H. N. PROUT.

Hoeing-Machine.

No. 168,105. Patented Sept. 28. 1875.

Fig. 1.

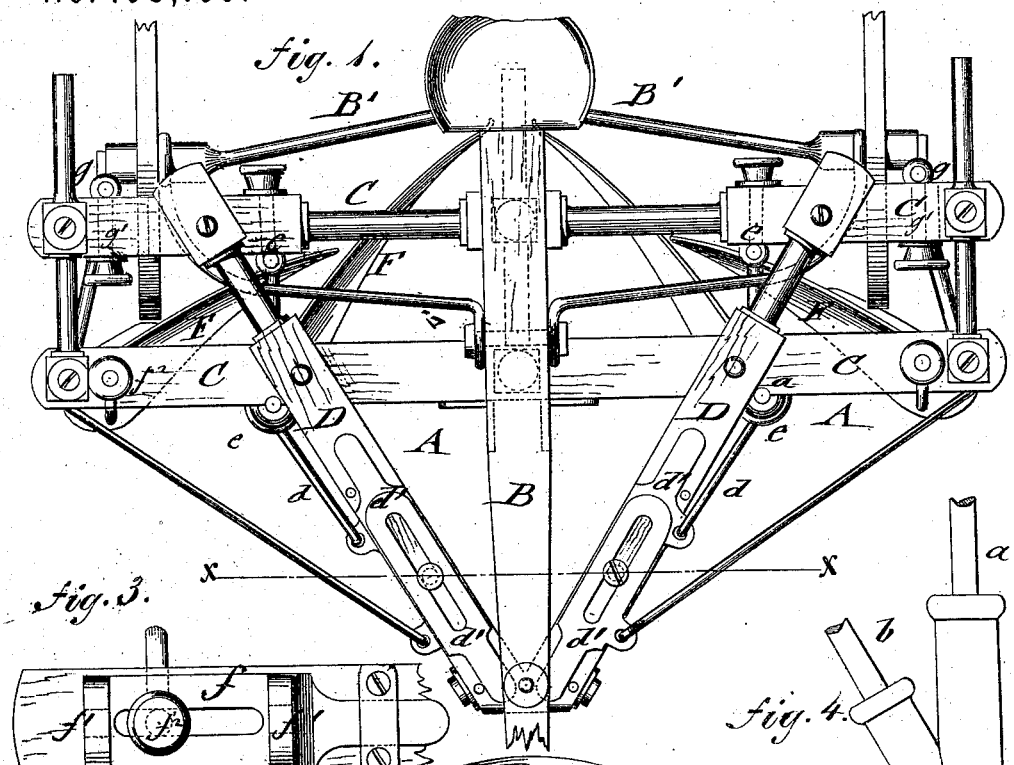


Fig. 3.

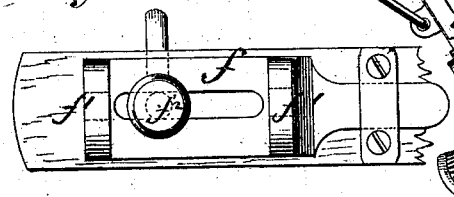


Fig. 4.

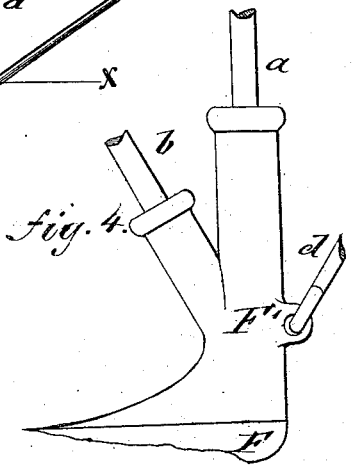
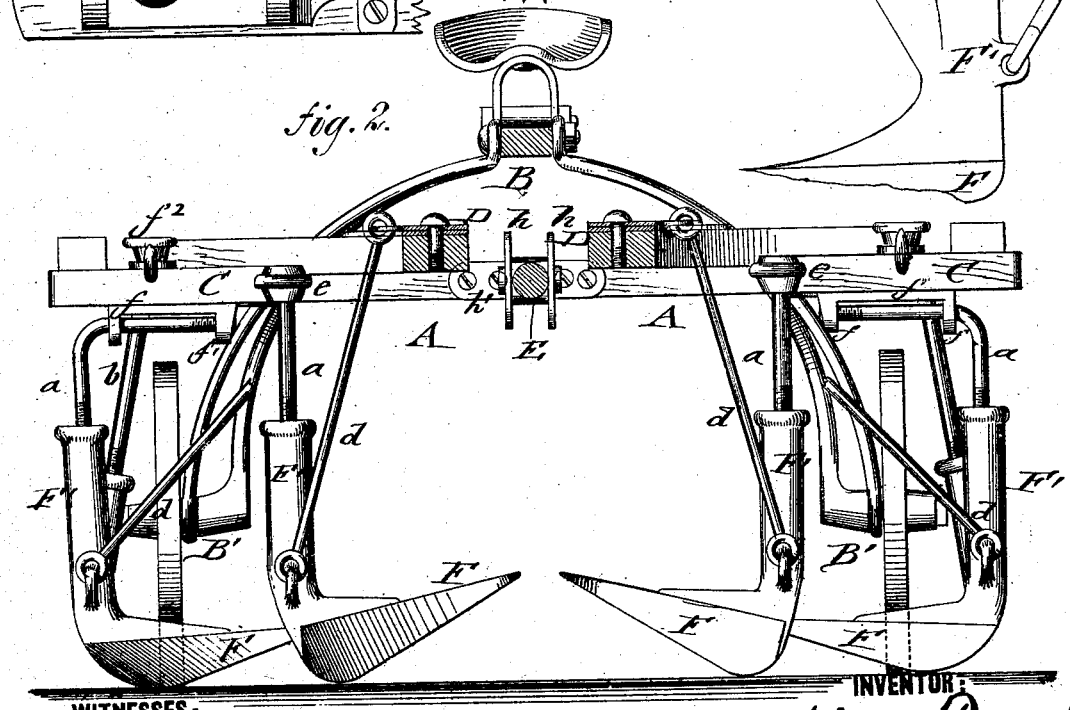


Fig. 2.



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UNITED STATES PATENT OFFICE.

HORACE N. PROUT, OF WESTFIELD, MASSACHUSETTS.

IMPROVEMENT IN HOEING-MACHINES.

Specification forming part of Letters Patent No. **168,105**, dated September 28, 1875; application filed February 13, 1875.

To all whom it may concern:

Be it known that I, HORACE N. PROUT, of Westfield, Hampden county, Massachusetts, have invented a new and Improved Hoeing-Machine, of which the following is a specification:

Figure 1 represents a top view of my improved hoeing-machine; Fig. 2, a front elevation, partly in section, on the line *x x*, Fig. 1; Fig. 3, a detail bottom view of the adjustable supporting-plate of the outer hoe-stock, and Fig. 4 a detail side view of the bifurcated hoe-stock.

Similar letters of reference indicate corresponding parts.

My invention relates to an improved hoeing-machine; and consists, mainly, in the arrangement of a number of wing-springs or hoes, which are attached to the bifurcated stocks, connected by adjustable arms and brace-rods to the main frame, that is hung in an adjustable manner to a tongue and gig-frame, or operated by handles. The outer wing-springs are adjusted toward the inner wing-springs on the frame by a sliding and slotted staple-plate, in connection with a fixed screw-bolt. The main frame is set to a greater or less depth of hoes by a central pivoted lever set to different angles of inclination by slotted staples and clamp-screws.

In the drawing, A represents the main supporting-frame of my hoeing-machine, which is hung to a beam or tongue, B, and a wheeled gig-frame, B′, in such a manner that it may be raised and lowered from the driver's seat by any of the approved regulating devices. The hoeing-machine may, however, also be operated by means of handles without a wheeled frame, in which case the main frame is attached directly to the tongue.

Frame A is made of strong lateral pieces C, to which the adjustable hoe or wing-spring stocks are applied, and of forward-extending brace-pieces D, that are centrally pivoted below the tongue, and applied to a longitudinal lever, E, which is pivoted intermediately between the same.

The hoes or wing-springs F are riveted or otherwise fastened to the broad or wing-shaped ends of the bifurcated hoe-stocks F′, Fig. 4, and are connected by their vertical main rods *a*, seated in the front arms of the stocks F′, to the lateral front piece C, by the curved rods *b* to the rear pieces C, and by the front brace-rods *d*, moving in eyes of the stocks, to the front part of the brace-pieces D.

The peculiar shape of the wing-springs F is specially adapted to the work of hoeing and covering which they have to perform, and has heretofore been patented by me under date of March 24, 1874, No. 148,845.

Two wing-springs and stocks are, preferably, arranged at each side symmetrically to the longitudinal axis of the machine, of which the inner stocks are made adjustable in height by sliding in guide-staples *e*, while the outer stocks are, furthermore, adjustable in lateral direction to throw the outer greater hoes into lesser distance from the inner wing-springs. Each stock is supported, by the bifurcated arms *a b* and the front brace-rod *d*, at three points, being firmly retained in the required positions, after adjustment, by suitable eyebolts, washers, and nuts. The front brace-rods *d* are applied to slotted slide-pieces *d′*, which are separately guided and secured by suitable set-screws. The main arm of the outer stocks F′ is bent at right angles below the front piece C, and hung to staples or eyes f^1 of a slotted slide-plate, *f*, which is laterally adjusted and secured by a washer, screw-bolt, and nut, f^2. The curved rear arm of stock F′ slides in the eye of a bolt, *g*, which follows the lateral adjustment of stock F′ in a slot, *g′*, of the rear piece C. The wing-springs may thus be readily set to different widths of rows, and hung to greater or less depth, as required.

The whole series of wing-springs may be worked at a greater or less depth by means of the central pivoted lever E, which swings higher or lower in slotted guides *h* of front piece C, and is rigidly secured thereto in the required position by a fastening screw-bolt and nuts, *h′*.

The ready adjustability of the hoe-stocks, in connection with the effective disposition and shape of the wing-springs, produces a very useful, economical, and rapidly-working hoeing-machine.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. The combination, with spring-hoes F, of double-socketed stocks F′, adjustable by rods *a b d* and slide-pieces *d′ f*, as shown and described.

2. The lever E, pivoted in front to the frame and tongue, and adjustable at the rear in slotted guides *h h*, as and for the purpose specified.

HORACE N. PROUT.

Witnesses:
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