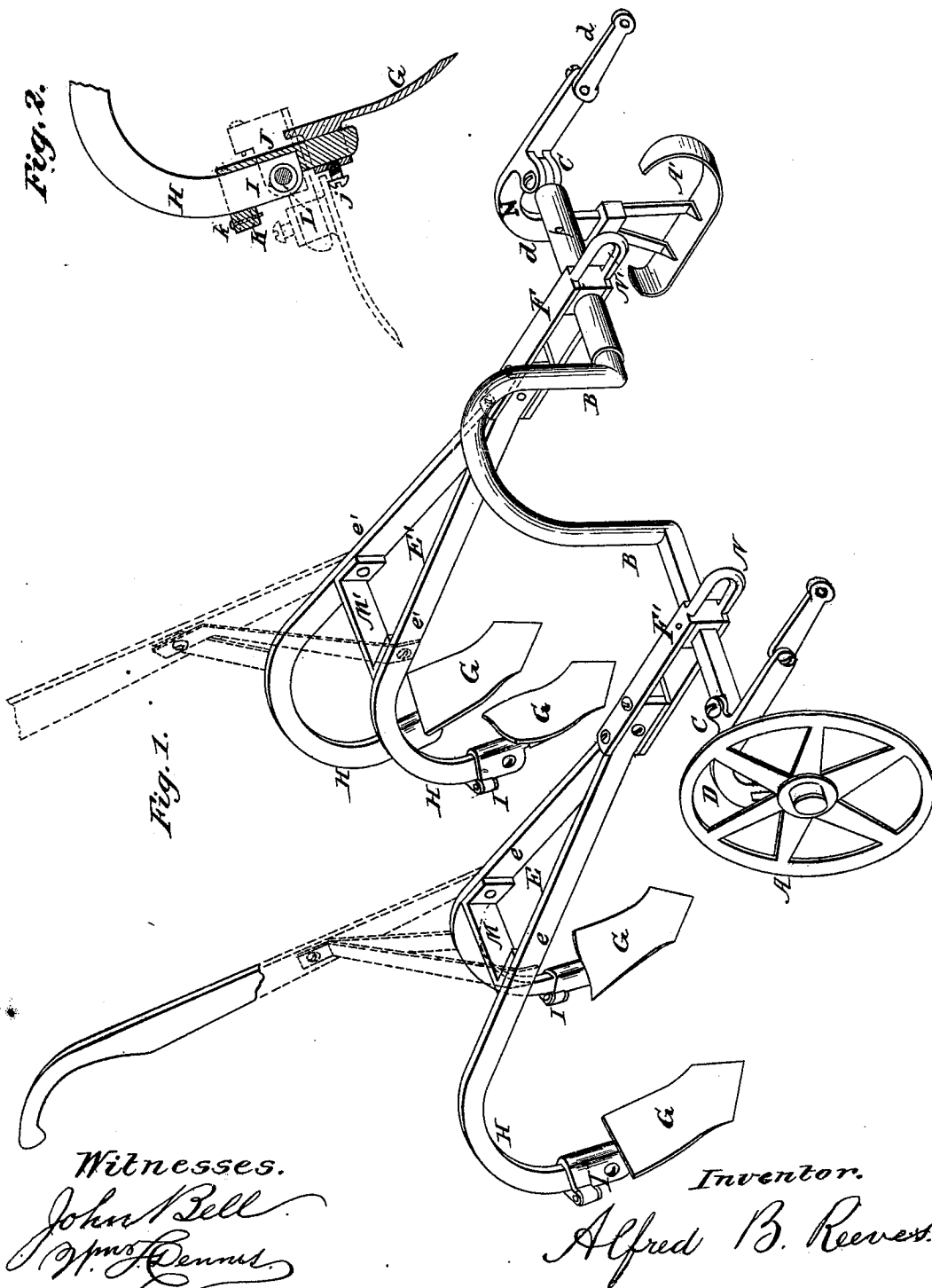


A. B. REEVES.
CULTIVATOR.

No. 175,256.

Patented March 28, 1876.



UNITED STATES PATENT OFFICE.

ALFRED B. REEVES, OF KNIGHTSTOWN, INDIANA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **175,256**, dated March 28, 1876; application filed March 13, 1874.

To all whom it may concern:

Be it known that I, ALFRED B. REEVES, of Knightstown, Henry county, Indiana, have invented certain new and useful Improvements in Cultivators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to manufacture and use the same, reference being had to the specification, drawings, and letters of reference thereon, which accompany the same, and forms a part of this application.

In the drawings, Figure 1 is a perspective view of my improved cultivator, with the additional handles to each plow, shown in dotted lines. Fig. 2 shows the lower section of the curved standard, with the pivoted clamping latch and set-screw, to which the shovel is attached when the latch-pin is broken and the shovel thrown back.

My invention consists, first, in the employment of an arched connecting-bar, to which the plow-beams are connected by dissimilar devices, allowing each an independent vertical and lateral motion, and provided at each end with a hinged joint permitting lateral motion only; also in the employment of a curved bar, the vertical portion of which is slotted to receive the axle of the carrying-wheel, made adjustable by a set-screw perpendicularly, while its upper portion is provided with horizontal ears or lugs, forming a hinge with the outer ends of the arched connecting-bar, and to the front end of which horizontal portion the draft is attached; also in the peculiar dissimilar devices by which the plow-beams are attached to, and are detachable from, the arched connecting-bar, so that when detached and separated, each can be used singly by affixing an additional handle, which is provided; and, finally in devices for fastening, hinging, and releasing the shovels from the standards and regulating the angle and pitch of the same.

I will now proceed to describe the construction and operation of my improved cultivator.

A is a wheel, and A' is a runner, either one of which or both of which may be used as the carrying devices of a straddle-row cultivator as ordinarily constructed. B is an arched connecting-bar or axle, having in its center an arch

or curved elevation, proportioned as may be desired, to pass the standing corn, terminating in horizontal ends of equal length and different form, to which the bifurcated beams E E' are attached. The beams E E' are each composed of two longitudinal bars, *e e'*, rigidly held together by the braces M M', and, while one is shorter than the other, both terminate in the curved standards H H, of which they form a part, and to which the shovels G G are attached by means of the clamps J J', which terminate in shafts I I, upon which the shovels, by means of an ear attached to the rear of the same, are turned to any desired angle, and secured in their positions by ordinary set-screws. To the upper rear portion of the clamp J a latch, K, is hinged, provided with a perforated loop, and when the latch is closed the clamp is held in working position by means of a boss or shoulder opposite to the hinge of the latch having a hole to correspond with the perforations in the loop of the latch, and by a wood pin or other suitable fastening held against ordinary working obstructions, yet which may be broken by abrupt resistance, thus saving the shovel and frame-work from any ordinary breakage. L is an eccentric, inserted in an opening in the lower portion of the curved standard, the periphery of which is provided with a triangular lug which fits into one or more recesses, as may be required, in the circumference of the opening. In the eccentric L is a hole for the reception of the screw-bolt which pivots the clamp to the curved standard, situated near the circumference, the functions of which are, by being placed in successive positions, to change the perpendicular angle, or, in other words, the pitch, of the shovels. F is a compound coupling, connecting the plow-beam E with one of the horizontal ends or sections of the arched connecting-bar, formed of a loop containing a square block having a circular opening turning on its center, said loop terminating in a rigid connection, by bolts or other suitable devices, with the plow-beam E'. The circular opening in the square block within the loop of the coupling is made to receive a sleeve, *p*, with which this arm of the arched connecting-bar is provided, and is adjustable on any portion of said sleeve by means of a set-screw, the joint

or combined motions thus produced being free and easy both laterally and vertically, that portion of the shaft or section of the arched connecting-bar being round, to allow of the free revolution of the sleeve. F' is a coupling connecting the plow-beam E, and is attached to the opposite end of the arched connecting-bar, and is of the same construction as the coupling F, excepting that the square block turning on its center horizontally is provided with a square opening, to receive this arm of the arched connecting-bar, which is square, and upon which it is adjustable and held in position by means of a set-screw. The forward ends of the couplings F F' are provided with loops in the form of a clevis, to be used when they are employed as separate and independent implements. N N are curved bars, the vertical parts of which are slotted to receive the axle of the wheels, and allow of a perpendicular adjustment of the line of draft. The upper portion of this bar is horizontal, and is hinged by lugs or ears upon their inner surfaces to the ends of the arched connecting-bar, giving a free vibration laterally to the curved bars N N, and consequently to the wheels or runners which are attached to them. The front end of the curved bars are provided with a hinged bar, having a vertical motion only, rigidly limited by stops, and allowing a self-adjusting line of draft from the front end of the curved bar forward.

Handles may be attached to each of the beams not already provided, when the double-shovel plows are to be used independently, the arrangement, as shown, allowing the operator to walk one side of the row of grain instead of the center.

It will be seen that the points of the attach-

ment of the draft being independent of each other, that each animal attached controls the carrying device, whether wheel or runner, to the extent that rows of grain of irregular width, may be properly and equally treated, and the outermost hills or drills successfully cultivated. This arrangement also does away with the necessity of the tongue, double-tree, neck-yoke, and stay-chains in ordinary cultivators, and is consequently far more easily managed and controlled.

Having thus fully described my said invention, what I claim is—

1. The arched axle B, with ends of dissimilar form, whereby one end is rigid in the drag-bar E, and the other is allowed to turn freely in the drag-bar E', substantially as shown and described.

2. The arched axle B, having a square horizontal end, and the opposite end round and provided with sleeve p, in combination with the curved and slotted supporting-bar N, having ears C, and adapted to carry either a wheel or runner, as and for the purposes set forth.

3. The combination of the hinged draw-bar d, and the slotted curved bar N, hinged to the ends of the arched axle B, as herein described.

4. The clamp J, pivoted to the standard and held in its position by the latch K and pin k, in the manner and for the purposes herein described.

5. A shovel-fastening composed of the eccentric L, fitted in the standard H, and provided with the spur L', to adjust the shovels at different angles, as herein described.

ALFRED B. REEVES.

Witnesses:

JOHN BELL,

WM. T. DENNIS.