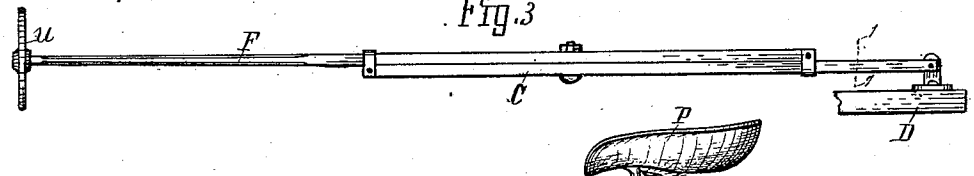
(No Model.)

A. T. STEWART.

LAND MARKER.

No. 337,092. Patented Mar. 2, 1886.

Fig. 3



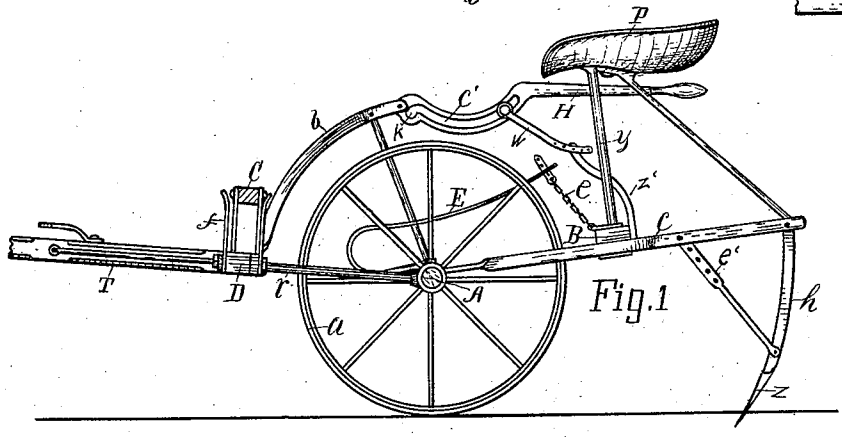


Fig. 1

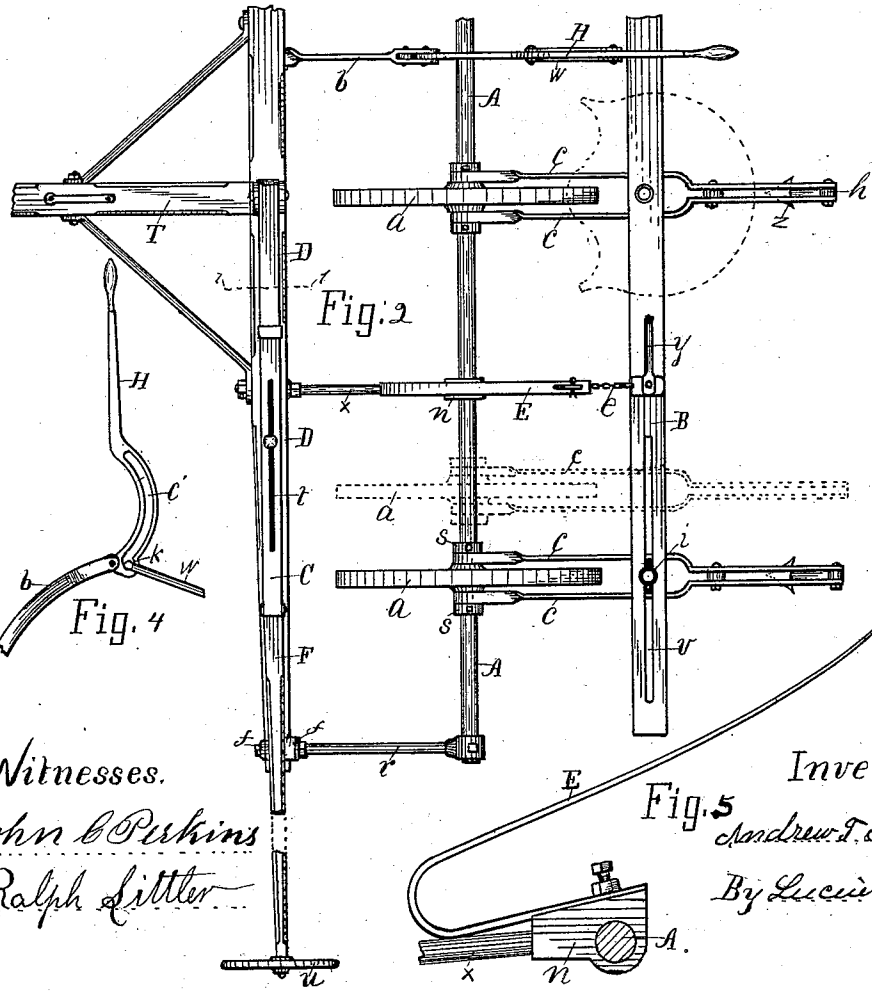


Fig. 2

Fig. 4

Fig. 5

Witnesses.

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UNITED STATES PATENT OFFICE.

ANDREW T. STEWART, OF CONCORD, ASSIGNOR OF ONE-HALF TO GEORGE S. SHEFFIELD, OF THREE RIVERS, MICHIGAN.

LAND-MARKER.

SPECIFICATION forming part of Letters Patent No. 337,092, dated March 2, 1886.

Application filed June 11, 1885. Serial No. 168,396. (No model.)

To all whom it may concern:

Be it known that I, ANDREW T. STEWART, a citizen of the United States, residing at Concord, county of Jackson, State of Michigan, have invented a new and useful Land-Marker, of which the following is a specification.

This invention has for its object the construction of an improved land-marker, substantially as hereinafter described and claimed, designed to facilitate the operation and greatly increase the utility of this class of agricultural machines.

Among the important features of the invention may be named the counterbalancing of the draft-power and the resistance thereto by centrally fixing the strain of each on the wheel-axle; making the wheels and markers which are lined with each other both together laterally adjustable; equalizing the effect of the varying weights of the driver in forcing the markers into the soil and controlling the power of said weight to have the desired effect. The means and manner of effecting these results and others are described in detail below.

In the drawings forming a part of this specification, Figure 1 is a side elevation, part C being in cross-section near line 1 1 in Figs. 2 and 3. Fig. 2 is a top view with one side of the machine broken away, showing a little more than one-half of the complete machine; Fig. 3, a front view of a detail in Fig. 2; Fig. 4, details of Fig. 1, showing operation; and Fig. 5, an enlarged side elevation of a part in Figs. 1 and 2.

The several details above named are designated by like letters, all of which are further described below.

Referring to the letters marked on the drawings, A is the wheel-axle, substantially centrally located, and held from revolving by the bars *r*, rigidly connecting it and the forward beam, D, to which the tongue is connected. I usually employ three wheels, *a a*, revoluble on the axle A, the upper wheel in Fig. 2 being centrally stationed in the rear of the tongue T. The parts above this wheel in said figure which are broken away are duplicates of said parts shown below this wheel. The wheels are held in place and are laterally adjustable by means of the adjustable collars S S. Between the collars S S and the ends of the wheel-hubs the two arms C C of the marker-supporting bars are pivotally connected with the axle A. Thus any vertical play of the frame or beam D and tongue T does not affect the markers, and the vertical play of the markers in no way affects the frame part forward of the axle, as the pivotal fulcrum of each is on the axle A. For this reason the draft-strain and the resistance-strain of the marker part of the machine are independent or counterbalanced. To the rear end of the supporting-bars *c* the markers *h*, bearing a marking share or blade, *z*, are pivotally connected, and are held and braced in the desired angle by the adjustable brace *e'*, Fig. 1.

The dotted parts *a c* in Fig. 2 illustrate the lateral adjustment of the wheel and marker in governing the distance between rows marked across the field. The marker-bars *c c* are connected by a transverse beam, B, having slots *v*, with which said bars *c* are adjustably connected by a bolt, *i*, passed through said slot. When three markers are employed, as illustrated, the central one and the wheel in the rear of the tongue need not be laterally adjustable. The bolt is loosened in making the adjustment of the marker-bars, and is screwed tight again when in the desired position. The beam B supports the seat P, the latter being supported by any suitable standards, Fig. 1, connecting it and the beam B.

The end of the bar *x* which connects the axle A and frame-beam D has secured to it a spring, E, of suitable form, with one arm longer than the other and extending rearwardly, as in Figs. 1 and 5. A chain, *e*, adjustably connects the free end of this spring with the beam B. The object of this spring is to control the effect of the driver to press down on the markers—that is, by shortening the chain *e* the spring is made stiffer, so that the weight of the driver will not bear down unduly. If a person of light weight occupies the seat, the chain is connected nearer its upper end with the spring, thus making the spring more flexible, so that the weight of the light person may be sufficient.

The seat P being supported by the marker-supporting bars *c c*, or by a beam, B, which connects said bars, it is necessary for the driver

in raising the markers to clear obstructions, &c., to raise his own weight at the same time. To this end I have constructed a peculiar lever, H, Figs. 1 and 4. The lower end or portion of the lever is curved, said curved portion being provided with a curved slot, *c'*. At the lower end of this slot is a lock-recess, *k*, at an angle to said slot *c'*, and communicating with it. The end of the lever is pivotally fulcrumed to an elevated support, *b*, well above the axle A, Figs. 1 and 2. The lever H is connected with the beam B by the pivotally-connected bars *z' w*, the lower end of bar *z'* connecting with the beam B, and the upper end of bar *w* forming a cam-connection with the slot *c'* by means of a wrist-pin or bolt adapted to play in the slot and to enter the lock-recess *k* when the lever is raised, Fig. 4. When in the elevated position, the relative position of the lock-recess *k* and the fulcrum of the lever H is such that the weight being sustained by said lever has no power to throw the lever down, and the lever will remain thus locked until the driver pulls it toward him, throwing the cam end of the bar *w* out of the lock-recess *k* into the slot *c'* again, when the lever is easily lowered to the position shown in Fig. 1. The relation of this simply-constructed lifting device with the weight and elevated fulcrum is such that but little strength is required of the driver with one hand to operate it.

I employ a gage-wheel, *u*, which makes a track or line on the unmarked land during the passage of the machine across the field a suitable distance from the furrows being made by the shares *z z*, said line forming a guide in passing back over the field after turning around at the end of the rows. This wheel is revolubly connected with the free end of the arm F C. These parts F C are longitudinally slotted and lapped, Figs. 2 and 3, and are adjustably held together by end confining-clips and a bolt in said slots. Thus the arm F C is longitudinally adjustable to fix the gage-wheel *u* the desired distance from the furrow made by the marker. The other end of this arm is centrally pivoted to the beam D, or rather to a support secured to said beam, Fig. 3, so as to elevate this end of the arm, in order that the wheel *u* at the other end will be sure to engage the ground. By thus pivoting the arm F C it can be swung over from one side of the machine to the other, according to the direction the machine is going. At *f f* are upwardly-extending guards on each forward corner of the machine, between which guards the arm F C rests when in use, thus bracing it against displacement by the resistance-strain of the wheel engaging the ground.

Having thus described my invention, and deeming its operation will be understood without further description, what I claim as new, and desire to secure, is—

1. In a land-marker, the combination of the forward beam, the wheel-axle rigidly held against revolving by bars connecting said beam and axle, wheels rotable on said axle, and laterally adjustable, and supporting-bars bearing marker-shares pivotally connecting to said axle and extending to the rearward behind said wheels, substantially as and for the object set forth.

2. The combination of the forward beam, the wheel-axle, bars connecting said beam and axle and holding the latter from revolving, rotable laterally-adjustable wheels on said axle, bars pivotally connecting the axle extending rearwardly and bearing marker-shares, said bars laterally adjustable with the wheels, a beam connecting said bars in an adjustable manner, and a spring to adjust the effect of the driver's weight upon the markers, substantially as set forth.

3. The combination of a wheel-frame, pivoted vertically-playing share-bars, a transverse beam connecting said bars, the lifting-lever provided with the slotted base and lock-recess at an angle to said slot and communicating therewith, said lever fulcrumed above the pivotal connection of the share-bars, and a jointed bar, one end of which connects with said transverse beam, and the other end forming a cam-connection with the slot of the lever, all substantially as set forth.

4. The combination of pivoted vertically-playing share-bars bearing shares and supporting a driver's seat, and a spring and adjustable means connecting it with the share-bars, said spring having a lifting resistance against the downward pressure of the driver's weight, substantially as set forth.

In testimony of the foregoing I have hereunto subscribed my name in presence of two witnesses.

ANDREW T. STEWART.

Witnesses:
JOHN H. CHASE,
GEORGE S. SHEFFIELD.