

No. 776,903.

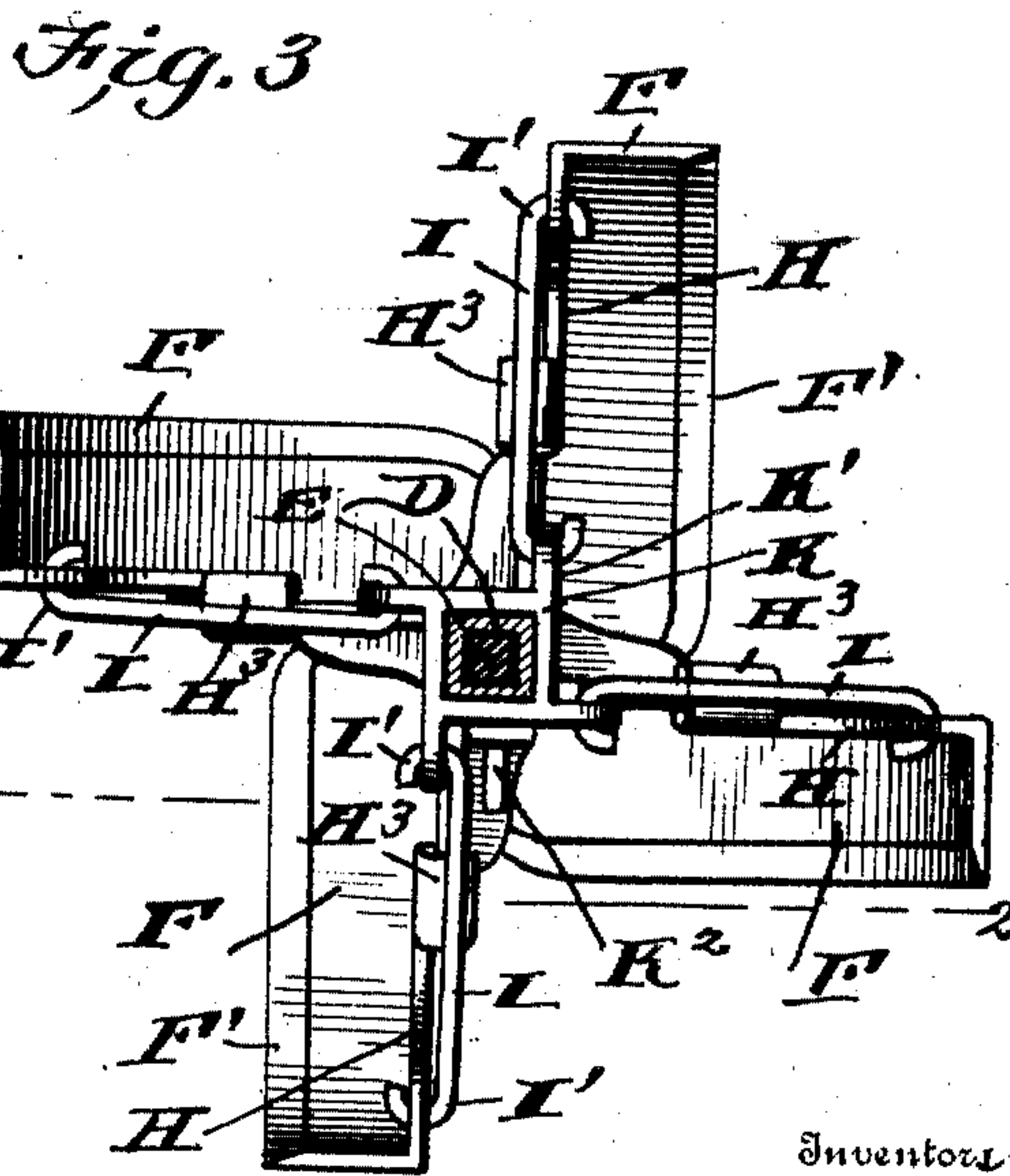
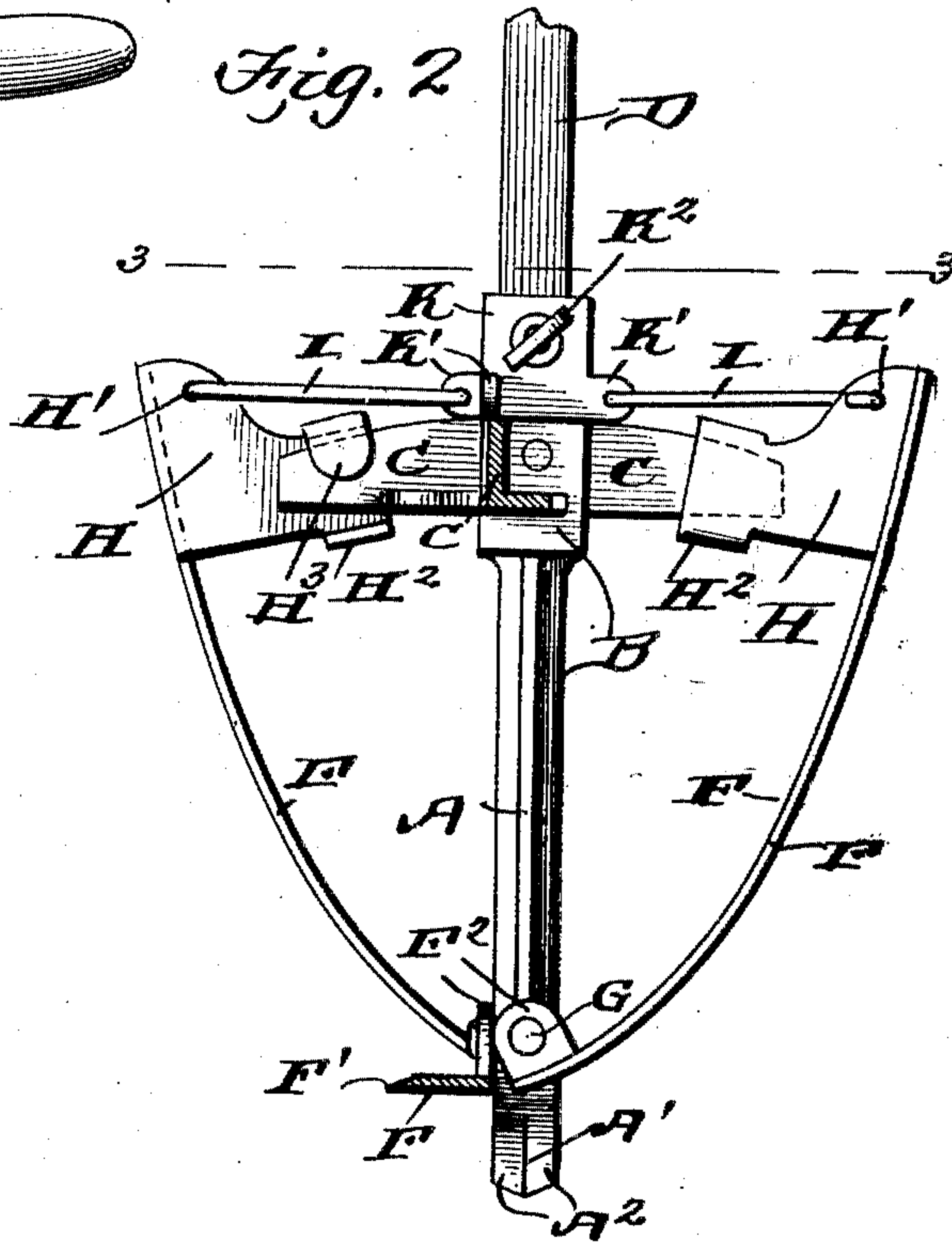
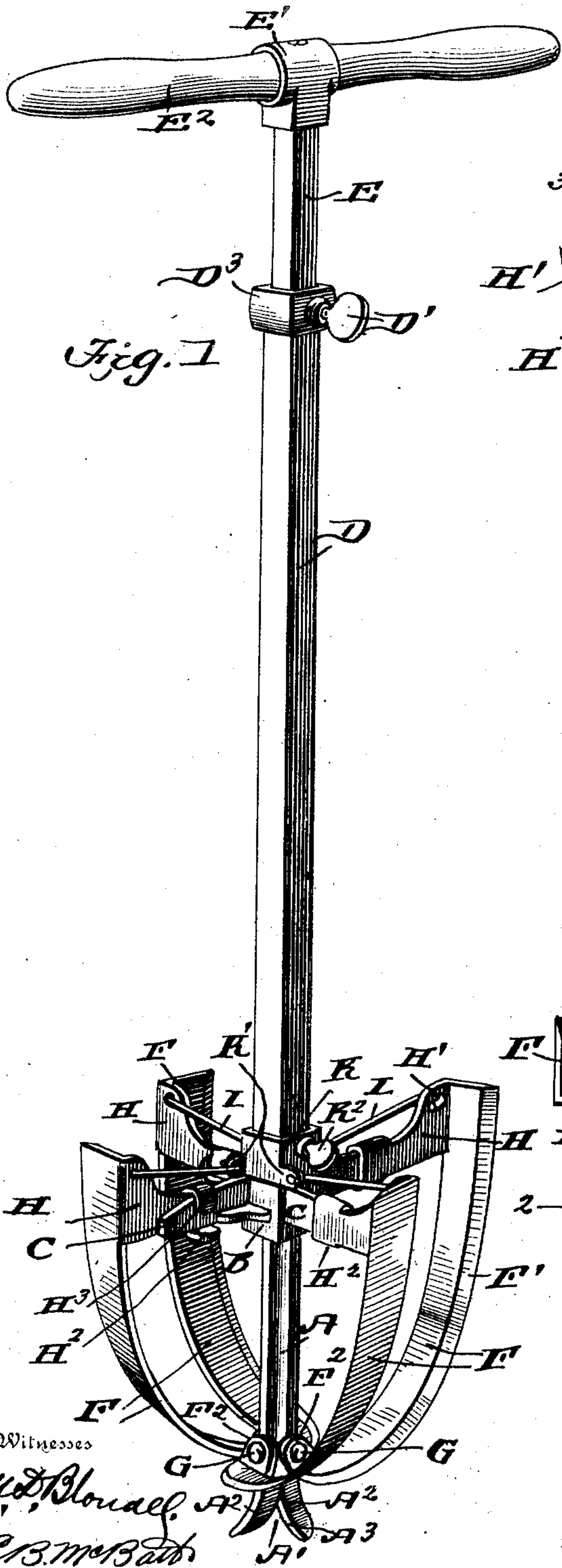
PATENTED DEC. 6, 1904.

S. G. GIVENS & C. E. GRIDLEY.
POST HOLE AUGER.

APPLICATION FILED APR. 11, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



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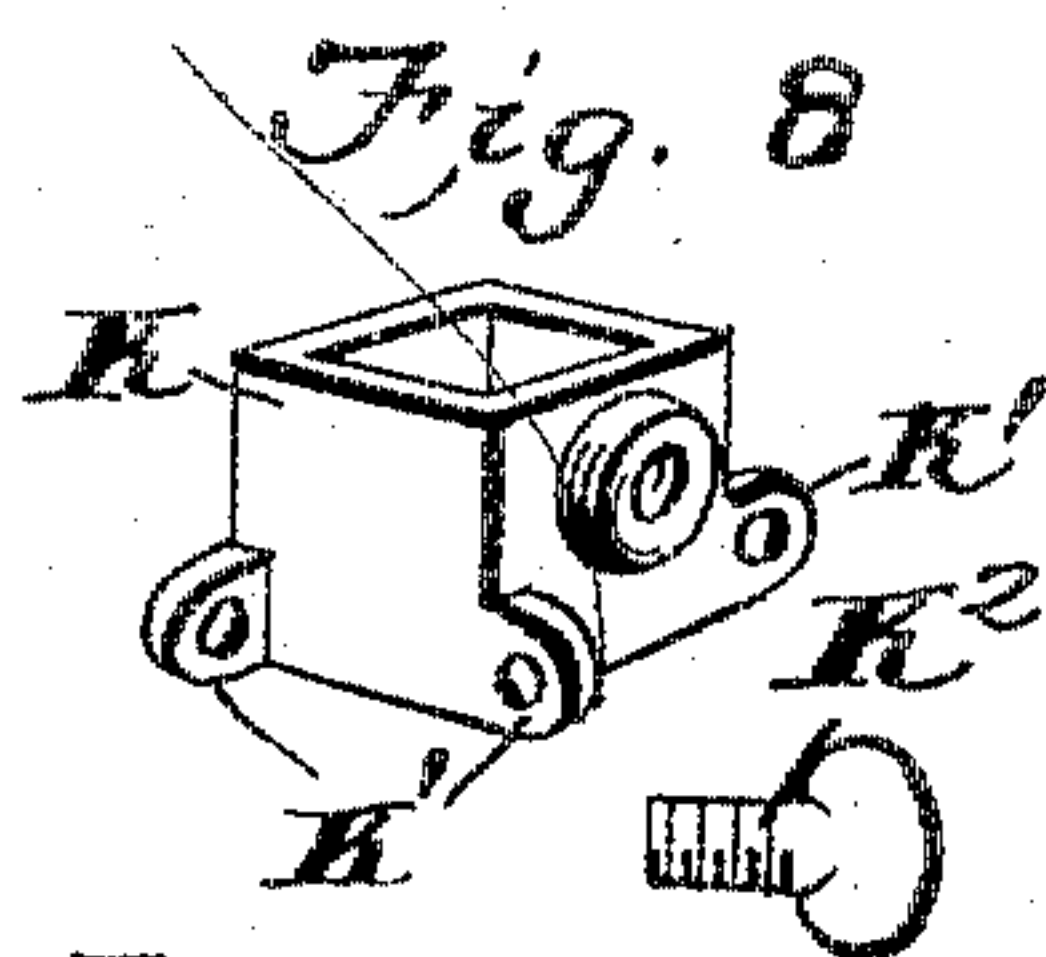
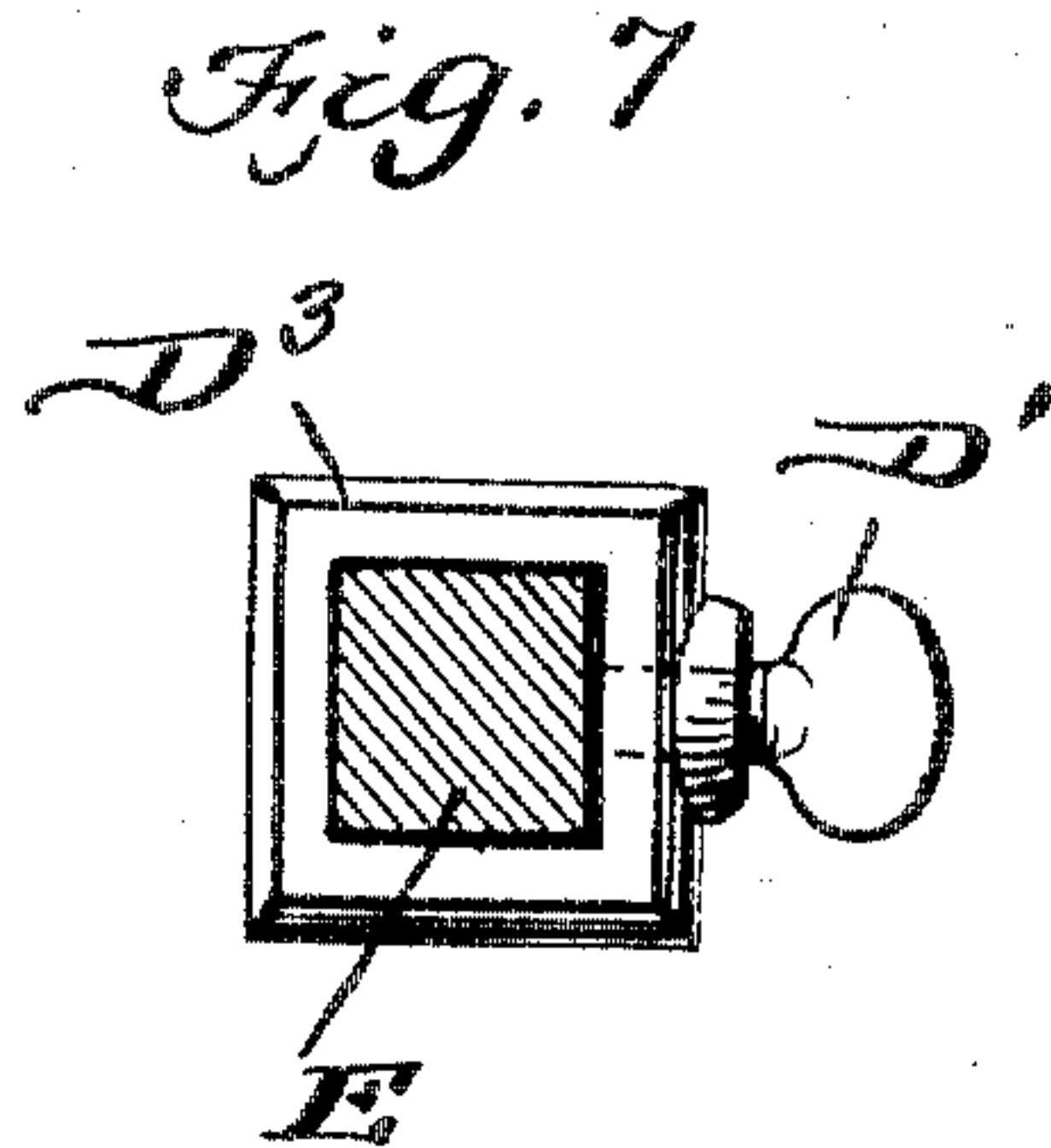
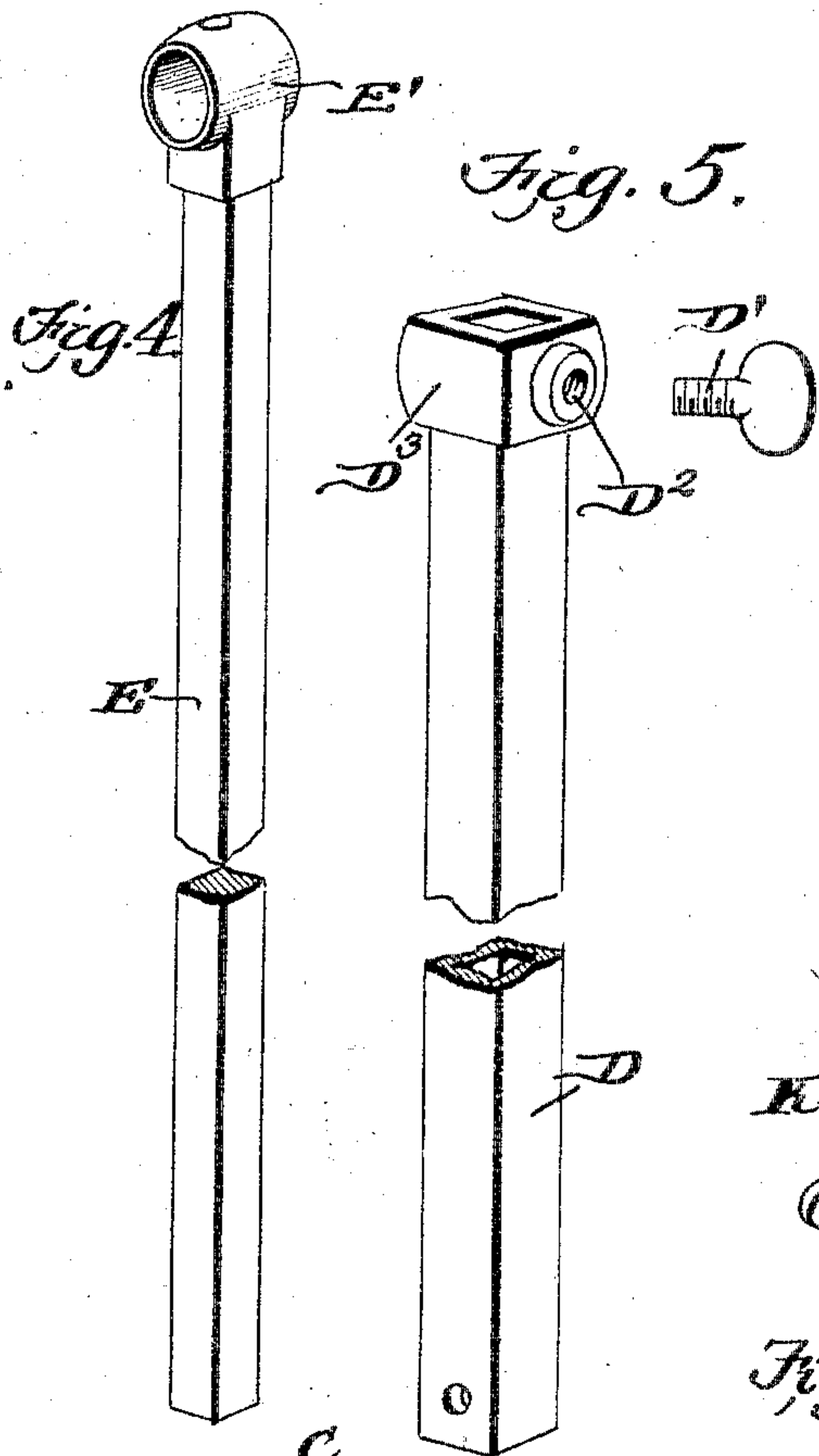
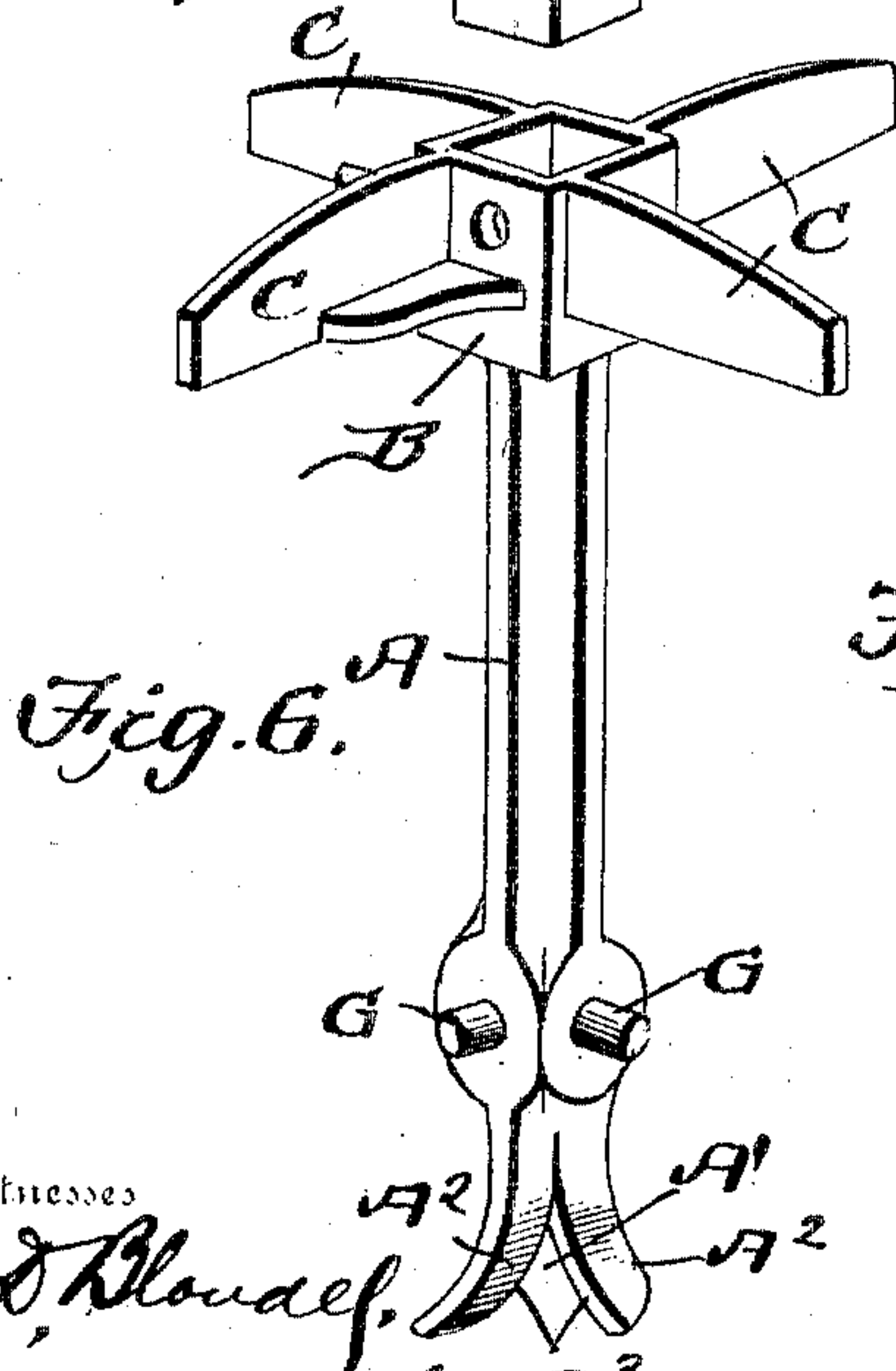
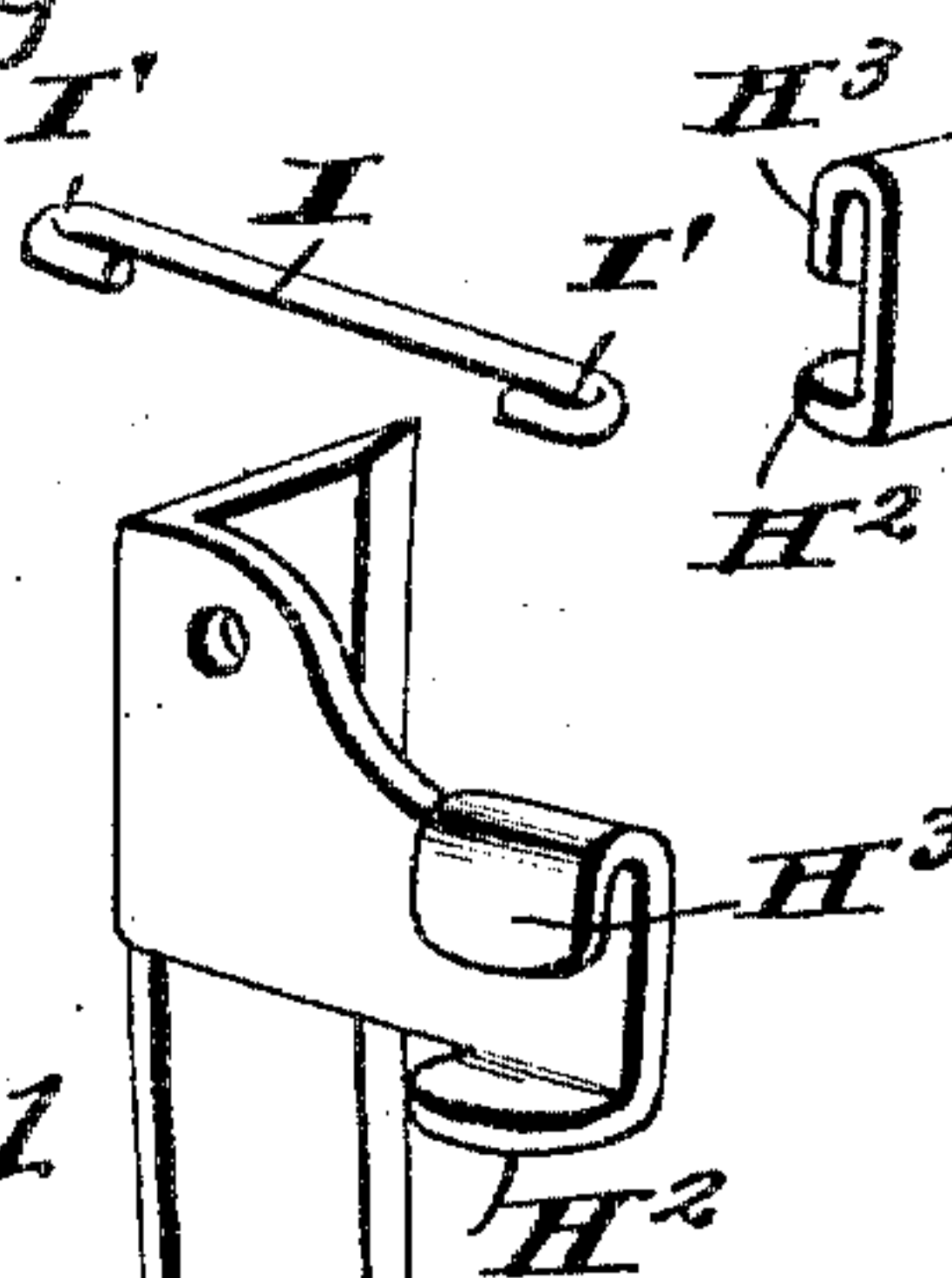


Fig. 9



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UNITED STATES PATENT OFFICE.

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POST-HOLE AUGER.

SPECIFICATION forming part of Letters Patent No. 776,903, dated December 6, 1904.

Application filed April 11, 1904. Serial No. 202,595. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL G. GIVENS and CHARLES E. GRIDLEY, citizens of the United States, residing at Paducah, in the county of McCracken and State of Kentucky, have invented a new and useful Improvement in Post-Hole Augers, of which the following is a specification.

This invention is an improved construction of post-hole auger, the object being to provide a simple, durable, and efficient construction of auger by means of which the post-hole can be quickly and easily bored, one which will readily collect and hold the earth so that it can be easily removed from the hole; and another object of the invention is to provide an auger of this kind from which the earth can be quickly and easily discharged after it has been withdrawn from the hole.

Another object of the invention is to provide a post-hole auger which can be adjusted for boring large or small holes; and a still further object of the invention is to provide an adjustable operating-shaft capable of adjustment during the boring of the hole, so that the length of the operating-shaft can be increased as the depth of the hole increases.

With these various objects in view the invention consists in the novel features of construction and combination, all of which will be fully described hereinafter and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective view of a post-hole auger constructed in accordance with our invention. Fig. 2 is a section elevation on the line 2 2 of Fig. 3. Fig. 3 is a sectional plan view on the line 3 3 of Fig. 2. Fig. 4 is a detail perspective view showing the upper portion of the operating-handle. Fig. 5 is a detail perspective view of the lower portion of the operating-handle. Fig. 6 is a detail perspective view of the shank, having the bit at its lower end and the casting at its upper end. Fig. 7 is a horizontal sectional view taken through the tubular shaft at the upper end, the reinforcement being shown in plan

view. Fig. 8 is a detail perspective view of the adjustable collar and set-screw for securing the same. Fig. 9 is a detail view of the link-rod. Fig. 10 is a detail perspective view of one of the cutting-blades. Fig. 11 is a detail sectional view showing the opposite side of the arm attached to the upper end of said blade.

In carrying out our invention we employ a steel shank A, which is bifurcated at its lower end, as shown at A', the members A² being curved or twisted in reverse directions, the opposing edges A³ being sharpened. By means of this construction we provide a bit of superior qualities, inasmuch as it quickly and easily obtains a firm grip upon the earth, holds the auger in place, and makes the initial opening for the cutting-blades. Upon the upper end of the shank A is a socket-casting B, having a series of guide-arms C extending therefrom, said arms being arranged at equidistant points, and there are as many arms as there are cutting-blades of the auger, and in the present construction we have shown four such blades, and consequently there will be four arms connected to the socket-casting. A tubular shaft D is secured at its lower end in the socket-casting B, and sliding in said tubular shaft is the solid bar or shaft E, a set-screw D' passing through an opening D², produced in the reinforced portion D³ at the upper end of the tubular shaft D for the purpose of locking the sections of the operating-shaft together. A horizontal bored head E' is arranged at the upper end of the shaft E and in which fits the handle E², by means of which the auger is operated. By having the operating-shaft made in two telescopic sections it is obvious that the said shaft can be lengthened or shortened, as desired, so as to provide an operating-shaft of the proper length.

F indicates the cutting-blades, preferably made of steel and curved as shown, the outer edges F' being sharpened. At the lower end each blade is formed with an apertured ear F², which engages the pivot-studs G, carried

at the lower end of the shank just above the bit. At the upper end of each blade is an arm H, having an aperture H', in which fits the hooked end I' of the link-rod I, the opposite hooked end of said rod engaging the apertured ears K', projecting from the collar K, which slides upon the tubular shaft D and is held in any desired position by means of the set-screw K². The inner end of each arm H is formed with a horizontal laterally-projecting lip H² at the lower edge and an overhanging outwardly-extending finger H³ at the upper edge, said lip and finger embracing the guide-arms C and steadying the movements of the blades as they are adjusted by means of the sliding collar to produce a broad or narrow auger, it being obvious that when the collar is moved upwardly the blades will be contracted and that the reverse operation will take place when the collar is forced downwardly.

The operating-shaft is first adjusted to the proper length and the blades also set at the desired position. The bit is then driven into the earth and the auger rotated, and the dirt will be collected and held by said blades and can be quickly and easily removed from the hole and discharged. Should it be desired to lengthen the operating-shaft, it can be quickly and easily accomplished by simply releasing the set-screw D', pulling the shaft E outwardly and resetting the screw. Should it be desired to adjust the size of the auger, it can be quickly and easily accomplished by loosening the screw K² and moving the collar K up or down upon the shaft D. The peculiar form of the bit greatly facilitates the operation of the auger, and the guide-arms C and the arms H being connected as shown the adjustment of the cutting-blades is rendered extremely easy.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a post-hole auger comprising a shank having a bifurcated lower end, longitudinally-curved cutting-blades pivoted at their lower ends to the shank, a casting having radial arms,

and arms extending from the cutting-blades and adapted to engage the arms of the casting.

2. In a post-hole auger, a shank, a casting thereon having radially-extending arms, cutting-blades pivoted at their lower ends to the shank, inwardly-extending arms projecting from the upper portion of the cutting-blades, a lip carried by each of the last-mentioned arms, a finger also carried by the arms, said finger and lip being adapted to engage one of the radial arms carried by the casting, and means for rotating the cutting-blades.

3. A post-hole auger comprising a shank, a socket-casting thereon, a tubular shaft adapted to fit in the said socket, a solid shaft slidably held in the tubular shaft, cutting-blades longitudinally curved and pivoted at their lower ends to the shank, radial arms carried by the socket-casting, and arms carried by the blades having lip and finger portions adapted to slidably engage the radial arms of the casting.

4. A post-hole auger comprising a shank having a bit at the lower end and a casting at the upper end, said casting having guide-arms extending therefrom, a tubular shaft secured in the casting, a sliding shaft adjustable in the tubular shaft and means for locking them together, cutting-blades having apertured ears at their lower ends, studs arranged at the lower end of the shank above the bit and adapted to be engaged by the apertured ears, arms attached to the upper ends of the cutting-blades, the inner ends of said arms being provided with a guiding-lip and a curved finger, a sliding collar arranged upon the tubular shaft and link-rods connecting said collar with the arms carried by the cutting-blades, substantially as described.

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