(Model.)

T. E. GAY.

COMBINED HARROW AND CULTIVATOR.

No. 260,290 Patented June 27, 1882.

Fig. 1.

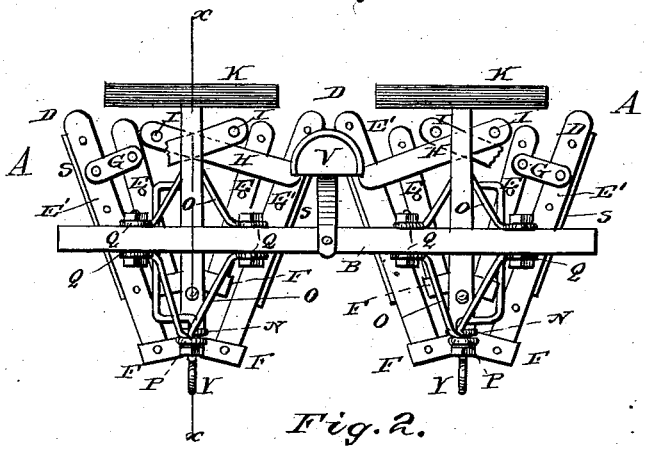


Fig. 2.

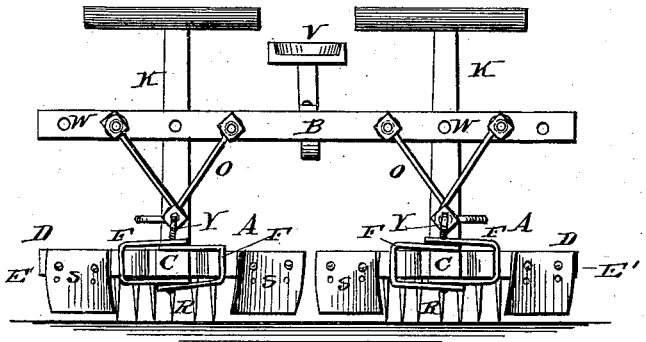


Fig. 3.

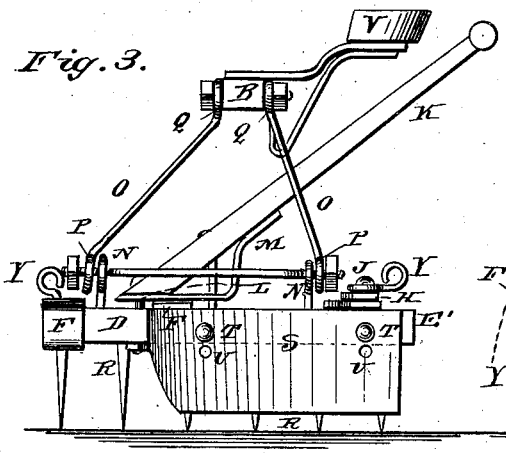
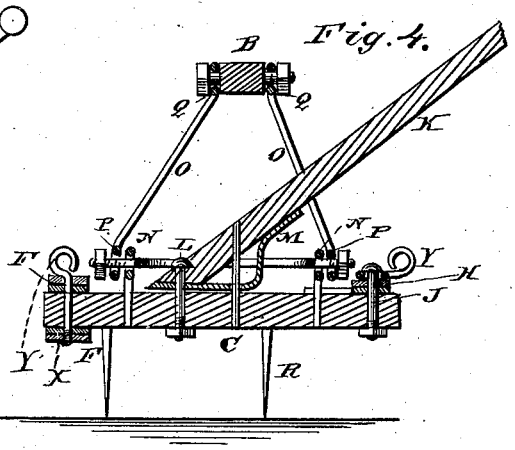


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

TIMOTHY E. GAY, OF FRANKLIN, MASSACHUSETTS.

COMBINED HARROW AND CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 260,290, dated June 27, 1882.

Application filed March 11, 1882. (Model.)

To all whom it may concern:

Be it known that I, TIMOTHY E. GAY, of Franklin, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Combined Harrows and Cultivators; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a top plan view of my improved combined harrow and cultivator. Fig. 2 is a front view. Fig. 3 is a side view; and Fig. 4 is a vertical sectional view on the line *x x*, Fig. 1.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to an improved combined harrow and cultivator, the construction of which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A A represent the two sections of my improved harrow, which are both secured to or connected by a single transverse frame-beam, B. The sections A each consist of a central longitudinal beam, C, and side wings, D, each of which may be constructed of one or more beams.

In the drawings hereto annexed I have shown the side wings constructed of two beams, E E′, the front ends of which are independently hinged by strap-bails F to the central longitudinal beam, C, while their rear ends are connected by pivoted straps G. The rear ends of the outer beams, E′, are also adjustably connected by straps H to the rear end of the central longitudinal beam, C. The straps H have several perforations or bolt-holes, I, so that by changing the bolt J from one to the other of said holes the width of the harrow-section may be adjusted as desired.

Handles K are secured to the central beams C of the harrow-sections by means of bolts L and braces M. By removing the bolts the handles may be turned or reversed, so as to face in either direction, for purposes which will appear hereinafter.

The central beams, C, are provided near their front and rear ends with eyebolts N. O O are V-shaped bails or brackets, provided at the intersection of their arms with eyes P, which are connected to the eyebolts N by bolts and nuts, upon which the harrow-sections are thus hinged in such a manner as to have a free rocking motion. The upper ends of the arms of bails O have eyes Q, by which they are bolted to the transverse frame-beam B, to which the two harrow-sections A A are thus firmly connected.

The several beams which compose the harrow-sections are equipped in the usual manner with sharp-pointed steel teeth R.

S S are shields, which are adjustably secured to the outer sides of the outer beams, E′, of the harrow-sections by means of bolts T, which are adjustable in any one of the several perforations U in the said shields. The latter may thus be raised or lowered, as desired.

The main frame-beam B has a centrally-located driver's seat, V, of suitable construction, and it is also provided with a series of openings, W, to receive the bolts by which the bails O, to which the harrow-sections are connected, are attached thereto. The said sections may thus be located near together, as shown in the drawings, or any desired distance apart.

The operation of my invention will be readily understood. When the sections A are placed near together it may be used as an ordinary harrow. For cultivating they may be placed a suitable distance apart, so as to straddle the row of young plants, the shields S serving to throw up the hills. The sections A being hinged, as described, to the bails O, they have an easy rocking motion, by which they are enabled to adapt themselves to hills or uneven soil. When the handles are reversed and the device drawn with the wide ends of sections A foremost, the shields S will scrape stones and clods off the surface of the soil and leave them in a row.

The bolts X, by which the outer beams, E′, are hinged to the central beams, C, of sections A, are provided with hooks Y, to which the whiffletrees, or, if the machine is to be drawn by a single horse, the traces, may be connected. The machine may also be made of suitable size to be operated by hand-power

alone, and one or more of the sections A may be used, as desired.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of the frame-beam B, bails O, hinged harrow-sections A, having adjustable wings D, adjustable shields S, and reversible handles K, as set forth.

2. The combination of the harrow-sections A, having shields S and eyebolts N, the V-shaped bails O, having eyes P, to which said sections A are hinged, and eyes Q, and the frame-beam B, having perforations W, to which said bails are adjustably connected, as set forth.

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

TIMOTHY ELLIS GAY.

Witnesses:

HENRY R. JENKS,

ALBIN R. BLAKE.