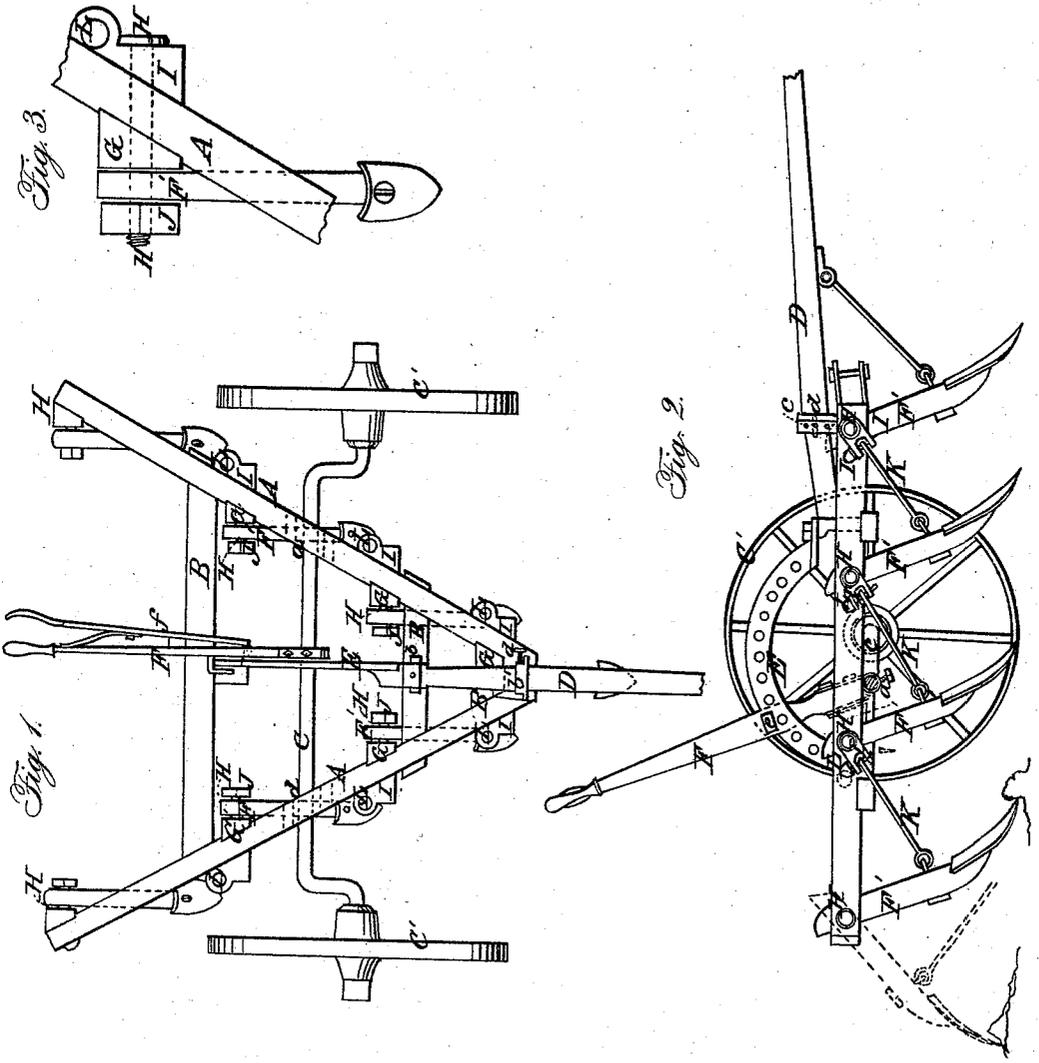


COX & THROP.
Wheel-Cultivator.

No. } 698, }
 } 31,702. }

Patented Mar. 19, 1861.



UNITED STATES PATENT OFFICE.

JOHN COX AND JOHN A. THROP, OF THREE RIVERS, MICHIGAN.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 31,702, dated March 19, 1861.

To all whom it may concern:

Be it known that we, JOHN COX and JOHN A. THROP, of Three Rivers, in the county of St. Joseph and State of Michigan, have invented a new and useful Improvement in Cultivators; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan or top view of our improved cultivator. Fig. 2 is a vertical longitudinal section. Fig. 3 is an enlarged plan view of one of the side beams, a cultivator-tooth, a three-sided metal block, and a metal ear.

Similar letters of reference in each of the several figures indicate corresponding parts.

The nature of our invention consists, first, in the combination, with the oblique side bars and shovel stocks or feet of a V-shaped frame, of three-sided metallic blocks, the blocks being constructed with their inner faces to run parallel with the line of draft and their outer faces parallel with the oblique bars, and being confined by means of screw-bolts, substantially in the manner hereinafter described.

Our invention consists, second, in the combination, with the oblique side bars, of metallic ears, wooden pins, swiveling connecting-links, shovel-stocks, and pivotal screw-bolts, substantially in the manner hereinafter described.

It consists, third, in the arrangement of the V-shaped frame, crank-axle, supporting-wheels, arch-shaped bar, adjusting-lever, three-sided blocks, shovel-stocks, screw-bolts, metallic ears, swiveling connecting-links, and wooden pins, all in the manner and for the purposes hereinafter described.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A A represent the oblique side bars of a cultivator-frame. They are arranged in such relation to one another as to form a figure approximating very closely the letter V. These parts are connected together by cross-pieces B B B.

C is a crank-axle, supported by wheels C' C, and arranged centrally under the side bars in bearings d a of the same.

D is the tongue by which the machine is

drawn. It is attached to the frame by means of loops b b', and is adjustable up and down in the front loop by means of holes e and a pin, d.

E is a segment-bar with holes through it; and F is a lever attached to the crank-axle and connected with the segment-bar by means of a bracket, e, which overhangs the bar E. On the side of the lever a pivoted spring-stop, f, is arranged, so that when the lever is moved to a certain position on the segment-bar for the purpose of throwing up or down the cultivator it can be retained in such position as long as desired.

F' F' are the shovel stocks or feet of the cultivator. They are arranged so as to stand on the inner sides of the oblique side bars, A A, of the frame. In order to set the stocks so as to have their front sides run at right angles to the line of draft, three-sided metallic blocks G G are set in mortises cut in the side bars. The blocks are so shaped and applied that their inner side runs parallel with the line of draft, while their outer side runs obliquely thereto, or parallel with the oblique side bars. It will be observed that the stocks are placed against the inner side of the blocks, and therefore their front side runs at right angles to the line of draft. It is important to thus set the stocks in order to have the shovels come squarely in contact with the soil and turn and distribute the soil equally on opposite sides of the furrow. It is also important as it admits of the pivotal screw-bolts H H, which confine the stocks, running centrally through the stocks and at right angles to the line of draft. It will be observed that the bolts H pass through the side beams, A A, blocks G G, stocks F F, and metallic ears I I, and are retained by nuts J J, which screw on their inner ends. The metallic ears I receive the eye ends of brace-connecting rods K K of the shovel-stocks. Wooden pins L L, passing down through the ears and eye of the rod, retain the rods in place until the shovels strike a stone or unyielding obstruction, when they break and allow the shovels and their stocks to turn up and back on the pivotal screw-rods and to assume the position shown in red. Thus allowing the shovels and stocks to give to an obstruction saves them from breakage or other injury.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination, with the oblique side

bars, A A, and swinging shovel stocks or feet F' F' of a V shaped frame, of three-sided metallic blocks G G, the blocks being constructed with their inner face to be parallel with the line of draft and in contact with the upper ends of the shovel-stocks and their outer face parallel with the oblique bars, each block being let in the sides of the bars and confined by a single bolt, H, substantially as and for the purposes set forth.

2. The combination, with the oblique side bars, A A, of metallic ears I I, wooden pins L L, swiveling connecting-links K K, shovel-stocks F' F', and pivotal screw-bolts H H, substantially as and for the purposes set forth.

3. The arrangement of the V-shaped frame A A B, crank-axle C, supporting-wheels C' C', arch-shaped bar E, adjusting-lever E f, three-sided blocks G G, shovel-stocks F' F', screw-bolts H H, metallic ears I I, swiveling connecting-links K K, and wooden pins L L, substantially as and for the purposes set forth.

JOHN COX.
JOHN A. THROP.

Witnesses:

JAMES M. LYON,
H. C. UNDERWOOD.