Feb. 9, 1926. 1,572,426

J. H. FOOTE

PRUNING IMPLEMENT

Filed May 23, 1925

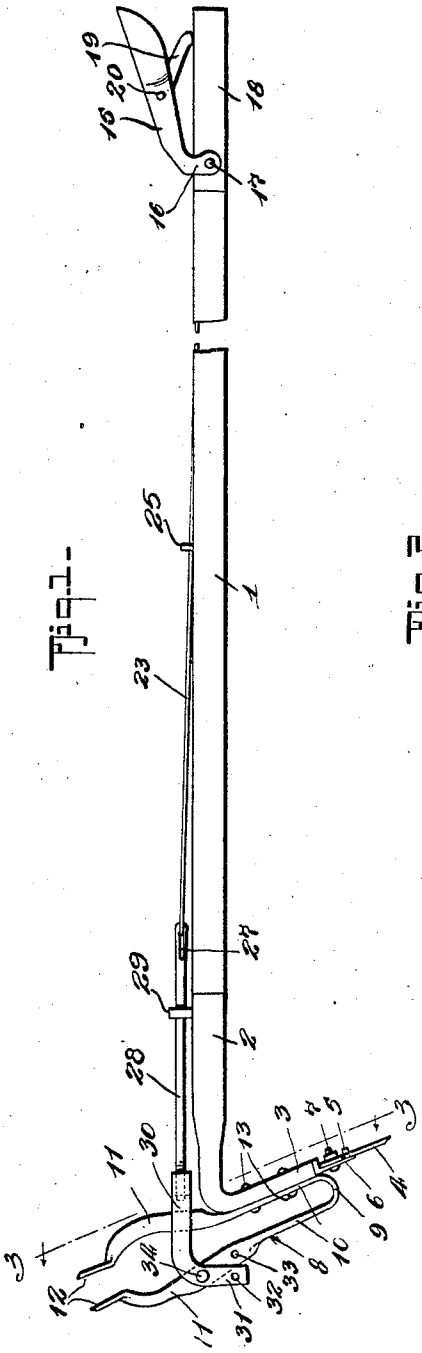


Fig. 1.

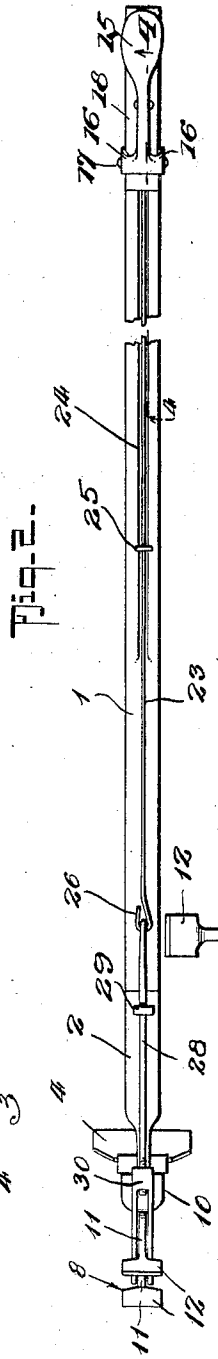


Fig. 2.

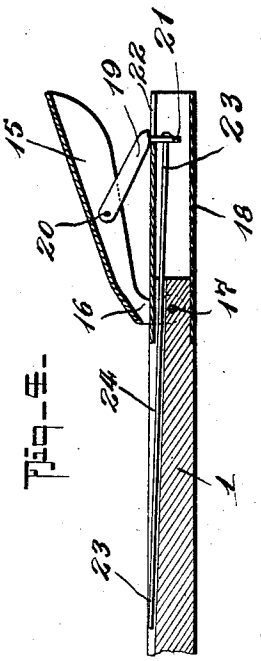


Fig. 5.

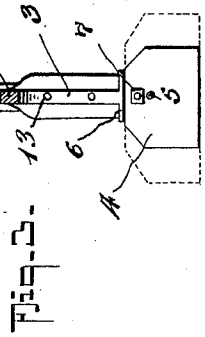


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN HENRY FOOTE, OF DELTA, UTAH.

PRUNING IMPLEMENT.

Application filed May 23, 1925. Serial No. 32,482.

To all whom it may concern:

Be it known that I, JOHN HENRY FOOTE, a citizen of the United States, and a resident of Delta, in the county of Millard and State of Utah, have invented certain new and useful Improvements in Pruning Implements, of which the following is a specification.

This invention relates to an improved hand implement especially designed for the use of gardeners and beet thinners.

The present invention proposes the use of a blocking tool attached to a handle of convenient length and having changeable blades of varying width to suit the variety of vegetables to be thinned and organizes with these elements a pair of thinning tweezers, the tweezers being disposed opposite the blade and being operable from the grip end of the handle.

The object of the invention resides in the provision of a device of this character which may be easily and quickly manipulated to alternately block and thin.

A further object of the invention is to provide a device of this character which is of simple and durable construction, reliable and effective in operation, well balanced and of light weight, and easy and comparatively inexpensive to manufacture.

Other objects and advantages reside in certain novel features of the construction, arrangement and combination of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings, forming a part of this specification, and in which;

Figure 1 is a view in side elevation showing one embodiment of the invention,

Figure 2 is a plan view thereof,

Figure 3 is a view in section on line 3—3 of Figure 1, and

Figure 4 is a view in longitudinal section on line 4—4 of Fig. 2.

Referring to the drawings the numeral 1 designates a handle of convenient length, the forward end of which is fitted and fixed in the socket of an attaching member 2, the latter having an angular extension 3 on which both the tweezers and blocking tools are mounted.

The blocking tool consists of a blade 4, of suitable size and similar in shape and form to an ordinary hoe blade. It is proposed to use blades of various sizes in order to adapt the tool to meet effectively the various conditions met with in practice. A large size blade is shown in dotted lines in Fig. 3. Each blade has a pair of vertically alined holes, the lower of which is adapted to receive a pin 5 integral with or suitably secured to an attaching bracket 6, the latter being integral with or suitably fixed to the lower end of the angular extension 3 of the attaching member. A bolt and nut 7 completes the secure though releasable fastening of the blade 4 to its attaching bracket.

A pair of thinning tweezers designated generally at 8 are provided and is preferably constructed of a single piece of resilient metal, such as spring steel or the like, bent to substantially U-shaped form and having a curved springy body portion 9 and arms 10. The outer end portions of the arms 10 are formed to constitute the jaws 11 of the thinning tweezers. The metal of the tweezers is twisted to provide substantially rigid jaws and flat jaw faces 12. One of the arms 10 is riveted or otherwise suitably secured to the extension 3 as indicated at 13. The springy body portion 9, by virtue of its inherent resiliency, tends to spread the jaws of the tweezers.

In order to bring the jaw faces 12 flatly into engagement with each other or into effective engagement with the vegetation to be thinned, hand grip operated means are provided for positively drawing the outer movable jaw up against the inner fixed jaw. The hand grip operated means comprise an operating lever 15 adapted to be gripped by the hand and having offset arm 16 pivoted as at 17 to the opposite sides of a sleeve 18 fastened to the handle 1 and projecting rearwardly thereof. A link 19 is provided and has one end pivoted as at 20 to the hand lever, the other end of the link having an offset guide portion 21 connected thereto and operating in a slot 22 in the sleeve, the guide of the link being connected to the rear end of a transversely flexible though longitudinally inextensible rod 23 extending through the sleeve 18 and through a slot 24 in the handle 1 to the forward end of the tool. A staple 25 driven into the handle serves as a guide for the flexible rod. At its forward end the flexible rod 23 has an eye or loop 26 engaged in a slot 27 formed in the rear end of a sliding rod 28. The rod 28 operates through a guide 29 and has a yoke 30 threadedly connected to its forward end,

The arms 31 of the yoke 30 are angular and have a plurality of transversely alined holes 32 any two of which may be registered with a selected one of a plurality of cooperable openings 33 provided in the movable jaw 11. A pivot pin 34 is inserted through the alined openings of the yoke and movable jaw.

In operation, the workman moves across the field at right angles to the row of beets or other vegetation, reaching and blocking a strip about four feet wide on the first two rows, then, by simply turning the tool in his hand he brings the tweezers into action and reduces the blocks to singles. The workman then takes one step in advance and repeats the operation completing the work of thinning without getting down on his hands and knees.

I claim:

1. In an implement of the character described, a handle, and a pair of thinning tweezers carried by the handle, said tweezers being constructed of a single piece of metal bent to substantially U-shaped form and having a curved springy body portion and a pair of arms integral with said body portion, one of the arms being fixedly connected to the handle member, jaws formed on the arms, the inherent resiliency of the body portion normally holding the jaws spread, and means for bringing the jaws together.

2. In an implement of the character described, a handle, and a pair of thinning tweezers carried by the handle, said tweezers being constructed of a single piece of metal bent to substantially U-shaped form and having a curved springy body portion and a pair of arms integral with said body portion, one of the arms being fixedly connected to the handle member, jaws formed on the arms, the inherent resiliency of the body portion normally holding the jaws spread, and means for bringing the jaws together, and comprising a handle lever, and motion transmission means between the hand lever and the movable jaw.

3. In an implement of the character described, a handle, and a pair of thinning tweezers carried by the handle, said tweezers being constructed of a single piece of metal bent to substantially U-shaped form and having a curved springy body portion and a pair of arms integral with said body portion, one of the arms being fixedly connected to the handle member, jaws formed on the arms, the inherent resiliency of the body portion normally holding the jaws spread, and means for bringing the jaws together, and comprising a handle lever, and motion transmission means between the hand lever and the movable jaw, and including a pair of connected rods, a link between the hand lever and one of the rods, and a yoke between the other rod and the movable jaw.

4. In an implement of the character described, a handle, and a pair of thinning tweezers carried by the handle, said tweezers being constructed of a single piece of metal bent to substantially U-shaped form and having a curved springy body portion and a pair of arms integral with said body portion, one of the arms being fixedly connected to the handle member, jaws formed on the arms, the inherent resiliency of the body portion normally holding the jaws spread, and means for bringing the jaws together, and comprising a handle lever, and motion transmission means between the hand lever and the movable jaw, and including a pair of connected rods, a link between the hand lever and one of the rods, and a yoke between the other rod and the movable jaw, said yoke having offset arms adjustably and pivotally connected to the movable jaw.

5. In an implement of the character described, a handle, and a pair of thinning tweezers carried by the handle, said tweezers being constructed of a single piece of metal bent to substantially U-shaped form and having a curved springy body portion and a pair of arms integral with said body portion, one of the arms being fixedly connected to the handle member, jaws formed on the arms, the inherent resiliency of the body portion normally holding the jaws spread, and means for bringing the jaws together, and comprising a handle lever, and motion transmission means between the hand lever and the movable jaw, and including a pair of connected rods, a link between the hand lever and one of the rods, said link having a guide, a sleeve attached to the handle member and slotted to coact with the guide, and a yoke between the other rod and the movable jaw.

JOHN HENRY FOOTE.