No. 681,598. Patented Aug. 27, 1901.

J. A. WARD.

PLOW.

(Application filed May 23, 1900.)

(No Model.)

Fig. 1.

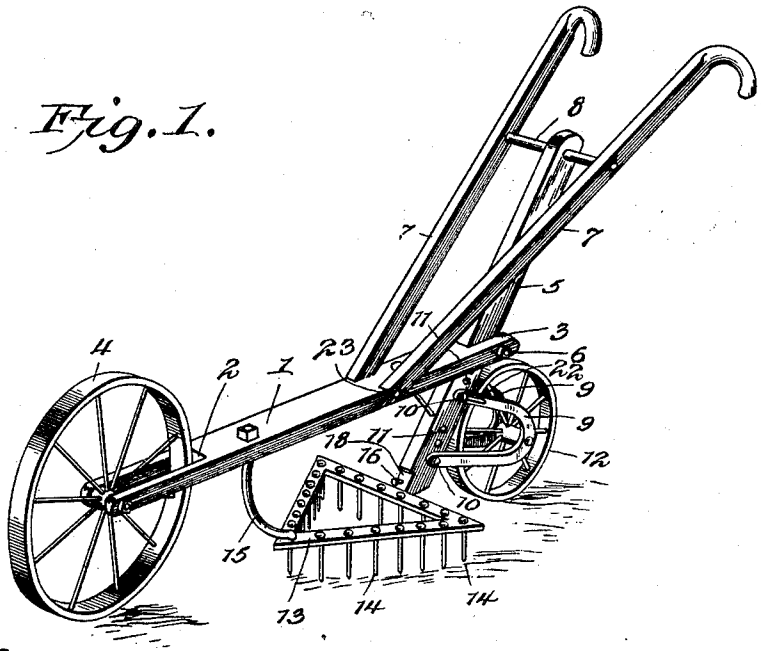

Fig. 3.

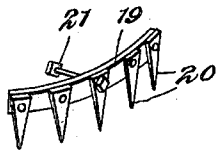

Fig. 2.

Witnesses
Howard D. Orr.
[illegible]

John A. Ward, Inventor.
By Crosby & Co.
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN A. WARD, OF HUBBARD, TEXAS.

PLOW.

SPECIFICATION forming part of Letters Patent No. 681,598, dated August 27, 1901.

Application filed May 23, 1900. Serial No. 17,726. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. WARD, a citizen of the United States, residing at Hubbard, in the county of Hill and State of Texas, have invented a new and useful Plow, of which the following is a specification.

This invention relates to cultivators, and has for its object to provide an improved hand-propelled device for use in gardens and also to provide an improved form of frame for bracing the handles of the device and for mounting the rear wheel thereof.

It is also designed to provide an improved arrangement of cultivator-teeth and to provide for the convenient interchange of different forms of teeth.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a garden-cultivator constructed in accordance with the present invention. Fig. 2 is a side elevation thereof having another form of cultivator-tooth applied thereto. Fig. 3 is a detail perspective view of a modified form of teeth.

Corresponding parts are designated by like characters of reference in the figures of the drawings.

Referring to the drawings, 1 designates the cultivator-beam, which is provided at its opposite ends with the respective front and rear bifurcations 2 and 3. In the front bifurcation is mounted a wheel 4, and received within the opposite bifurcation is a standard 5, which is secured to the beam by means of a transverse bolt or other suitable fastening 6, and said standard projects in opposite directions above and below the beam. The opposite handles 7 are of the form common to plows and have their lower ends connected to the beam in advance of the standard. The upper end of the standard extends between the opposite handles, and the latter are connected thereto by means of a transverse brace-bar 8, that passes through the standard and the handles.

Projecting rearwardly from the opposite sides of the lower portion of the standard are the substantially U-shaped wheel-brackets 9, which are connected to the standard by means of corresponding bolts or fastenings 10, which pass through the respective opposite ends of the brackets and also the standard. The latter is provided with a plurality of vertically-alined perforations 11, so that the brackets may be vertically adjustable. A small rear wheel 12 is mounted between the wheel-brackets, and by reason of the vertical adjustment of the brackets the lower end of the standard may be adjusted to assume different heights from the ground.

As shown in Fig. 1 of the drawings, the cultivator is provided with a triangular tooth-frame 13, which has one corner directed forwardly, so that the opposite side or base thereof may lie transversely of the beam, and each side of the frame is provided with a plurality of pendent teeth or pins 14. From the forward corner or end of the tooth-frame there rises an arm 15, which is secured to the under side of the beam, so as to connect the tooth-frame to the frame of the cultivator and to brace the former. The rear side or base of the tooth-frame abuts against the front side of the lower portion of the standard, so as to brace the frame and relieve the arm 15 of considerable strain. Also the rear side of the tooth-frame is held against upward movement by means of a bolt 16, projecting forwardly from the lower portion of the standard and overlapping the rear side or base of the frame. It will be understood that the brace 15 is detachably connected to the beam in any desired manner—as, for instance, by having its upper end reduced and screw-threaded and passed upwardly through an opening in the beam—there being a nut applied to the upper projected end of the brace to prevent accidental displacement thereof and also to facilitate the removal of the brace.

In some instances it may not be desirable to use the toothed harrow-frame, and therefore the latter may be removed and an ordinary cultivator-shovel 17 applied to the lower end of the standard, as shown in Fig. 2, the

forward side of the standard being cut away or notched, as indicated at 18 in Fig. 1. As shown in detail in Fig. 3, another form of toothed frame may be employed comprising a transverse bar 19, having transverse teeth or shovels 20, and an intermediate bolt 21, so as to mount the frame in the same manner as a single shovel.

From the foregoing description it will be seen that the rear wheel may be adjusted vertically, so as to vary the depth of action of the cultivator teeth or shovels, and the latter may be conveniently interchanged to suit the character of work required.

In order that a slight vertical adjustment may be had for the rear wheel, the upper end of each wheel-bracket 9 is provided with a longitudinal slot 22, so that by loosening the upper bolt 10 the brackets may be swung either upwardly or downwardly upon the lower fastening as a pivot, as will be understood.

The lower portion of the standard is braced by means of a rod 23, which passes through the standard and inclines upwardly and forwardly to the beam and is fastened thereto immediately in rear of the handles. Besides forming a brace this rod serves to separate long grass and weeds, so as to prevent the latter from hanging in the angle between the beam and the standard.

What is claimed is—

1. In a cultivator, the combination with a beam, having a pendent standard, of a toothed frame located in advance of and loosely abutting against the front side of the standard, and a detachable brace connection between the front of the frame and the beam.

2. The combination with a cultivator-beam, having a pendent standard, of a triangular toothed frame located in front of the standard and having its base abutting against the front side thereof, and an upwardly-directed arm carried at the front end or apex of the toothed frame and also connected to the beam.

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

JOHN A. WARD.

Witnesses:
JOE WARD,
LEE FRISBY.