

No. 849,993.

PATENTED APR. 9, 1907.

A. C. GAYLORD.
DISK HARROW SCRAPER.
APPLICATION FILED NOV. 19, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

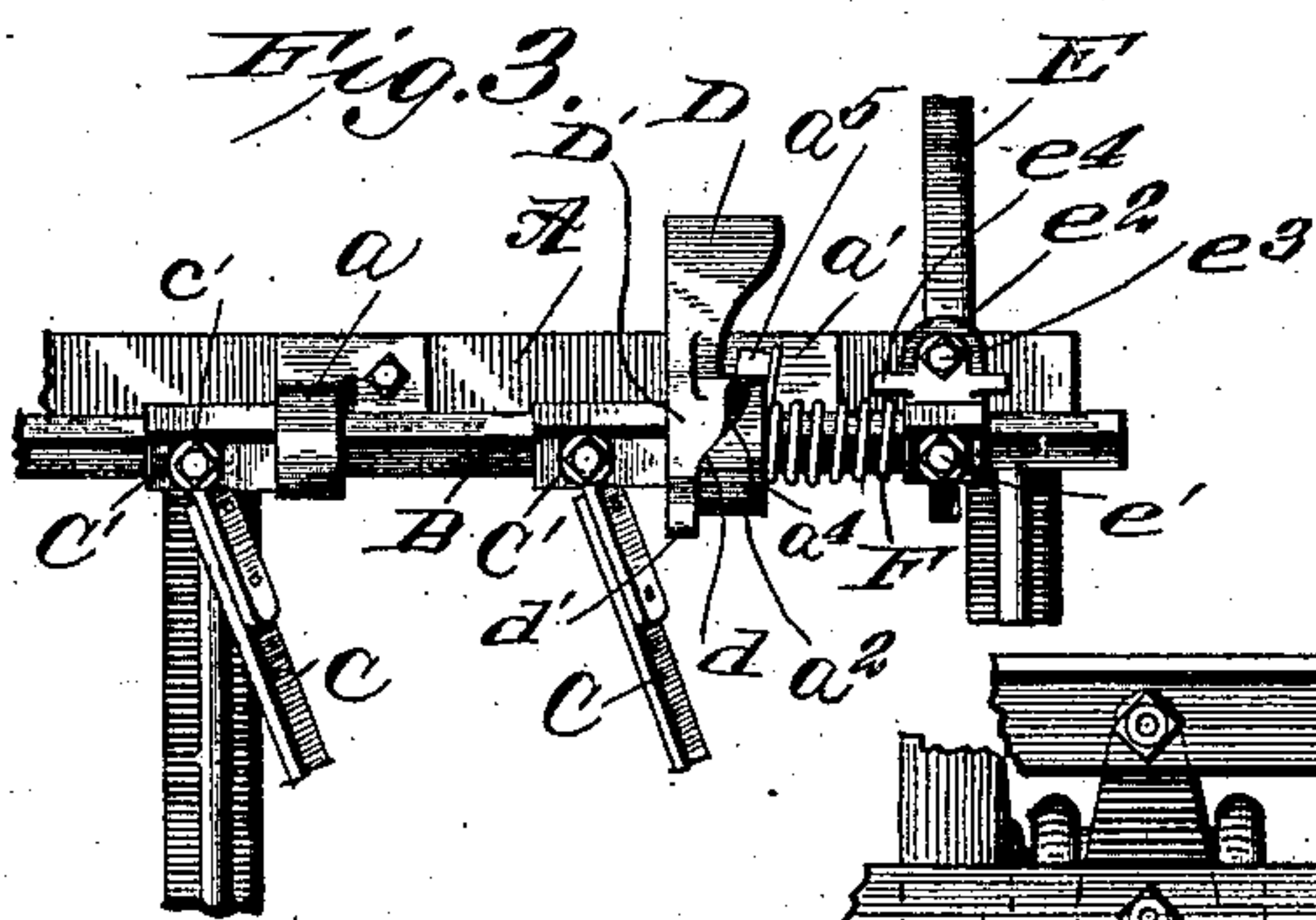
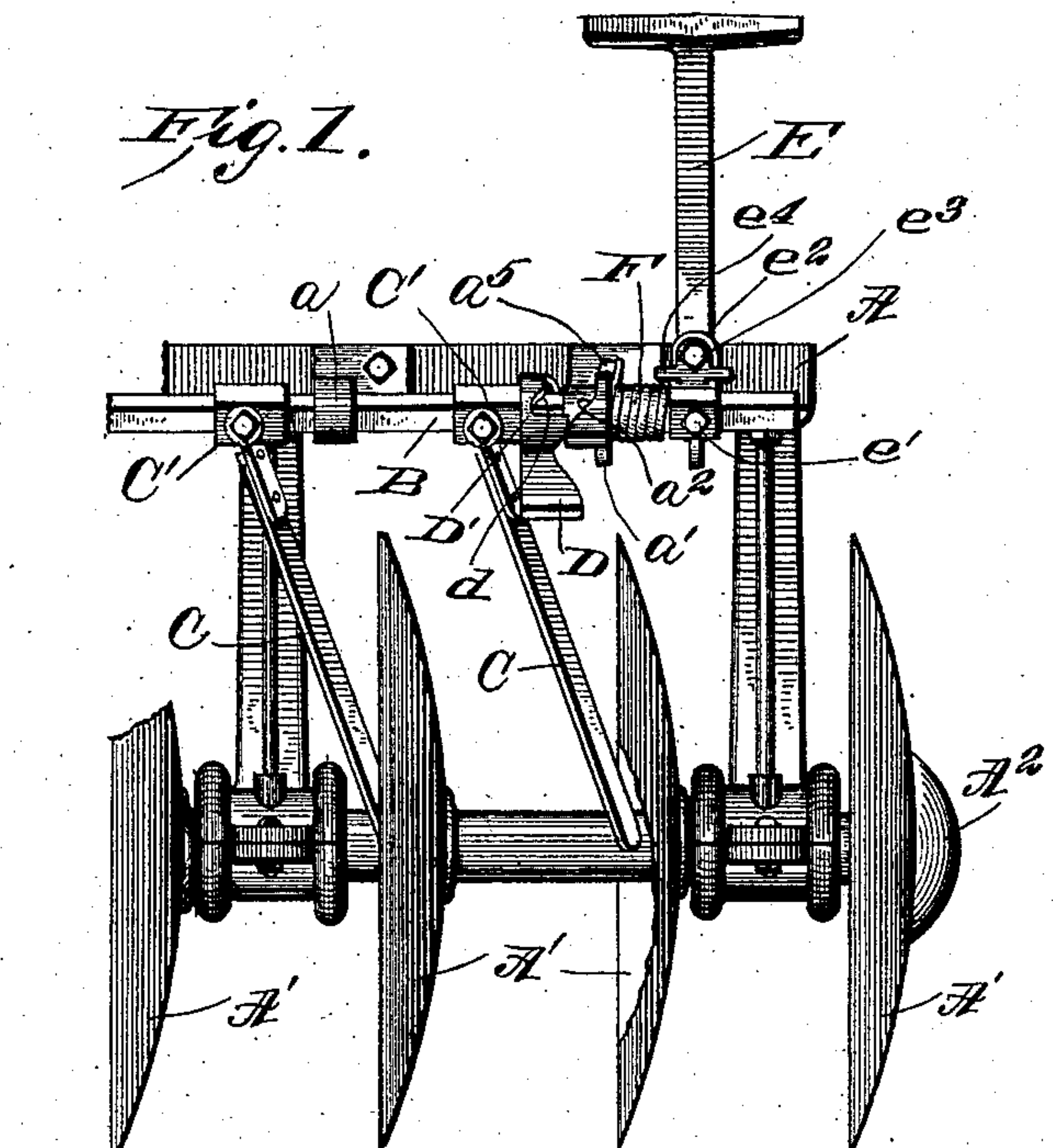
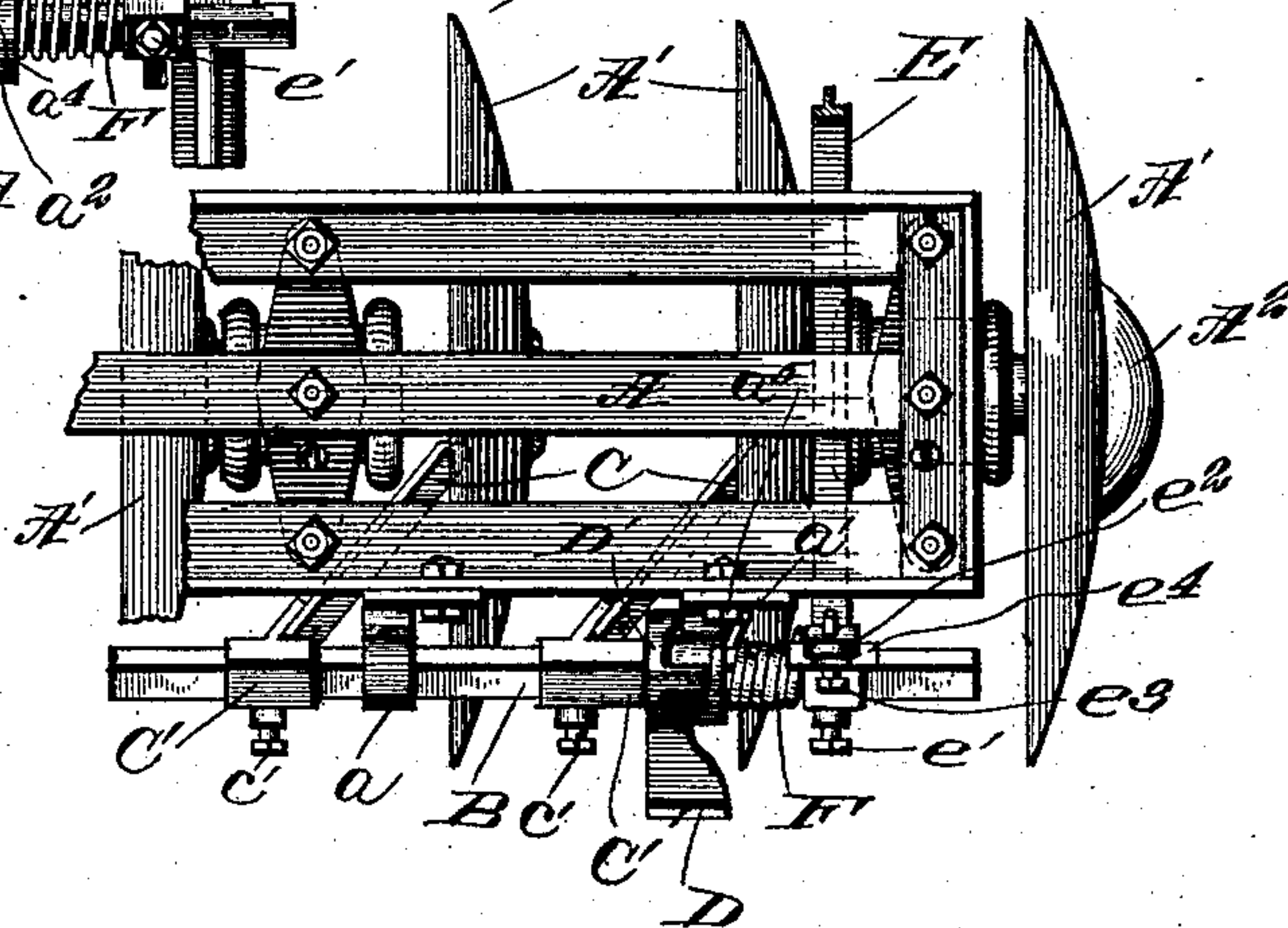


Fig. 2.



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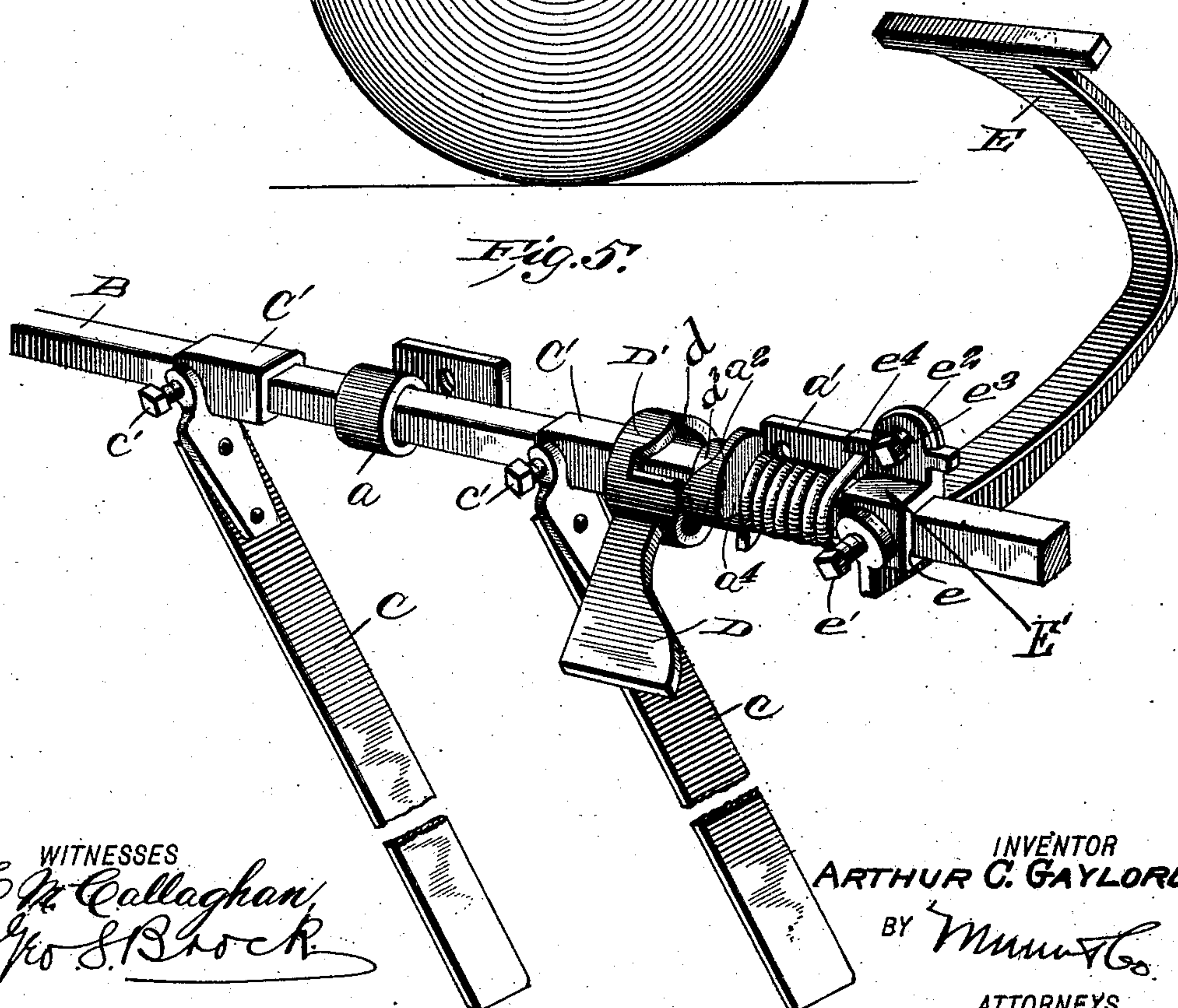
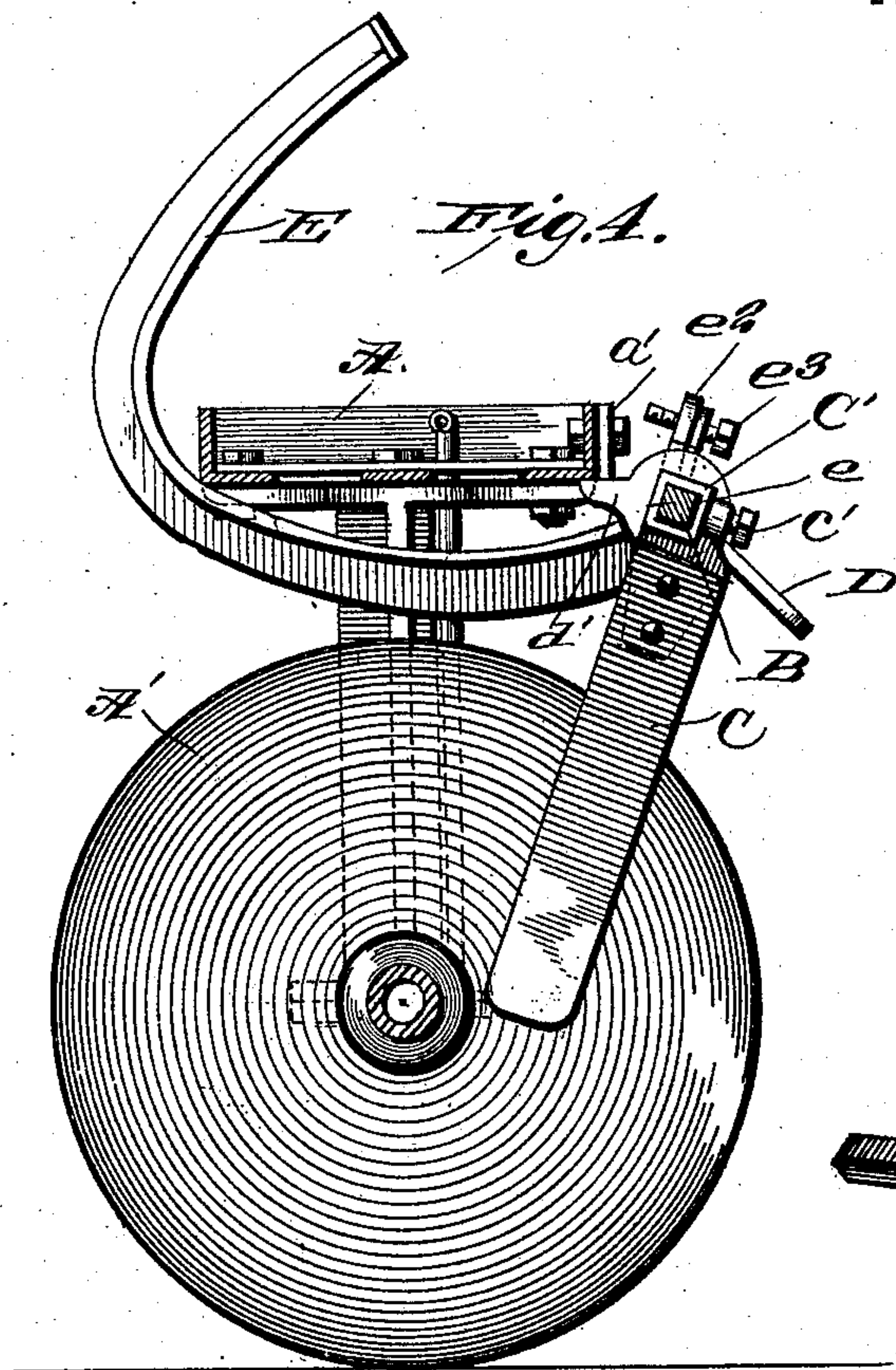
ATTORNEYS

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UNITED STATES PATENT OFFICE.

ARTHUR C. GAYLORD, OF GALESBURG, ILLINOIS, ASSIGNOR TO GALESBURG
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DISK-HARROW SCRAPER.

No. 849,993.

Specification of Letters Patent.

Patented April 9, 1907.

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To all whom it may concern:

Be it known that I, ARTHUR C. GAYLORD, a citizen of the United States, and a resident of Galesburg, in the county of Knox and State of Illinois, have invented an Improvement in Disk-Harrow Scrapers, of which the following is a specification.

My invention relates to certain improvements in disk-harrow scrapers in which the scraper-blades are held in contact with the disk by the pressure of springs, the object of my invention being to relieve the pressure, and hence lessen the friction or increased draft load at the will of the operator.

My invention consists in certain novel features of construction, arrangement, and combination of parts, as will be hereinafter fully described, and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a rear elevation of a portion of a disk-harrow frame with my improvements attached. Fig. 2 is a top plan view of same. Fig. 3 is a rear elevation showing the parts of my device in a different position. Fig. 4 is a sectional elevation. Fig. 5 is a perspective view of my attachments detached.

In devices of the character illustrated it is customary to have the scraper-blades act so as to touch the disks and by means of a foot-lever move their lower ends to and from the center and periphery of the disks; but it is found desirable to change the pressure with which the blades rest against the disks to meet the varying conditions of soil and also to relieve this pressure entirely and to move the blades away from the disks in order to dislodge trash, which sometimes becomes lodged against the disks and causes undue friction. I accomplish this result by the means shown in the various figures of the drawings, A representing the gang-frame, carrying the disks A', which may be any number desired. To the rear side of the frame are bolted the brackets a a', which support the rock-shaft B, which carries the scrapers C and swings them to and from the centers and peripheries of the disks. The bracket a is a simple casting, through which the rock-shaft B passes, while the bracket a' is of peculiar construction having a cam-face a² on one side face and a central smooth tubular portion a³, through which the said rock-shaft passes.

D is an arm having a tubular head D' surrounding the squared rock-shaft, which has a cam-face d on one side edge, which abuts the cam-face a² of the bracket a', the arm serving as a foot-piece, by means of which the scraper-heads and rock-shaft may be moved longitudinally.

The scrapers C are fastened to the scraper-heads C', which have squared openings or eyes c fitting on the squared rock-shaft B and are held rigidly thereto by the set-screws c'.

E is a treadle or foot-lever projecting from the head E', which has a square opening or eye e, which fits over the rock-shaft B near its outer end, said head being rigidly clamped to said rod by a set-screw e'. Said head E' has a vertical projection or lug e², through which is threaded a thumb-screw e³, which may be adjusted to regulate the throw of the treadle E.

F is a coiled spring surrounding the rock-shaft B between the head E' and the smooth vertical face a⁴ of the bracket a', one end of said spring being seated against said bracket a', while the other end rests under and bears against a transverse lug e⁴ on the vertical lug e², the tendency of said spring being to throw the free end of the treadle upwardly and also to keep the clutch members together.

The head D' of the arm D has a projecting stop-lug d', as shown in Figs. 3 and 4, which limits the travel of said arm D and the consequent longitudinal movement of the rock-shaft B by striking against the bottom of the frame, as more plainly shown in Fig. 4.

With the parts in the position shown in Fig. 3, which is the normal one, the scraper-blades C rest against the inner faces of the disks A'. If now the treadle E is forced downwardly, the rock-shaft B begins to rotate and swing the said blades away from the centers of the disks and against the inner faces of the same. Upon releasing pressure on the treadle the spring F causes the same to swing back to place. The smooth face of the head D' abuts one of the scraper-heads, which is rigidly connected to the rock-shaft.

If now it is desired to vary the pressure of the scrapers against the disks and to have them swing across the inner face of the disks at some distance therefrom, the arm D is pushed down as far as desired, whereupon the cam-face of the head D' engages the cam-face a² of the bracket a' and commences to

move to the left on shaft B under action of spring F, and as the abutting scraper-head is rigidly secured to the said shaft it will necessarily be shifted longitudinally, and hence the various scraper-blades will be moved away from the inner faces of the disks. While the parts just mentioned are in this position, the treadle is now pressed downwardly and then released, swinging the scrapers from the center to the periphery of the disks and back again. If it is desired to move the blades still farther away from the disks, the arm D is pressed downwardly until the stop-lug *d'* strikes the frame, and the cam-faces of the head D' and the bracket *a'* will be in the position shown in Fig. 5 after having moved the scraper-heads a greater distance away from the disks. The treadle E may be now swung up and down as before, releasing trash, &c., from between the disks and blades. It will thus be seen that this forward and backward swinging of the scraper-blades in an arc will clear whatever trash, &c., may have accumulated on the disks and that the distance and pressure of said blades with respect to the inner faces of the disks may be regulated by the arm D and that the pressure may be entirely relieved and that the blades may be moved away from the disks in order to dislodge trash which sometimes becomes lodged between the disks and blades. It will also be observed that my improvements are extremely simple and cheap and can be readily applied to the ordinary disk-harrow frames carrying scraper-blades of the ordinary type.

The outer disk of the gang has applied to it the bumper-washer A².

It will be noticed that the spring F has two offices—one, to twist the rock-shaft B; the other, to hold the rock-shaft, together with the attached scraper-blades, to the left or against the disks.

I claim—

1. In a disk harrow, the combination of a frame, brackets carried by said frame and a rock-shaft journaled in said brackets, one of said brackets having a cam-face, scraper-blades rigidly secured to scraper-heads, a head slidably and rotatably mounted on said rock-shaft and abutting one of said scraper-

heads, said slidable and rotatable head having a cam-face abutting the cam-face of the aforesaid cam-faced bracket and provided with a projecting arm for rotating the same with respect to the rock-shaft, a treadle rigidly attached to said rock-shaft for rotating the same, and a spring bearing against the frame and bracket and against the treadle to regulate and control the distance of the scraper-blades from the inner faces of the disk and also to return the rock-shaft to its normal position and hold points of the scrapers against the face of the disks.

2. In a disk harrow, the combination of a frame, brackets carried by said frame, and a rock-shaft journaled in said brackets, one of said brackets having a cam-face, scraper-blades rigidly secured to scraper-heads, a head mounted on said rock-shaft and abutting one of said scraper-heads, said head having a cam-face abutting the cam-face of the aforesaid bracket, a treadle rigidly attached to said rock-shaft for rotating the same, and a spring bearing against the frame and bracket and against the treadle to return the rock-shaft to its normal position and hold the points of the scraper against face of disk.

3. In a disk harrow, the combination of a frame carrying disks, brackets carried by said frame, and a rock-shaft journaled in said brackets, one of said brackets having a cam-face, scraper-heads rigidly secured to said rock-shaft, scraper-blades carried by said scraper-heads, an arm having a head rotatably and slidably mounted on said rock-shaft and having a smooth face abutting one of the scraper-heads, the opposite side of said arm-head having a cam-face engaging the cam-face of the bracket, a stop-lug on the arm-head adapted to engage the frame to limit rotary movement of said arm-head, a treadle secured to the rock-shaft near its end and a coiled spring surrounding said rock-shaft, engaging the frame and bracket at one end and the treadle at its opposite end to swing the treadle back to its normal position against the faces of the disks.

ARTHUR C. GAYLORD.

Witnesses:

EDWARD J. KING,
MARY RICE.