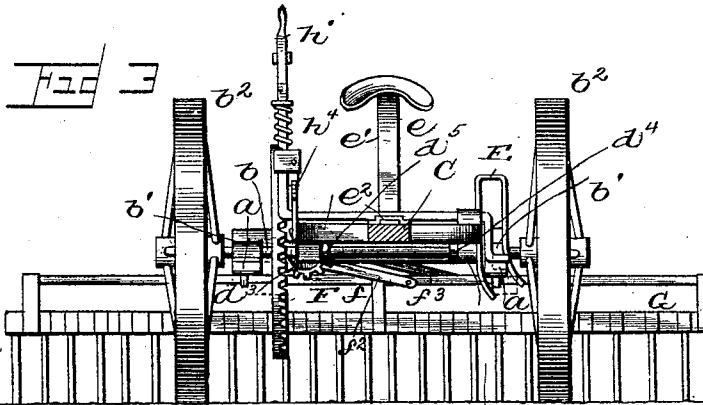
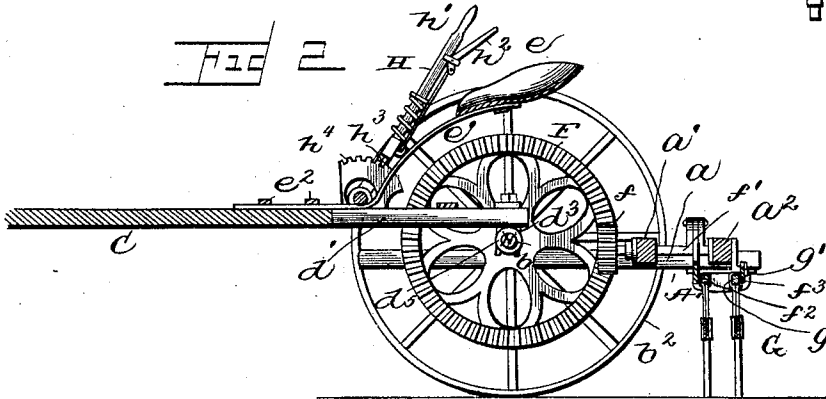
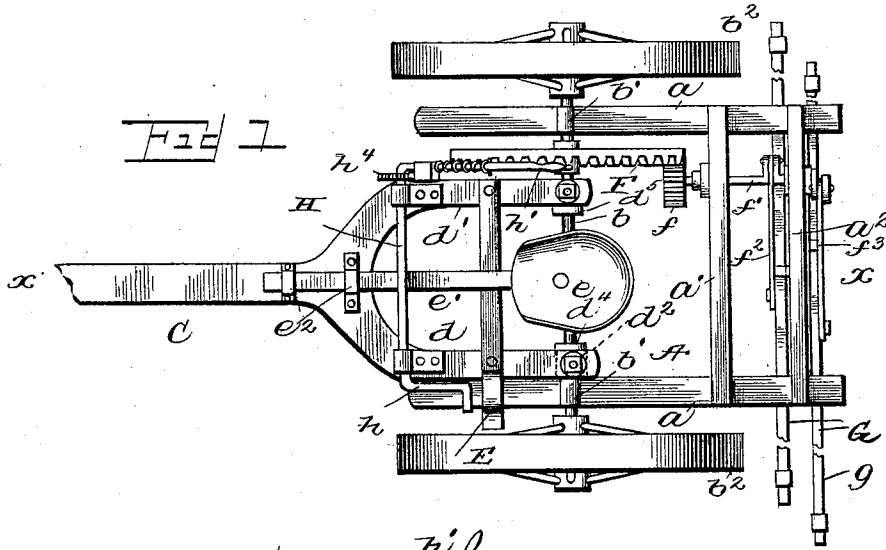


(No Model.)

W. H. PERKINS & W. L. CRONENBERG.
CULTIVATOR.

No. 484,815.

Patented Oct. 25, 1892.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIARD HORACE PERKINS AND WILLIAM LLOYD CRONENBERG, OF LONG BEACH, CALIFORNIA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 484,815, dated October 25, 1892

Application filed February 17, 1892. Serial No. 421,865. (No model.)

To all whom it may concern:

Be it known that we, WILLIARD HORACE PERKINS and WILLIAM LLOYD CRONENBERG, of Long Beach, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Cultivators; and we 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 appertains to make and use the same.

This invention relates to certain new and highly-useful improvements in cultivators, and has for its object the production of cheap, simple, and highly-efficient means whereby the draft-power is reduced to a minimum and the ground is thoroughly and effectively worked in a short time.

The invention comprises the detail construction, combination, and arrangement of parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of our improved cultivator. Fig. 2 is a vertical longitudinal sectional view thereof on the line $x x$, Fig. 1. Fig. 3 is a front view showing parts in dotted lines.

Referring to the drawings, A designates the frame, composed of two parallel side bars a and two rear connecting-bars a' a^2 . This frame is loosely hung on an axle b , so as to be capable of moving laterally by journal-boxes b' , secured to the side bars a . Upon axle b are the main carrying-wheels b^2 with which the axle is designed to rotate.

C is the tongue, from the inner or rear end of which project parallel bars or hounds d d' . To the inner end of the former bar or hound is secured a journal-box d^2 , through which axle b is passed, while from bar or hound d' projects an inverted-U-shaped plate d^3 , which is designed to hug axle b adjacent to a collar d^4 thereon. A similar collar d^5 is on said axle adjacent to journal-box d^2 . To bar or hound d is secured an approximately-U-shaped bracket E, the lower free ends of the side arms of which are bent or curved outwardly and hug one of the side bars a of frame A. The driver's seat e is attached to the upper end of a curved bar e' , the lower horizontal portion of which is passed beneath guide-plates

e^2 , attached to tongue C and can be adjusted to any point.

F is a large gear-wheel secured upon axle b between the adjacent side bars a and bar or hound d' . With this gear-wheel is designed to engage a pinion f , fast on a double crank-shaft f' , journaled in cross-bars a' a^2 of frame A. To the cranked portions of shaft f' are loosely connected the inner ends of pitmen f^2 f^3 , which at their outer ends are loosely secured to two vibratory toothed cultivating-bars G. These toothed bars have upper longitudinal bars g , which are passed through correspondingly-shaped openings in plates g' , attached to the under side of the rear ends of side bars a . These toothed bars are alternately moved in opposite directions by the power applied through the agency of crank-shaft f' , which receives its motion through its pinion f and gear-wheel F.

One of the objects of our invention is to permit the operator at pleasure to elevate the toothed bars out of contact with the ground and at the same time throw the pinion on the crank-shaft out of engagement with its driving gear-wheel. To do this in the simplest and cheapest way is our aim. For this purpose we mount on bars or hounds d d' a shaft H, one end of which is bent rearwardly and outwardly, forming a foot h , which normally bears on bar or hound d adjacent to the bracket E. The other end of shaft H is extended upwardly, forming a lever-handle h' . To this lever-handle is secured a small hand-lever h^2 for controlling the movement of a spring-pressed bolt h^3 , designed to engage a curved toothed bar h^4 , attached to bar or hound d' . By pulling rearward on this lever-handle shaft H will be turned in its bearings, so that the foot h thereof will bear down upon side bar a and effect the tilting of frame A and the elevation of the toothed bars. At the same time the curved arms of bracket E cause frame A to move a short distance toward one side, this being permitted by the journal-boxes supporting said frame on the axle. The frame in thus moving to one side effects the disengagement of pinion f from gear-wheel F. The shaft H can be held at any point by the spring-pressed bolt and toothed plate. By moving shaft H in the opposite direction

frame A will immediately assume its normal position and the pinion and gear-wheel will be thrown into engagement.

A cultivator thus constructed is extremely
5 simple, inexpensive, strong, and durable, and the cultivator tooth-bars are conveniently under the control of the driver.

We claim as our invention—

1. The herein-described improved cultivator
10 comprising the axle and the carrying-wheels secured thereon, the frame pivotally hung on said axle and carrying the toothed cultivator-bars, the bars or hounds secured to said axle, a guide extending from said bars
15 or hounds in contact with said frame, mechanism for operating said cultivating-bars, and the rock-shaft pivotally mounted on said bars or hounds and having one end bearing on one of the side bars of said frame, whereby the
20 latter can be tilted and moved laterally and the operating mechanism thrown out of operation, substantially as set forth.

2. The herein-described improved cultivator comprising the axle and carrying-wheels
25 secured thereon, the gear-wheel on said axle, the frame loosely hung on said axle, the cultivating-bars, the crank-shaft for operating the same, having a pinion thereon, the tongue having bars or hounds secured to said axle,
30 the bracket attached to one of said bars or hounds and having outwardly-curved arms, and the rock-shaft for depressing the forward end of said frame, whereby the latter will be tilted and moved laterally, disengaging the
35 pinion from contact with said gear-wheel, substantially as set forth.

3. The combination, with the axles and

wheels, of the gear-wheel on said axle, the frame loosely hung on said axle, the bars or hounds having curved guide-arms extending
40 therefrom on each side of one of the side bars of said frame, the cultivating-bars, the rock-shaft for operating the same, having a pinion in engagement with said gear-wheel, and
45 means for depressing the forward end of said frame, whereby the pinion can be thrown out of engagement with said gear-wheel, substantially as set forth.

4. The herein-described improved cultivator, comprising the axle and carrying-wheels
50 secured thereon, the gear-wheel on said axle, the frame loosely hung on said axle, the cultivating-bars loosely secured to the rear end of said frame, the double crank-shaft, the pitmen connected thereto and to said cultivating-bars, the pinion on said shaft normally in
55 engagement with said gear-wheel, the bars or hounds secured to said axle, the curved arms or guides projecting from one of said bars or hounds and between which one of the side
60 bars of said frame is passed, the rock-shaft secured on said bars or hounds and having its cranked end bearing on said side bar, the lever extending from the other end of said
65 rock-shaft, the toothed plate, and the spring-pressed bolt, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

WILLIARD HORACE PERKINS.
WILLIAM LLOYD CRONENBERG.

Witnesses:

C. ELIHAN,
W. W. LOWE.