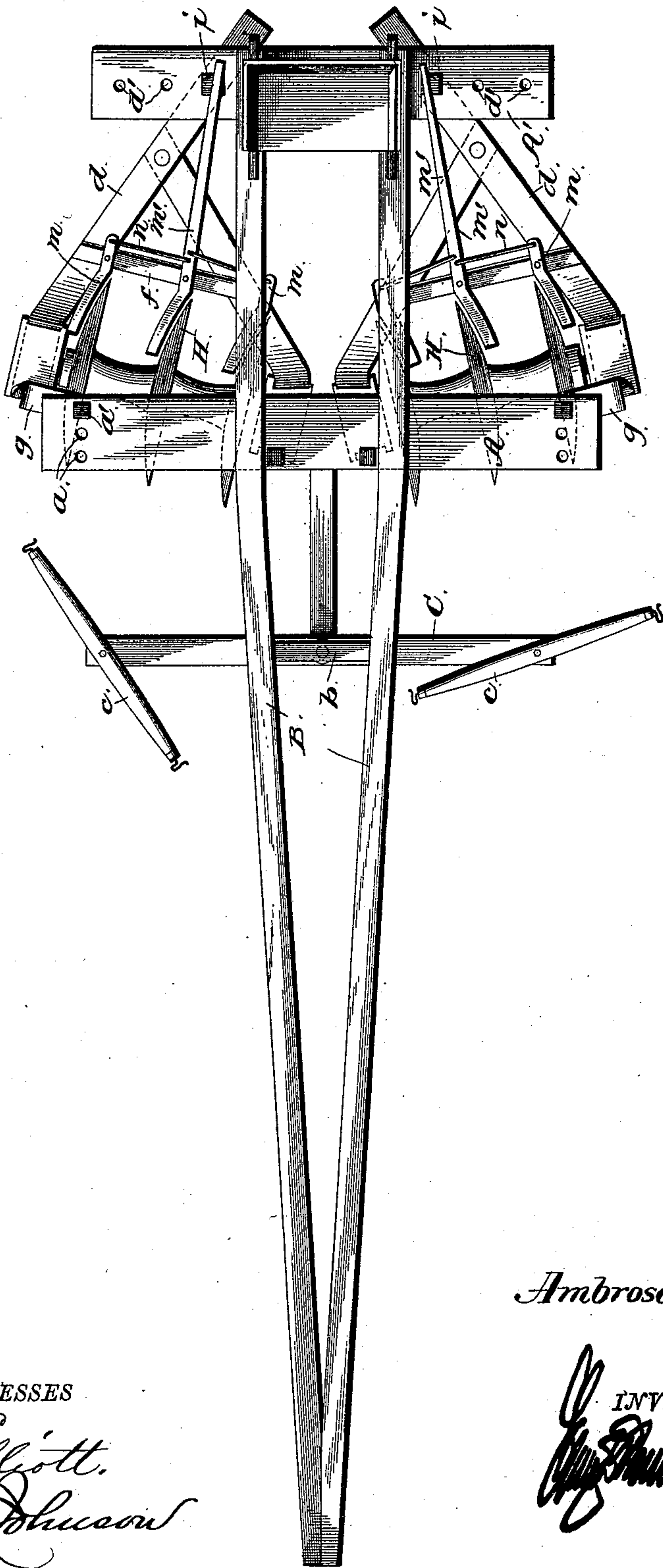


2 Sheets—Sheet 1.

No. 374,503.

Patented Dec. 6, 1887.



*Ambrose Spire.*

*WITNESSES*

L. S. Elliott.  
W. Johnson

***INVENTOR***

*Attorney*

(No Model.)

2 Sheets—Sheet 2.

A. SPIRE.  
DISK CULTIVATOR.

No. 374,503.

Patented Dec. 6, 1887.

Fig. 2.

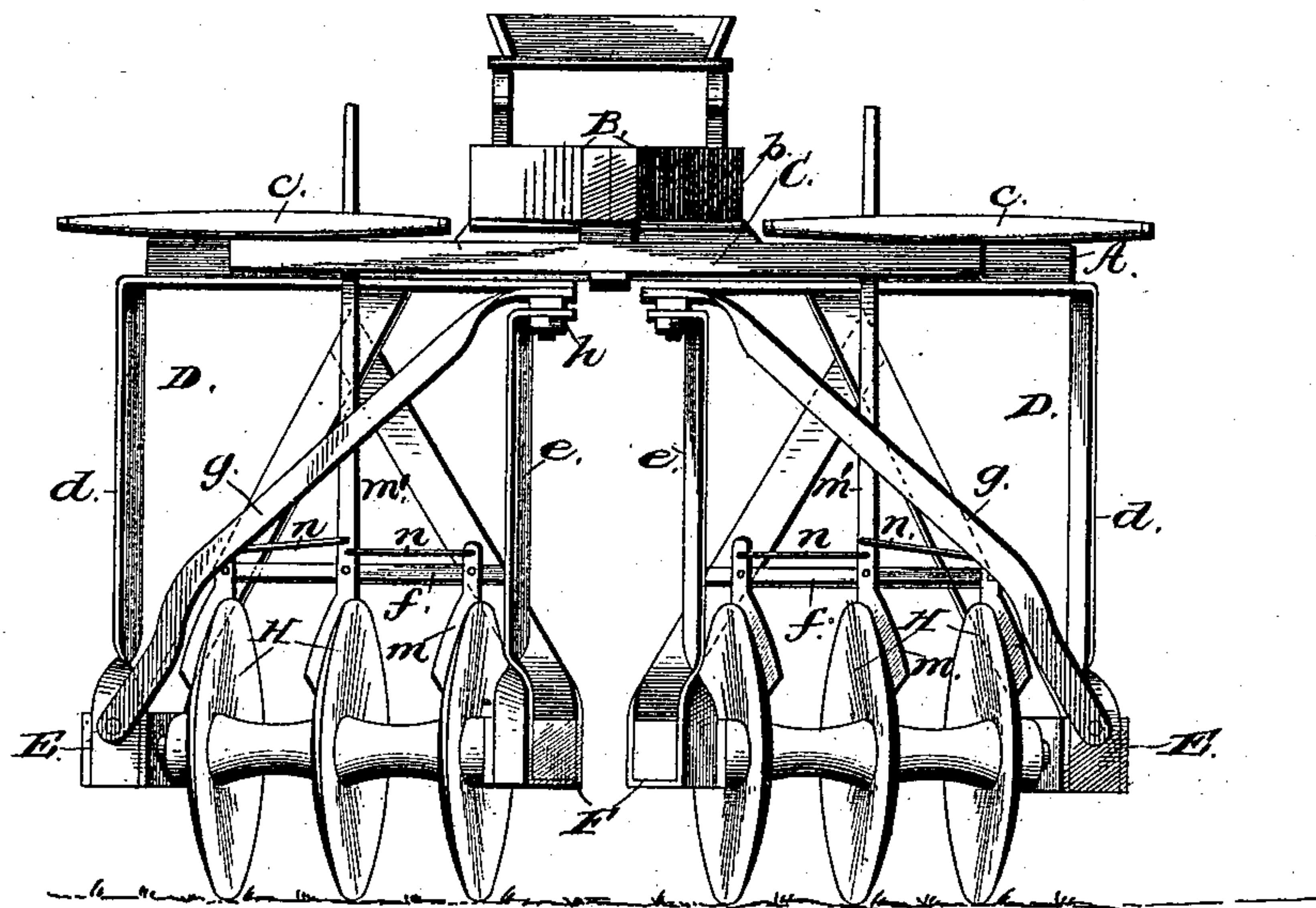
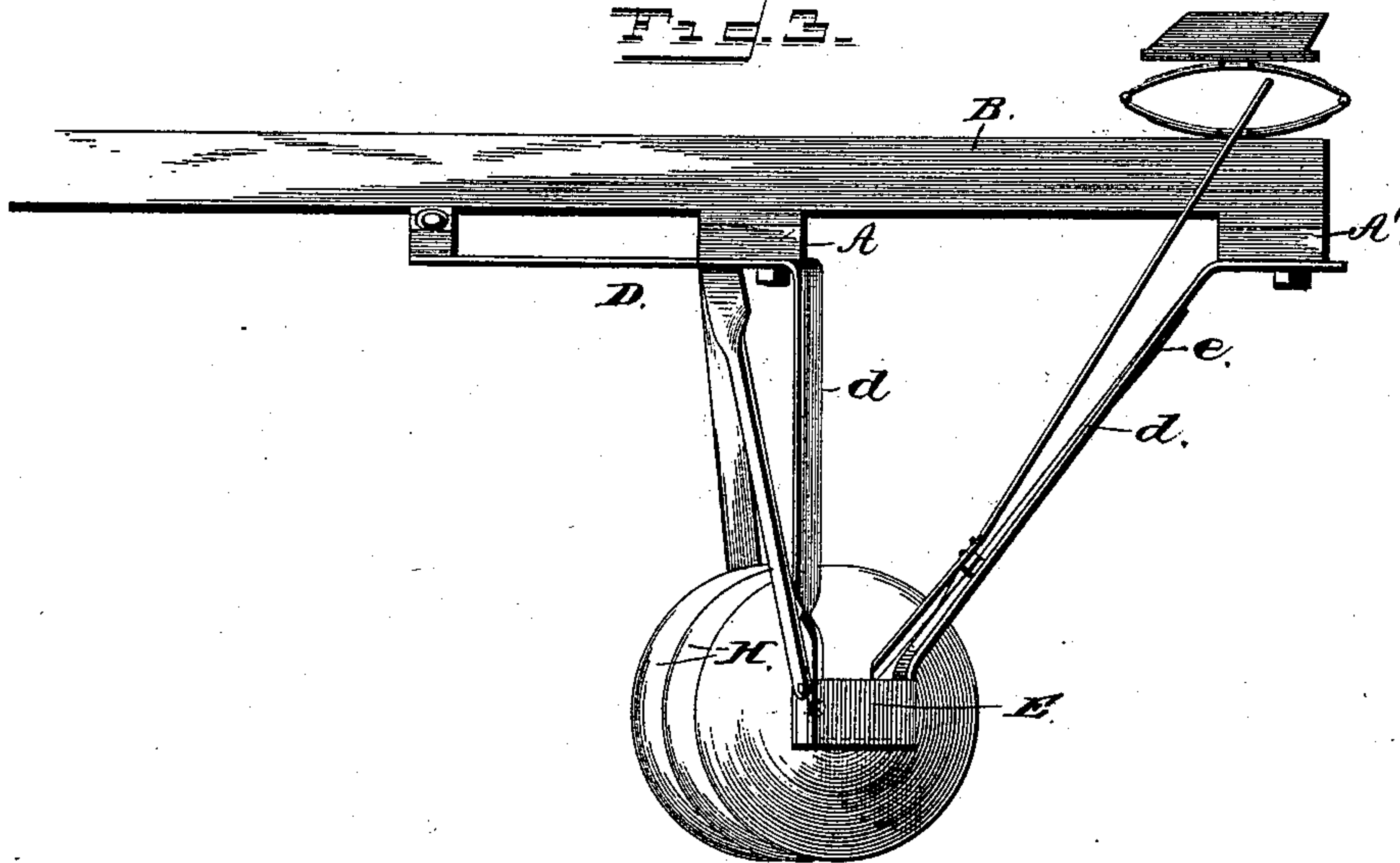


Fig. 3.



Ambrose Spire.

WITNESSES

L. S. Elliott.  
W. Johnson

INVENTOR

*Ambrose Spire*

Attorney



# UNITED STATES PATENT OFFICE.

AMBROSE SPIRE, OF CHAUTAUQUA, KANSAS.

## DISK-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 374,503, dated December 6, 1887.

Application filed October 6, 1887. Serial No. 251,638. (No model.)

*To all whom it may concern:*

Be it known that I, AMBROSE SPIRE, a citizen of the United States of America, residing at Chautauqua, in the county of Chautauqua and State of Kansas, have invented certain new and useful Improvements in Disk-Cultivators; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in disk-cultivators; and the same consists in providing a disk-cultivator with a frame which can be adjusted so as to vary the angle of the disks; also, in providing means for removing the dirt from the disks, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a plan view of a disk-cultivator constructed in accordance with my invention. Fig. 2 is a front view. Fig. 3 is a side view.

A and A' refer to the transverse beams of the main frame, which are rigidly connected to each other by bars B B, which extend forwardly so as to form the draft-tongue, the front ends of these bars being rigidly connected to each other. The bars B B, which form the tongue, are also connected to each other in front of the cross-beam A of the frame by a strap, *b*, beneath which is pivoted a whiffletree, C, and the ends of this whiffletree are provided with singletrees *c c*. The bolt of the whiffletree C braced by a strap, which extends therefrom to the cross-bar A. The rear ends of the bars B B have attached thereto springs, upon which the driver's seat is mounted, said seat being approximately over the rear cross-bar, A'.

D D refer to metallic frames, which consist of bars *d*, said bars extending from a point near the center portion of the cross-beam A horizontally to a point beyond the same. These bars are then bent so as to extend downwardly, and near their lower ends they are twisted, so as to partially encircle the boxes E, from the rear sides of which they extend upwardly at an angle, the upper ends thereof being bent

horizontally, said horizontal rear end portion being immediately under the rear cross-bar, A'. The strap or metallic bar *e*, forming the opposite end of the frame, has its upper end bent horizontally, from which horizontal portion it extends downwardly and is turned upon itself above the boxes F, which it partially encircles, and from said box extends upwardly and rearwardly, the end being rigidly attached to the bar *d* in front of the cross-beam A'. The bars or straps *d* and *e* are connected to each other in rear of the disks by a transverse strap, *f*, which also serves as a means for pivoting the scrapers thereto, as will be hereinafter set forth.

The strap or brace *g* extends diagonally from the strap *d*, adjacent to the box E, to the upper end of the bar or strap *d*, and the ends of the straps *d*, *g*, and *e* are connected to each other by a bolt, *h*, which passes through the front cross-beam, A, and through perforations in the ends of the aforesaid straps.

The disks H H are concave in cross-section, and are attached rigidly to axles, the ends of which are journaled in boxes E and F, which are attached to a support, hereinbefore described.

The ends of the cross-beam A are provided with a series of perforations, *aa*, through which pass bolts *a'*, which engage with perforations in the horizontal portion of the straps or bars *d*, and through these perforations passes a bolt for securing the strap *d* to the front cross-beam, A. The rear cross-beam, A', is also provided with perforations *d'*, through which a bolt may be passed for securing the ends of the straps *d* to the rear cross-beam, the ends of said straps being provided with perforations. Bolts *i* are employed for connecting the rear ends of the straps *d* to a rear cross-bar, A'.

By the construction hereinbefore described I provide a disk-cultivator, the frame which carries the disks being capable of being adjusted upon the main or upper frame, so as to change the angle of the disks; and by simply removing the bolts *a'* and *i*, the disk-carrying frames D D may be adjusted and afterward secured by the same bolts, in order to occupy a position so as to locate the disks either on the line of draft or at an angle therewith.

To the cross-bars or braces *f*, hereinbefore referred to, are pivoted scrapers *m m*, which are connected to a lever, *m'*, by links *n*, the



lower portion of said lever also forming one of the scrapers. The handle portion of the lever extends upwardly, so as to be within easy reach of the driver, and by moving the same to one side it may be brought in contact with the disks, so as to remove the earth therefrom.

I claim—

1. The combination, in a cultivator, of cross-bars A and A', rigidly secured to each other and provided with perforations *a* and *d'*, frames D, pivotally attached near the center portion of the front cross-beam, and bolts *a'* and *i*, for securing the disk-carrying frames adjustably to the cross-bars, substantially as shown, and for the purpose set forth.

2. In combination with a disk-cultivator constructed substantially as shown, adjustable frames D D, to which the boxes E and F are secured, in which the disk-carrying shafts are

journaled, said frame being made up of bars *d* and *e*, which are bent as shown, and brace-bars *g* and *f*, substantially as and for the purpose set forth.

3. In combination with a disk-cultivator, the frame D D, constructed substantially as shown, brace-bars *f*, rigidly attached to the bars *d* and *e* in rear of the disks, and scrapers *m m*, pivotally attached to the bar *f* and connected to a lever having an upwardly-extending handle, the lower end of which forms a scraper, substantially as and for the purpose set forth.

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

AMBROSE SPIRE.

Witnesses:

GEORGE INNES,

WM. BLOOMFIELD.