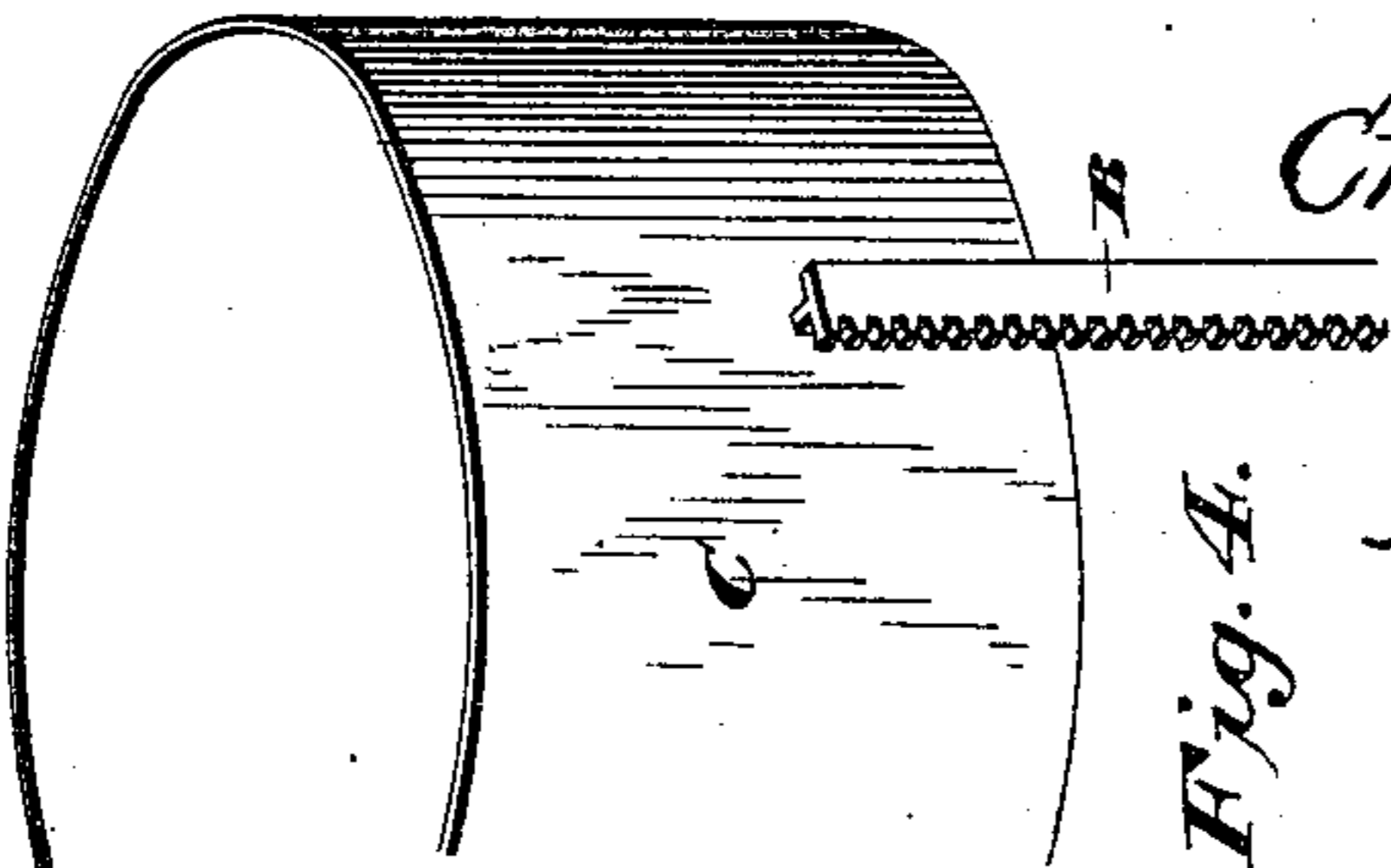
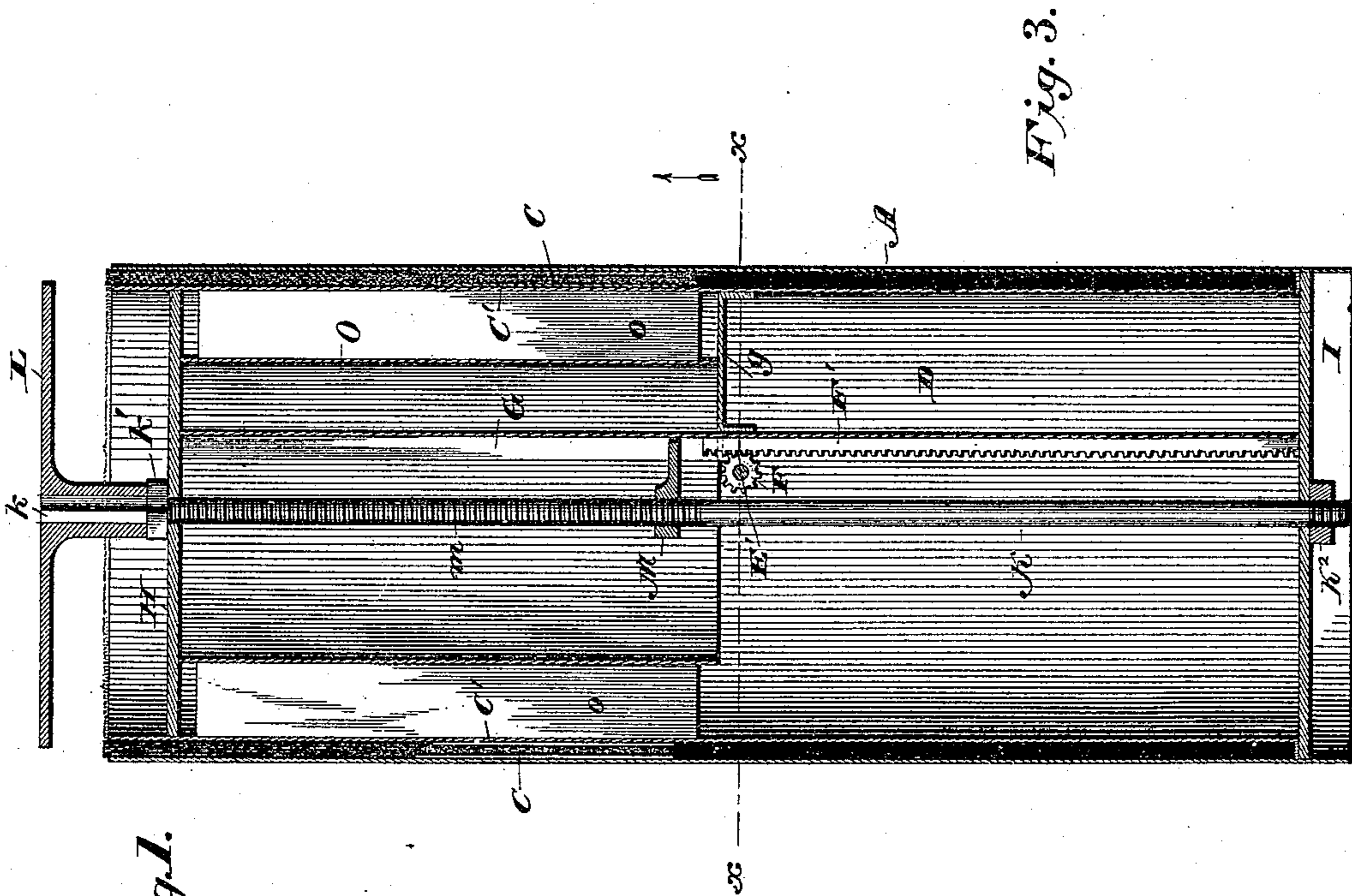
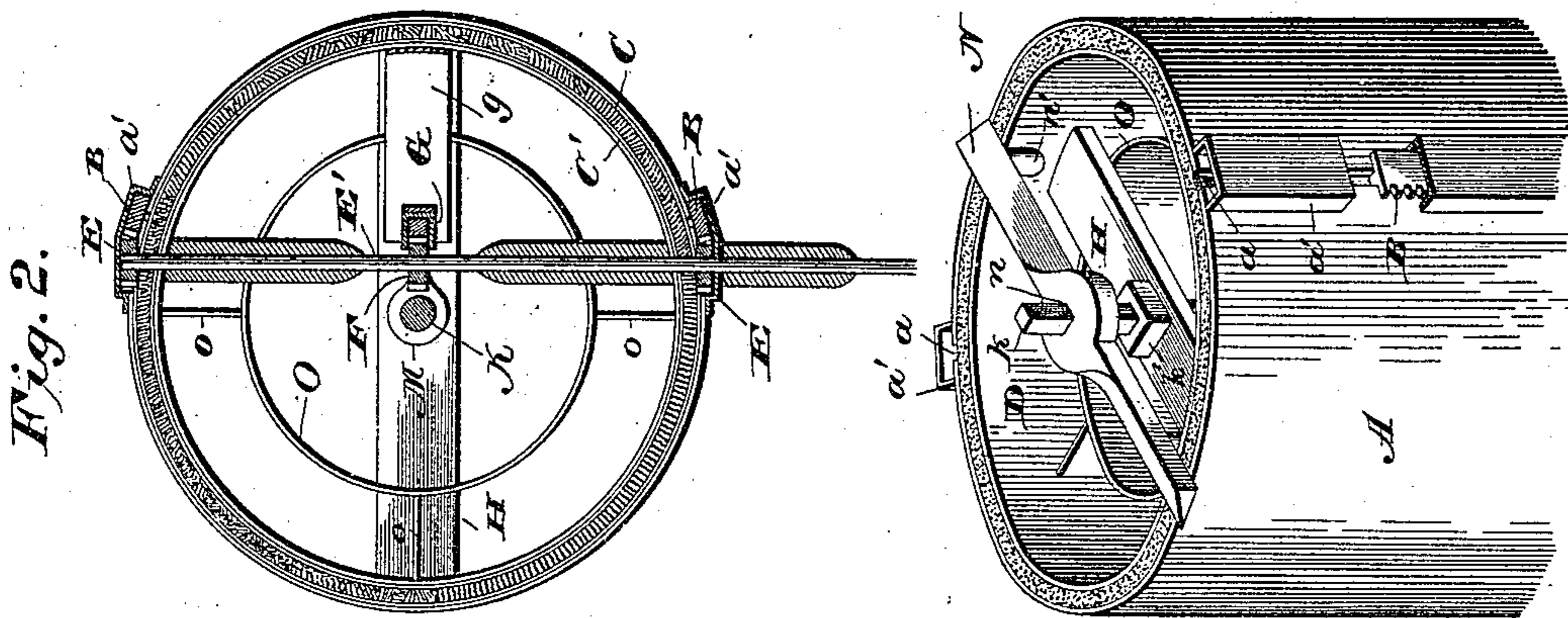


(No Model.)

C. E. BELL.
LAMP OR OIL BURNER.

No. 441,465.

Patented Nov. 25, 1890.



Charles H. Bell.
Inventor

by *[Signature]* Attorney

Witnesses
L. S. Elliott,
W. Johnson

UNITED STATES PATENT OFFICE.

CHARLES E. BELL, OF AMSTERDAM, NEW YORK.

LAMP OR OIL BURNER.

SPECIFICATION forming part of Letters Patent No. 441,465, dated November 25, 1890.

Application filed September 6, 1890. Serial No. 364,162. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. BELL, a citizen of the United States, residing at Amsterdam, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Lamp or Oil Burners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in oil-burners designed especially for stoves.

The object of the invention is to provide a simple, cheap, and effective oil-burner with means for elevating the wick and with a movable stop which prevents the wick being turned too high, the same being designed to be used with a flame-spreader, which can be removed when it is desired to trim the wick, which is accomplished by a special constructed trimmer operating upon the rod which supports the spreader to move a stop in advance of the rack-bar; and the invention consists in the construction and combination of the parts, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a vertical sectional view of an oil-burner constructed in accordance with my invention. Fig. 2 is a sectional view taken through the line *xx* of Fig. 1. Fig. 3 is a detail perspective view of the upper portion of the burner with the flame-spreader removed and the trimmer placed thereon. Fig. 4 is a perspective view of the tube which carries the rack-bars.

A refers to the outer casing, which is provided with longitudinal side openings *a*, covered by casings *a'*, within which are located rack-bars B, attached at their upper ends to the wick-collar C, an interior collar C' being provided, and between these collars the wick is held. The openings or slits *a* in the outer cylinder only extends downwardly from the upper end a comparatively short distance, as wicks used with this class of burner are not of great length, seldom exceeding six inches.

An inner cylinder or casing D is securely attached at its base to the outer cylinder, and between the outer and inner cylinders the wick is located. The outer cylinder, near its lower end, has suitable openings, through which the oil is fed to the wick from the supply-reservoir.

The rack-bars B B, which are located in the tubes or casings *a'*, extend downward in said tubes and engage with pinions E E, located on the shaft E', which extends through the inner and outer casings A and D, one end thereof carrying a handle for operating the same, while centrally the said shaft is provided with a pinion F, which meshes with a rack-bar F', journaled loosely in a recessed or U-shaped guide-bar G, attached at its ends to the upper and lower cross-bars H and I, which are securely attached to the inner cylinder, as shown. The rack-bar F is of substantially the same length as the rack-bars B B, so that it will move vertically in unison therewith.

K refers to a rod, the upper end *k* being key-ended, so as to retain thereon the flame-spreader L, which is of ordinary construction, such as is used with this class of tubular oil-burners. Beneath the key-ended portion of the rod K is a fixed nut *k'*, which, with the nut *k''*, holds the rod K centrally in a vertical position, and permits the same to be rotated, the said rod also passing through the cross-pieces H and I. This rod has its upper portion screw-threaded, as shown at *m*, and this screw-threaded portion of the rod carries a traveling or movable stop M, the outer end thereof moving in the upper portion of the guide G.

N refers to a combined trimmer and wrench, which is provided centrally with a rectangular opening *n* adapted to be placed upon the end of the rod K for turning the same, and when turned the ends thereof will traverse the upper edges of the inner and outer cylinders to remove the burned portions of the wick. This trimmer is provided on its under side with depending lugs *n'*, which abut against the inner face of the inner cylinder, and assist in holding the same steady. The inner cylinder has attached thereto a central-draft tube O, which is provided with wings *o* for maintaining the same in position. Near the lower portion of the central-draft tube is

a brace *g*, which is attached to the bottom of said tube and to the guide *G*.

In operation, the lower portion of the burner is secured to the lamp, and oil passes to the wick through the usual openings in the outer cylinder; the lower portion of the cylinder communicating with the atmosphere to supply air to the flame. The wick is secured between the collars *C* and *C'*, the outer collar carrying the rack-bars *B B*. The wick and holder are then passed between the inner and outer cylinders until the rack-bars engage with the pinions *E E*, the central shaft having been turned to properly position the movable stop *M*, which should be located a slight distance above the rack-bar *F'*, when it is in engagement with the pinion *F*. When the wick is its full length and has been turned down to its fullest extent, the parts occupy a position as in Fig. 1, and as the wick is consumed it can be raised by turning the shaft *E*. The movable stop *M* prevents the wick being raised excessively to cause smoking. When it is desired to trim the wick, the flame-spreader *L* is removed and the combined trimmer and wrench positioned on the end of the central rod *K*, and by giving the same a single rotation the burned portion of the wick will be removed and the stop *M* advanced on the shaft, after which the trimmer is removed and the flame-spreader replaced.

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

1. In an oil-burner, the combination of the inner and outer cylinders, said outer cylinder having slots and covering-cases, depending rack-bars secured to the outer wick-collar and located within the casings to engage with pinions mounted on the operating-shaft, a central pinion mounted on said shaft to engage with a movable rack-bar, together with a central rod carrying a flame-spreader, and a movable stop to limit the movement of the central rack-bar, substantially as set forth.

2. The combination, in an oil-burner constructed substantially as shown, of a vertically-supported rack-bar engaging with a pinion on the wick-operating shaft, a central rod

K, carrying a movable stop with which the central rack-bar engages to limit the upward movement of the wick and wick-carrying mechanism, substantially as set forth.

3. The combination, with an oil-burner constructed substantially as shown, of a central rod *K*, carrying a stop which limits the upward movement of the wick-carrying mechanism, said stop being suitably held against rotation, and a wrench having ends which extend over the wick-cylinder to simultaneously remove the burned portions of the wick and turn the shaft to elevate the movable stop, substantially as set forth.

4. The combination, in an oil-burner, of a central shaft *K*, the upper portion thereof being key-ended for the support of a flame-spreader, the upper portion being screw-threaded and provided with a movable stop *M*, a grooved guide *G*, within which one end of the stop lies, together with a rack-bar lying within said guide below the stop to engage with a pinion on the wick-operating shaft, substantially as shown, and for the purpose set forth.

5. The combination, with an oil-burner constructed substantially as shown and having a central-draft tube, of a rod *K*, adapted to be rotated, a movable stop carried thereby, said stop moving in advance of the wick-operating mechanism when the central shaft is rotated, and means adapted to contact with said stop for limiting the upward movement of the wick-elevating mechanism, substantially as set forth.

6. As an improved article of manufacture, a combined wrench and wick-trimmer, the central portion of which is provided with a rectangular opening, the ends thereof which lie above the wick-chamber having cutting-edges and depending lugs *n'*, substantially as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES E. BELL.

Witnesses:

MARTIN L. STOVER,
J. SPENCER FISHER.