

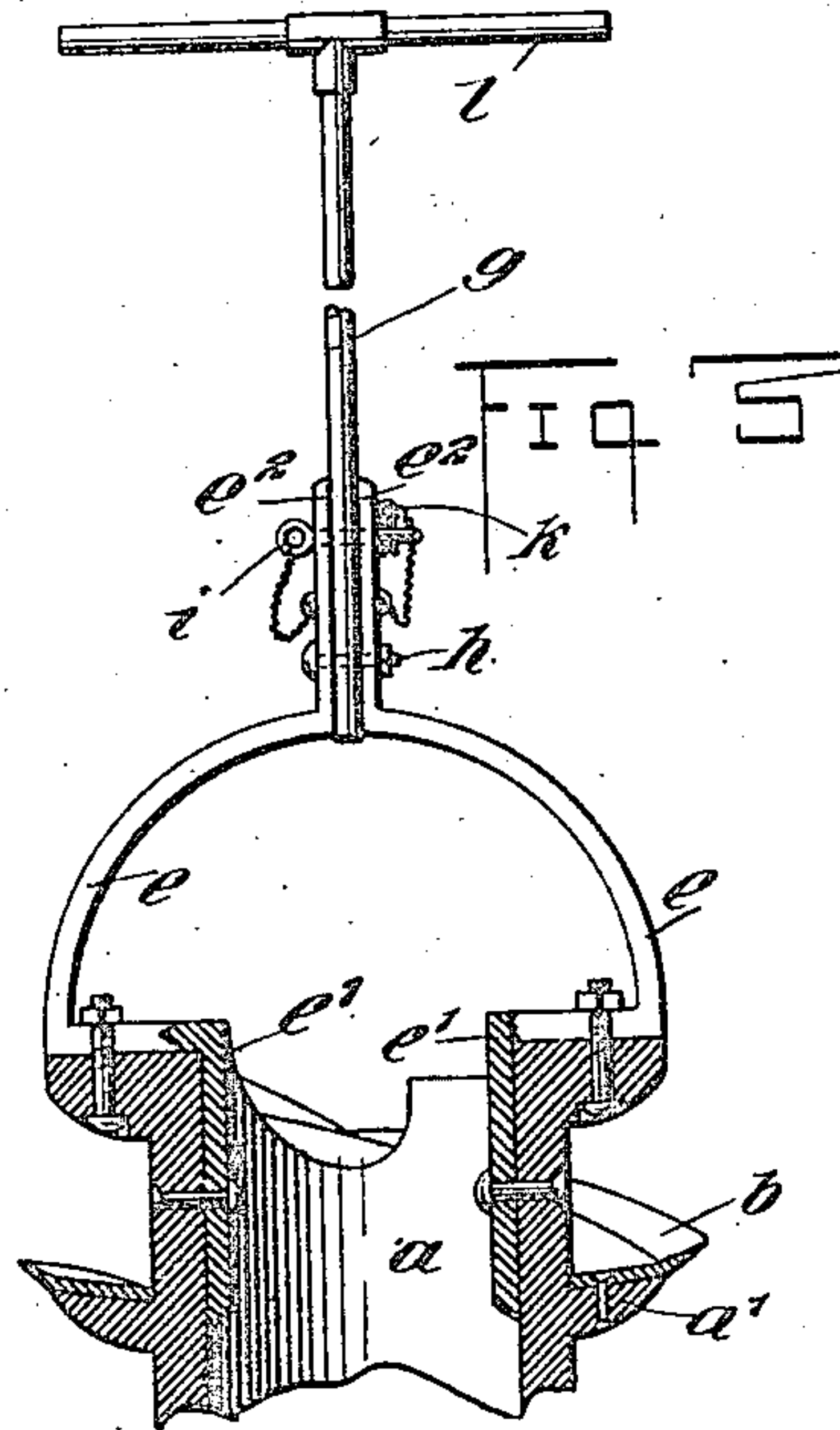
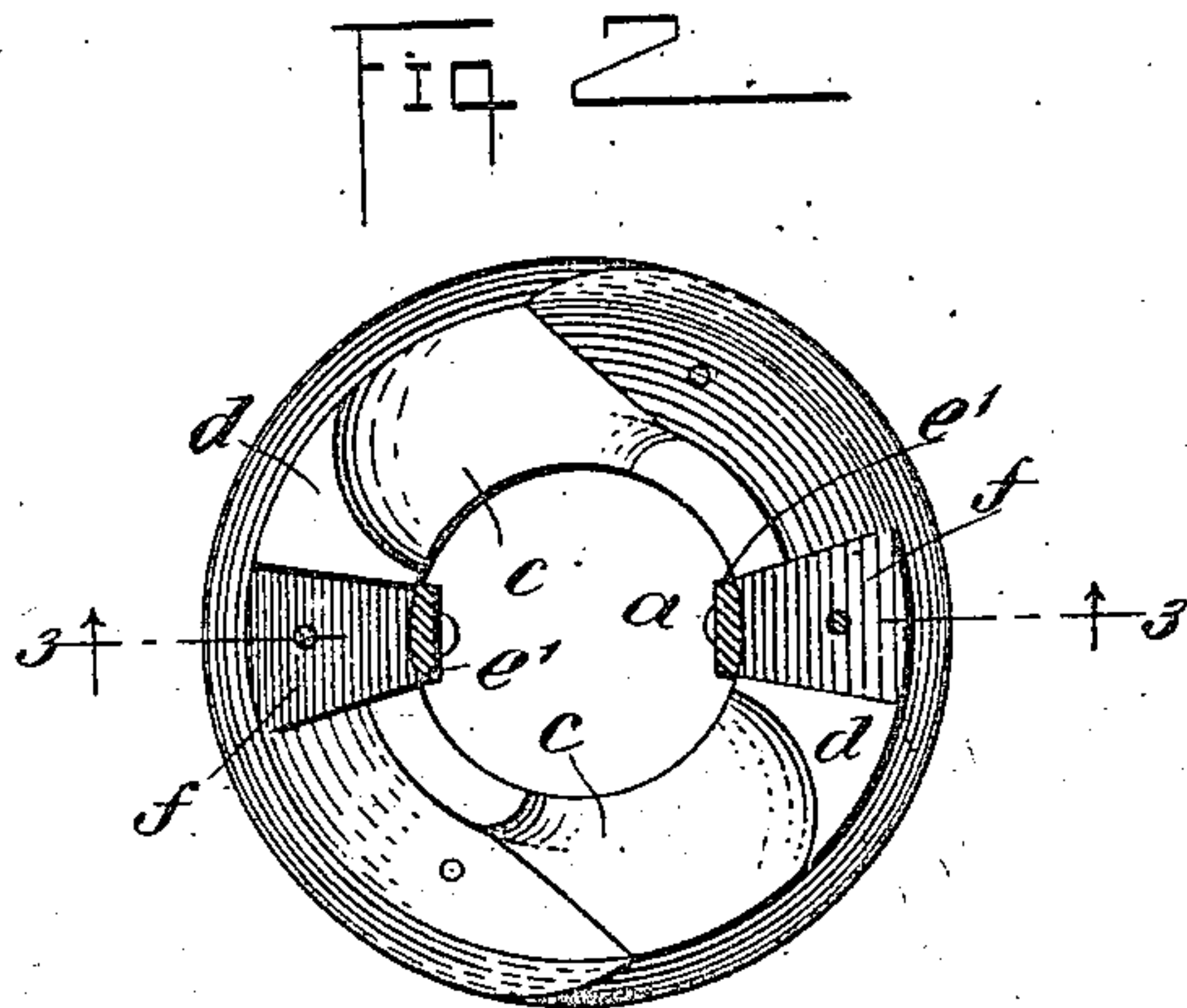
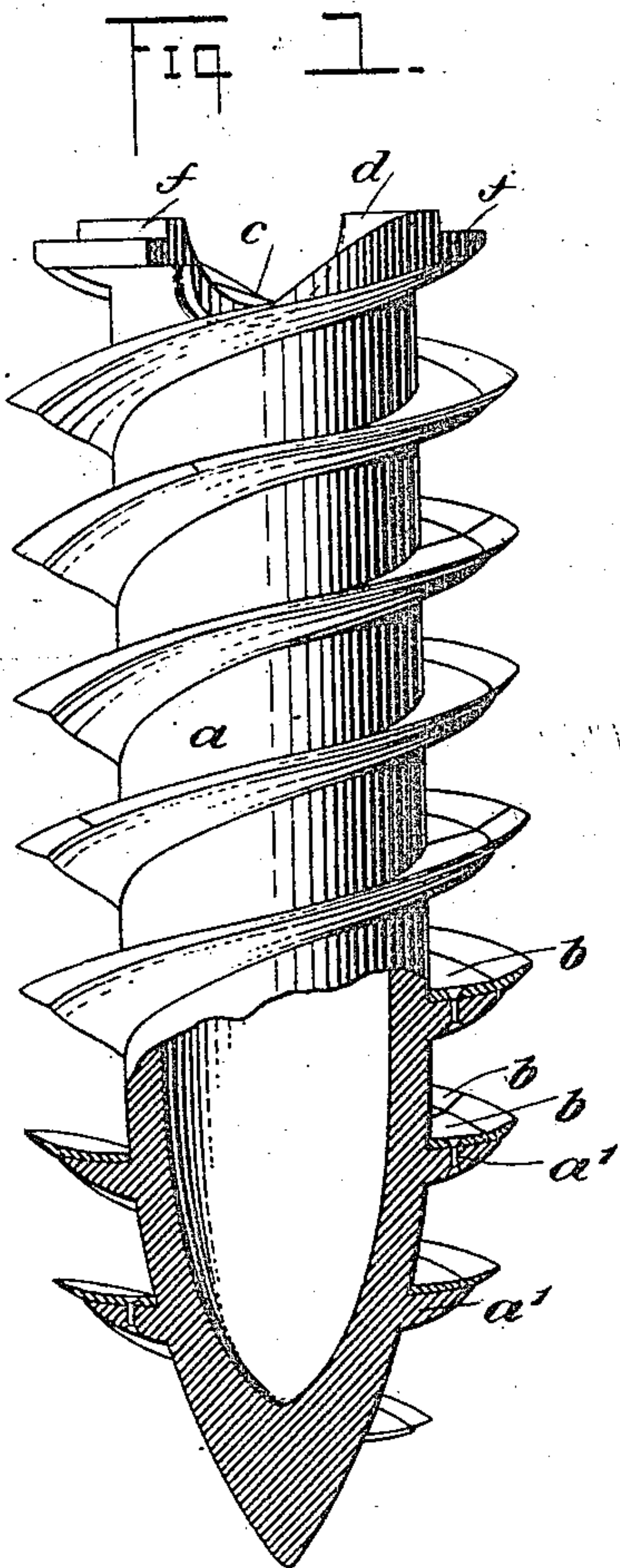
No. 665,735.

Patented Jan. 8, 1901.

N. H. HANSEN.  
EARTH AUGER.

(Application filed Aug. 30, 1900.)

(No Model.)



WITNESSES:  
*J. B. Owens.*

INVENTOR  
*Nils H. Hansen.*  
BY *Wm. J. Owens*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

NILS H. HANSEN, OF WESTPORT, WASHINGTON.

## EARTH-AUGER.

SPECIFICATION forming part of Letters Patent No. 665,735, dated January 8, 1901.

Application filed August 30, 1900. Serial No. 28,587. (No model.)

*To all whom it may concern:*

Be it known that I, NILS H. HANSEN, a citizen of the United States, and a resident of Westport, in the county of Chehalis and State of Washington, have invented a new and Improved Earth-Auger, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide an earth-auger which will be especially useful in soft earth, particularly semifluid earth, such as quicksand and the like. This attribute admirably adapts the auger for use as a prospecting instrument, although the device may also be used as a post-hole borer or for other analogous purposes.

This specification is the disclosure of one form of my invention, while the claim defines the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the invention with parts in section. Fig. 2 is a plan view thereof; and Fig. 3 is a sectional elevation on the line 3 3 in Fig. 2, showing the handle of the device and the manner of its attachment to the body portion.

The body portion *a* of the device is formed, preferably, of cast metal and comprises a cylindrical main part hollow throughout and having its upper end open, the lower end being closed and tapered to a point, as shown. Formed on the outside of the body portion *a* is a spiral thread *a'*, which is cast integral therewith and has a number of segmental steel plates *b* riveted thereto, the plates *b* being arranged end to end, so as to form an unbroken cutting edge for the thread *a'*. These plates *b* therefore may be removed for repair or for applying new ones to the auger. The outer portions of the plates *b* are turned up slightly, as shown in the drawings, so as to form a sort of way around the body of the device through which the earth and slime may pass during the operation of the auger. The thread *a'* of the body of the device passes upward to the open upper end of the body and terminates at recesses *c*, which are formed opposite each other in the walls of the body por-

tion, so as to permit the earth to pass from the upper extremities of the thread inward into the body. To facilitate this operation, the body portion is formed with shoulders *d*, which serve to deflect the earth inward from the thread to the interior of the body *a*. It will therefore be seen that as the boring-tool is turned in the earth it will work itself down, and the borings will be caused to pass inward into the body *a*, so that the tool may subsequently be withdrawn from the hole, carrying out with it the borings. Thus the tool is adapted to all sorts of boring-work, either for sinking holes or for prospecting for minerals or boring post-holes or the like.

A handle is provided, which consists of two arms *e*, provided with angular extensions *e'* at their lower ends, which lie at the upper end and side portions of the body *a* and are fastened thereto, recesses *f* being formed in the upper end of the body for the reception of these extensions *e'*. The extensions *e'* are held securely in the recesses, and the upper ends of the arms *e* have parallel extensions *e''*, which are secured to opposite sides of a handle-rod *g* by means of a bolt *h*, forming a pivot, and a removable pin *i*, held in place by a suitable cotter-pin or key *k*. When it is desired to dump the earth from the interior of the body of the device, the pin *i* may be disconnected and the body of the device tilted by manipulating the handle. The handle-rod *g* has a cross-bar *l* attached to its upper end, as shown. By using this device in connection with sections of pipe coupled together a hole of any depth may be bored in the earth, the auger being passed up and down through the pipes. The auger will pass down through water and quicksand and the like, and these materials will flow into the cavity and may be thereby bailed out of the hole. It will be apparent that the proportions of the apparatus may be varied at will without departing from the spirit and scope of my invention.

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

An earth-auger, having a hollow body forming a bucket, the body having an exterior

spiral thread thereon and also having a recess formed in its upper edge at the upper extremity of the thread, and a shoulder located at one side of the said recess to deflect the  
5 earth sidewise through the recess into the body.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

NILS H. HANSEN.

Witnesses:

GUNDER R. HAUKEI,  
KARL JOHAN O. EIENE.