No. 617,070. Patented Jan. 3, 1899.

A. ANDERSON.

CLEANER FOR SPADING HARROWS.

(Application filed June 16, 1898.)

(No Model.)

Fig. 1.

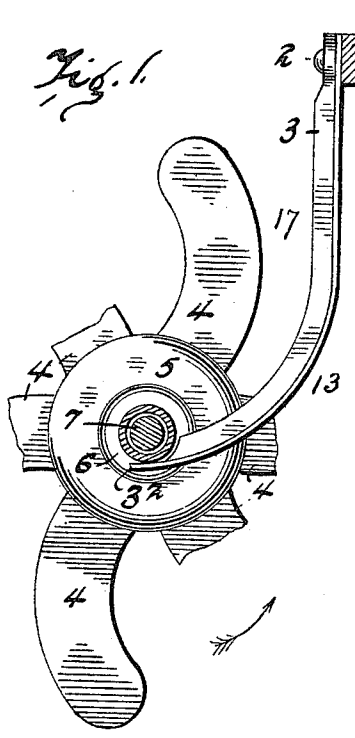


Fig. 2.

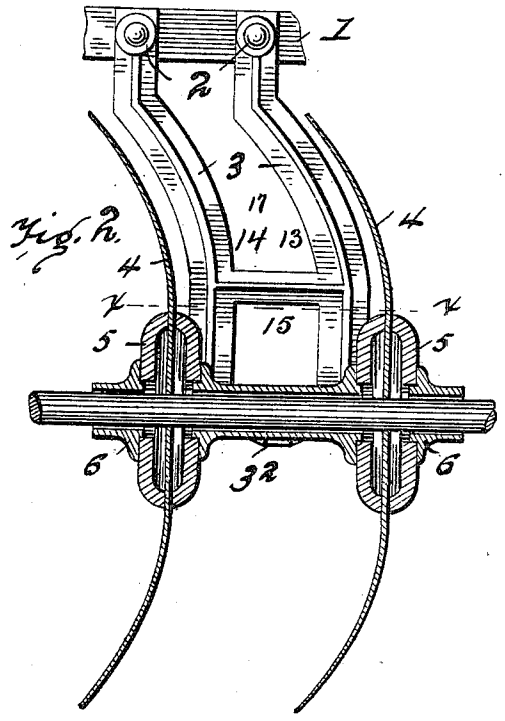


Fig. 4.

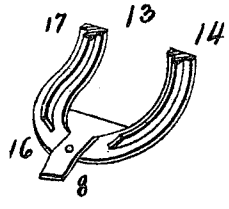


Fig. 3.

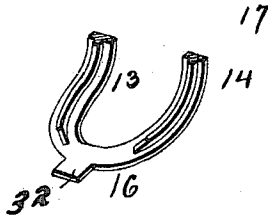
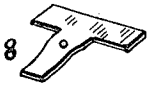


Fig. 5.



Witnesses.
Chas. K. Davies,
M. E. Brown

Inventor
A. Anderson
By C. C. Wood
Attorney.

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UNITED STATES PATENT OFFICE.

ANTON ANDERSON, OF MENOMONIE, WISCONSIN, ASSIGNOR TO THE E. BEMENT'S SONS, OF LANSING, MICHIGAN.

CLEANER FOR SPADING-HARROWS.

SPECIFICATION forming part of Letters Patent No. 617,070, dated January 3, 1899.

Application filed June 16, 1898. Serial No. 683,656. (No model.)

To all whom it may concern:

Be it known that I, ANTON ANDERSON, a citizen of the United States, residing at Menomonie, in the county of Dunn and State of Wisconsin, have invented a new and useful Improvement in Cleaners for Spading-Harrows, of which the following is a specification.

Harrows of this character are to a large extent employed in preparing corn-stubble ground for the sowing of a spring crop, as oats or the like. To accomplish this result, the spades of the harrow are so constructed as to catch the corn-stubble and cut it between the spades of the harrow and a shearing-blade or cleaner attached to the frame of the harrow for this purpose. Great trouble and inconvenience have resulted in the use of these machines from this blade or cleaner becoming displaced, bent, and failing to perform its functions properly. This objection I have obviated by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view of one of the spading-disks with its head and cleaner from the left-hand side of the machine. Fig. 2 is a front view of the cleaner with a section of two of the spading-disks. Fig. 3 is a section of the lower end of the cleaner made at the line $x\,x$, showing one form of construction employed by me. Fig. 4 is similar to Fig. 3, but employs the construction of the lug 8, shown in Fig. 5. Fig. 5 shows a modification of the lug 8, designed to be attached to the cleaner-blade in any suitable manner.

1 is a portion of the frame of the harrow, to which is attached by the bolts 2 the cleaner 3, which cleaner or cutter approximates in shape at its outer edges to the shape of the spading-blades 4—that is, one side of the blade or cleaner curves to correspond with and lie in close proximity to the concave surface of one rotary spade or digger and the other side of the cleaner approximates the form and lies in close proximity to the convex side of the next adjacent rotary spader or digger.

The cleaner 3 consists of two side bars 13 and 14, these bars being connected by the cross-bar 15 and by the curved extension 16. The bars are preferably stiffened or strengthened by ribs 17 on the faces of such bars opposite to the side against which the rotary diggers or spades operate to carry stalks and trash, as has been indicated.

The rotary spaders or diggers are of a form well known in this art, an example of such being shown in the patent of Maul, No. 529,457, of November 20, 1894. The spading-blades 4 4 are held between collars 5, mounted on axle A, the collars 5 being held apart by spacing-spools 6, mounted on said axle.

The blades 4 serve to stir or spade up the ground as the spading-harrow advances. The curved form of these spaders causes them to lift cornstalks and such trash and carry them up against the flat faces of bars 13 14, and these bars and the rotating spades act to shear or cut off such stalks and trash into pieces of about the length of the distance between the rotating spaders. The lower end of the cleaner 3 is curved forward and provided with an integral tongue or extension 3^2, which tongue rests against the spool 6. As shown in Figs. 4 and 5, a tongue 8 may be made on a separate piece and riveted to the curved bar 16 of the cleaner instead of being made integral. In either case this extension 8 or 3^2, bearing against the spool 6 on the axle A, serves to brace and support the lower end of the cleaner or cutter 3, the upper end of said cleaner or cutter being supported by the frame-bar 1 and the side bars 13 14 being braced by bars 15 and 16.

It is desirable that the cut trash may readily fall from the machine, and this is permitted by forming the cleaners 3 of solid side bars with openings between, said bars being braced and supported, as described.

Spading-harrows having cutters or cleaners, as hereinbefore described, have proved very efficient and satisfactory in the field, where machines of slightly-different construction have failed. I therefore contend that the device as a whole is a marked improvement. No such machine, so far as I am aware, can perform such work as has been successfully accomplished by this machine.

What I claim is—

1. The combination with a spading-harrow having rotating spaders consisting of curved

blades, of a cleaner attachment consisting of side bars in proximity to said rotating spaders and conforming to the outline of the two adjacent diggers, said side bars having a cross-brace and an end piece supported against the spacing-piece on the digger-shaft, all substantially as described.

2. In a spading-harrow, the combination of the frame, the shaft having rotating spade-diggers, and the cleaner connected to the frame and bearing against a part on the shaft on which the said diggers are mounted, said cleaner having integral side bars and a cross-brace strengthened by a rib on the face opposite the cutting-face, the side bars of such cleaner formed to lie in close proximity to the path of movement of the rotating diggers, all substantially as described.

ANTON ANDERSON.

Witnesses:
FRED. BERG,
H. GOLDENBURG.