No. 779,560. PATENTED JAN. 10, 1905.

J. H. PRICE.

WHEELED DISK HARROW.

APPLICATION FILED JULY 26, 1904.

3 SHEETS—SHEET 1.

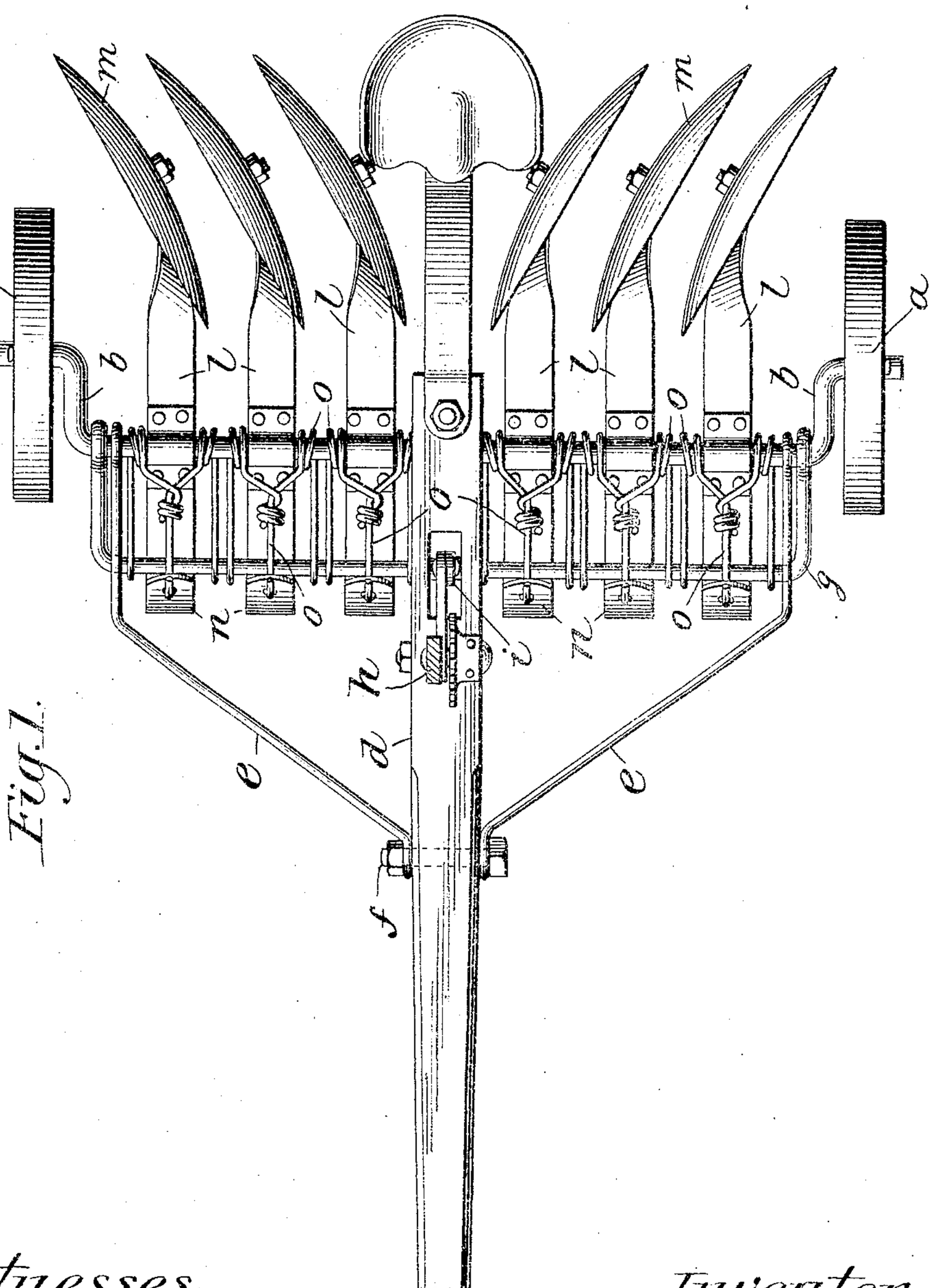

Fig. 1.

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3 SHEETS—SHEET 2.

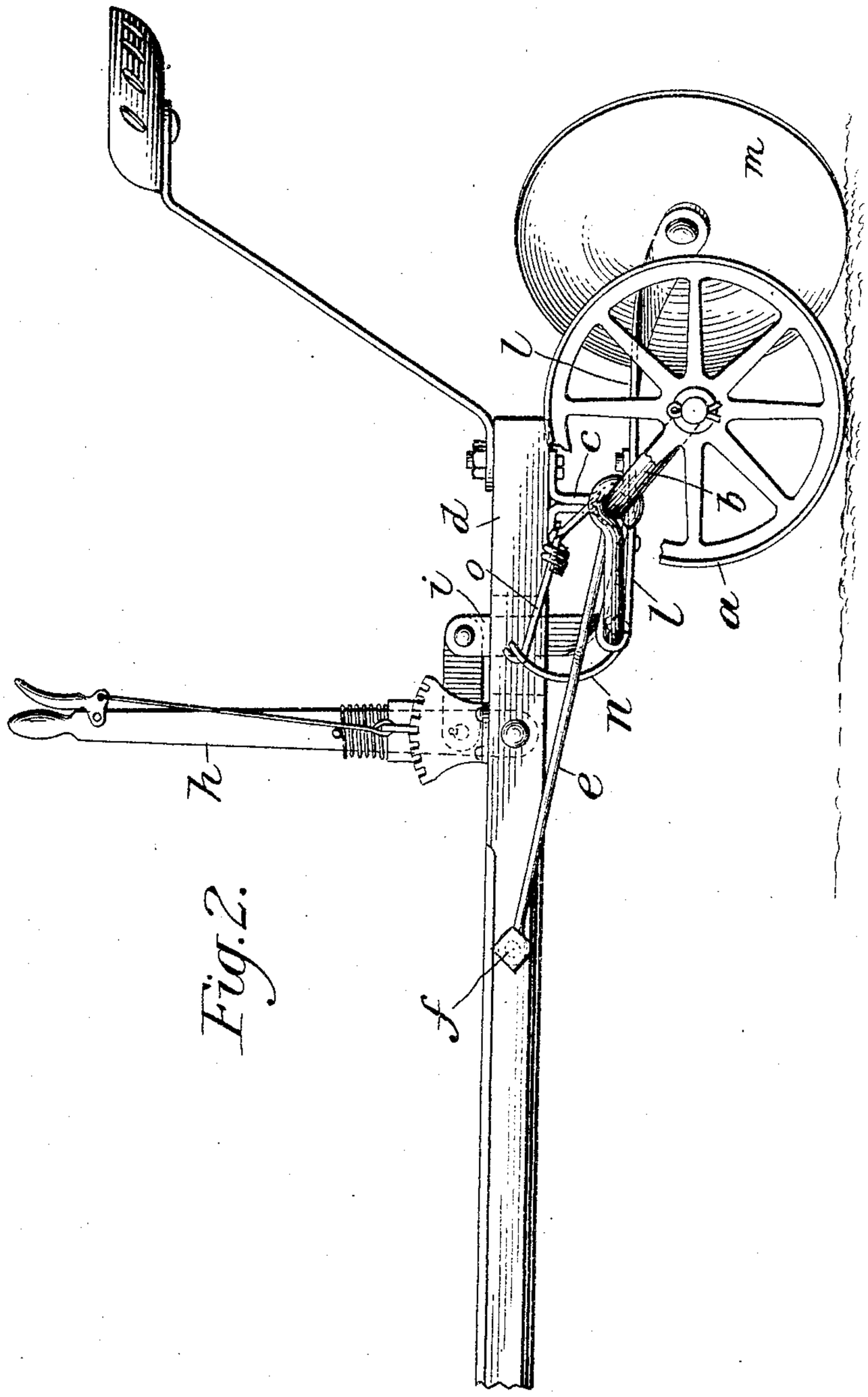

Fig. 2.

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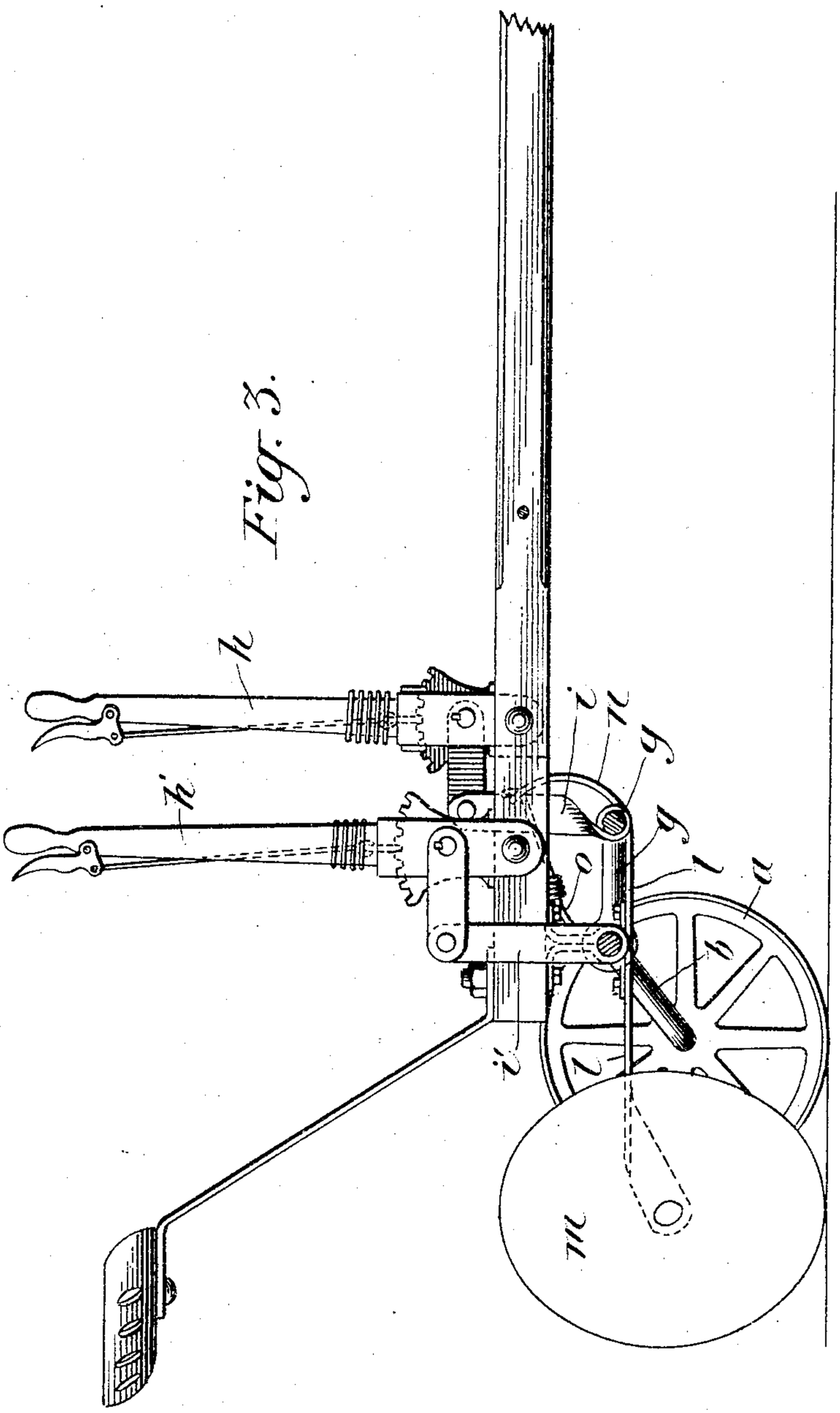
3 SHEETS—SHEET 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN H. PRICE, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO WILLIAM H. DILLMAN, OF INDIANAPOLIS, INDIANA.

WHEELED DISK HARROW.

SPECIFICATION forming part of Letters Patent No. 779,560, dated January 10, 1905.

Application filed July 26, 1904. Serial No. 218,249.

To all whom it may concern:

Be it known that I, JOHN H. PRICE, a citizen of the United States, residing in Indianapolis, county of Marion, State of Indiana, have invented certain new and useful Improvements in Wheeled Disk 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.

The invention relates generally to disk harrows, and more especially to such as are mounted on wheels and where the driver rides upon the machine and regulates the action of the disks from his seat as in other types of wheeled cultivators.

The object of the invention is to simplify the construction of the harrow, cheapen the cost of manufacture, and enhance the general efficiency of the machine; and to this end the characteristic features of the invention are that the disk-supporting drag-bars are mounted directly on the axle and that the elastic pressure to hold the disks down to their work is obtained from springs that are connected to extensions of the drag-bars in front of the axle.

The invention is illustrated in the accompanying drawings, where—

Figure 1 is a plan, and Fig. 2 a side elevation, of the entire machine. Fig. 3 is a side view illustrating a modification.

Referring to the views, it will be seen that the wheels *a a* are journaled upon the ends of a continuous crank-shaped axle *b*, which in turn is free to rock in a sleeve-like bracket *c*, depending from the rear end of the tongue *d*, the rocking movement of the axle being for the purpose of adjusting its operative portion up and down and this adjustment being under control by the driver from his seat in a way and by means which will be presently described in detail. The axle is also connected to the tongue by diagonal braces *e e*, which are pivotally connected to the tongue at *f* and extend rearwardly and outwardly and are sleeved upon the axle near its outer ends. A bar *g* extends parallel with and in front of the axle from side to side of the machine. Its ends are bent rearwardly, as clearly shown in the views, and are secured to the axle near its outer ends, so that the bar is, in effect, a rigid projection from the axle. This bar performs two functions—first, that of rocking the axle in its tongue-bearing through the instrumentality of the adjusting-lever *h* and the link *i*, and, second, that of forming a stop to limit the upward movement of the front ends of the drag-bars under the action of the springs which hold the disks down to their work.

The drag-bars are indicated at *l*. They carry the disks *m*, as usual, at their rear ends; but in the present invention they are pivotally mounted directly on the axle, as best shown in Fig. 1, and have their front ends extended considerably forward of the axle and under the stop-bar, and preferably, also, their front ends are bent or curved upwardly in front of and above the stop-bar, as shown at *n* in Fig. 2.

The disks are held elastically down to their work by springs *o*, that are connected to and arranged to exert a constant upward pull upon the front ends of the drag-bars. These springs may be constructed, arranged, and connected up in any suitable way; but I prefer to use wire springs, as shown, and to coil them around the axle, as best indicated in Fig. 1, and to hook one end in eyes in the front upturned ends of the drag-bars above the stop-bar. Preferably, also, their opposite ends are extended forward and connected to the stop-bar.

The springs by pulling up on the front ends of the drag-bars hold their rear ends down and keep the disks yieldingly pressed into the ground, and the bar forms a stop or abutment to limit the extent to which the springs can lift the drag-bar ends.

The construction being as thus described, it will be understood that the driver from his seat on the machine may reach the hand-lever and raise or lower the crank portion of the axle through the instrumentality of the transverse stop-bar, and thus adjust the rear

ends of the drag-bars up or down so as to cause them to press with a regulable force into the ground. It is also to be noted that no frame, properly speaking, is required, but that the tongue is connected directly to the axle and that the hanging of the drag-bars also on the axle greatly simplifies the construction and renders the frame as heretofore employed in these machines unnecessary.

Although, as above described and as shown in Figs. 1 and 2 of the drawings, the stop-bar *g* is rigidly connected to the axle and the link *i* of the hand-lever *h* is connected to the bar, the connection between the stop-bar and the axle may be a pivotal one, as shown in Fig. 3, and the adjusting-lever may be connected directly to the axle or a rigid crank-like projection therefrom; but in this case a separate lever *h i* will be required to adjust the stop-bar up and down and raise or lower the drag-bars independently of the axle.

In the construction illustrated in the drawings a single adjusting-lever regulates the height of the axle and the stop-bar; but if this bar is pivotally connected to the axle, as in Fig. 3, it will be necessary to have two levers, one, *h'*, for adjusting the axle and another, *h*, for adjusting the bar.

Having thus described my invention, what I claim is—

1. In a wheeled disk harrow, the combination of a cranked axle, disk-supporting drag-bars mounted thereon with their front ends extending forward of the axle, and a stop-bar extending transversely in front of the axle for limiting the upward movement of said front ends.

2. In a wheeled disk harrow, the combination of a cranked axle, disk-supporting drag-bars pivoted thereto with their front ends extending forward of the axle, a stop-bar secured transversely in front of and to the axle, springs secured to the axle and holding the front ends of the drag-bars up against the stop-bar, and an adjusting-lever to adjust the height of the axle.

3. In a wheeled disk harrow, the combination of a cranked axle having a stop-bar secured transversely to and in front thereof, disk-supporting drag-bars pivoted to the axle and extending forward under the bar with their front ends bent in front of and above it, and upwardly-pulling springs coiled around the axle and connected to the front bent ends of the drag-bars.

4. In a wheeled disk harrow, the combination of a crank-axle, disk-supporting drag-bars pivoted thereto, with their front ends extending forward of the axle, a stop-bar secured transversely in front of and to the axle, springs secured to the axle and holding the front ends of the drag-bars up against the stop-bar, and an adjusting-lever to adjust the height of the stop-bar.

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

JOHN H. PRICE.

Witnesses:
L. A. WEISS,
E. LEEDOM.