(No Model.)

D. FEIGLY.

NURSERY TREE DIGGER.

No. 370,690. Patented Sept. 27, 1887.

Fig. 1.

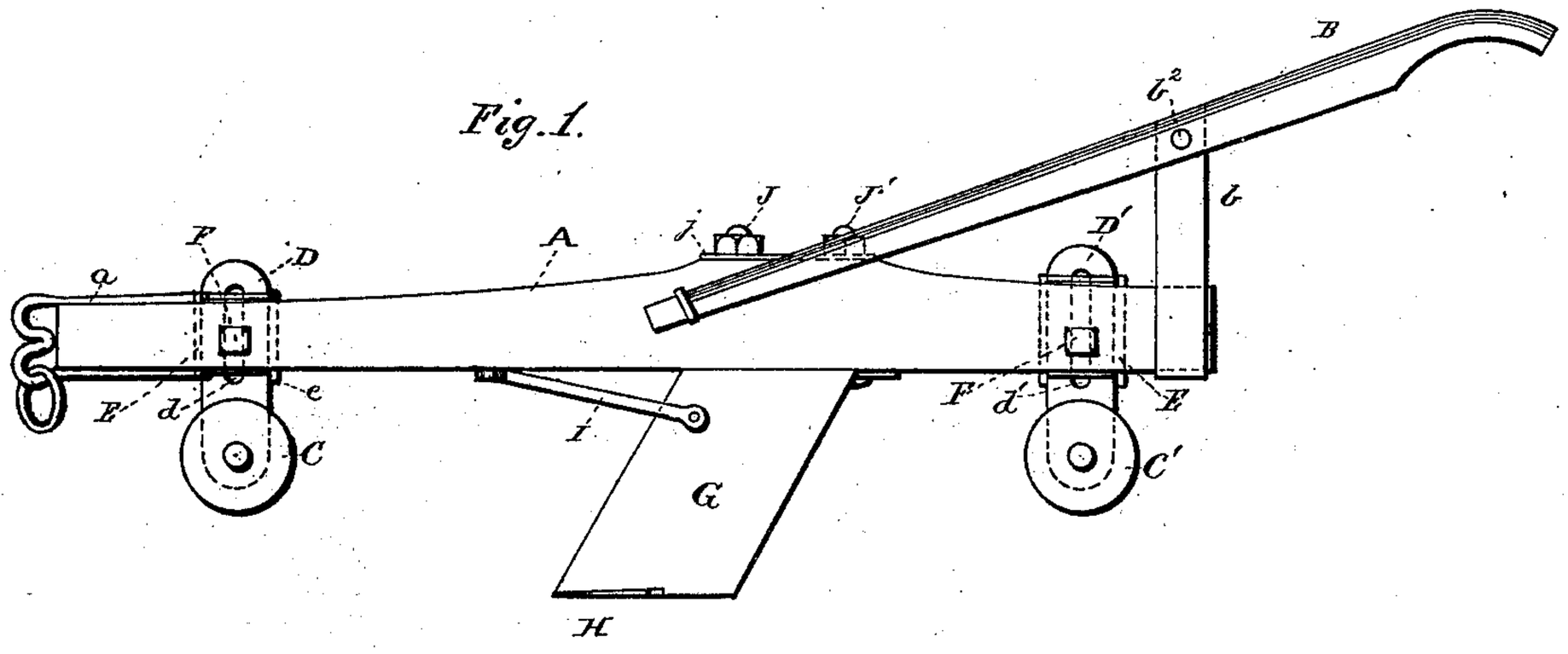


Fig. 2.

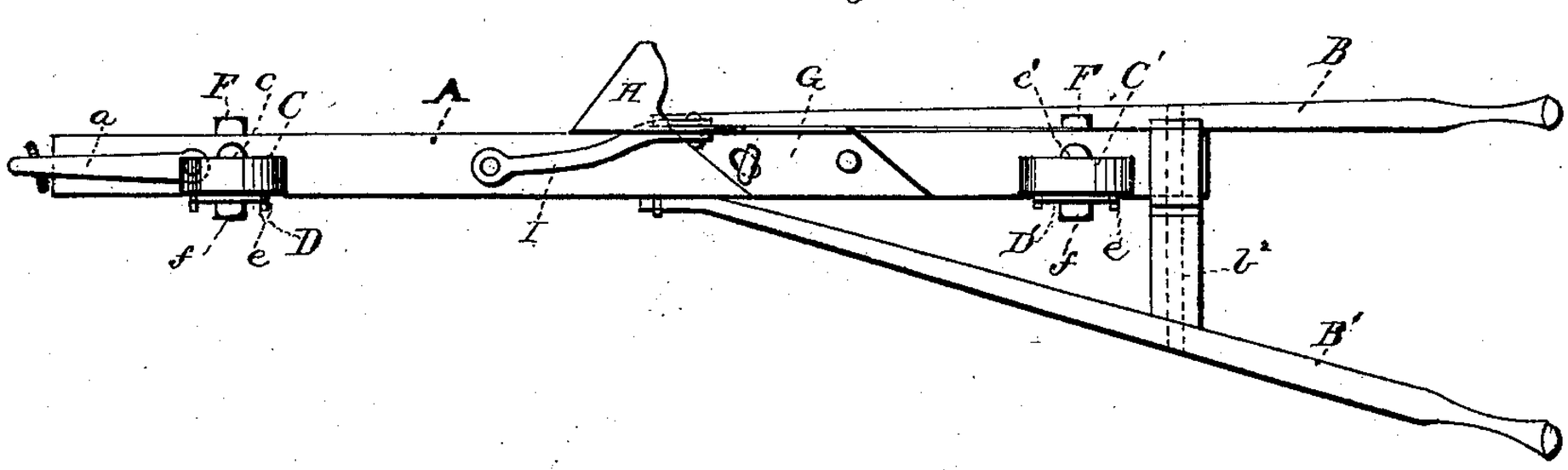
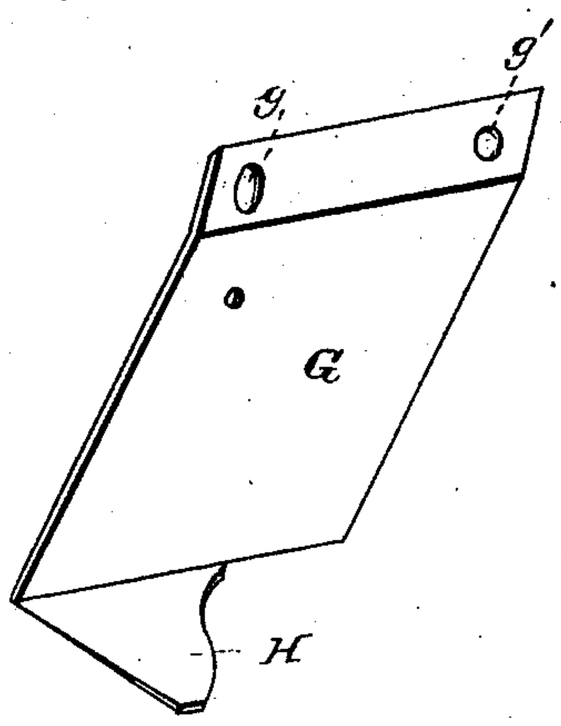


Fig. 3.



WITNESSES
H. B. Harrison
Phillip Masi.

INVENTOR
David Feigly.
by E. W. Anderson,
Attorney

UNITED STATES PATENT OFFICE.

DAVID FEIGLY, OF MEDWAY, OHIO.

NURSERY TREE-DIGGER.

SPECIFICATION forming part of Letters Patent No. 370,690, dated September 27, 1887.

Application filed May 14, 1887. Serial No. 238,253. (No model.)

To all whom it may concern:

Be it known that I, DAVID FEIGLY, a citizen of the United States, resident at Medway, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Nursery Tree-Diggers; and I do 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side elevation of my improved tree-digger. Fig. 2 is a bottom view of same. Fig. 3 is a detail perspective view of blade.

The invention relates to improvements in tree-diggers; and it consists in the construction and novel combination of parts, as hereinafter set forth.

Referring to the accompanying drawings, A designates the beam of the machine, having attached to its front end the clevis *a* and ring, of the usual construction, in the usual well-known manner.

B B′ are the handles, similar to plow-handles, and having their inner ends secured to the opposite sides of the beams, at a proper point, by staples or other suitable means, the handle B on the cutting side being in line with the beam, as shown, while the one on the opposite side diverges therefrom. The said handles are supported at the proper angles to the beam by the brace-standards *b b′*, and are connected together and braced laterally by the cross-rod b^2. The beam is supported near its front and rear ends by the wheels C C′, respectively, which are journaled on short horizontal axles *c c′*, extending under the plow-beam from the lower ends of the standards D D′, which are provided, respectively, near their upper ends with longitudinal adjusting-slots *d d′*. The edges of the said standards fit and move between the vertical adjusting-flanges *e e* of the corresponding plates E, which are secured to the side of the beam opposite that from which the cutter-blade depends. The said wheels are aligned and stand under the beam, so as to support the same equally both longitudinally and laterally, and are adjusted vertically by means of the bolts F, passing through the slots *d d′* and through proper openings in the beam, and the nuts *f*, engaging said bolts.

The cutter-blade G is of steel, about five-sixteenths of an inch thick, about ten inches wide, and of a suitable length. The upper end of the blade is bent horizontally, and lies against the under surface of the beam at a suitable point thereof, being provided with the front and rear bolt-openings, the former one of which consists of a transverse adjusting-slot, *g*, the rear opening, *g′*, being circular. The blade stands downward from the side of the beam, flush therewith, and inclined forward at an angle of about thirty degrees, its front edge being properly beveled to cut. At the lowest point the blade is provided with a horizontal projection, H, having a front cutting-edge which inclines outward and rearward at an angle of about forty degrees from the horizontal lower edge of the blade. The projection H is of general triangular shape, and is narrower than the vertical part of the cutting-blade, which is made broad to act as a landside.

I is a brace-bar, bolted through an eye in its front end to the under surface of the beam a suitable distance in front of the cutter-blade, and with the front edge of the latter, near its upper end, riveted or otherwise secured between the arms of the bifurcated rear end of said bar.

The bolts J J′ pass, respectively, through the bolt-openings *g g′* and through suitable openings in the plow-beam, which is widened at this point to give it sufficient strength, and, after passing through openings in the plate *j* on the upper surface of the beam, have their tapped ends engaged by suitable nuts. By means of the slot *g* and corresponding bolt J the cutter-blade can be turned on the bolt J as a pivot and properly aligned.

In operation the blade makes one of the side cuts and about one-half the horizontal cut necessary to remove the nursery trees, which it is especially adapted to remove, and when reversed and driven in the opposite direction it makes the other side cut and the remainder of the horizontal cut. The handle B, being in line with the beam on the side of the cutter, is not in the way of the operator observing the

trees to be dug, and allows him to run his lines properly.

The machine requires much less draft than the digger in common use, which consists of a U-shaped blade attached to two beams, as the former can be operated by one team only; and as the upright portion of the blade and the projection both cut at an angle or shear, they perform the work with the greatest economy. The machine, moreover, can be operated by one man, and can be much more easily directed in a right line than those heretofore made. The adjustable wheels permit the cut to be made more or less deep, as required, and the rectangular bend between the vertical part of the cutter and the horizontal projection gives more space for an equal depth of cutter than a curved blade will give.

Having described my invention, I claim—

1. The combination of the beam, the front and rear wheels aligned under said beam, and the cutter-blade secured to the beam at a suitable point between said wheels, and consisting of a depending cutting part standing in a vertical plane, and a horizontal cutting part standing from the lower end thereof, substantially as specified.

2. The combination, with the beam and the front and rear wheels attached thereto by the vertically-adjustable standards, of the cutter-blade secured to the beam between said wheels, with its vertical cutting part inclining downward and forward from the beam, and its horizontal cutting part provided with an edge inclining outward and rearward from the front edge of the vertical part, substantially as specified.

3. In a tree-digger, the combination, with the beam and the brace connecting the same to the cutting-blade, of the vertical cutting-blade having an outstanding horizontal blade portion at its lower end and an inwardly-extending flange on its upper end, and secured to the beam by a bolt passing through a rear circular opening in said flange and by a bolt passing through a transverse slot in the front portion of said flange, so that the blade can be turned on its rear bolt and aligned with the beam by means of the front bolt and slot, substantially as specified.

4. The combination, with the beam, handles, and supporting-wheels, of the vertical plane cutter, provided at its lower end with the horizontal outstanding cutter portion, narrower than the vertical portion and triangular in shape, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID FEIGLY.

Witnesses:

DAVID M. MARTIN,

MARGARET I. MARTIN.