

(No Model.)

2 Sheets—Sheet 1.

D. W. HOSHALL.

PLANTER.

No. 397,549.

Patented Feb. 12, 1889.

Fig. 1.

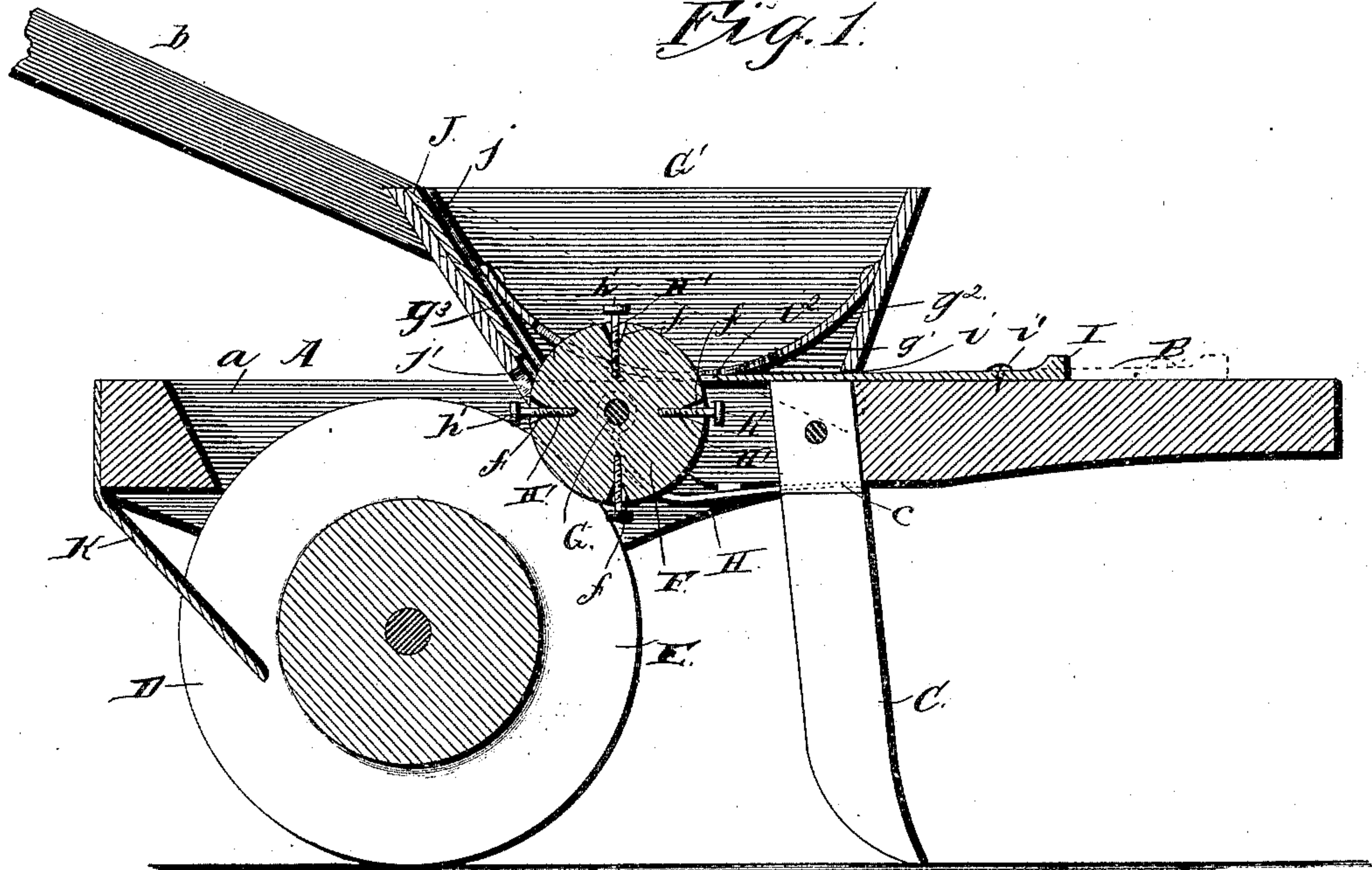
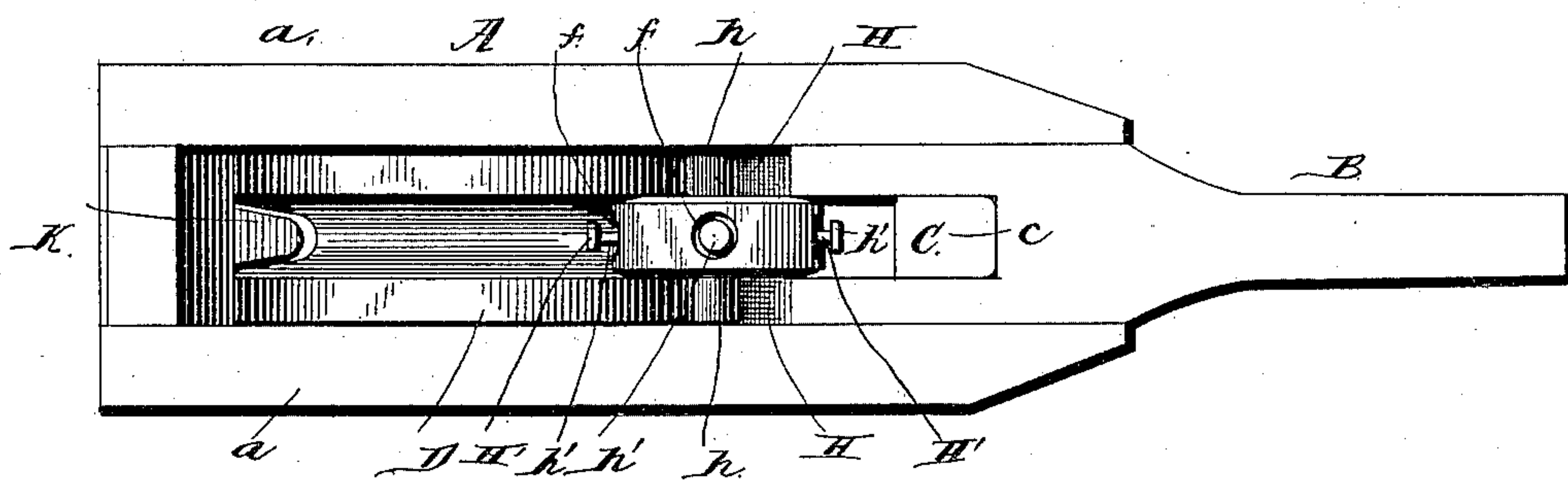


Fig. 2.



Witnesses.

Geo. Thorpe.
Theodore S. West.

Inventor.

D. W. Hoshall.

By *his* Attorneys.

Chas. A. Snow

(No Model.)

2 Sheets—Sheet 2.

D. W. HOSHALL.

PLANTER.

No. 397,549.

Patented Feb. 12, 1889.

Fig. 3.

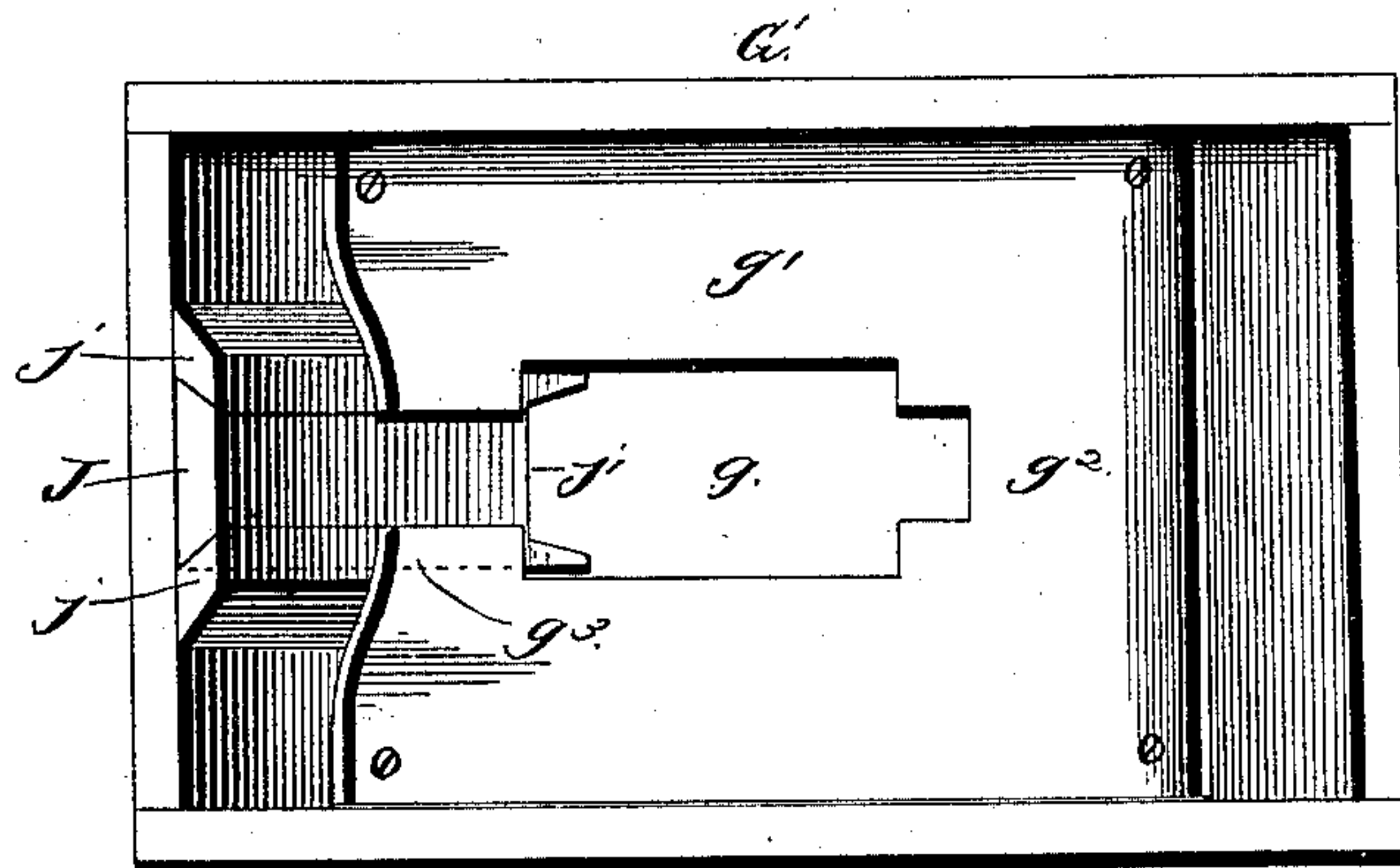


Fig. 4.

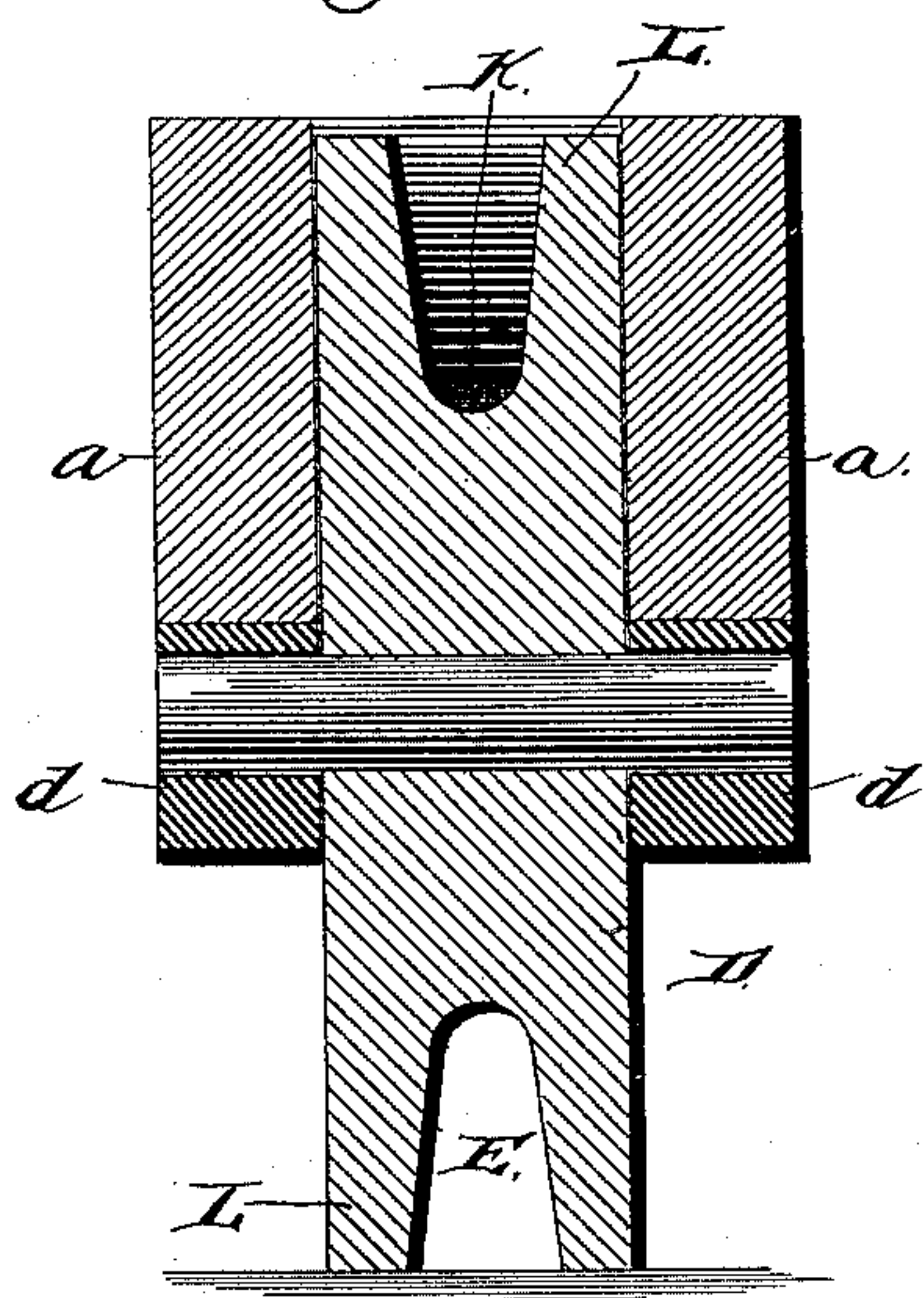
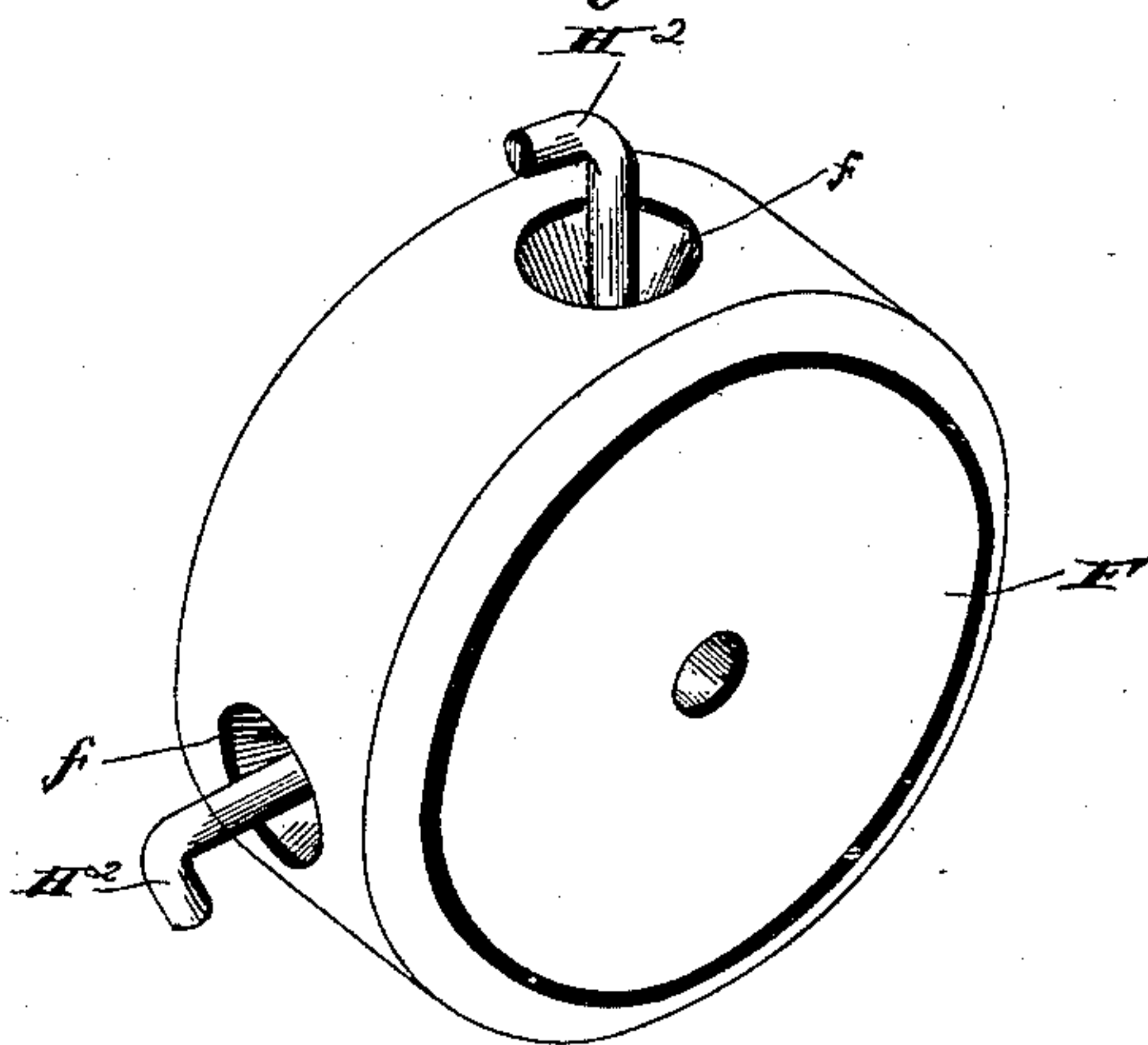


Fig. 5.



Witnesses.

Geo. J. Thorpe,
Theodore S. West,

Inventor.

D. W. Hoshall,

By *his* Attorneys

C. H. Snow & Co.

UNITED STATES PATENT OFFICE.

DAVID W. HOSHALL, OF LITTLE ROCK, ARKANSAS.

PLANTER.

SPECIFICATION forming part of Letters Patent No. 397,549, dated February 12, 1889.

Application filed July 25, 1888. Serial No. 281,017. (No model.)

To all whom it may concern:

Be it known that I, DAVID W. HOSHALL, a citizen of the United States, residing at Little Rock, in the county of Pulaski and State of Arkansas, have invented new and useful Improvements in Planters, of which the following is a specification.

The invention relates to improvements in planters; and it consists in the construction and novel combination of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the appended claims.

The planter is especially adapted to plant cotton-seed, claws or fingers being attached to the planting-disk for that purpose, as hereinafter described, and the operation thereof explained.

Figure 1 of the drawings represents a central vertical longitudinal section of a planter embodying the invention. Fig. 2 represents a plan view of the machine with the hopper detached to show the engagement of the conveyer or wheel and the feeding-wheel. Fig. 3 represents a plan view of the hopper. Fig. 4 represents a detail transverse section of the conveyer-wheel. Fig. 5 represents a modification of the feeding-wheel used when planting cotton-seed.

Referring to the drawings by letter, A designates the frame of the machine provided with the longitudinal side rails, *a*, and having the tongue or draft-pole B secured to its front end.

b b are the handles secured to and extending rearward from the side rails, and C is a furrow-opener, the standard *c* of which is secured between said rails near the front ends thereof.

D is the conveyer-wheel, which also acts as a coverer and operates the feeding-wheel. The wheel D has its shaft journaled in bearings *d*, secured to the lower edges of the side rails, *a*, at opposite points, and is provided with the deep circumferential groove E in its periphery, which groove is V-shaped in cross-section and preferably rounded at its inner side.

F is the feed-wheel, provided in its periphery with the conical-shaped recesses *f*, which are preferably equidistant, and with journals

G inserted and turning in bearing-loops *h*, formed on the free ends of the plate or strap metal springs H, the front ends of which are secured to the lower surfaces of the side rails, *a*, near the front ends thereof and on opposite sides of the standard of the furrow-opener.

The edge of the wheel F enters the groove E in the periphery of the conveyer-wheel, and the sides of said groove bear against the beveled-edges of the feeding-wheel and cause the latter to rotate as the conveyer-wheel moves forward. The feeding-wheel has the upper portion of its rim projecting through the longitudinal slot *g* of the hopper G', secured to and above the main frame in proper position and provided with a downwardly-concave bottom, *g'*, in which the slot *g* is made, the said bottom being preferably of plate metal. The said slot has the front and rear extensions, *g*² *g*³, respectively, through which extensions the arms H', provided with large flat heads *h'*, pass as the planting-wheel rotates, the said arms passing downward through the rear opening, *g*³, and upward through the front opening, *g*².

I is a slide-plate lying upon the front of the main frame and passing into an opening, *i*, in the lower edge of the front of the hopper. The said slide can have its position adjusted by the screw *i'*, and its inner end is provided with a notch, *i*², that straddles the edge of the feeding-wheel F, and is adapted to lessen or increase the area of the front extension-opening, *g*².

J is a slide-bar resting between the guide-strips *j j*, which are secured to the interior surface of the rear wall of the hopper, and having a notch, *j'*, in its lower end, which notch straddles the adjacent portion of the rim of the feeding-wheel, and is adapted to increase or lessen the area of the discharge extension-opening *g*³ in the bottom of the hopper. The guide-strips *j* have their edges dovetailed, in order to hold the sliding bar J in position, and their lower ends pass below the metallic concave bottom of the hopper, so that the ends of said strips will not have the grain in the hopper collected against them.

In planting corn or other large grain the arms H' are made straight and screw into the conical recesses *f*, and may have their ends moved

farther inward toward the rim of the planting-wheel when it is desired to drop a small quantity of grain at each planting, the slide-bar J then being adjusted downward to give the proper amount of clearance opening. When it is desired to drop more grain at each planting, the said slide-bar is adjusted upward or outward, and the arms H' are screwed farther outward, so that the recesses *f* will hold more grain.

When it is desired to plant cotton-seed, the arms H' are removed, and angularly-bent arms H² are attached to the planting-wheel in place thereof, the slides I and J being adjusted to give the proper amount of clearance.

K is a scraper-blade secured at its upper end to the rear rail of the main frame and projecting into the peripheral groove E of the conveyer-wheel. The said scraper-blade prevents soil from accumulating and packing in said groove.

The edges L L of the conveyer-wheel on each side of the groove E sink in the earth to a slight extent, and the conveying sides of said groove heap the soil upward between them, and cover thereby the dropping grain. The said edges, by making ruts in the ground on each side of the planted rows, cause the said rows to drain in rainy weather.

Having described my invention, I claim—

1. In a planter, the combination of a conveyer-wheel having a peripheral groove and a wheel having planting-recesses in its periphery, and with its edge inserted into the groove in the periphery of the conveyer-wheel and bearing therein, so that the said conveyer-wheel rotates the planting-wheel by friction, substantially as specified.

2. In a planter, the combination of a conveyer-wheel having a peripheral groove V-shaped in cross-section, a hopper secured to the main frame, and a wheel with its edge entering the groove in the periphery of the conveyer-wheel and rotated thereby, and projecting through a longitudinal slot in the bottom of the hopper, substantially as specified.

3. In a planter, the combination of the con-

veyer-wheel having the peripheral groove E, V-shaped in cross-section, the hopper G', provided with a longitudinal slot, *g*, in its bottom, the wheel with its edge entering in the groove of the conveyer-wheel, and the spring-plates H, having the bearing-loops *h* on their free ends to support the journals of the planting-wheel, substantially as specified.

4. In a planter, the combination of the conveyer-wheel having the peripheral groove V-shaped in cross-section, the hopper having the metal-plate bottom *g'*, provided with the slot *g*, having the extensions *g*² *g*³, the wheel F, provided with the conical recess *f* and screw-arms H', and the spring-plates H, having bearing-loops *h* at their free ends to support the journals of the planting-wheel, substantially as specified.

5. In a planter, the combination of a conveyer-wheel having the peripheral groove E, V-shaped in cross-section, the hopper G', having the metal bottom *g'*, provided with the slot *g*, having the extensions *g*² *g*³, the feeding-wheel F, having the conical peripheral recesses *f* and the screw-arms H', the adjustable slides I and J, and the spring-plates H, provided with bearing-loops *h* for the journals of the feeding-wheel, substantially as specified.

6. The herein-described planter, comprising the main frame having the side rails, *a*, the furrow-opener with its standard secured to the front portion of said frame, the hopper provided with the slot *g*, having the extensions *g*² *g*³, the conveyer-wheel having the peripheral groove E, the feeding-wheel provided with the recesses *f* and arms H', the adjusting-slides I and J, and the spring-plates H, having the bearing-loops *h* at their free ends for the journals of the feeding-wheel, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

DAVID W. HOSHALL.

Witnesses:

F. P. DUNN,

H. D. LAYMAN.