

(No Model.)

D. C. POWELL.
GRATER.

No. 602,628.

Patented Apr. 19, 1898.

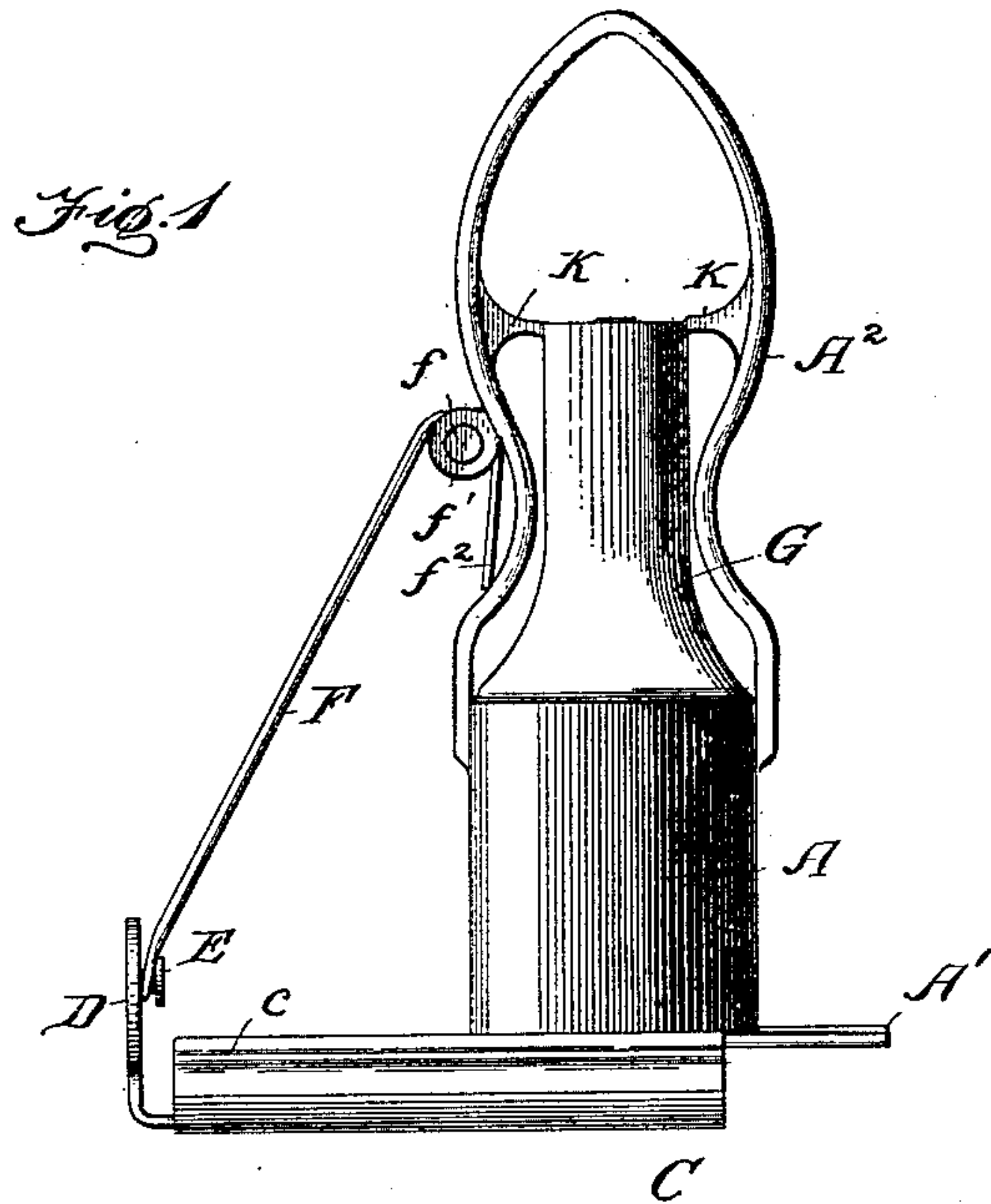
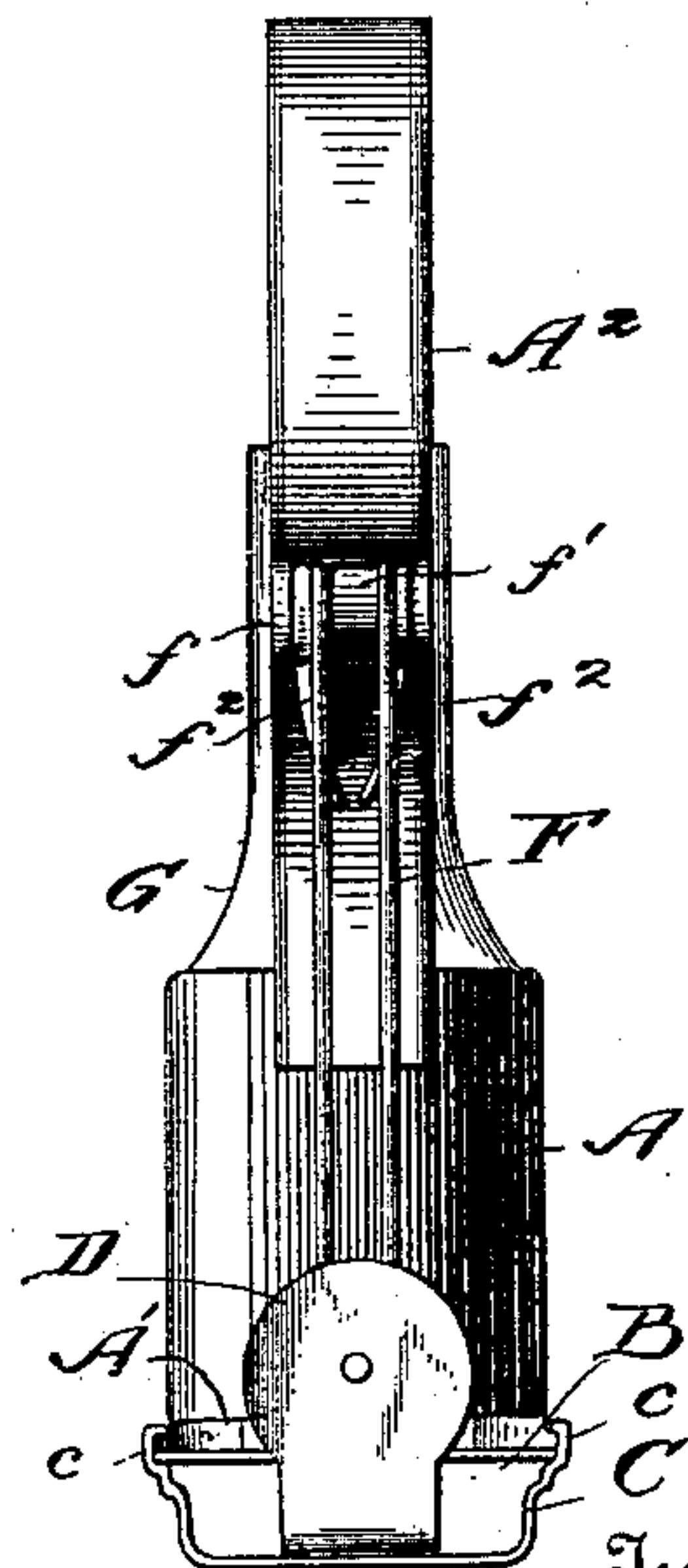
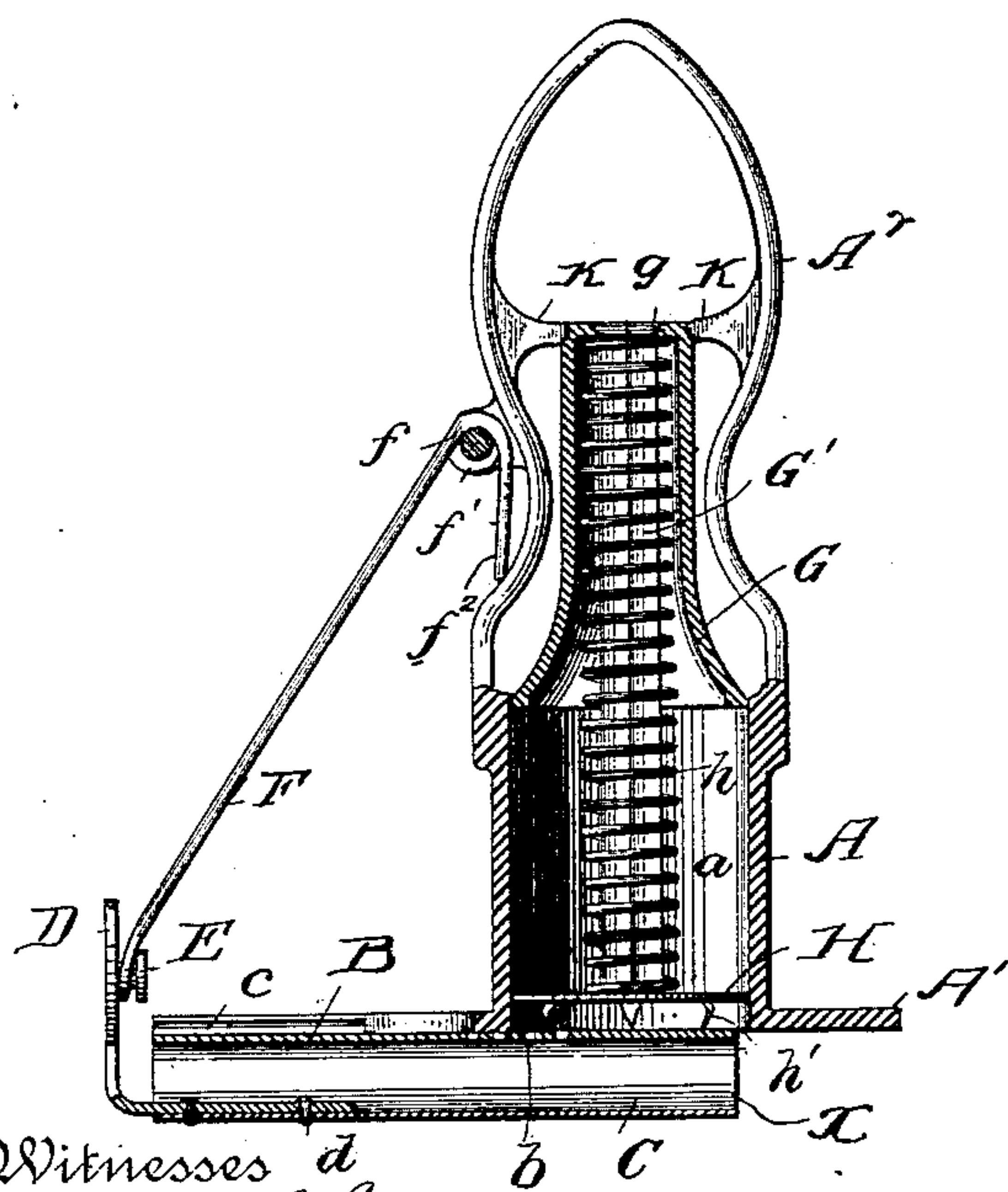


Fig. 2

Fig. 3



Witnesses
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By his Attorneys
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UNITED STATES PATENT OFFICE.

DAVID C. POWELL, OF MICHIGAN CITY, INDIANA, ASSIGNOR OF ONE-HALF
TO EDWARD J. POWELL, OF SAME PLACE.

GRATER.

SPECIFICATION forming part of Letters Patent No. 602,628, dated April 19, 1898.

Application filed July 31, 1897. Serial No. 646,683. (No model.)

To all whom it may concern:

Be it known that I, DAVID C. POWELL, a citizen of the United States, residing at Michigan City, in the county of La Porte and State of Indiana, have invented certain new and useful Improvements in Graters, of which the following is a specification.

My invention relates to hand-graters for grating nutmegs and similar material.
The apparatus constructed in accordance with my invention is one that may be held in the hand and the grating plate or surface reciprocated against the pressure of the returning-spring by the pressure of the thumb, and comprises certain new features of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation; Fig. 2, a longitudinal section, and Fig. 3 an elevation of that end of the apparatus at which the thumb is applied to reciprocate the grating-plate.

The frame or handle is composed of a hollow cylindrical portion A, at one end of which there is a rectangular guide plate or way A', and from the other end of which extends an open or skeleton part A², that constitutes the handle proper. This part of the apparatus may all be cast in one piece or otherwise constructed, as may be desired. The flat grating-plate B is secured across the open face of a bent or trough-like plate C, open at both ends and turned over at its side edges c to embrace and run upon the opposite straight sides or edges of the guide or way A'. The thumb-plate D, by which the part B C is reciprocated, is shown as bent at right angles, and one end is riveted, as at d, to the inner face of the bent plate or trough C. The inner face of the other end of the thumb-plate, which stands at right angles to the grating-plate, has thereon a headed lug E, which is embraced by a spring F. This spring is shown as formed of a piece of wire bent centrally, so as to form an open loop with parallel sides in which the headed stud E works. The ends of the wire are respectively turned around a rivet f, which passes through a lug f' on the side of the part A², against which the free ends f² of the wire bear. When, therefore, the frame or handle A A² is grasped between the fingers and the palm of the hand, the

grating-plate may be propelled by the pressure of the thumb across the open face of the cylindrical part A and is returned after each excursion by the reaction of the spring F.

b, Fig. 2, indicates the openings in the grating-plate having burs or cutting edges formed in the usual manner, or in any suitable manner, to abrade the nutmeg, which is inserted and supported within the cylindrical part A, as follows: The rear open end of the part A is closed by a hollow part G, preferably somewhat conical in shape, as shown, and the larger end of which closely fits the opening in A. The hollow conical part G contains a rod G', that is square or angular in cross-section, (to prevent turning,) that fits loosely in a correspondingly-shaped opening in the end of the part G, and whose end is enlarged or flares outwardly, as at g, to prevent its disengagement from the opening when moved toward the grating-plate. The opposite end of the rod G has secured to it a plate H, preferably circular and fitted to slide within the bore of the part A, and between the plate and the bottom of the hollow conical part G is placed a coiled spring h, that surrounds the rod. On opposite sides of the outer end of the part G are formed two notches, in which are seated ears or lugs K, projecting inwardly from the opposite sides of the skeleton portion A² of the handle. The part G, that serves as a cap or cover for closing the rear of the nutmeg-receiving chamber a and also carries the endwise-sliding rod and the nutmeg feeding and supporting plate H, which is provided with projecting spurs or teeth h', that serve to prevent the rotation of the nutmeg, may be removed by pressing it inwardly against the tension of the spring h until the lugs K are disengaged from the notches in its end, when its end may be moved laterally and it, together with the rod, spring, and plate H, removed from the chamber a. A nutmeg may now be dropped into the chamber and the parts replaced in position, where they are locked by the lugs K. Pressure of the spring h urges the nutmeg with sufficient tension against the abrading face of the grating-plate. The apparatus being held as described and the grating-plate reciprocated by the pressure of the thumb, the grated nutmeg or other

material is discharged from the open end X of the bent plate or trough C.

This apparatus, it will be observed, is one that may be used conveniently and readily with one hand only, is simple in construction and operation, and permits the ready insertion of the nutmegs or material to be grated.

I claim as my invention—

1. The combination of a receptacle for the substance to be reduced, a grating - plate mounted to slide opposite one end thereof, a cap or cover closing the opposite end of the receptacle and adapted to move endwise therein, a handle secured to the receptacle and having a stop with which the cap or cover is adapted to engage, a plate adapted to bear upon the substance to be reduced, and a spring interposed between the plate and the cap or cover tending to force the plate toward the grating-plate, and the cap or cover against the stop in the handle.

2. The combination of a receptacle for the substance to be reduced, a grating - plate mounted to reciprocate opposite one end thereof, a recessed cap or cover closing the opposite end of the receptacle and adapted to move endwise therein, an open-sided handle secured to the receptacle and having inwardly-projecting lugs or stops adapted to

enter the recesses in the top of the cap or cover, a plate adapted to bear against the article to be reduced, a rod secured thereto and extending through the cap or cover, and a spring surrounding the rod and interposed between the cap and the plate and tending to move the cap in one direction against the stops and the plate in the opposite direction against the article to be reduced.

3. The combination with the frame having a hollow part constituting a receiving-chamber, a way or guide A', arranged at the front opening of the receiving-chamber, the bent plate, C, whose edges engage the way or guide and travel thereon, the grating-plate carried by the plate, C, and arranged to close the receiving-chamber, the thumb-piece for propelling the grating-plate across the open end of the receiving-chamber, the lug thereon and the spring secured upon the side of the handle and loosely engaging the lug on the thumb-plate, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

DAVID C. POWELL.

Witnesses:

CHRISTIAN BUDTZ,
LOUIS R. KRUEGER.