

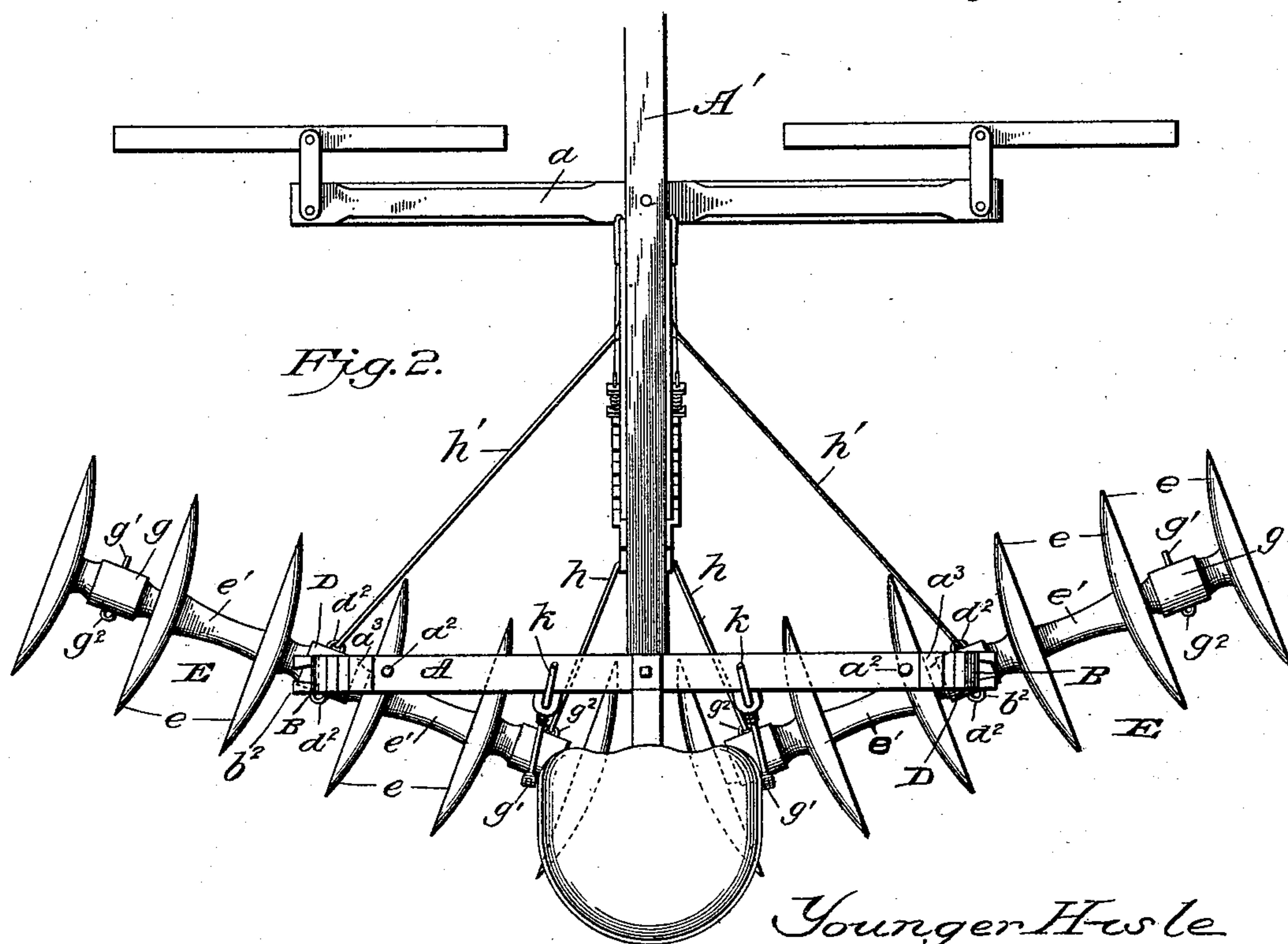
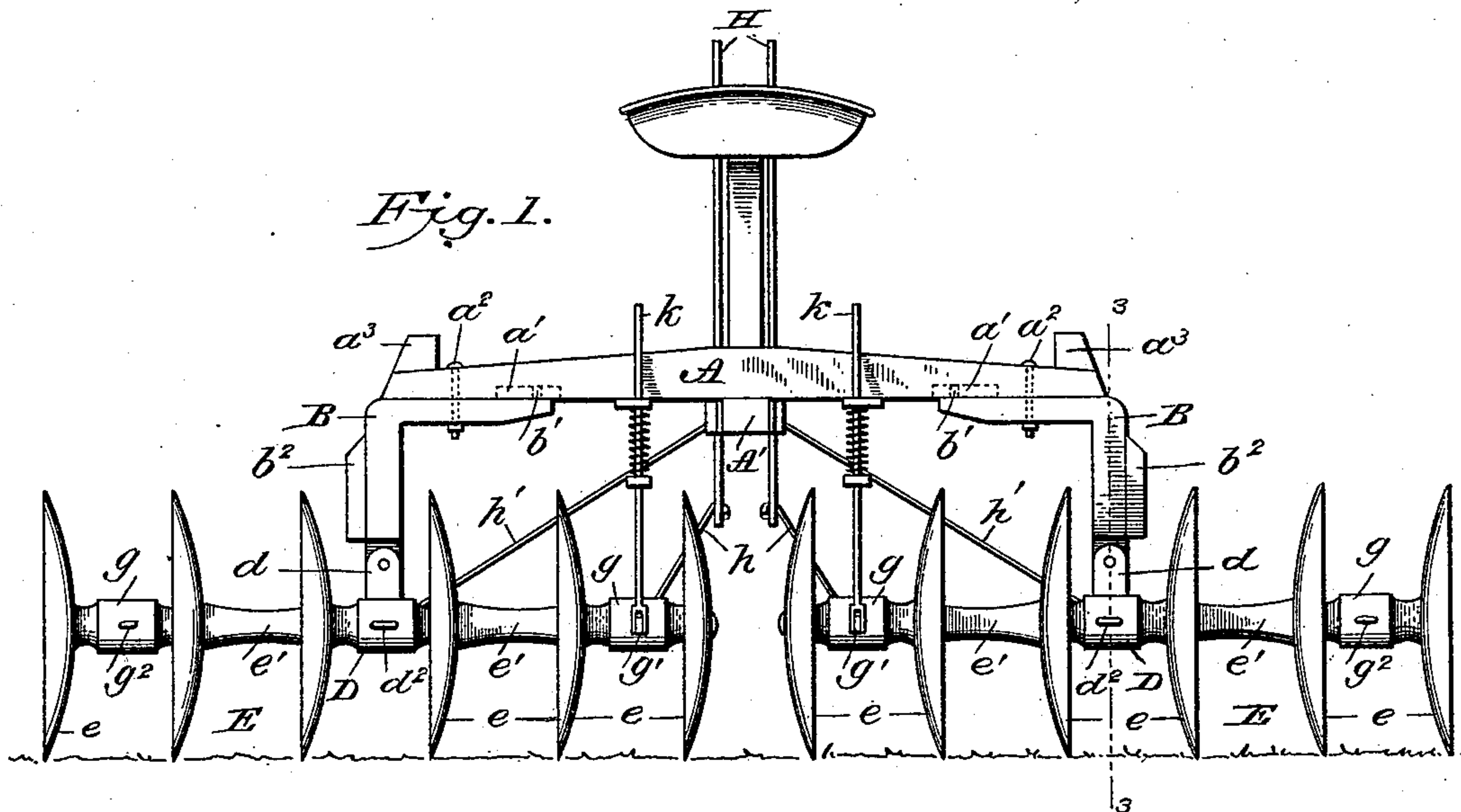
(No Model.)

2 Sheets—Sheet 1.

Y. HISLE.
DISK HARROW.

No. 540,550.

Patented June 4, 1895.



WITNESSES

L. S. Elliott,
M. Johnson

Younger Hisle
INVENTOR

by *[Signature]*

Attorney

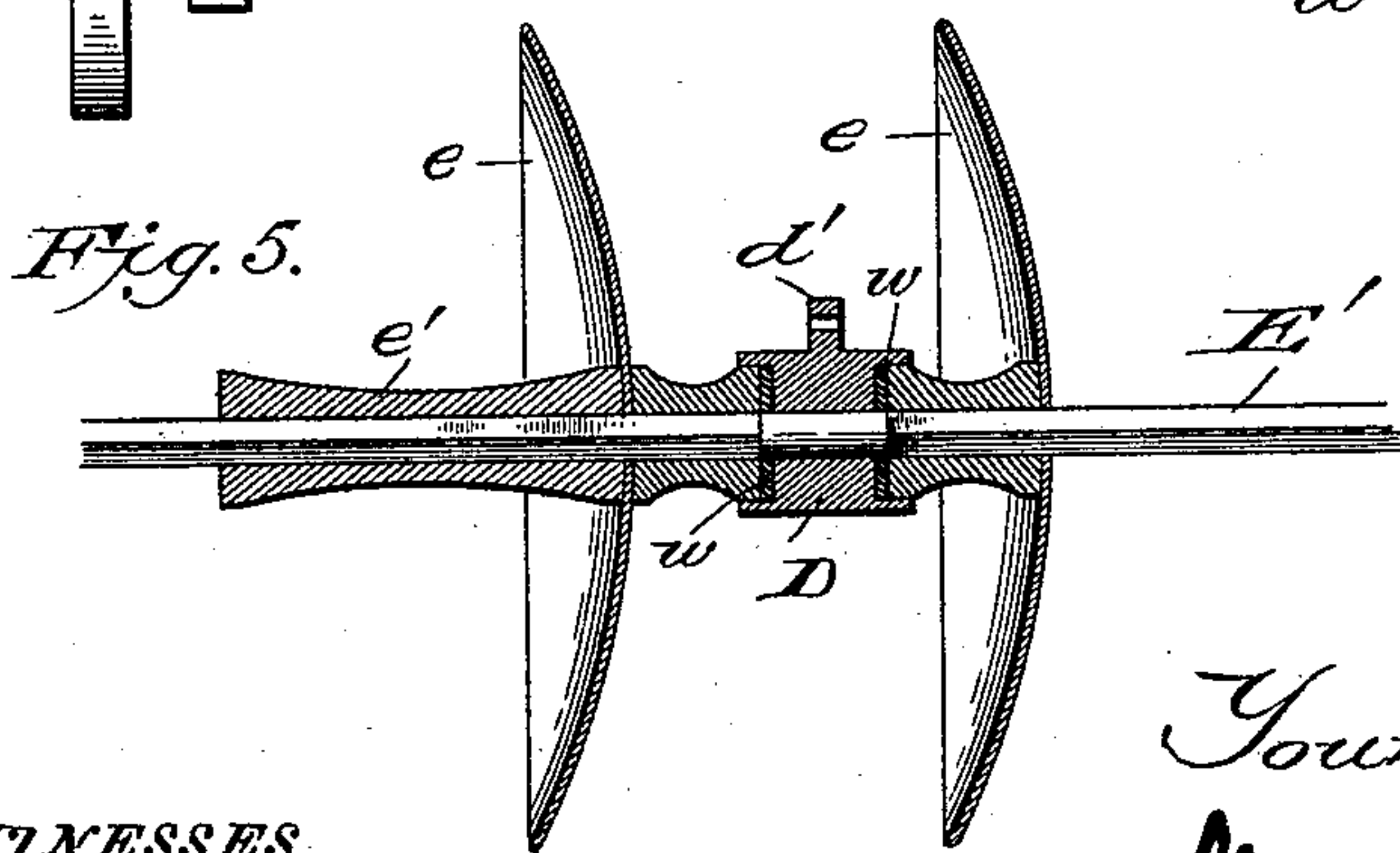
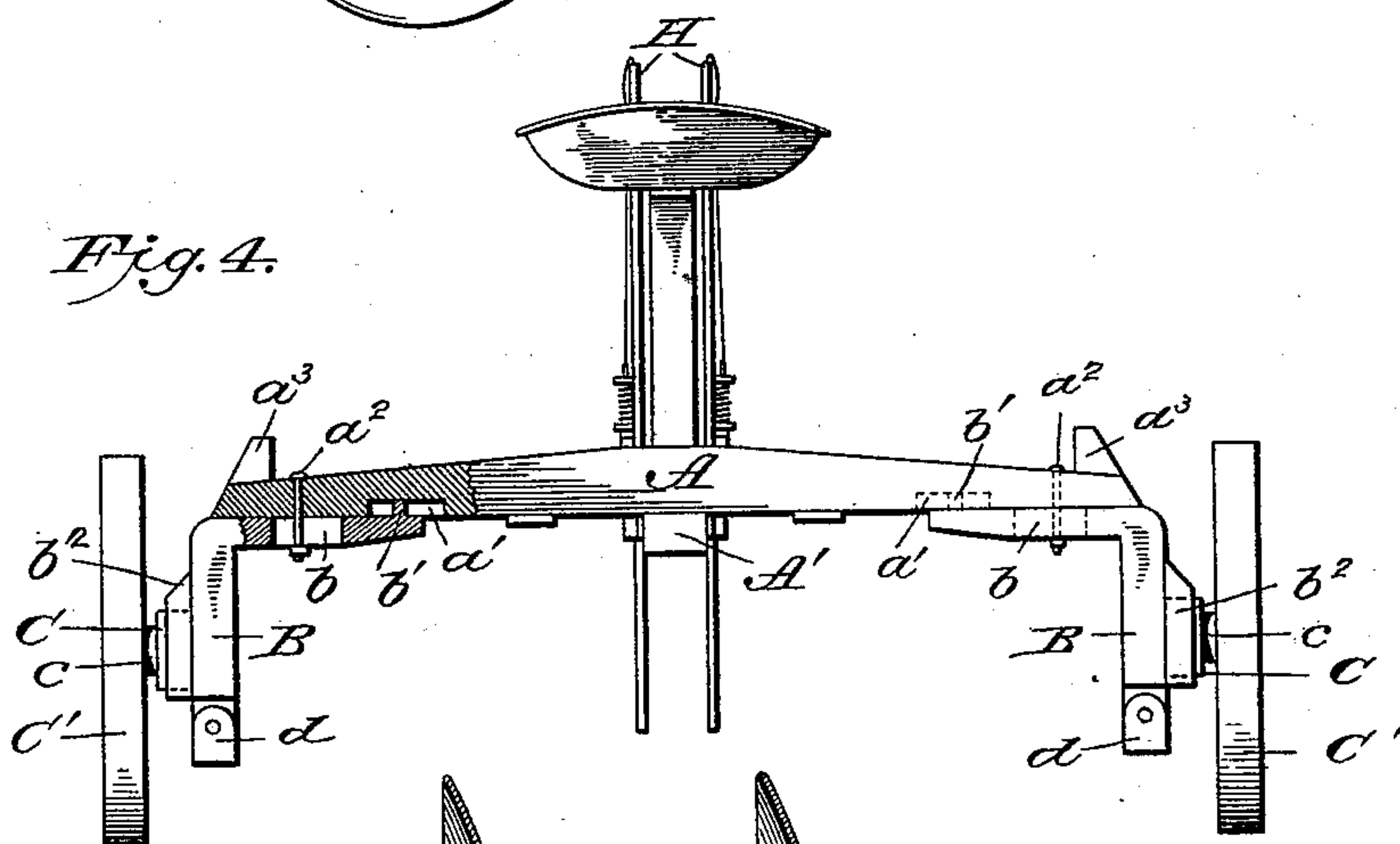
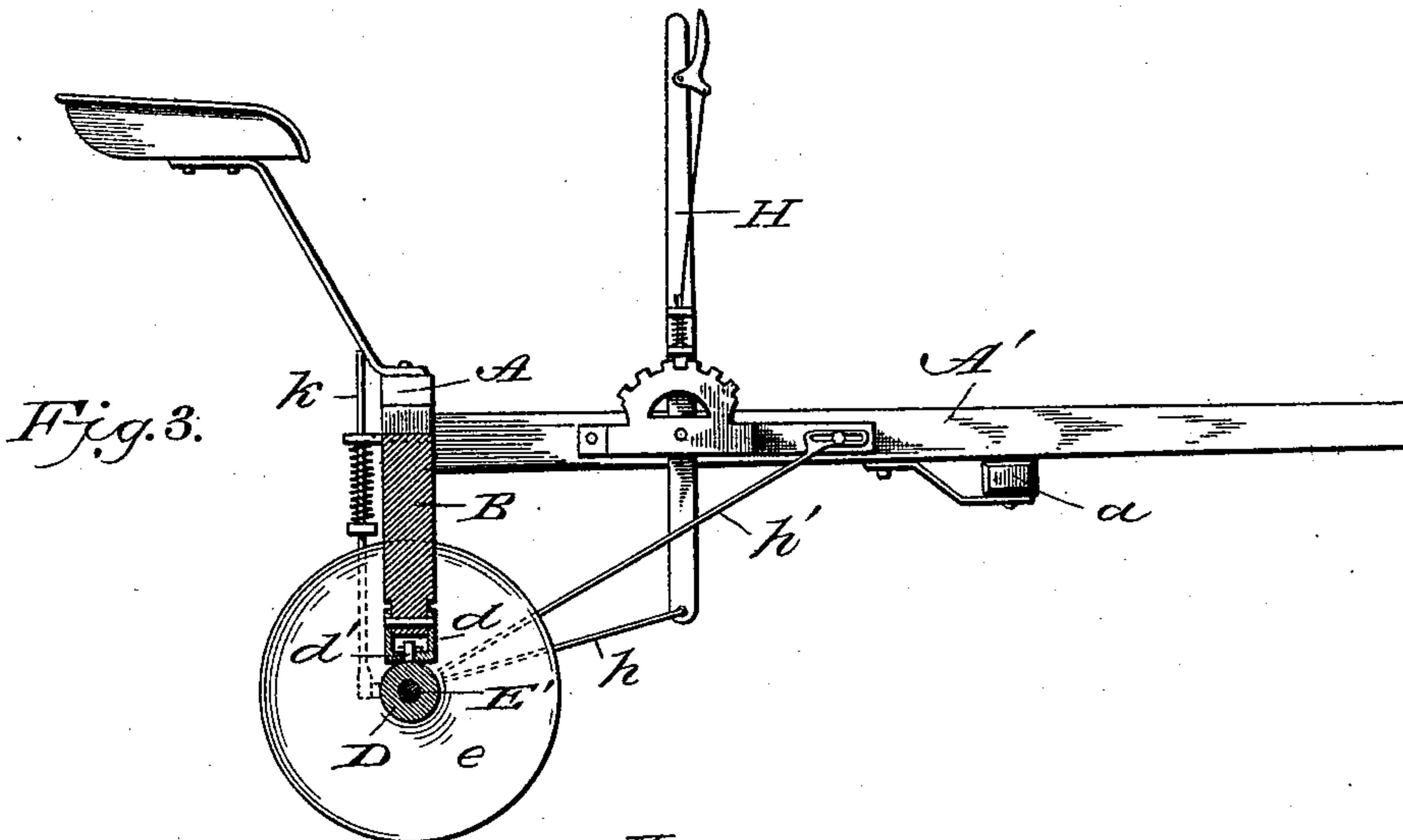
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2 Sheets—Sheet 2.

Y. HISLE.
DISK HARROW.

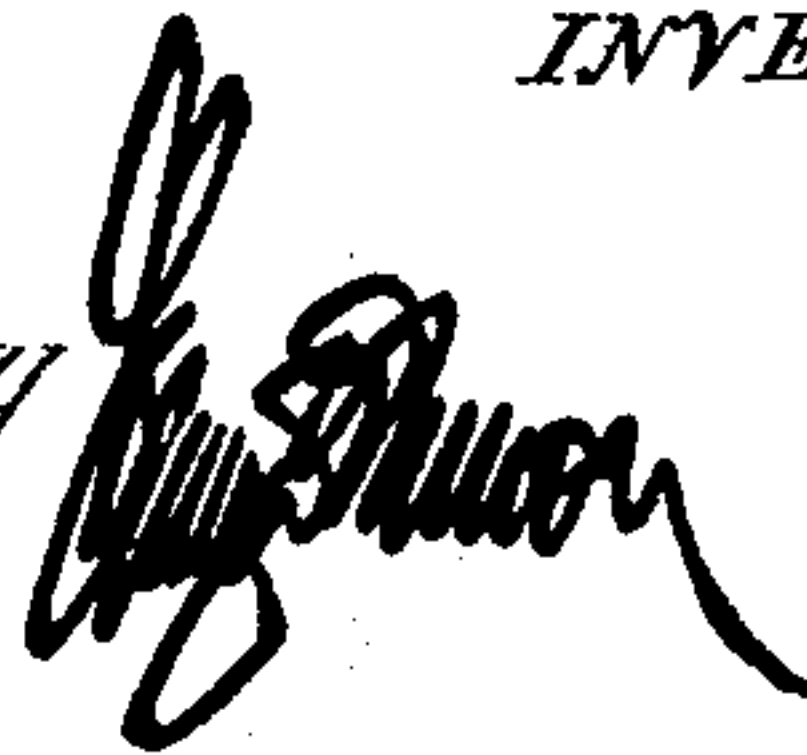
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UNITED STATES PATENT OFFICE.

YOUNGER HISLE, OF DODGE, KENTUCKY.

DISK HARROW.

SPECIFICATION forming part of Letters Patent No. 540,550, dated June 4, 1895.

Application filed December 13, 1894. Serial No. 531,717. (No model.)

To all whom it may concern:

Be it known that I, YOUNGER HISLE, a citizen of the United States of America, residing at Dodge, in the county of Clark and State of Kentucky, have invented certain new and useful Improvements in 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a disk-harrow of special construction in which the gangs of disks are secured to the supporting frame in such a manner that the furrows of the ridges will be thrown to either the right or left by simply turning the gangs upon their supporting means.

The invention consists in the construction and combination of the parts, as will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a rear elevation of a disk harrow constructed in accordance with my invention. Fig. 2 is a plan view. Fig. 3 is a sectional view on the line 3-3 of Fig. 1. Fig. 4 is a rear elevation of the frame, partly in section, showing the manner of connecting the supporting-wheels to the frame; and Fig. 5 is a detail sectional view, showing a pair of disks mounted on the supporting-shaft.

The main frame of the device consists of a cross-beam A and a longitudinal beam A' which are rigidly secured to each other, the forward end of the longitudinal beam forming a tongue to which a double-tree a is suitably connected, said double-tree having single-trees connected thereto in the usual manner. The driver's seat is mounted on the cross-beam A. In the under side of the cross-beam are formed recesses a' into which lugs b' formed on the upper part of the hangers B project, said hangers having slots b therein which are of substantially the same length as the recesses a'. Through the slots pass bolts a² which connect the hangers to the cross-beam. By providing this connection the hangers may be adjusted upon the beam so that

one or both of the gangs of disks can be adjusted upon the frame so that in use the end of one of the gangs will overlap the end of the other so as not to leave any ridge of earth between the inner ends, and when this is done it is preferred to adjust the gangs of disks at slightly different angles with respect to the center of the frame.

The ends of the cross-beam A are provided with upwardly-projecting blocks a³ which are used to support the gangs of disks upon the frame when it is desired to transport the machine, the collars D being bolted or otherwise suitably connected to the blocks.

Upon the outer edge of the depending portion of each hanger B is secured a block or cleat b² in which is formed a vertical dovetailed recess which is adapted to receive a block C having a dovetailed projecting portion. The blocks C carry stub-axes c upon which are mounted carrying-wheels C'. The lower ends of the hangers are slightly reduced and they are provided with an aperture through which passes a pin for connecting thereto a bail or strap d, the horizontal portion of said bolt or strap being located considerably below the lower end of the hanger and having a perforation through which passes a projection d' on a collar D, said collar being adapted to encircle one of the shafts which carries a gang of disks. This mode of connecting the shafts to the frame provides for both an oscillating and rotary movement of the gangs of disks, so that each gang besides being adjustable to vary the angle of the disks with respect to the frame also permits an oscillating movement whereby the disks will adapt themselves to the inequalities of the soil.

E E designate the gangs of disks which consists of a plurality of concavo-convex disks e having square apertures through which pass the shafts E', the disks being properly spaced upon the shafts by means of interposed blocks e'. Each shaft is provided near each end with a collar g in addition to the central collar D, and the collars g are provided with projecting eyes g' and g² to which are connected rods h and k which extend therefrom, the rod h being connected to the lower end of lever H pivoted to the longitudinal beam A' and the rod k being connected to the frame as hereinafter described. The

central collars D are also provided with projecting eyes d^2 to which are connected rods h' extending therefrom to the beam A'. The rods h' are provided with slots for adjusting the same when necessary and the collars D are socketed at their ends to receive washers w and the ends of the blocks e' . The cross-beam A has rigidly secured thereto rearwardly-projecting plates which are apertured for the passage of rods k , the rods being encircled by springs which bear against blocks thereon and against the under side of the plates, the lower ends of said rods being bifurcated for connection with the eyes g' . These rods are of such a length that they will permit a wide range of movement of the gangs of disks and still be held in spring engagement with the plates carried by the beam A, and these spring bars tend to hold the disks in engagement with the ground.

It will be noted that the shafts E are provided with rounded portions where the collars g fit over the same, as well as where the shafts are encircled by the collars D, and the central opening in the collar is round while the opening in the blocks e' is square. It is preferred that the collar D be located to one side of the center of the shaft E' so that when the gangs of disks are turned to bring their longest ends nearest the center of the machine they will overlap so that in operation there will not be left a center ridge, and the length of each gang is such that it can be turned so that the concave sides will all be either in the same direction or opposed, and when in the same direction all the furrows will be thrown the same way.

When it is desired to transport the machine the gangs of disks can be readily removed by taking out the pins which pass through the openings in the projections d' of the collar D, and the gangs can then be attached to the blocks a^3 so as to rest upon the

main frame; the supporting-wheels C' can then be attached to the hangers by placing the dovetailed projections on the blocks C in the recesses therefor in the blocks b^2 . It will be noted that the hangers B can be adjusted upon the beam A to increase or diminish the distance between the depending portions thereof.

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

1. In a disk-harrow, the combination, of a transverse beam A and longitudinal beam A' rigidly secured to each other the forward part of the longitudinal beam forming the draft tongue, hangers attached to the transverse beam, and gangs of disks connected to the hangers and to the frame, each gang having collars D and g in which the shafts which carry the disks rotate, the central collars being connected to the hangers and the collars at the inner ends being connected by rods to adjusting levers pivoted to the longitudinal beam, together with rods k connected to the collars g and in spring engagement with the frame, substantially as shown and for the purpose set forth.

2. In a disk-harrow, the combination, of a shaft E' having squared portions upon which the disks are mounted and cylindrical portions upon which are mounted bearings D, g and g' with projecting eyes, the central bearing D having socketed ends to receive washers w and the ends of spacing blocks e' , together with rods h , h' and k attached to the eyes and extending to the frame, substantially as shown and for the purpose set forth.

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

YOUNGER HISLE.

Witnesses:

J. P. CONWAY,
W. W. EATON.