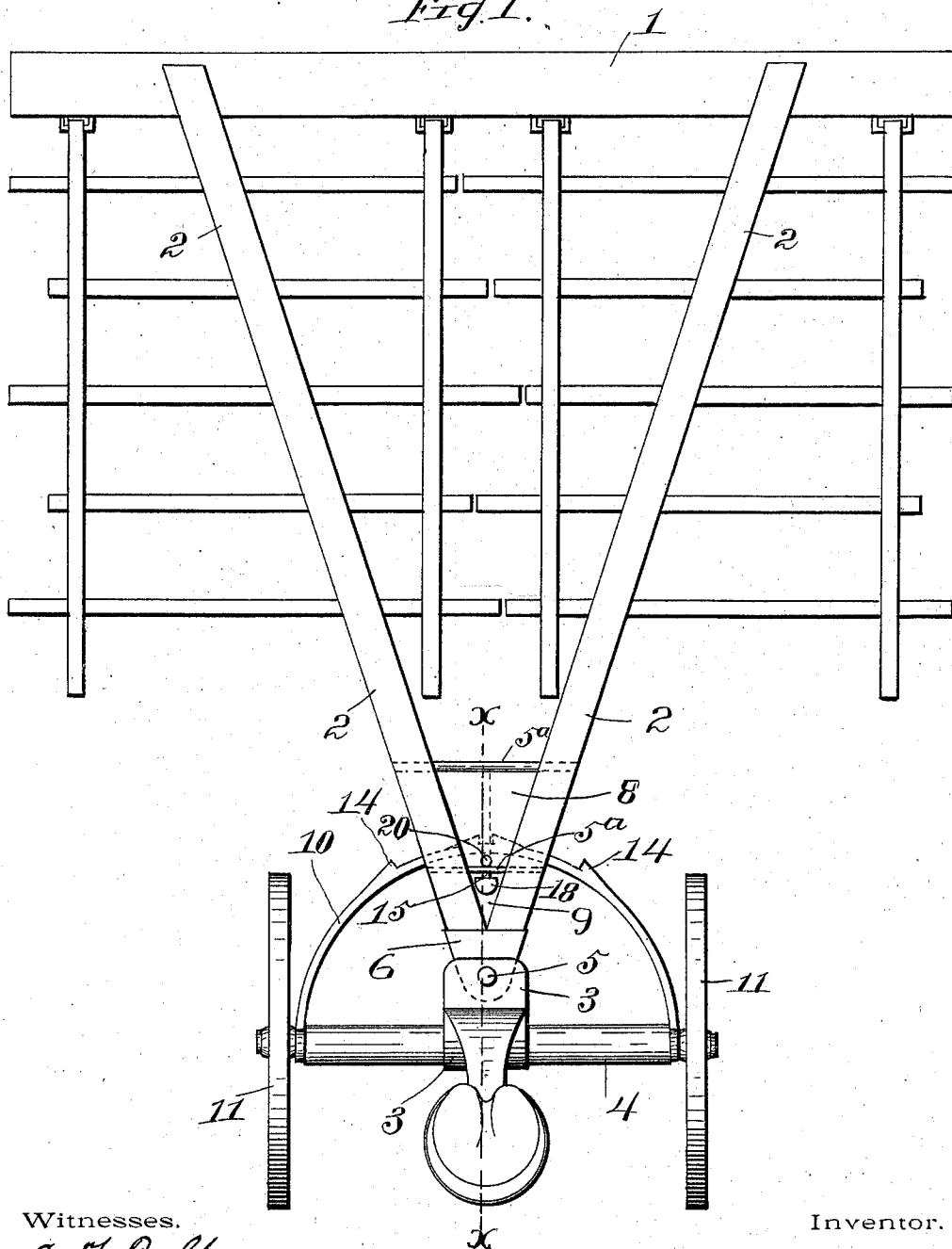


D. C. MILLER.
WHEELED HARROW.

No. 574,102.

Patented Dec. 29, 1896.

Fig. 1.



Witnesses.

C. T. Belt.
John S. Steump.

Inventor.

Davis C. Miller.
By W. H. Wells.

Attorney.

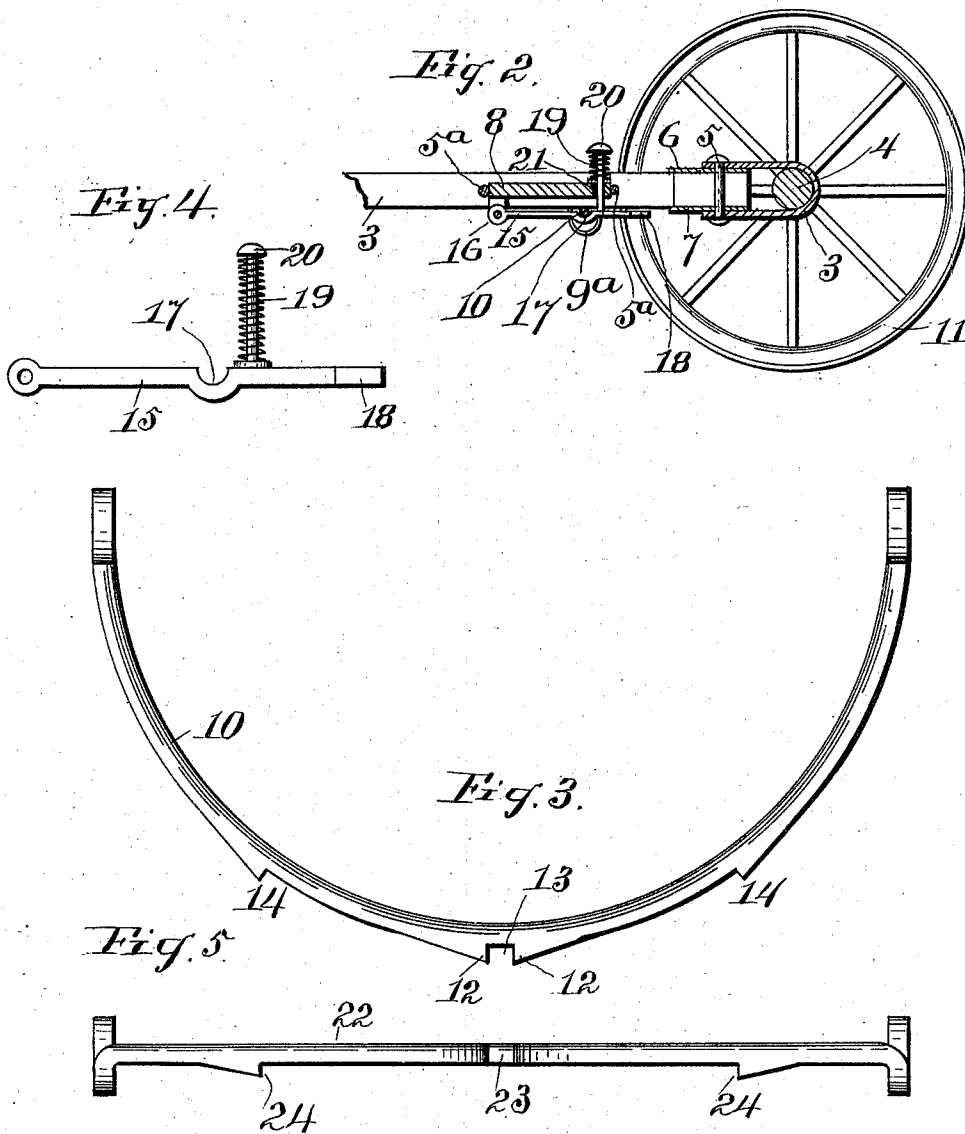
(No Model.)

2 Sheets—Sheet 2.

D. C. MILLER.
WHEELED HARROW.

No. 574,102.

Patented Dec. 29, 1896.



Witnesses.

C. T. Belt
John Stump.

Inventor.

David C. Miller,
By W. H. Wells,

Attorney

UNITED STATES PATENT OFFICE.

DAVID C. MILLER, OF CEDARVILLE, KANSAS.

WHEELED HARROW.

SPECIFICATION forming part of Letters Patent No. 574,102, dated December 29, 1896.

Application filed April 11, 1896. Serial No. 587,090. (No model.)

To all whom it may concern:

Be it known that I, DAVID C. MILLER, a citizen of the United States, residing at Cedarville, in the county of Smith and State of Kansas, have invented certain new and useful Improvements in Wheeled Harrows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a harrow, and particularly to a wheeled harrow, and its novelty will be fully understood from the following description and claims when taken in connection with the annexed drawings.

The object of the invention is to provide a wheeled or sulky harrow having a seat for the operator and an improved means whereby the wheels and their axles are automatically turned or directed to follow the draft or course of the harrow.

A further object of the invention is to provide a novel and peculiar hound and an automatic means operating in connection with the hound to fix the latter with the harrow-beams and to disconnect it from said beams to compel the sulky to follow the course of the harrow.

Further objects and advantages peculiar to this machine and accruing from its novel construction will be hereinafter disclosed.

The invention consists in the novel construction and arrangement of parts, as will be hereinafter fully described, and set up in the claims.

In the accompanying drawings, forming part of this application, Figure 1 is a top plan view. Fig. 2 is a section on the line *xx* of Fig. 1 with parts broken away and seat removed. Fig. 3 is an enlarged plan view of the hound. Fig. 4 is an enlarged elevation of the automatic attachment which comprises the foot-bar, its bolt, and spiral spring. Fig. 5 is a front edge view of a modified form of hound.

The same numeral references denote the same parts throughout the several figures of the drawings.

The harrow, which is intended to precede the sulky, is of ordinary construction, having a front swing-bar 1, to which is attached a doubletree, and from which the main harrow-

beams 2 extend in the ordinary V-shaped form to a point where they are housed by a clevis 3 and secured to the sulky-axle 4. The said point of the beams 2 is held in the clevis 3 by a bolt 5, passing through the latter and through top and bottom plates 6 and 7, respectively, secured to the said beam ends 2. Thus the harrow and the sulky are pivoted together by the bolt 5, and the harrow-beams have brace-rods 5^a.

Between and near the pivoted ends of the harrow-beams 2 is tenanted therein a platform 8, leaving a space 9 between said platform and the pivoted ends of the beams 2.

Opposite the platform 8 is secured to the under side of the beams 2 the hanger-guides 9^a for the hound 10, the ends of the latter being secured to the axle 4 near the wheels 11. This hound is provided centrally with two inclined lugs 12 and an intervening notch 13, and upon each side of these lugs 12, toward the ends of the hound, is formed similar inclined lugs 14. The hangers are large enough to allow free passage of the lugs 12 and 14 as the harrow and sulky are turned upon the point 5.

The automatic device for holding the hound 10 fixed with the harrow-beams 2 consists of the foot-lever 15, hinged or pivoted at 16 to the under side of the platform 8, so as to swing vertically. The lever has an offset or notch 17, and when the harrow and sulky are fixed together this offset 17 engages the notch 13 of the harrow and prevents the harrow or sulky from swinging on the pivot 5. The free end of the lever 15 is provided with a foot-rest 18, which is operated through the opening 9 to disengage the lever with the hound and allow the latter to slide through the guide-hangers 9^a, in accordance with the course of the harrow, said hound being stopped from unnecessary or too free movement to the right or left by the lugs 14, which engage the lever 17, while the latter is held in engagement with the hound by the spiral spring 19. This spring is located on top of the platform and surrounds the guide-bolt 20 of the lever 15, said bolt being operated through the slot 21 in the platform 8.

It will be observed that the spring holds the lever in normal position, and the latter has only to be pushed downward until the notches 17 and 13 are disengaged, when the

pressure is released, and the lever will automatically be returned by the spring 19 and kept in engagement with the hound, as and for the purpose hereinbefore described.

5 Referring to the modification shown in Fig. 5, the hound 22 has a central notch 23 and depending shoulders instead of lugs 12 and 14, hereinbefore referred to.

10 It will be observed that when the hound is locked to the harrow the sulky will follow in a direct line with the course of the harrow, and when the lever is in engagement with the hound upon either side of the notch 13 the sulky is free to adjust itself to long or short
15 turns and to follow the harrow in any direction or course it may take without any attention by the driver to the sulky, harrow, or any other part of the machine.

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

1. The combination with a harrow, a sulky to which it is pivoted, a hound having lugs and an intervening notch, an automatic means

for fixing the hound to the sulky comprising 25 the foot-lever pivoted at one end to the harrow-platform, a guide-bolt secured to the lever and working through the platform, and a spiral spring between the bolt-head and the platform, substantially as set forth. 30

2. The combination with a harrow having supporting-beams, a platform at the intersection of the rear ends of said beams, a sulky pivoted to said ends, a hound immovably secured to the sulky-axle and operated in guide- 35 hangers secured to the said beams, a foot-lever pivoted to the platform, a bolt secured to the lever and extending through the platform and a spiral spring around the bolt upon the platform adapted to control the movement of 40 the lever, as set forth.

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

DAVID C. MILLER.

Witnesses:

JNO. N. BEAL,
CLYDE BEAL.