

No. 747,875.

PATENTED DEC. 22, 1903.

H. E. FISHBOUGH.
LUBRICATOR.

APPLICATION FILED FEB. 27, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

FIG. 1.

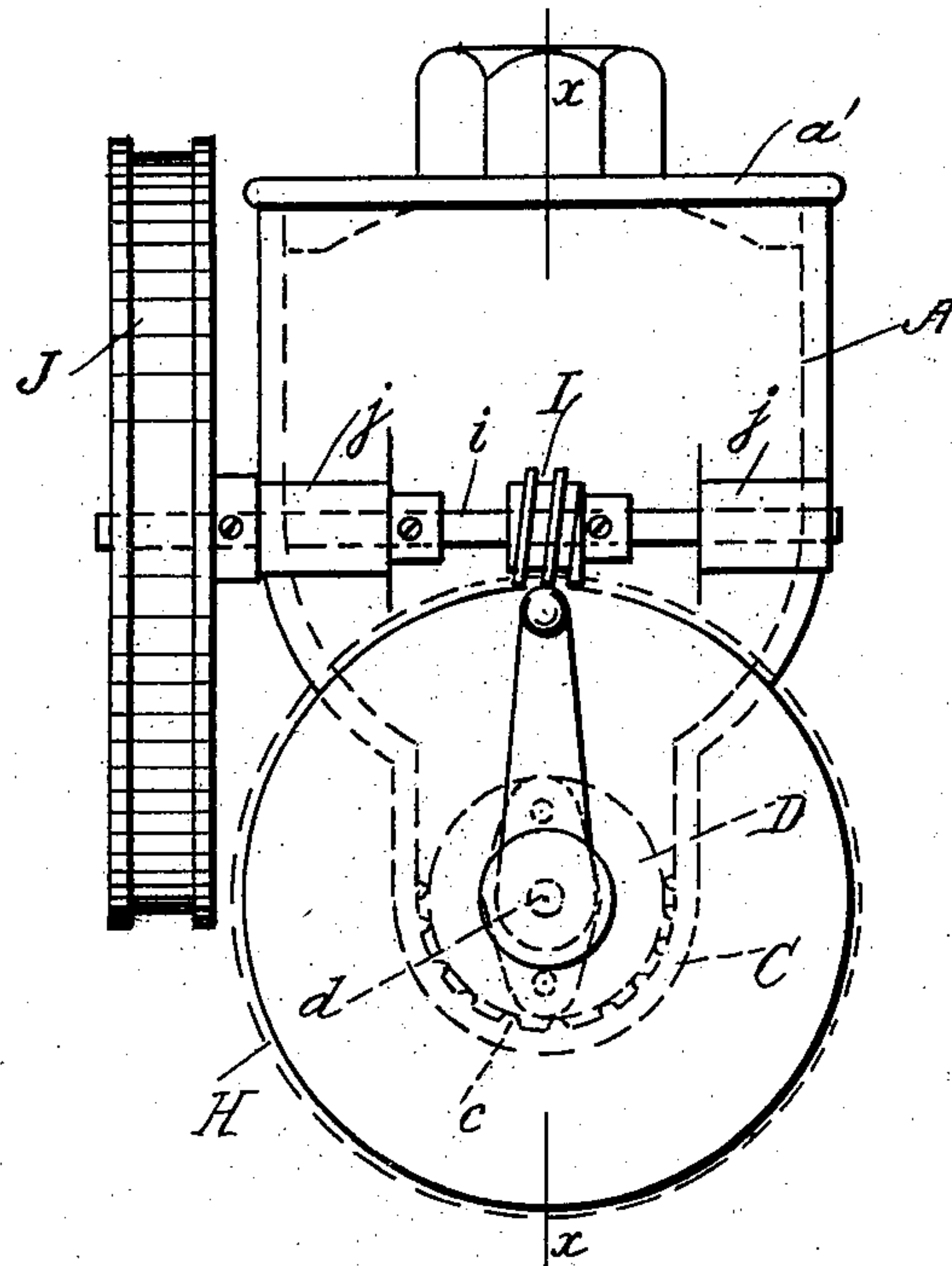
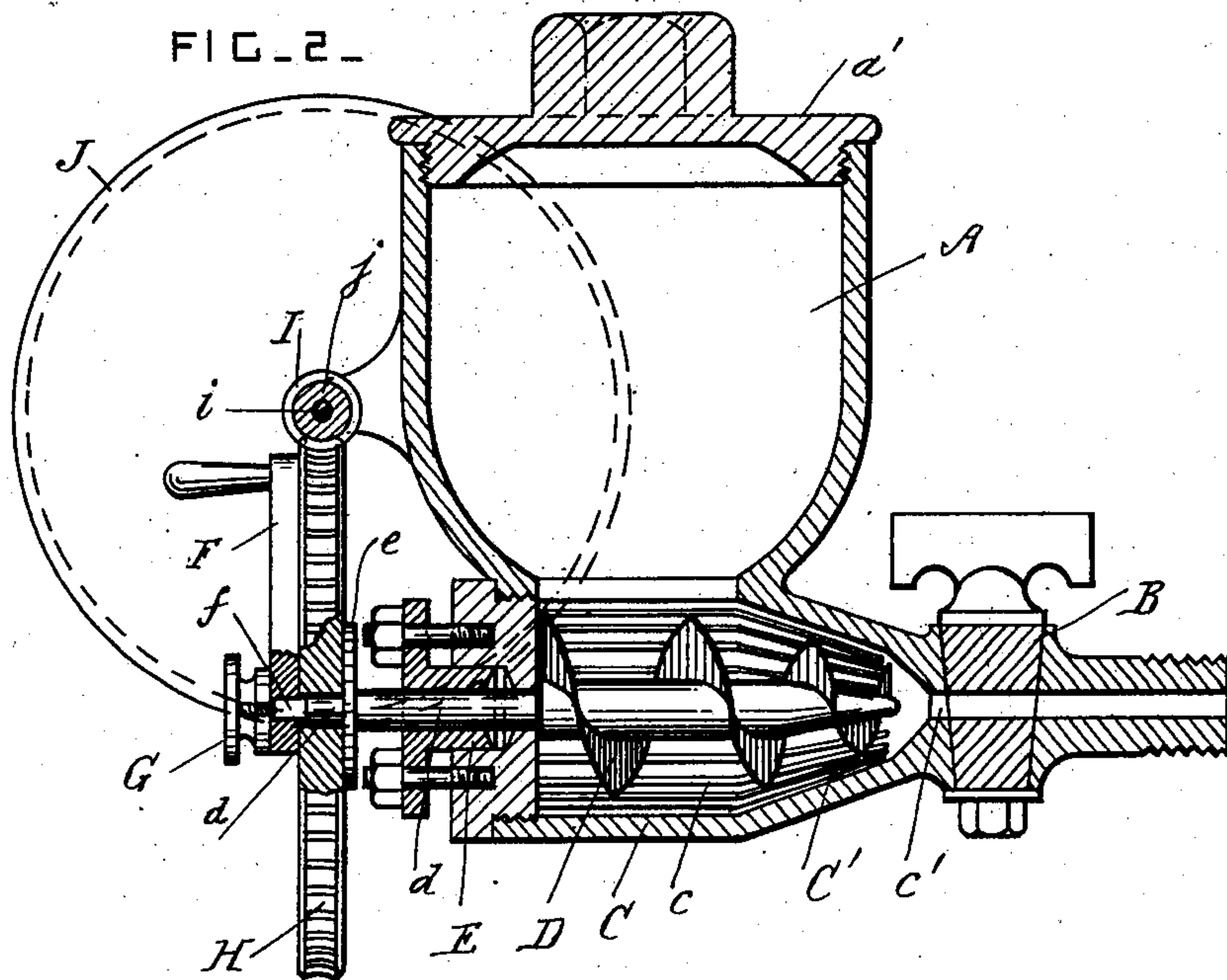


FIG. 2.



WITNESSES

John C. O'Shea
J. Spragg Poul

INVENTOR

Harry E. Fishbough
by Herbert W. Jenner.
Attorney

No. 747,875.

PATENTED DEC. 22, 1903.

H. E. FISHBOUGH.
LUBRICATOR.

APPLICATION FILED FEB. 27, 1903.

NO MODEL.

2 SHEETS—SHEET 2.

FIG. 3.

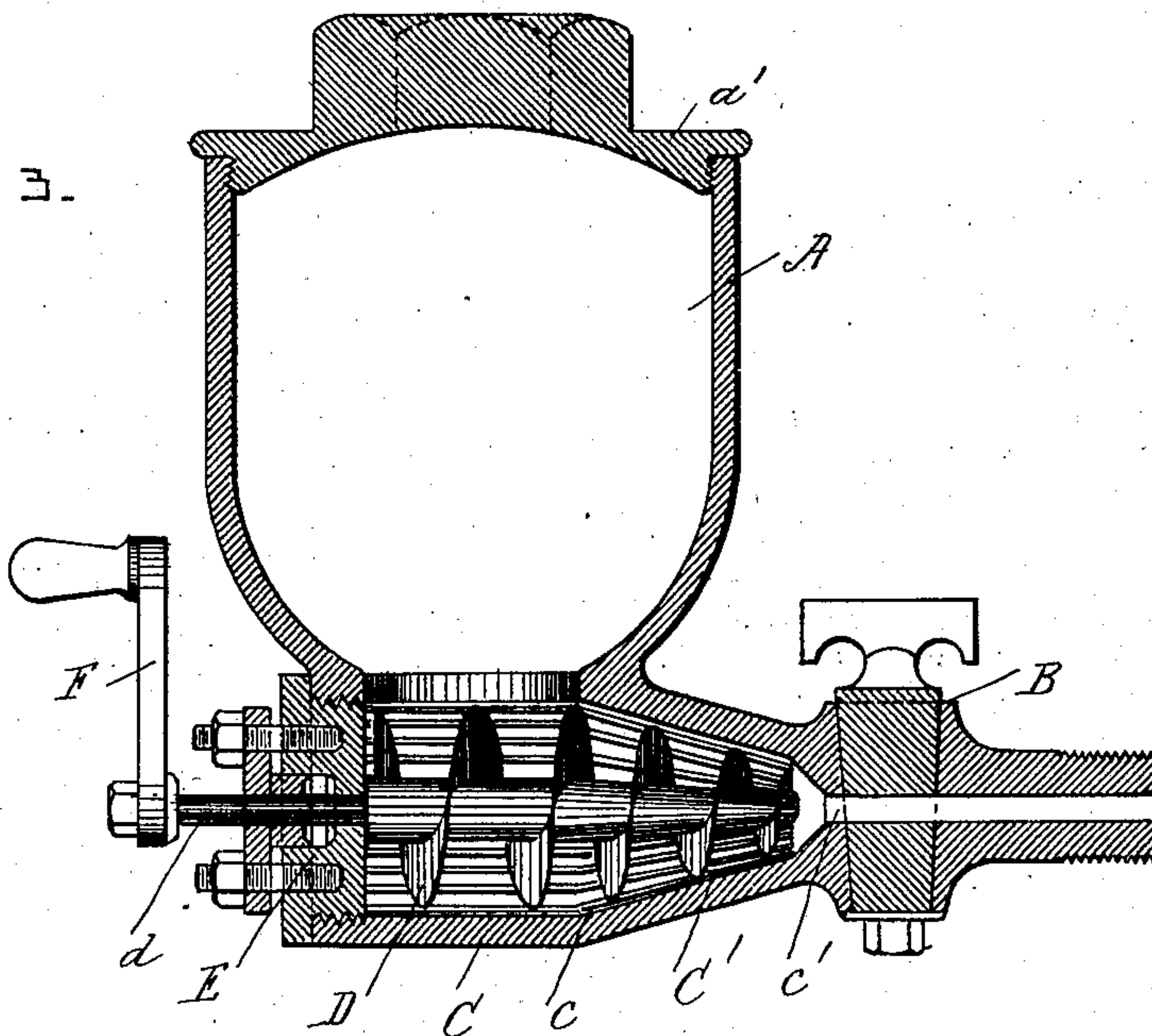
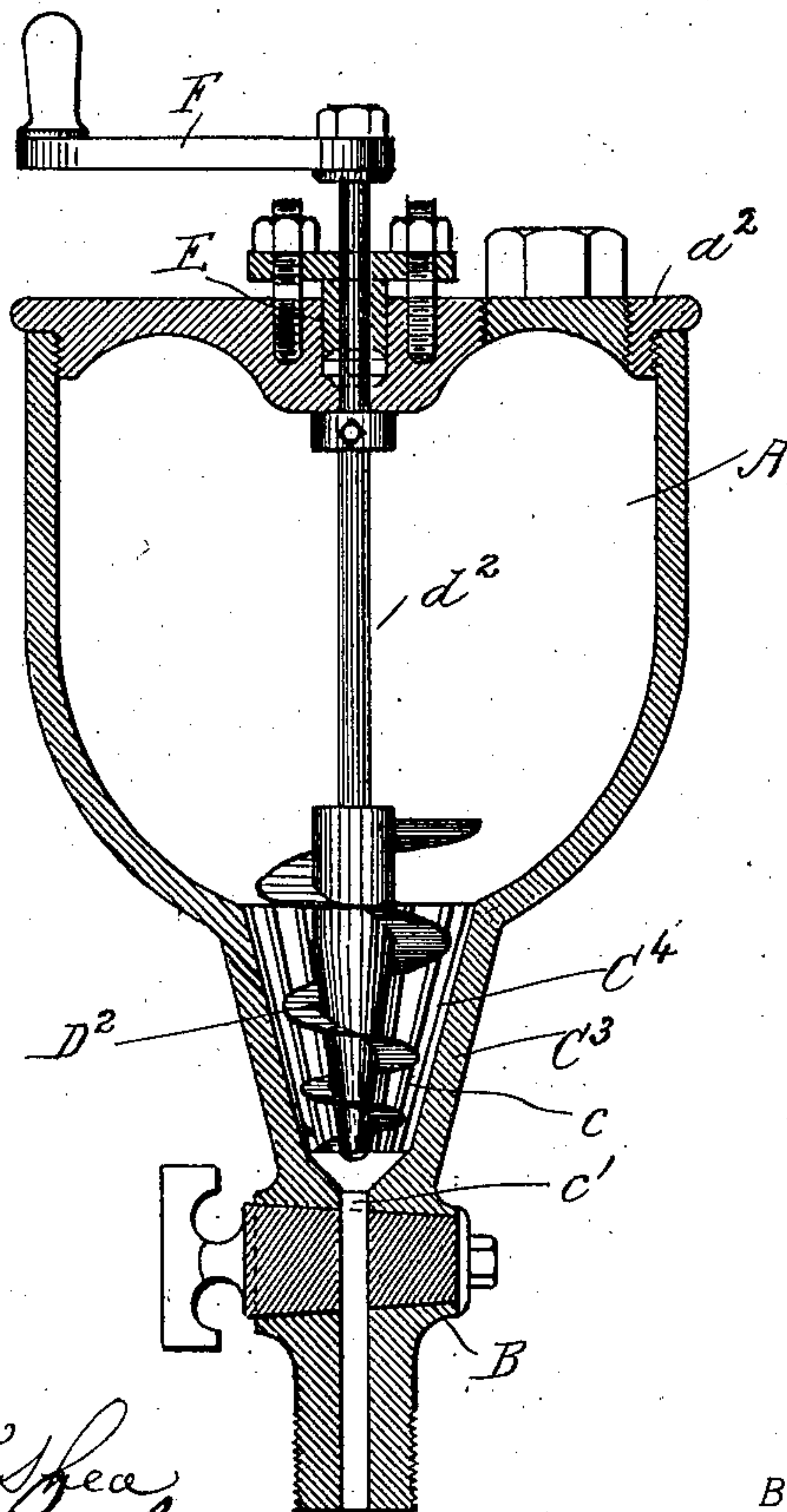


FIG. 4.



WITNESSES:

John C. Oshea
J. Emmet Fowler

INVENTOR.

BY *Harry E. Fishbough*
Herbert W. Jenner
ATTORNEY.

UNITED STATES PATENT OFFICE.

HARRY E. FISHBOUGH, OF BUCYRUS, OHIO.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 747,875, dated December 22, 1903.

Application filed February 27, 1903. Serial No. 145,397. (No model.)

To all whom it may concern:

Be it known that I, HARRY E. FISHBOUGH, a citizen of the United States, residing at Bucyrus, in the county of Crawford and State of Ohio, have invented certain new and useful Improvements in Lubricators; 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.

This invention relates to force-feed lubricators used to lubricate steam-engine and other cylinders; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is an end view of a lubricator. Fig. 2 is a longitudinal section through the lubricator, taken on the line *x x* in Fig. 1. Figs. 3 and 4 are sections through the lubricator, showing modifications.

The lubricator is specially adapted for feeding mixtures of oil and plumbago or other heavy and thick lubricant to the cylinders of steam-engines.

A is a cup or reservoir for the lubricant, and *a'* is its lid or cover.

B is a valve by means of which the cup is connected to the cylinder and which can be used to shut off the connection between these parts.

C is a conveyer-chamber provided with a conical portion *C'*, but which may be made conical for the whole of its length, if desired. This chamber is arranged between the cup and the valve, and it is provided with longitudinal projecting ribs *c* and an outlet *c'*.

D is a spirial conveyer arranged in the conveyer-chamber. This conveyer is preferably conical, and it is provided with an operating-shaft *d* for revolving it. The small end of the conveyer is arranged in the small end of the chamber near the said outlet.

E is a stuffing-box of any approved construction, and the shaft *d* is journaled in this stuffing-box. A friction-plate *e* is secured on the shaft *d*, and F is a handle slidable on a rectangular portion *f* of the shaft *d*.

G is a thumb-nut which engages with the screw-threaded end of the shaft *d*.

H is a worm-wheel which is mounted loose on the shaft *d* between the friction-plate *e*

and the handle. When the thumb-nut is screwed up, this worm-wheel is secured on the shaft *d*, so that it can drive the conveyer.

I is a worm secured on a shaft *i*, which is journaled in bearings *j* on the cup and which gears into the worm-wheel H.

J is a pulley for revolving the shaft *i* continuously by means of a belt from any part of the engine.

The conveyer is revolved slowly and continuously by the engine as long as the engine is at work, and it varies in speed with the engine. When the engine is not running or at any other time, the lubricant can be forced into the cylinder by hand by unscrewing the thumb-nut and revolving the conveyer by means of the handle. The ribs *c* prevent the lubricant from revolving with the conveyer without passing through the outlet.

In the modification shown in Fig. 3 the power driving mechanism is dispensed with, but the lubricator is otherwise the same as that shown in Fig. 2.

In the modification shown in Fig. 4 the power driving mechanism is also dispensed with, but the conveyer is arranged to work vertically instead of horizontally. In this form of the device the large end of the conveyer is allowed to project into the cup, so as to work the lubricant into the chamber.

D² is the modified conveyer, which works in the chamber C³, having ribs C⁴, and *d*² is the driving-shaft of the conveyer, which is supported by the lid *a*².

It is obvious that the conveyer can be right or left hand and that the vertical conveyer can be provided with power driving mechanism, if desired, and that the power driving mechanism can be of any approved construction.

What I claim is—

1. In a lubricator, the combination, with a closed cup for the lubricant, and a conveyer-chamber provided with an outlet, said chamber being arranged under the said cup and fed with lubricant from it by gravity; of a spirial conveyer arranged in the said chamber and operating to force the lubricant through the said outlet, a worm-wheel operatively connected with the said conveyer, a driving-shaft provided with a driving-wheel and a

worm which gears into the said worm-wheel, and bearings projecting from the said cup and supporting the said driving-shaft.

2. In a lubricator, the combination, with a
5 cup, and a conveyer-chamber connected thereto and provided with an outlet, of a spiral conveyer arranged in the said chamber and provided with a driving-shaft having a screw-threaded end and a friction-plate, a handle
10 revolving with the said shaft and slidable longitudinally on it, a driving-wheel mounted

loose on the said shaft between the said handle and plate, and a nut engaging with the said screw-threaded end and clamping the said wheel to the shaft.

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

HARRY E. FISHBOUGH.

Witnesses:

E. J. ROELLE,
J. W. WRIGHT.