle at or near one end of the arching portion, and a horizontal brace, *b*, connects it centrally with the arching portion of the axle.

At D is represented a driver's seat supported on a spring, *c*, fixed centrally to the arching portion of the axle-tree.

At E is represented a rectangular arching-bar, having its end portions fixed to the vertical portions of the arching axle-tree and its arching portion extending in front thereof, and to the center of its forward portion is fixed a foot-support, *e*. These several parts are substantially of the usual construction.

At *f* is represented a collar fitted to receive the inner portion of the axle-arm *a* on the furrow side of the machine in a manner to be capable of an oscillatory movement thereon. 55

At F is represented an octagon-formed bail, having one of its ends, as at *g*, fixed to the inner end of the collar *f*, and is fitted to receive the axle-arm in the same manner as the collar. The other end, *g'*, is pivoted to the vertical portion of the arching axle on the landside of the machine. The rear portion of this octagon bail is provided with uprising ears *h*, adapted to receive the beam of a plow between them. 60

At G is represented a plow of the usual form, having its beam *h'* placed between the uprising ears *h* on the arching bar, in which position it is fixed by means of a transverse bolt, *h''*, passed through the ears and through the beam. To the furrow end portion *g* of this arching bar is fixed an uprising arm, *i*, of bracket form. 65

At *k* is represented a hand-lever having the usual spring-latch and rock-bar.

At *m* is represented an angle-lever of the peculiar bent form shown, having its vertical portion pivoted between ears *m'*, projecting outward from the vertical portion of the arching axle-tree. The lower end of this bent lever *m* is of curved segment form, as at *m''*, its under edge engaging the notched inner end of the clutching-bolt *n* in such a manner that the vertical movement of the free end *m'''* of the bent lever will operate to impart an endwise sliding movement to the bolt *n*, which is fitted to move endwise in a socket, *n'*, in the collar *f* in the lengthwise direction of the axle-arm. 75

At H is represented the hub of the carrying-wheel on the furrow side of the machine, which is provided with spoke-flanges *n''*, between which, on the inner end of the hub, are formed openings *n'''*, which receive the outward projecting end of the clutching-bolt when ejected by depressing the free end *m'''* of the bent or foot lever *m*. 80

At *o* is represented a cam of wedge form, adjustably fixed to the inside of the bail in such position that in its upward swinging movement it will engage the rear arm of the segment-foot *m''* of the bent foot-lever, and operate to disengage the clutch-bolt from its connection with the hub of the carrying- 85 90 95 100

wheel. This wedge-formed cam is made adjustable in its connection with the arch-bar by means of a transverse slot, *o'*, which receives a suitable clamping-bolt, by which it may be adjusted to disconnect the clutching-bolt from the hub of the carrying-wheel at a greater or less elevation of the bail.

At *o''* is represented a spiral spring having a suitable connection with the free portion of the bent foot-lever, and, with the frame, operating to hold the clutching-bolt disconnected from the hub of the carrying-wheel.

At *p* is represented a lever having its fulcrum-support between ears *p'*, rising from the front arching bar, *E*, to which they are securely fixed. The forward end of this lever *p* is connected to the free end portion of the bent foot-lever in such a manner that its movements will be controlled by the movements of the bent foot-lever.

At *p''* is represented a segment having the same peripheral curve as the toothed segment *k''*, and is placed to move radially in a recessed portion of the toothed segment on its inner side. This segment *p''* is provided with a vertical arm, *p'''*, having its lower end pivoted to the outer arm of the lever *p* in such a manner that the depression of the free end of the bent foot-lever will cause the segment *p''* to rise to the periphery of the toothed segment, and in its rising movement will engage the end of the detent-bolt and disengage it from its connection with the ratchet-teeth of the segment *k''*, which will liberate the hand-lever.

In the use of my improved machine, when desired to raise the plow from the ground, it will only be necessary for the driver to depress the free end of the foot-lever, which movement will eject the clutching-bolt to engage the hub of the carrying-wheel, and at the same time will disengage the detent-bolt from the teeth of the segment-ratchet *k''*, and the forward movement of the machine will operate to raise

the bail and the plow connected therewith, in which movement the several parts will be carried to their position shown in dotted lines, and the detent of the hand-lever will engage the notch in the rear end portion of the toothed segment to hold the plow in its elevated position, at which point the clutching-bolt will be disengaged from its connection with the hub of the carrying-wheel by the action of the wedge-formed cam upon the foot-lever *m*. The plow is readily lowered by disengaging the detent-bolt of the hand-lever.

I claim as my invention—

1. In a sulky-plow, the angle-lever *m*, formed with segmental end pieces, the clutch-pin *n*, engaging therewith and with the hub of the carrying-wheel, and the collar *f*, in combination with the plow-supporting bail, whereby the motion of the carrying-wheel is imparted to said bail to raise the plow, substantially as shown and described.

2. In a sulky-plow, the angle-lever *m*, formed with ends *m''* and provided with suitable upward-acting spring, the pin *n*, collar *f*, recessed hub *H*, and axle *a*, in combination with the bail *F*, provided with the adjustable cam *o*, whereby the clutch mechanism may be disengaged automatically at any predetermined point, substantially as shown and described.

3. The combination of a pivoted foot-lever, a supplemental lever pivoted thereto and independently fulcrumed, an upward-acting segment connected with said supplemental lever and working in a recess of a segmental ratchet, and a hand-lever provided with a detent engaging the teeth of the ratchet and connected to the plow-supporting bail, substantially as shown and described.

GEORGE S. BRIGGS.

Witnesses:

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