T. C. KEVITT.

CULTIVATOR.

APPLICATION FILED FEB. 4, 1914.

1,113,563.

Patented Oct. 13, 1914.

2 SHEETS—SHEET 1.

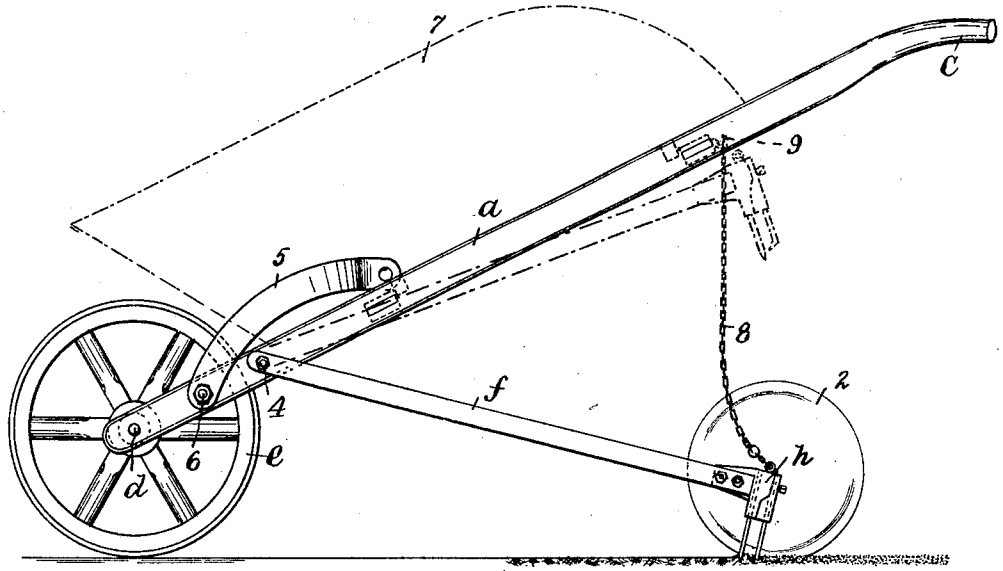


Fig. 1.

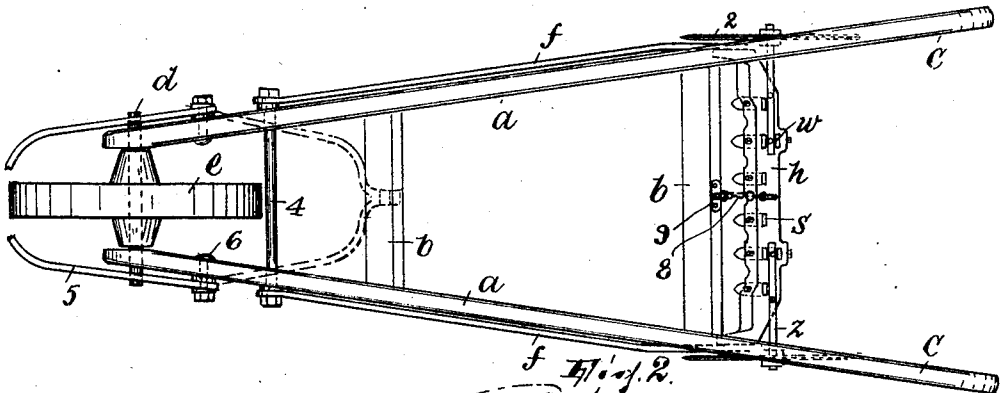


Fig. 2.

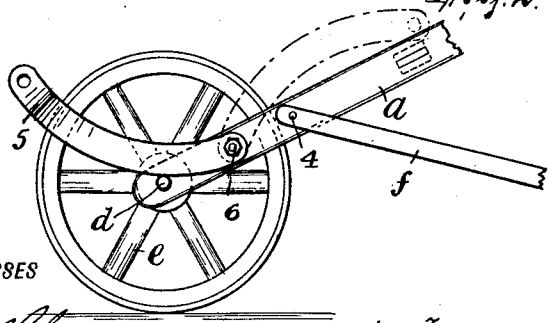


Fig. 3.

WITNESSES

Wm. D. Belt.

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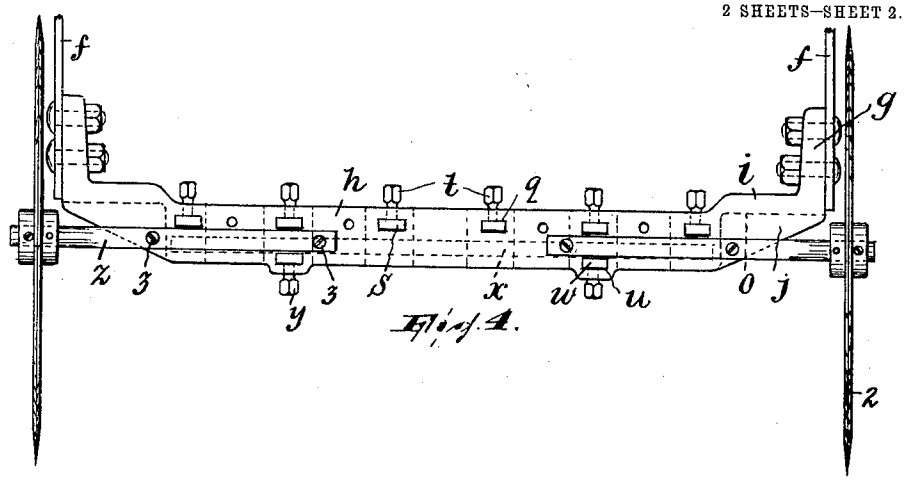


Fig. 4.

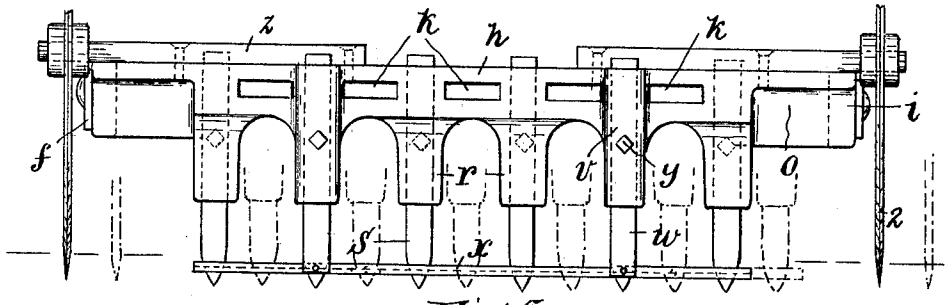


Fig. 5.

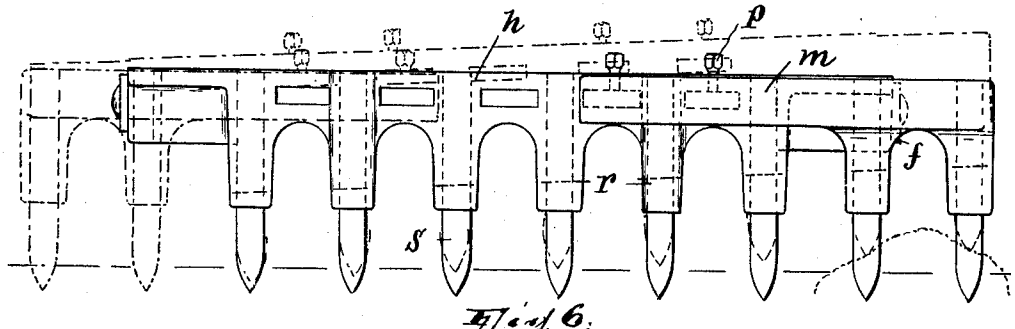


Fig. 6.

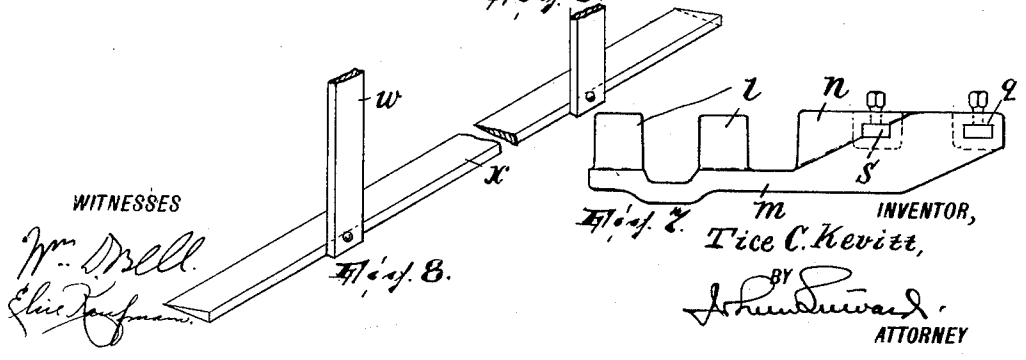


Fig. 8.

Fig. 7.

WITNESSES

Wm. Bell.

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UNITED STATES PATENT OFFICE.

TICE C. KEVITT, OF PATERSON, NEW JERSEY.

CULTIVATOR.

1,113,563. Specification of Letters Patent. Patented Oct. 13, 1914.

Application filed February 4, 1914. Serial No. 816,472.

To all whom it may concern:

Be it known that I, TICE C. KEVITT, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

This invention relates to cultivators and particularly to so-called hand-cultivators, that is to say, cultivators of the class employed for lighter kinds of work and adapted to be pushed over the ground generally without the assistance of a draft animal.

According to my invention I pivot to a suitable rigid frame, having a supporting wheel at the front and handles at the rear, and on a horizontal axis therein a trailing structure having suitable means to agitate the soil and movable up and down around said pivot, sidewise and in tilting fashion, said structure preferably comprising two slender flexible side strips joined at their rear ends by a relatively heavy head in which are mounted the soil-working tools.

In the accompanying drawings, Figure 1 is a side elevation of the improved cultivator; Fig. 2 is a plan view thereof; Fig. 3 is a side elevation of the forward portion of the cultivator with a certain draft yoke 5 turned forward; Fig. 4 is a plan view of the structure aforesaid; Fig. 5 is a rear elevation of said structure; Fig. 6 is a similar elevation, showing the disks 2 removed and an extension piece attached; Fig. 7 is a plan of one of the extension pieces; and, Fig. 8 is a perspective view of the mulching tool.

The frame includes the side bars *a* converging forwardly and held in rigid relation to each other by two or more cross-pieces *b*, the said side bars at their rear ends affording handles *c* and at their forward ends being provided with the axle *d* for the supporting wheel *e*, the ends of said axle protruding through the said bars for a purpose to be explained. The pivoted structure aforesaid is constructed as follows: *f f* designates two metallic strips spaced apart and having substantially the same convergence as the side bars *a* and arranged with their broad surfaces facing laterally. At their more widely spaced ends they are bolted to the forwardly projecting lugs *g* of a relatively heavy metallic casting *h* forming a cross-bar carrying the soil-working implements. Each lug *g* forms a part of an angular projection *i* of the cross-bar *h*, the web *j* reinforcing said projection. Preferably the cross-bar is provided with the horizontal holes *k* adapted to receive the tongues *l* of the extensions *m*, each having an angular lug *n* which fits in the angular space *o* formed under the web *j* between the end of the cross-bar *h* and its projection *i*. Any suitable means, such as the set screws *p* tapped into the cross-bar and bearing against the tongues *l*, may be employed to secure the extensions in place. The effective width of the cross-bar and its extensions may be increased by arranging the innermost tongues on the extensions in the outermost holes *k* in the cross-bar, as will be obvious.

The cross-bar and its extensions are provided with a row of vertical holes *q* and with the downwardly projecting sockets *r* in which are received the teeth *s*, held in place by the set screws *t*. Similar holes *u* in the cross-bar, provided with sockets *v*, may receive the vertical stems *w* of a horizontal mulch-bar *x*, said stems being held in place by the set-screws *y*. The mulch bar being placed behind the row of teeth *s* and slightly higher than the lower ends thereof is peculiarly advantageous in mulching the soil after it has been harrowed by the teeth. It will be understood that both the teeth and the mulch bar may be adjusted to any desired elevation.

If desired, axles *z* for the disk knives 2 may be secured on the cross-bar *h* by the screws 3, said knives being useful in cutting off runners from plants and other similar purposes.

The structure just described is pivoted in the frame shown in the drawings, or any other suitable support, so that it trails. To this end 4 is a bolt penetrating the side bars *a* of said frame and the forward ends of the strips *f*. Owing to the fact that said structure is pivoted and trails, and because its strips *f* are flexible, laterally, as it is trailed over the ground it can clear unyielding stones and other obstacles either by swinging upwardly on its pivot or moving laterally, the strips bending to permit such lateral movement; or it may tilt more or less as shown in dotted lines in Fig. 6, so that only the teeth which directly engage the obstacle leaves the ground. I find in practice that the adaptability of the trailing structure to clear obstructions without

unduly jarring or vibrating the frame is considerably enhanced by the flexible character of said structure and the fact that it is relatively heavy at the rear.

If desired, a forked yoke 5 to which to attach a draft animal, may be pivoted to the bolts 6 at the forward ends of the side bars *a*.

On the frame may be arranged a barrow, 7, at which time the yoke 5 is swung forward, resting on the ends of the axle *d*.

8 is a chain attached to the pivoted structure for use in raising the same as occasion requires; the pivoted structure may be held elevated as shown in dotted lines in Fig. 1 by attaching one of the links of the chain to the hook 9 on the frame.

The disk knives 2 not only serve for the purpose already explained but to support the trailing structure, so that the teeth harrow the ground at a more or less uniform depth. (They nevertheless offer no appreciable resistance to the lateral movements of the trailing structure because usually when an obstruction is met and the trailing structure shifts laterally only one of them is received in the ground, the other being more or less elevated by the obstruction). The mulch bar also serves to preserve the teeth at a substantially uniform working depth, as will be obvious.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In combination, a frame having handles at its rear end, a supporting wheel for the frame arranged at the forward end of the frame, and a trailing soil-working structure movable up and down and being freely flexible laterally and including a pair of slender laterally flexible side strips pivoted at their forward ends to said frame, a relatively heavy cross-bar connecting said strips and arranged substantially at their rearward extremities, and soil-working tools arranged in said cross-bar.

2. In a trailing soil-working structure, an elongated tool-holding member adapted to extend crosswise of its path of travel when in use, an extension projecting beyond one end of said member and adjustable longitudinally of the latter, said member and extension having interchangeable interlocking portions, means to hold the extension to said member, and soil-working tools carried by both said member and the extension.

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

T. C. KEVITT.

Witnesses:
JOHN W. STEWARD,
WM. D. BELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."