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PATENTED JAN. 7. 1908.

F. BUCHET & E. A. MULLINIX.
DISK HARROW AND WEEDER.

APPLICATION FILED JUNE 11, 1907.

2 SHEETS—SHEET 1.

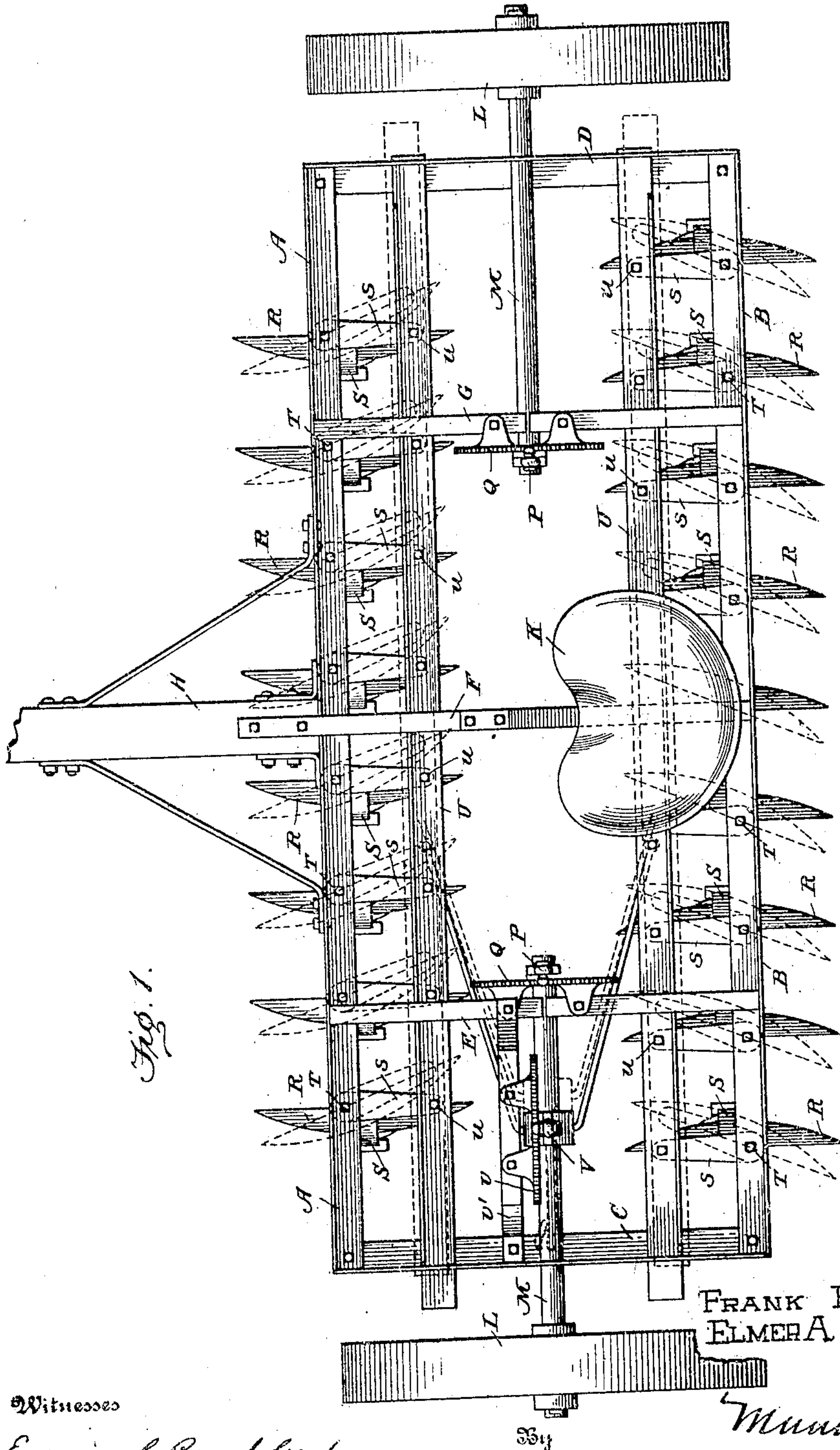


Fig. 1.

Witnesses

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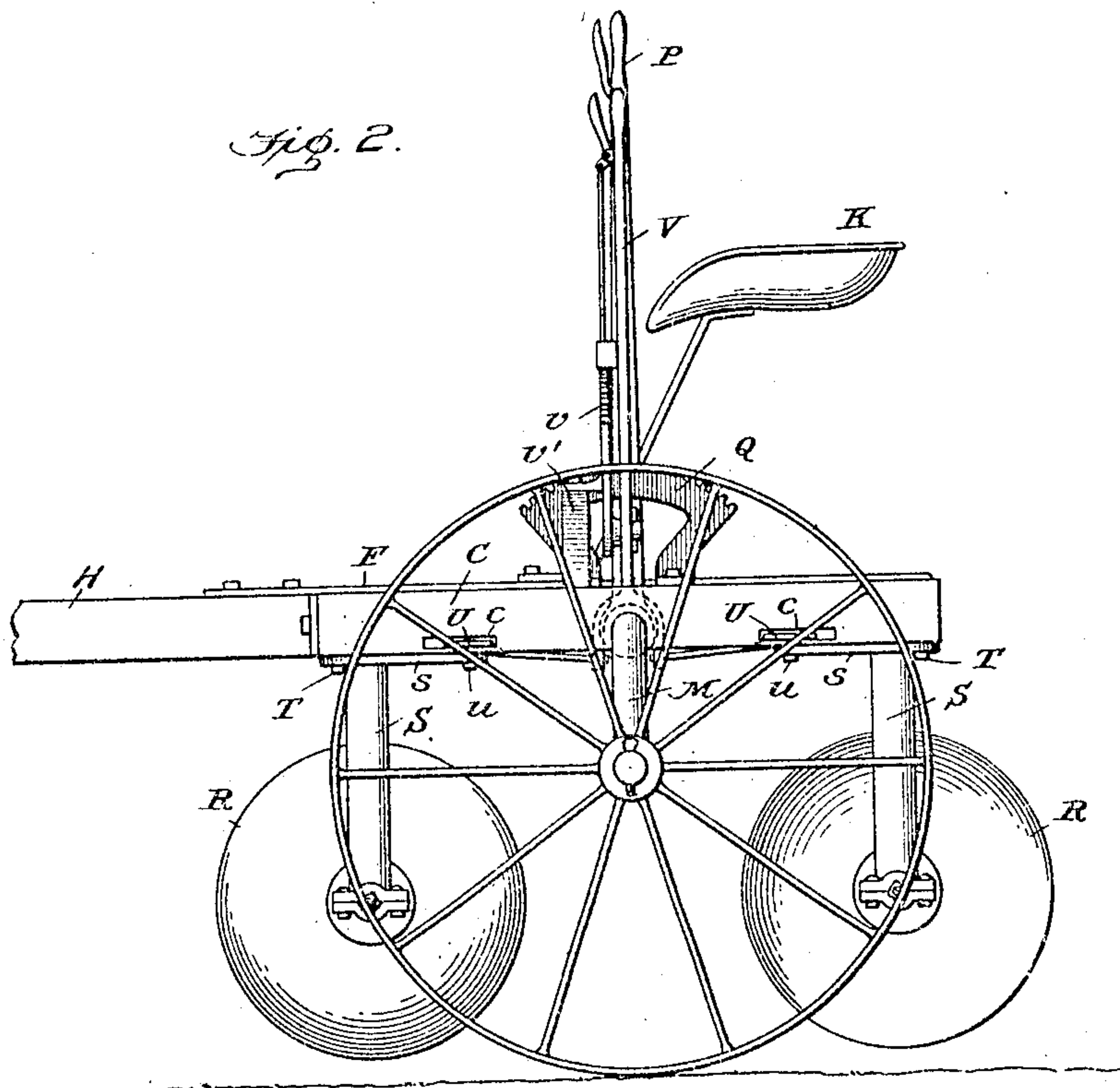


Fig. 3.

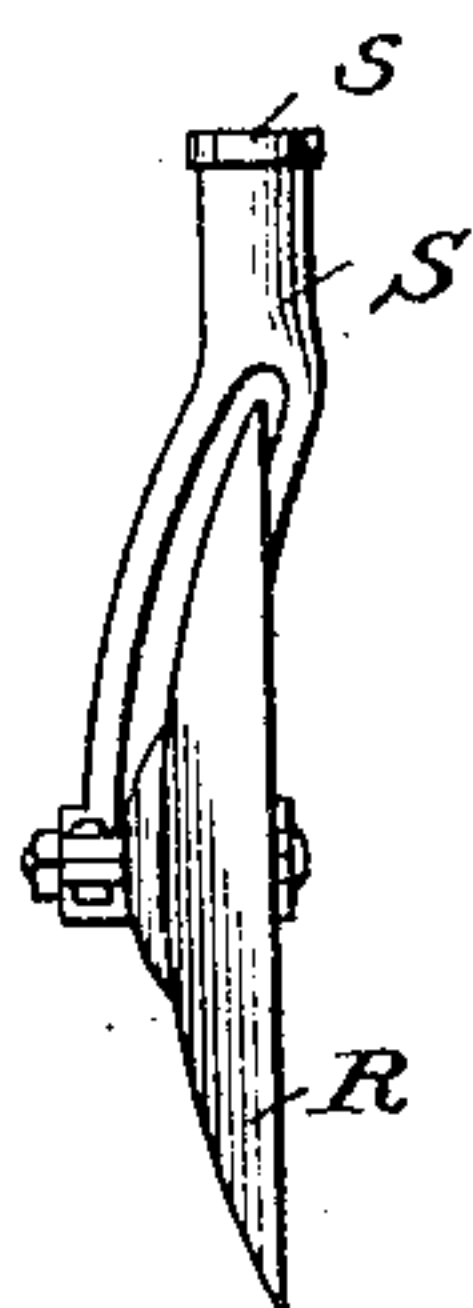
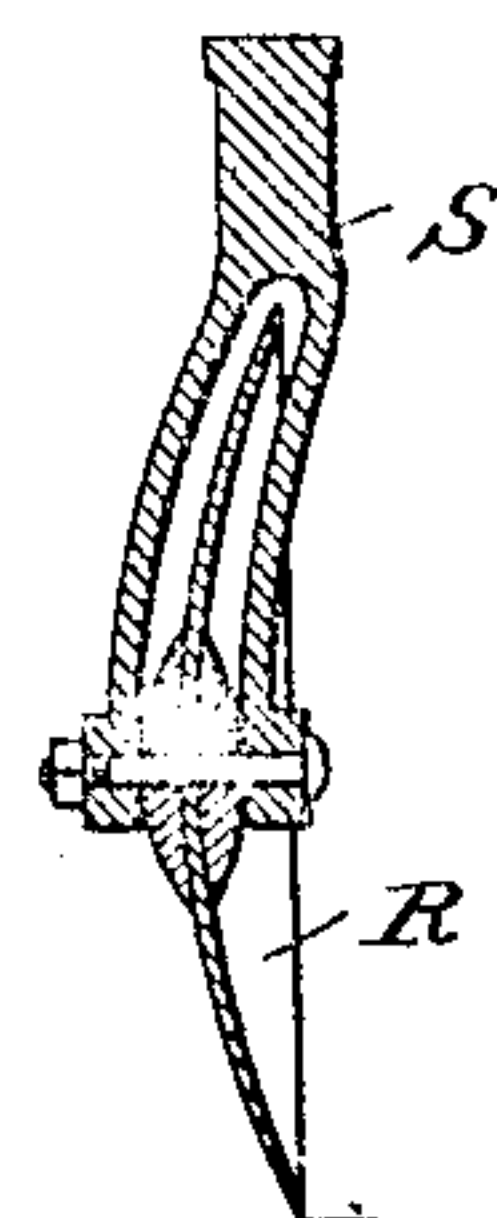


Fig. 4.



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FRANK BUCHET AND ELMER A. MULLINIX, OF WALLA WALLA, WASHINGTON.

DISK HARROW AND WEEDER.

No. 876,145.

Specification of Letters Patent.

Patented Jan. 7, 1908.

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To all whom it may concern:

Be it known that we, FRANK BUCHET and ELMER A. MULLINIX, citizens of the United States, residing at Walla Walla, in the county of Wallawalla and State of Washington, have invented a new and useful Improvement in Disk Harrows or Weeders, of which the following is a specification:

This invention relates to harrows or weeders of that class having a plurality of disks, and has for its object to provide an improved frame for supporting the disks, and provided with means for raising or lowering the frame to vary the depth of cut or to lift the disks from the ground. A further object is to provide novel and improved means for varying the angle of the disks with respect to the line of draft.

The implement is illustrated in the accompanying drawings, in which

Figure 1 is a top plan view thereof. Fig. 2 is a side elevation. Figs. 3 and 4 are details of the disk hangers.

The frame of the machine is composed of front and rear bars A and B, and side bars C and D, joined together at the ends to form a rectangular frame. The bars are preferably angle irons with the vertical flanges standing at the outer edge. The front and rear bars are connected by cross supports E, F and G and the tongue H is attached to the front bar A and to the front end of the cross bar F, by suitable braces and bolts. The seat K is supported on the middle cross bar F. The whole frame is thus cheaply and stoutly formed of angle and strap irons, bolted together. The disks R are carried in two gangs or rows, one under the front bar and the other under the rear bar of the frame. Each disk is supported by a hanger casting S which has at the top an arm s with a short end of which is pivotally connected the horizontal flange of the frame irons by a bolt T and the long end of which is connected to laterally sliding angle bars U by pivot bolts u, and by shifting these bars the disks are turned on the pivots T to vary the angle thereof with respect to the line of draft. The vertical flanges of the said bars C and D of the frame are slotted as indicated at c, and the ends of the bars U extend and work through these slots, and rest upon the horizontal flanges of said side bars, the vertical flanges of the bars U being cut away at the ends, to permit the movement.

The long ends of the arms s of the disk

hangers extend inwardly, or toward the middle of the frame, so that when the sliding bars are shifted the disks of the front and rear gangs are turned to opposite angles with respect to the line of draft. Said bars are shifted or set by means of a lever V provided with a latch engaging a segment v mounted upon a transverse bar v' at one side of the frame. The lower end of this lever is connected by rods a to the shifting bars respectively, and it is obvious that the angle of the disks may be varied as desired, by manipulation of the lever.

The frame and parts carried thereby are mounted upon cranked axles M and wheels L, at opposite sides of the machine, each axle having its latch lever P and quadrant Q, the latter being bolted to the cross bars E and G and the axles finding bearings in said bars and in the vertical flanges of the side bars C and D. The depth of cut of the disks may be varied, or they may be lifted entirely from the ground, by proper operation of the levers.

The simplicity, convenience and ease of operation are apparent, as well as the cheapness of construction, all the main parts being readily produced of stock or ordinary material, the only particular or special casting required being the disk hangers. The line of draft is not varied at any angle of the disks and the lateral pressure of one gang is counteracted by that of the other.

We claim

An improvement in disk harrows, substantially as described consisting of a main frame having side bars provided with guide openings and having front and rear bars in advance and in rear of their respective guide openings, slide bars movable laterally in the main frame and guided in the said guide openings, said slide bars being arranged one in rear of the front bar and the other in advance of the rear bar, a lever pivotally supported in connection with the main frame midway between the said slide bars and movable in a lateral direction between said slide bars, detent means for securing said lever in its different positions, links connected at one end with the said lever and extending thence laterally in the same general direction and diverging toward their other ends and connected at said ends one with the front slide bar and the other with the rear slide bar whereby the operation of the lever may move the slide bars in the same direction at each operation of the lever, disks below the front

and rear bars, hangers for said disks jour-
naled vertically in the front and rear bars
and having for the front disks rearwardly
projecting crank arms, and for the rear disks
5 forwardly projecting crank arms, the said
front and rear crank arms being pivotally
connected with their respective slide bars
whereby the operation of the one lever may

operate to tilt the front and rear disks, all
substantially as and for the purpose set forth. 10

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