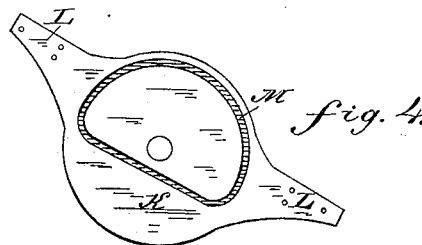
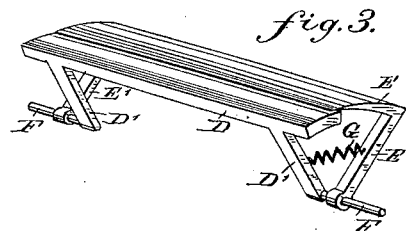
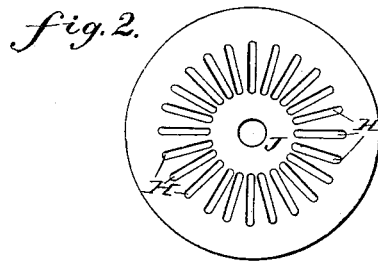
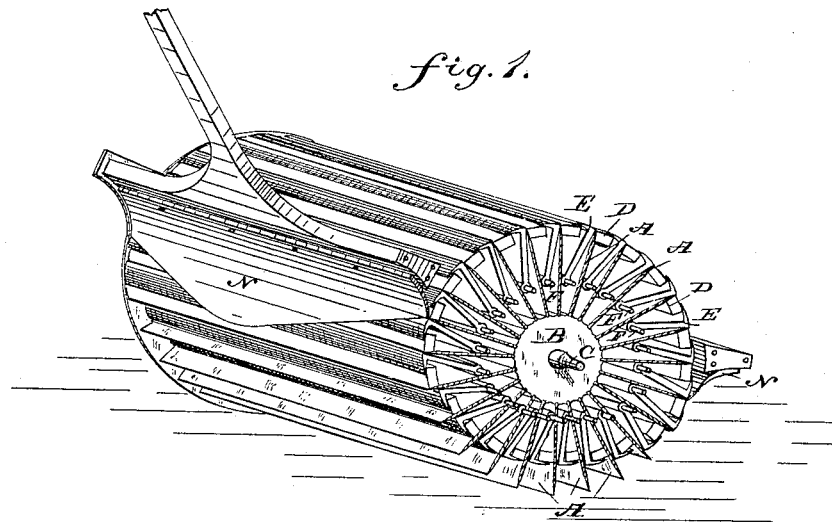


(No Model.)

J. B. HURD.  
REVOLVING PLOW.

No. 266,824.

Patented Oct. 31, 1882.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JUDSON B. HURD, OF SOUR LAKE, TEXAS.

## REVOLVING PLOW.

SPECIFICATION forming part of Letters Patent No. 266,824, dated October 31, 1882.

Application filed June 27, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JUDSON B. HURD, of Sour Lake, Hardin county, Texas, have invented a new and Improved Revolving Plow, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved revolving plow for cutting up, breaking, and turning over the soil or turf, in which the cutter-blades are freed automatically from the soil, turf, &c., adhering thereto.

The invention consists in a cylinder to which radial blades are attached, between which movable scraper-blades are held and pressed against the radial blades, which scraper-blades are moved to and from the edges of the radial blades by pivots attached to the arms of the scraper-blades and passing into grooves in the end plates, on which the cylinder revolves, whereby when the revolving plow is moved over the ground the radial blades cut into the ground, and the scraper-blades are moved to the outer edges of the radial blades when the same are raised, and scrape off the soil, grass, &c., adhering thereto, which scraper-blades are cleaned by scraper-plates attached to the frame of the plow.

The invention also consists in circular cutters at the ends of the cylinder, and in the combination of parts, as will be fully described hereinafter.

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

Figure 1 is a perspective view of my improved rotary plow, showing the end disks and cutters removed. Fig. 2 is an elevation of one of the slotted circular end cutters. Fig. 3 is a perspective view of the scraping-blades placed between the cutting-blades. Fig. 4 is an inside elevation of one of the end disks or plates.

A series of blades, A, are fastened radially and in some suitable manner in a cylinder, B, of wood or metal, provided with a longitudinal shaft, C. The outer edges of the blades A are preferably sharpened. Between each two cutting-blades A two scraping or cleaning blades, D and E, are arranged, these blades being provided at the ends with arms D' and

E', which have their free ends mounted on or attached to outwardly-projecting pivots F, the pivot being fixed to the arm D', and the arm E' working on it, forming a hinge, as shown in Fig. 3, and the scraper-blades project toward each other, one preferably overlapping the other, so that no dirt can get between them and the cylinder. The scraper-plates are pressed against the cutting-blades by means of suitable springs, G, placed between them. The pivots F pass through radial slots H in circular blades J, which are fastened on the ends of the cylinder B and revolve with it. Outside of these circular blades J end disks or plates, K, are mounted on the shaft C, these plates being provided with opposite radial arms, L, and being provided in the inner surfaces with grooves M for receiving the ends of the pivots F. The grooves M are in the shape of an enlarged semicircle united by a chord at the ends of the curves, the semicircle extending along the upper curved edge of the end plate or disk and the chord crossing directly below the center. Scraper-plates N are attached to the arms L and rest at opposite sides of the cylinder against the outer edges of the radial blades A.

The above-described rotary plow or cutter can be mounted on wheels or in a sulky, or can be weighted in any suitable manner, and can be provided with a handle, O, as shown, at one or both sides, or other devices for propulsion, and can be provided with one or more intermediate transverse circular blades.

The operation is as follows: The springs G press the outer edges of the scraper-plates D and E against the sides of the blades A. If the rotary cutter or plow is drawn over the ground, the blades A successively cut into the ground, and thus chop or cut up the ground and turn it over in short furrows, which lie across the course of the plow. The scraper-blades D E, between those blades A that are cutting into the ground, are drawn toward the shaft of the roller B, so that the blades A will project farther from the roller B than the scraper-blades, for as the straight part of the groove extends across the lower side of the end plates, K, the scraper-blades will be raised by their pivots F, which run in the grooves M. As the plow revolves and the cutting-blades are raised out of the ground the scraper-blades

D E are moved toward the outer edges of the blades A by the pivots F passing along the semicircular part of the groove M, and by this means these scraper-plates are made to scrape all soil, grasses, and trash that adhere to the blades A from the same, and when these blades enter the ground the scraper-blades D E are withdrawn from the edges of the blades A by the pivots F passing along the transverse part of the groove M. The scraper-plates N clean the scraper-blades D E as they pass.

This rotary cutter or plow can be used as a general pulverizer, as a hoe, or to break ground, or to cut sods and turf, or for similar purposes. As shown, a handle, O, is fixed behind. A similar contrivance may be fixed in front for a beam, and to this beam or short tongue a caster may be fixed, so that the plow may be easily handled and shifted from side to side by lifting up on the handle O and throwing the weight of the plow on the caster.

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

1. A revolving plow constructed, substantially as herein shown and described, with a series of radial blades attached to a roller or cylinder and a series of radially-movable scraper-blades between the cutting-blades, as set forth.

2. In a revolving plow, the combination, with a cylinder and a series of radial blades attached to the same, of movable scraper-blades between the cutting-blades, and devices for moving the scraper-blades to and from the outer edges of the cutting-blades, substantially as herein shown and described, and for the purpose set forth.

3. In a revolving plow, the combination, with a cylinder and a series of radial blades attached to the same, of scraper-blades between the cutting-blades, and of circular blades at the ends of the cylinder, substantially as

herein shown and described, and for the purpose set forth.

4. In a revolving plow, the combination, with a cylinder and radial blades attached to the same, of movable scraper-blades between the same, and of scraper-plates resting against the outer edges of the cutting-plates and attached to the frame of the plow or the end plates of the roller, substantially as herein shown and described, and for the purposes set forth.

5. In a revolving plow, the combination, with the cylinder B and the radial blades A, attached to the same, of the scraper-blades D E between the blades A, the pivots F, attached to the arms of the blades D E, and the end plates, K, each provided with a groove, M, in the shape of a semicircle united at the ends by a chord, substantially as herein shown and described, and for the purpose set forth.

6. In a revolving plow, the combination, with the cylinder B and the radial blades A, of the scraper-blades D E, the pivots F, attached to the ends of the arms of the same, the circular cutters J, provided with radial slots H, and the end plates, K, provided with grooves M in the inner surfaces, substantially as herein shown and described, and for the purpose set forth.

7. In a revolving plow, the combination, with the cylinder B and the radial blades A, of the scraper-plates D E between the blades A, the springs for pressing the outer edges of the blades D E against the blades A, and devices for moving the blades D E to and from the outer edges of the blades A, substantially as herein shown and described, and for the purpose set forth.

JUDSON B. HURD.

Witnesses:

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R. TEEL.