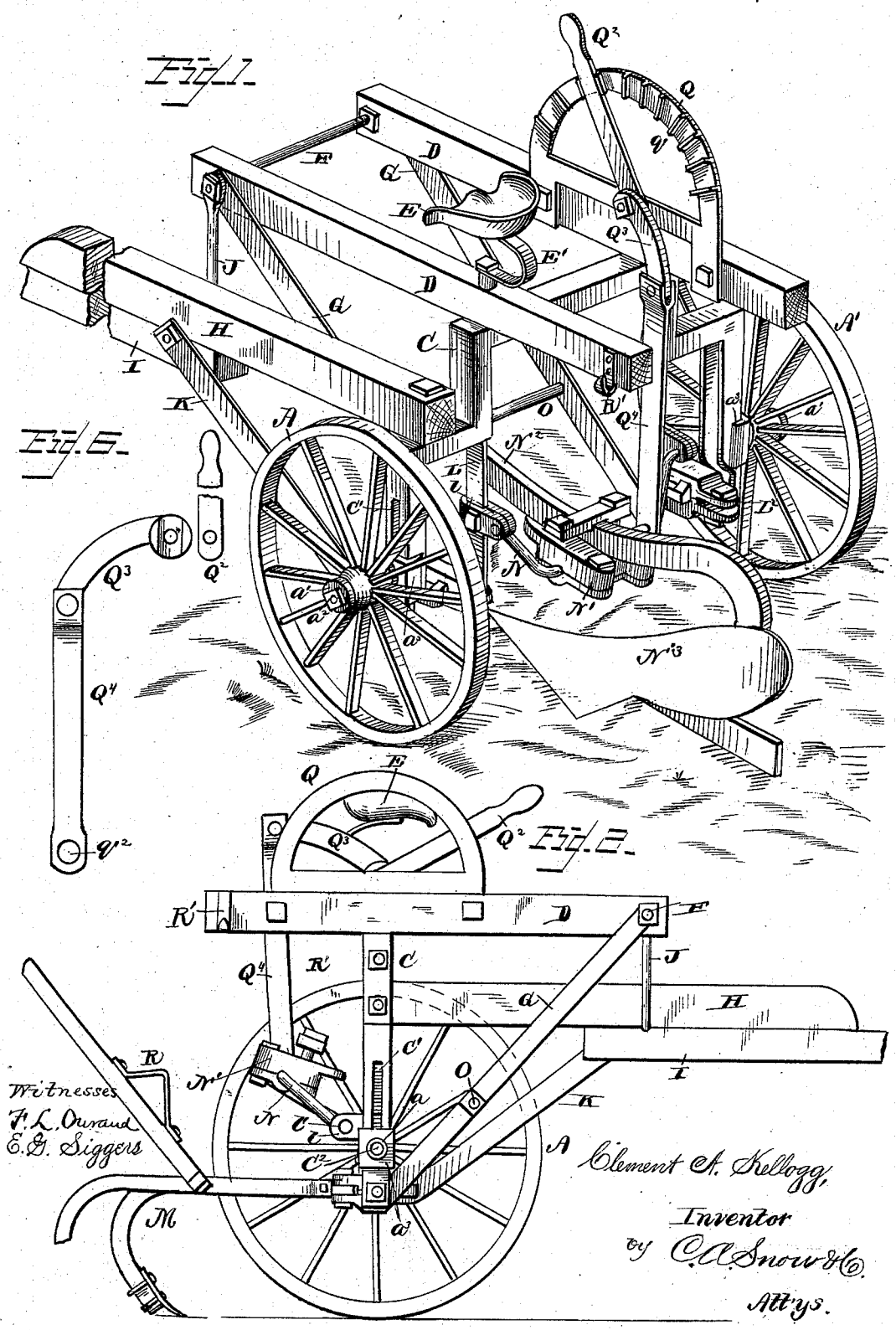
(No Model.)

2 Sheets—Sheet 1.

C. A. KELLOGG.

SULKY PLOW.

No. 288,341. Patented Nov. 13, 1883.



N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

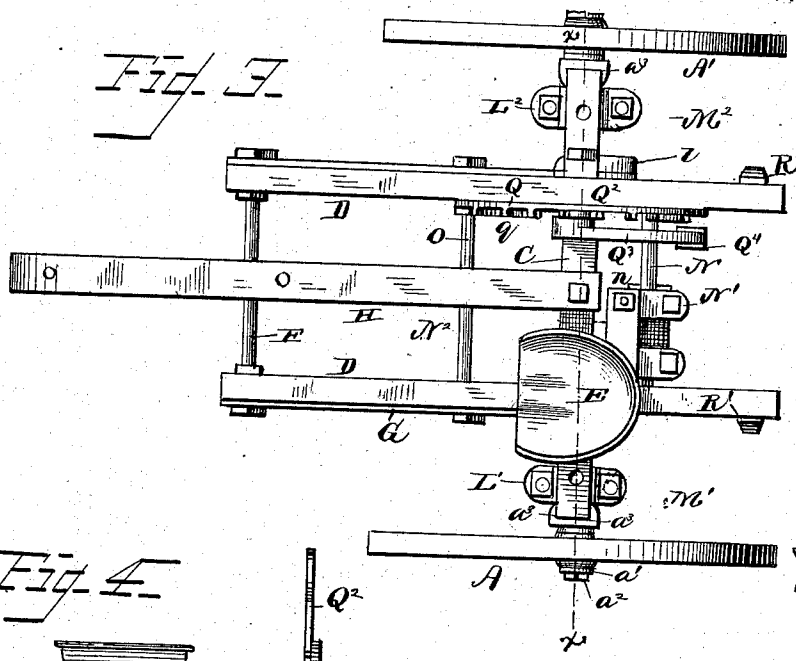


Fig. 4.

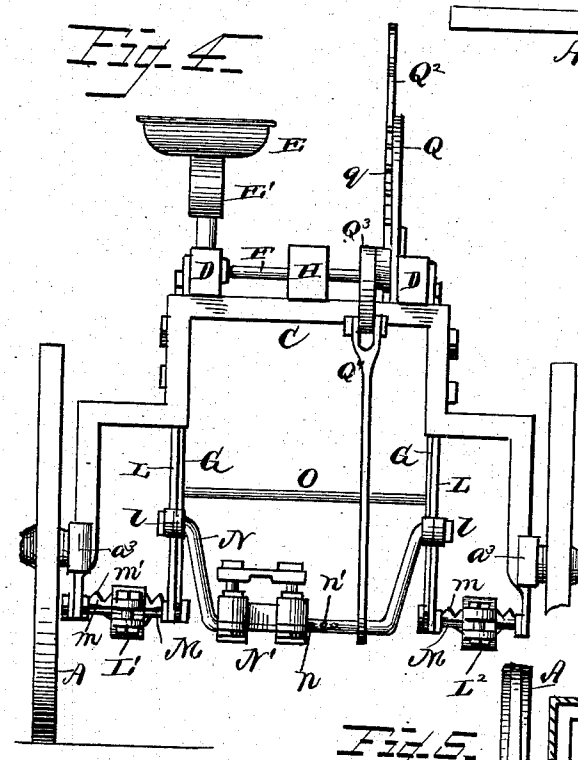


Fig. 7.

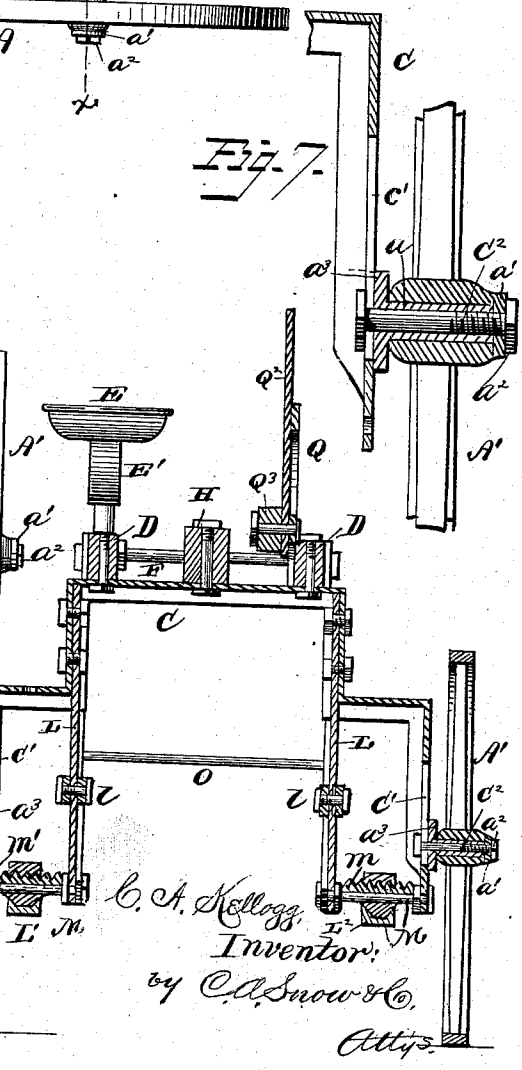
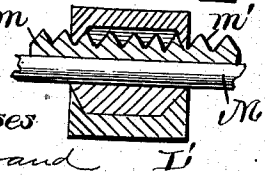


Fig. 5.

Fig. 8.



Witnesses
F. L. Durand
E. G. Siggers.

C. A. Kellogg,
Inventor.
by C. A. Snow & Co.
Attys.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CLEMENT A. KELLOGG, OF COLUMBUS GROVE, OHIO.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 288,341, dated November 13, 1883.

Application filed June 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, CLEMENT A. KELLOGG, a citizen of the United States, residing at Columbus Grove, in the county of Putnam and State of Ohio, have invented a new and useful Sulky-Plow, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to sulky-plows; and it has for its object to provide a simple, durable, and inexpensive machine which will readily and efficiently accomplish the plowing and breaking of the ground without the usual accidents from obstructions.

To this end my invention consists in certain improvements in the construction of the same, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a sulky-plow embodying my improved construction, the breaking-plow being placed in position for use. Fig. 2 is a side view of the same, the corn-plows being attached in this view only. Fig. 3 is a plan view, all the plows being off from the machine and the parts being adjusted for two horses. Fig. 4 is a rear elevation of the same. Fig. 5 is a vertical cross-section on line *x x*, Fig. 3. Fig. 6 is a detail view of the devices for raising and lowering the yoke. Fig. 7 is a cross-section of the wheel and spindle, showing the devices for adjusting the height of the wheels; and Fig. 8 is a cross-section through one of the rods carrying the corn-plows.

The same letters refer to corresponding parts in all the figures.

Referring to the drawings, A designates the land-wheel, and A′ the furrow-wheel; but since both of the wheels are made vertically adjustable, one can take the place of the other wheel.

C designates the arched or bowed frame, at the upper ends of which are secured the beams D D. The driver's seat E is secured to one of said beams, and has the usual support, E′. On the other beam D are secured the devices for raising and lowering the swinging yoke carrying the plow, which will be presently described. A rod, F, connects the front ends of said beams together by screw-nuts, and said rod also serves to connect the braces G G to said beams.

In Figs. 1 and 2, I have shown the plow adapted for the use of three horses, the pole H being secured by bolts to the frame C, and attached also to the pole I by screw bolts and nuts. A bent rod, J, secured to the end of the rod F, serves to support the said poles, as shown. Said rod J, passing between the two poles, extends outwardly and connects with a brace, K, which has connection with the frame C near the wheel A by means of screw bolts and nuts.

The above parts are arranged on the left-hand side of the machine, and are intended to be so placed when plowing with a left-hand plow. Whenever desired, the plowing can be done with a right-hand plow by changing brace K, poles H I, and rod J to the other side of the machine, and also shifting the plow-bearer to the right-hand side of the swinging yoke.

The frame C is provided in its lower extensions on each side of the machine with a slot, C′, extending vertically in the same, and through said slot a screw-bolt, C^2, passes and slides vertically therein. Said bolt passes through a spindle, *a*, on which the wheels A A′ revolve, and the bolt is secured at the outer end of said spindle by a cap, *a′*, and nut a^2. The spindle *a* is provided with flanges a^3 a^3, to clasp the sides of the lower extension of the frame C and hold the wheels more firmly to said frame. By this arrangement the wheels can be adjusted to any height by raising or lowering the bolt C^2 to the point desired, then screwing tightly the cap and nut, and the adjustment of the wheels will be found perfect. The construction of the adjusting devices for each wheel is identical, so that either can be used as the land or furrow wheel, according as a right or left hand plow is employed.

L designates bars secured to the inner sides of the upper extensions of frame C. Each of said bars extends downward parallel with the lower extension of frame C, and is connected to said lower extension by rods M. On said rods M clips forming plow-bearers L′ L^2 are attached, and by means of which corn-plows M′ M′ are loosely journaled to said rods

M. These plow-bearers or clips are provided with a plate, *m*, filling the space on rod M between frame C and rod L, and this plate *m* has notches *m'* in its upper face, in which notches the upper part of the clips or plow-bearers are adapted to fit at each end. By moving the plow-bearers either way one or more notches on the upper plate, *m*, until the required distance is reached, the lateral adjustment of the same is effected. The object of this lateral adjustment of the plow-bearers is to provide for varying widths of rows in corn-plowing.

Near the middle of each of the rods L is secured a clip, *l*, having a slot, *l'*, in which the ends of the swinging yoke N are journaled. Said yoke carries a revolving plow-bearer, N', having a groove in the upper face for receiving a plow-beam, N^2, carrying a plow, N^3. This plow-bearer can be adjusted to either side of said yoke, so as to be used with a right-hand or a left-hand plow.

The adjustment is as follows: The yoke N is provided with openings *n'* at suitable intervals on said yoke, and through said openings a pin, *n*, is inserted at the proper place. When changing from a left-hand to a right-hand plow, the plow-bearer is moved over to the right-hand side of the yoke, and the pin is inserted in the first opening *n'* on this side of the plow-bearer. This pin serves to limit the lateral movement of the plow-bearer, and thus prevents said plow-bearer from moving over to the other side, as it otherwise would if no holding means were employed.

The front end of the plow-beam is free and passes under a rod, O, which connects the two braces G G, secured at their lower ends by bolts at the junction of the rods L M. When the yoke is raised by the devices hereinafter described, the front portion of plow-beam comes up against the rod O, and said rod holds the beam down while the plow is raised out of the ground.

The horses are attached to the front end of plow-beam in the usual manner, the poles being simply to guide the sulky.

The devices for raising and lowering the yoke N are as follows: To the inner side of the beam D is secured a segment rack-bar, Q, having the usual notches or teeth, *q*. A lever, Q^2, is pivoted in a slot formed in the elbow-arm Q^3, which is journaled in a link, Q^4, said link having an opening, q^4, in its lower end, encircling the yoke N.

The operation of the devices will be apparent. By pushing the lever Q^2 it raises the lower end of arm Q^3, the latter raising the link Q^4, which in turn lifts the swinging yoke carrying the plow N^3, and by this means the plow is suspended above the ground to any distance desired. Thus when driving across fields, or when an obstruction is reached, the driver can in his seat raise the plow and hold it off the ground, the distance at which the plow is raised being regulated by the lever Q^2 catching in the notches of the segment-rack.

To hold the corn-plows M' M' off the ground I provide eyes R on the upper part of the beams carrying the corn-plows, and said eyes catch over hooks R' on the ends of beams D. When desired, the corn-plow beams are raised, so as to permit the eyes to catch over the hooks, and thus the said plows are suspended, as stated.

When changing the plow from a three-horse to a two-horse plow, the poles H I and braces J K are taken off of the machine, and the pole H is attached to the top of frame C, as shown in Fig. 3, the other parts, I J K, being dispensed with in a two-horse plow.

When the machine is required to be used for corn-plowing only, the breaking-plow part can be taken off as follows: Unscrew and take off the clips *l* from the rods L, then take out the bolt at the junction of arm Q^3 and link Q^4, and finally unscrew and withdraw rod O, and the breaking-plow part is off from the middle of the machine. Then take off the braces J K and poles H I, separate the two poles, and place H only on the top of frame C, the outer end of the pole resting on rod F. The pole I will not be required, since it does not require such a long pole for corn-plowing as for breaking. The beams D D should be parallel, and they serve to hold the frame C in an upright position.

The operation of my sulky-plow can be readily understood by the foregoing description, taken in connection with the annexed drawings. The horses are attached to the end of the plow-beam in the usual manner, and a right or a left hand plow is fitted on the machine, as desired. The wheels are adjusted to suit the kind of plow used by loosening the nut on the end of said wheels, raising or lowering the wheels to the position desired, then tightening the said nuts. When the adjustment of the wheels is complete, the sulky-plow is ready to be used.

By the use of my machine any of the well-known plows can be readily attached to the swinging yoke, as the plow-bearers or clips will fit and attach any iron or wooden beam plow, either right or left hand. Thus I do not restrict myself to any particular style of plow, as my attachments will readily fit all kinds in the market.

My machine is simple in its construction and efficient in its operation, and can be manufactured very cheaply in comparison to other machines of its kind.

Having described my invention, what I claim as new is—

1. In a sulky-plow, the combination, with the frame, of rods L, secured to and projecting downward therefrom, and provided with clips *l*, swinging yoke N, journaled in said clips, and having a laterally-adjustable plow-bearer moving thereon, as set forth.

2. In a sulky-plow, the swinging yoke N, journaled in rods L, projecting downward from the frame, in combination with a segment rack-bar, Q, lever Q^2, pivoted in a slot

formed in the elbow-arm Q^3, and a link, Q^4, encircling the yoke at its lower end, and provided with a bifurcated upper end, in which the elbow-arm is pivoted, as set forth.

3. In a sulky-plow, the combination, with the frame C and its braces and beams, of a rod, O, passing beneath the beams and connecting the braces, rods L, projecting downward from the frame, a swinging yoke, N, journaled in said rods L and carrying a laterally-adjustable plow-bearer, and the plow having its beam inserted through a groove of the plow-bearer and secured thereto, the front end of said beam passing under and held loosely against the rod O, as set forth.

4. In a sulky-plow, the combination of the frame C, having rods L, secured thereto and extending downward parallel with the lower portion of said frame, and rods M, connecting the lower ends of said rods L to the frame, with the yoke N, journaled in clips *l* of the rods L, and provided with a laterally-adjustable plow-bearer, as set forth.

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

CLEMENT A. KELLOGG.

Witnesses:

C. H. PARRISH,

B. F. FUNK.