P. D. & H. C. PELSOR.

ROTARY-SPADER STALK-CUTTERS AND FIELD-ROLLERS.

No. 181,976. Patented Sept. 5, 1876.

fig: 1.

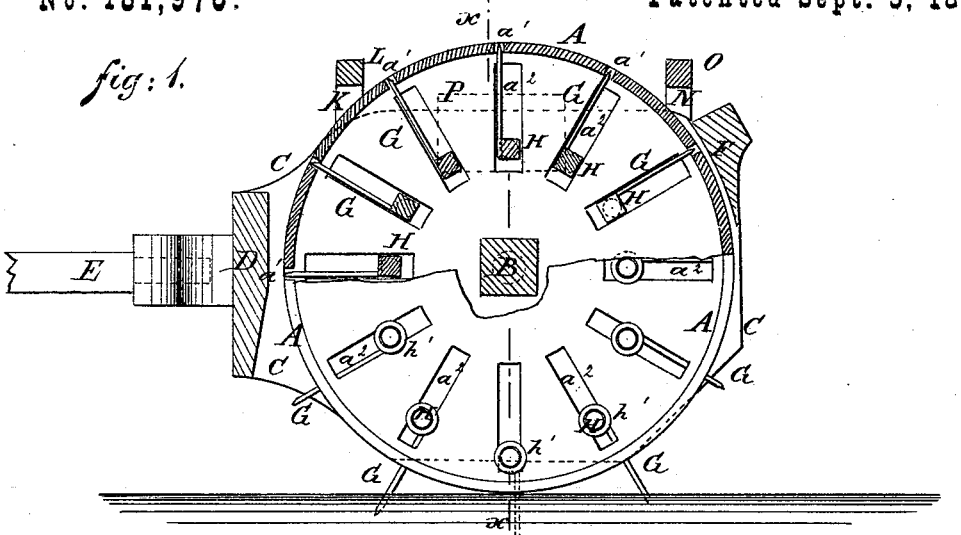


fig: 2.

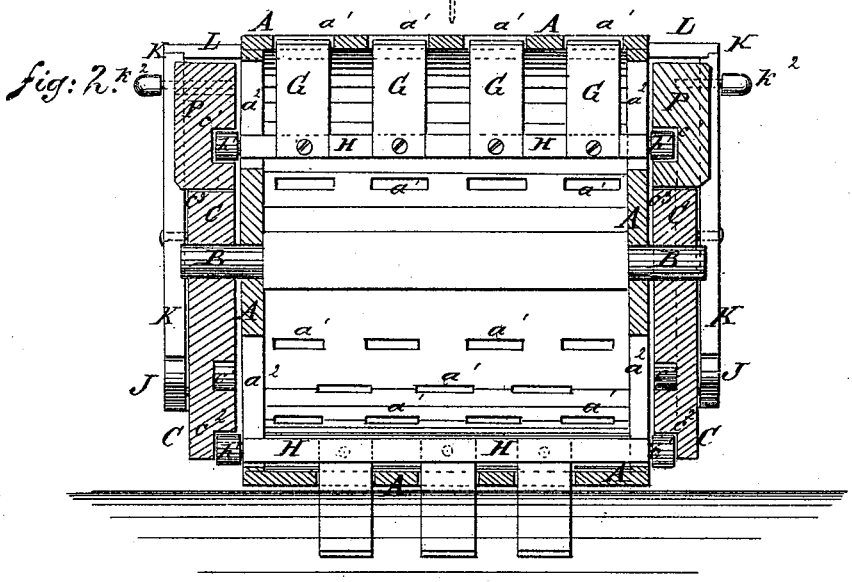
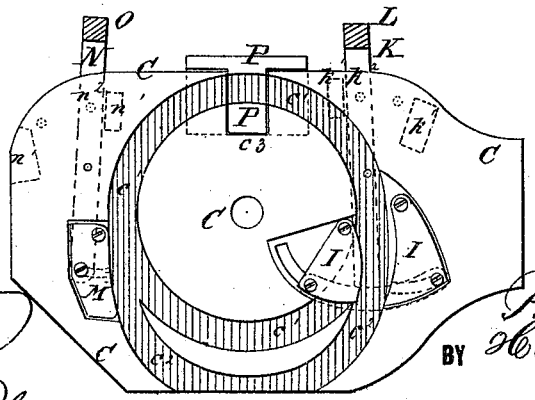


fig: 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

PETER D. PELSOR AND HENRY C. PELSOR, OF METAMORA, INDIANA.

IMPROVEMENT IN ROTARY SPADER, STALK-CUTTER, AND FIELD-ROLLER.

Specification forming part of Letters Patent No. **181,976**, dated September 5, 1876; application filed January 15, 1876.

To all whom it may concern:

Be it known that we, PETER D. PELSOR and HENRY C. PELSOR, of Metamora, in the county of Franklin and State of Indiana, have invented a new and useful Improvement in Rotary Spader, Stalk-Cutter, and Field-Roller, of which the following is a specification:

Figure 1 is a side view of our improved machine, the side plate and a part of the disk being removed. Fig. 2 is a vertical cross-section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a detail view of the inner side of one of the side plates.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine which may be used as a rotary spader, a stalk-cutter, and a field-roller, as may be desired, and which shall be simple in construction, convenient in use, and effective in operation in either capacity.

The invention consists in the roller provided with rows of alternating slots in its face, and with corresponding radial slots in its ends, the side plates provided with circular grooves and eccentric branch grooves in their inner surfaces, the cutters and the cutter-bars, in combination with each other; in the combination of the guide-blocks, the curved bars, the levers, and the connecting bar, with the grooved side plates, and the bars that carry the cutters; in the slots formed in the upper parts of the side plates, and their notched cap-blocks to enable the cutter-bars and cutters to be withdrawn from the roller; and in the combination of the scraper with the side plates, and with the face of the roller, as hereinafter fully described.

A is a large roller, the face of which rolls upon the ground, and upon the journals B, of which hang two plates, C. The plates C are connected at their forward ends by a cross-bar or plate, D, to the center of which is attached the tongue E. The upper part of the rear ends of the side plates C are connected by a bar or plate, F, the inner side of which is concaved to correspond with the curvature of the face of the roller A, so that the said plate may serve as a scraper to scrape off any dirt that may adhere to the face of the said roller A. In the face of the roller A are formed rows of slots a^1, which are so arranged that the slots of each row may be opposite the spaces between the slots of the adjacent rows. The slots a^1 are made of such a size that the spades G may fit into them, so that all the dirt that may adhere to the said spades G may be scraped off every time they are drawn inward. The inner ends of the spades G of each row are bolted to the side of a bar, H. The bars H pass out through radial slots a^2 in the end plates or disks of the roller A, and have rollers h' pivoted to their projecting ends. The outer ends of the slots a^2 extend nearly to the rims of the end plates or disks, so that the spades, cutters, or knives G may be projected through the slots a^1 nearly their whole length. The slots a^2 extend so far inward that the cutters G may be drawn wholly within the shell of the roller A, so that the bars H and cutters G may be withdrawn through the slots a^2. The projecting ends of the bars H enter circular grooves c^1 in the side plates C, which grooves are concentric with the axis of the roller A, and at such a distance from it as to hold the outer ends of the cutters G in the slots a^1 of the roller A, as shown in the upper part of the said roller, in Figs. 1 and 2, to prevent the spades from getting out of place, while at the same time preventing them from projecting, thus adapting the machine to be used as a field-roller and enabling it to be readily drawn from place to place. In the lower part of the plates C are formed branch eccentric or cam grooves c^2, as shown in Figs. 2 and 3. The lower part of the branch grooves c^2 extends to the lower edge of the plates C, so as to be open for the purpose of carrying the bars H close to the shell of the lower part of the roller A, so that the spades G may be projected their whole length, and also to allow any dirt that may find its way into said grooves to drop out.

In recesses in the forward part of the plates C, at the points where the branch groove c^2 leaves the groove c^1, are pivoted guide-blocks I, the adjacent edges of which are at such a distance apart that the ends of the bars H may pass between them, so that by adjusting the said blocks I the ends of the bars H may be made to pass through the grooves c^1 or through the branch groove c^2. The guide-

blocks I are connected with the curved bars J by bolts that pass through curved slots in the plates C, which slots are covered by the said curved bars J. The curved bars J are attached, at their middle parts, to the lower ends of the levers K, which are pivoted to the plates C, and the upper ends of which project above the forward part of the roller A, and are connected by a cross-bar, L, so that both the said levers K may be operated together to shift the guide-blocks I.

The movements of the levers K are limited by stop-blocks k^1 attached to the plates C, and the said levers are secured in either position by pins k^2, which pass through holes in the levers K, and into holes in the side plates C. M are single guide-blocks, which are placed in recesses in the rear parts of the plates C, at the point where the grooves c^1 c^2 meet, and are pivoted to the said plates, so that they may be swung forward to close the end of the branch groove c^2, to prevent the ends of the bars H from entering the said branch groove c^2 when the roller is turned backward.

The blocks M are operated by levers N, with which they are connected by bolts passing through curved slots in the plates C. The levers N are pivoted to the side plates C, and their upper ends project above the rear part of the roller A, and are connected by a cross-bar, O, so that the two levers may be moved together.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The roller A, provided with rows of alternating slots a^1 in its face, and with corresponding radial slots a^2 in its ends, the side plates C, provided with circular grooves c^1 and eccentric branch grooves c^2 in their inner surfaces, the cutters G, and the cutter-bars H, in combination with each other, substantially as herein shown and described.

2. The combination, with roller having slots a^1 a^2, the bars H, and the spades G, of the side plates C C, having eccentric grooves c^2, and the guide-blocks I, operated by mechanism J K L, as and for the purpose specified.

3. The slots c^3, formed in the upper part of the side plates, and their notched cap-blocks P, to enable the cutter-bars and cutters H to be withdrawn from the roller A, substantially as herein shown and described.

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Witnesses:
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