No. 650,265. Patented May 22, 1900.

G. R. McCHESNEY.

GRUBBING MACHINE.

(Application filed Aug. 1, 1899.)

(No Model.)

FIG. 1.

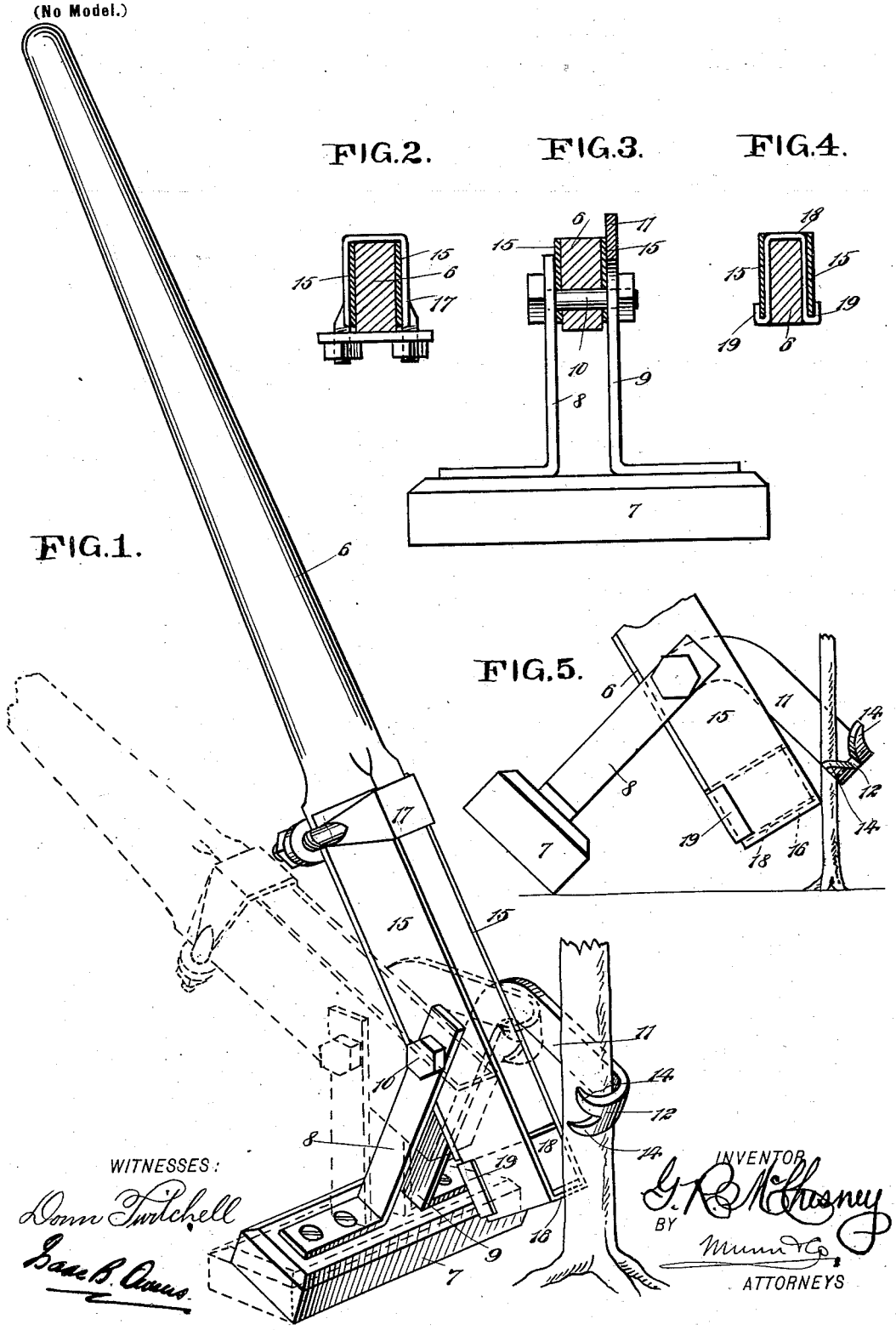

FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

WITNESSES:

Donn Twitchell

Isaac B. Ames

INVENTOR

G. R. McChesney

BY

Munn & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE R. McCHESNEY, OF NEW YORK, N. Y.

GRUBBING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 650,265, dated May 22, 1900.

Application filed August 1, 1899. Serial No. 725,736. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. McCHESNEY, of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Grubbing-Machine, of which the following is a full, clear, and exact description.

This invention relates to a grubbing-machine of that class in which a hand-lever is provided and fulcrumed on a block to which is attached a grubbing-arm, so that when the lever is thrown the grub is clamped between the arm and the lever, and by these means the grub is drawn. In this class of devices great trouble has been experienced in properly constructing the lever so as to prevent the breakage thereof and also in arranging the parts so that the grub is properly grasped and drawn out of the ground without snapping or breaking the grub.

My invention seeks to overcome these disadvantages by providing improved means for strengthening the lever and also by insuring the proper engagement between the lever and grubbing-arm.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the invention employed in connection with a large grub or sapling. Fig. 2 is a section taken through the upper portion of the strengthening devices. Fig. 3 is a section taken through the fulcrum of the lever. Fig. 4 is a section taken through the short end or nose of the lever, and Fig. 5 is a fragmentary view illustrating the use of the apparatus in connection with a small grub.

The grubbing-lever 6 is supported on a foot-block 7 by means of two standards 8 and 9, which are fastened rigidly to the block and which carry a bolt 10, forming the fulcrum of the lever. The standard 9 is extended above the bolt and then projected forwardly to form the grubbing-arm 11, which runs transversely to the fulcrum of the lever 6 and which has its free end turned laterally to form a hook 12, such hook being curved, as shown best in Fig. 1, and being bifurcated to form claws 14, the purpose of which will hereinafter appear.

The grub-lever is provided with a strengthening-strap composed of two parallel side plates 15 and a cross or nose piece 16. The nose-piece 16 extends across the front end or nose of the lever, and the side plates 15 lie, respectively, on the sides of the lever, the lever being constructed rectangular in cross-section at this point, as indicated best in Figs. 2, 3, and 4. The rear ends of the side plates are held fast to the lever by means of a clip 17, which embraces the lever and side plates and holds the parts securely without the necessity of boring through the lever, and thus reducing the strength thereof. The bolt 10 is passed through the side plates 15, as shown best in Fig. 3, and at this bolt is the only point at which the lever is bored. At the nose of the lever the strengthening-strap, composed of the side plates 15 and cross or nose piece 16, is held by means of a saddle-strap 18. This strap is U-shaped in form, as best shown in Fig. 4, and is saddled onto the nose or front end of the plate, the strap 18 lying inside of the side plates 15 of the strengthening-strap. The lower extremities of the sides of the saddle-strap 18 are bent outward and upward to form hooks 19, which hooks respectively receive the lower edges of the front ends of the side plates 15. In order to make a snug fit between the several parts, the lever may be reduced at its nose, so that the saddle-plate 18 may be let into the reduced portion, and thus lie flush with the main portions of the lever. The width of the side plates 15 of the strengthening-strap may be made less than the width of the lever, as is indicated in the drawings, so that should the lever shrink the clip 17 may be tightened, thus accounting for the shrinkage of the lever.

With this construction, assuming that the grubbing-machine is employed as shown in Figs. 1 and 5, the nose of the lever is engaged with the grub, and the hook 12 of the grubbing-arm is caused to embrace the grub, as shown, the block 7 being tilted in the manner indicated. Now by drawing down on the rear or free end of the lever the lever is thrown into practically a horizontal position and the nose of the lever elevated, thus

drawing the grub. It will be observed that the strain of the grub on the lever is transmitted directly to the cross or nose piece 16 of the strengthening-strap, and this by transmitting the strain to the front ends of the side plates 15 causes the saddle-plate 18 to take the major portion of the strain. Now this saddle-strap bearing on the lever, as shown, effectually transmits the strain to the lever and produces the strongest possible construction without the necessity of bolt-holes through the lever, which would reduce the strength thereof. It may further be observed that the strain of the grub bearing down on the front ends of the side plates 15 will tend to throw up the rear ends of the side plates and that this strain is counteracted by the clips 17. Fig. 1 shows the grubbing-machine used in connection with a large or well-grown grub or sapling, while Fig. 5 illustrates it in use in connection with a small grub. In this latter view it is shown that the lever moves toward the hook 12 in direct line with the cross or nose piece 16 of the strengthening-strap, so as to grip the grub between the hook and the nose-piece 16, which prevents splintering the grub and causes it to be effectively and readily withdrawn from the earth. The upper of the spurs 14 provides an effective means for engaging the roots of a partly-drawn grub. When the grub is partly drawn from the ground, it may be inconvenient to grasp the trunk thereof between the parts 12 and 16, in which case the spur 14 is caused to engage with the roots of the grub, and thus the grub may be completely withdrawn.

Various changes in the form, proportions, and minor details of my invention may be resorted to without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the scope of my claims.

Having thus described my invention, I claim as new and desire to claim by Letters Patent—

1. A grubbing-machine, having a grubbing-lever provided with a strengthening-strap comprising the side plates and a cross or nose piece, the strengthening-strap embracing the front end of the lever, a clip embracing the lever and the rear ends of the side plates, and a saddle-plate saddled on the front end or nose of the lever and having hooks engaging with the front ends of the side plates to transmit the strain thereof directly to the lever.

2. A grubbing-machine, having a lever with a strengthening-strap attached to the front end thereof, and a saddle-plate saddled on the front end of the lever and having its ends engaged with the strengthening-strap, the strengthening-strap serving primarily to receive the strain on the lever, and such strain being communicated directly to the lever by the saddle-plate.

3. A grubbing-machine, having a grubbing-lever provided with a strengthening-strap, and a saddle mounted on the lever and engaged by the strengthening-strap to transmit to the lever the strain on such strap.

GEORGE R. McCHESNEY.

Witnesses:
ISAAC B. OWENS,
JNO. M. RITTER.