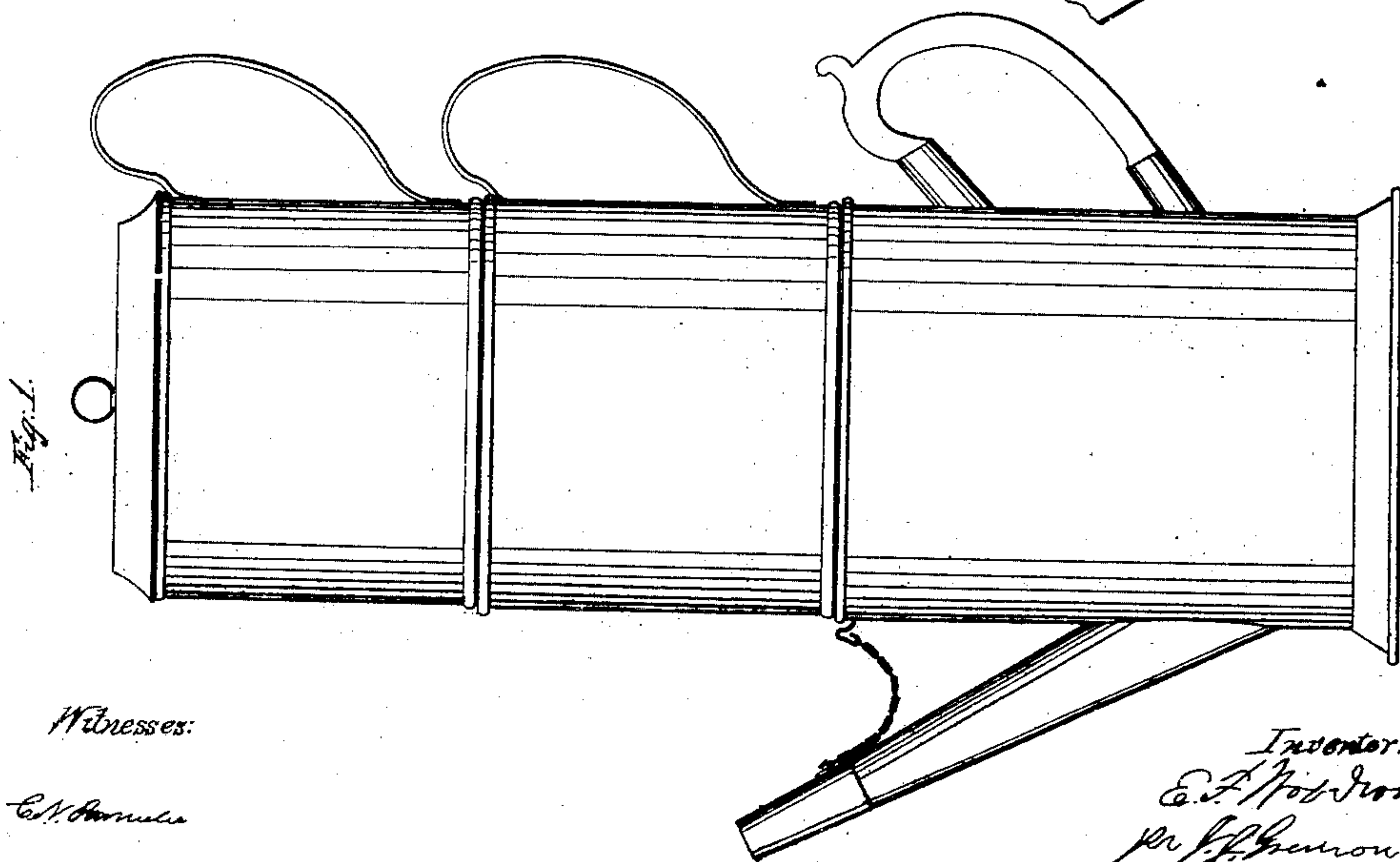
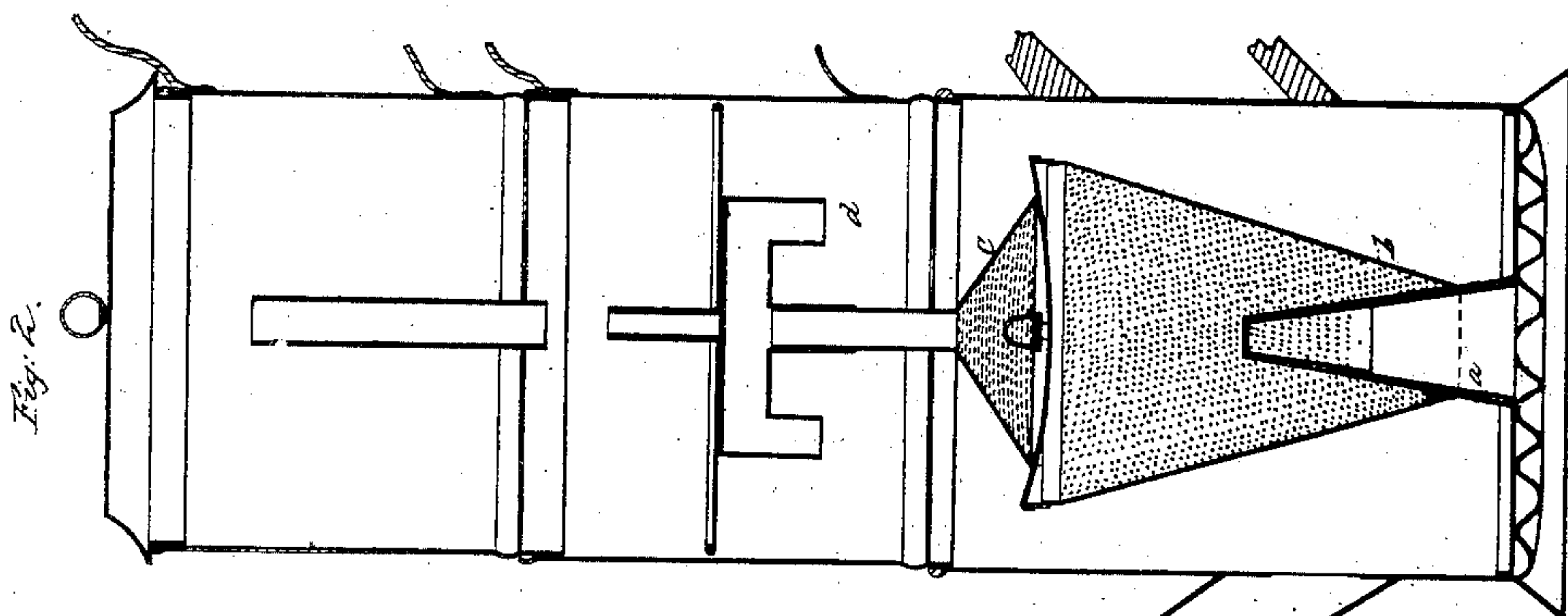
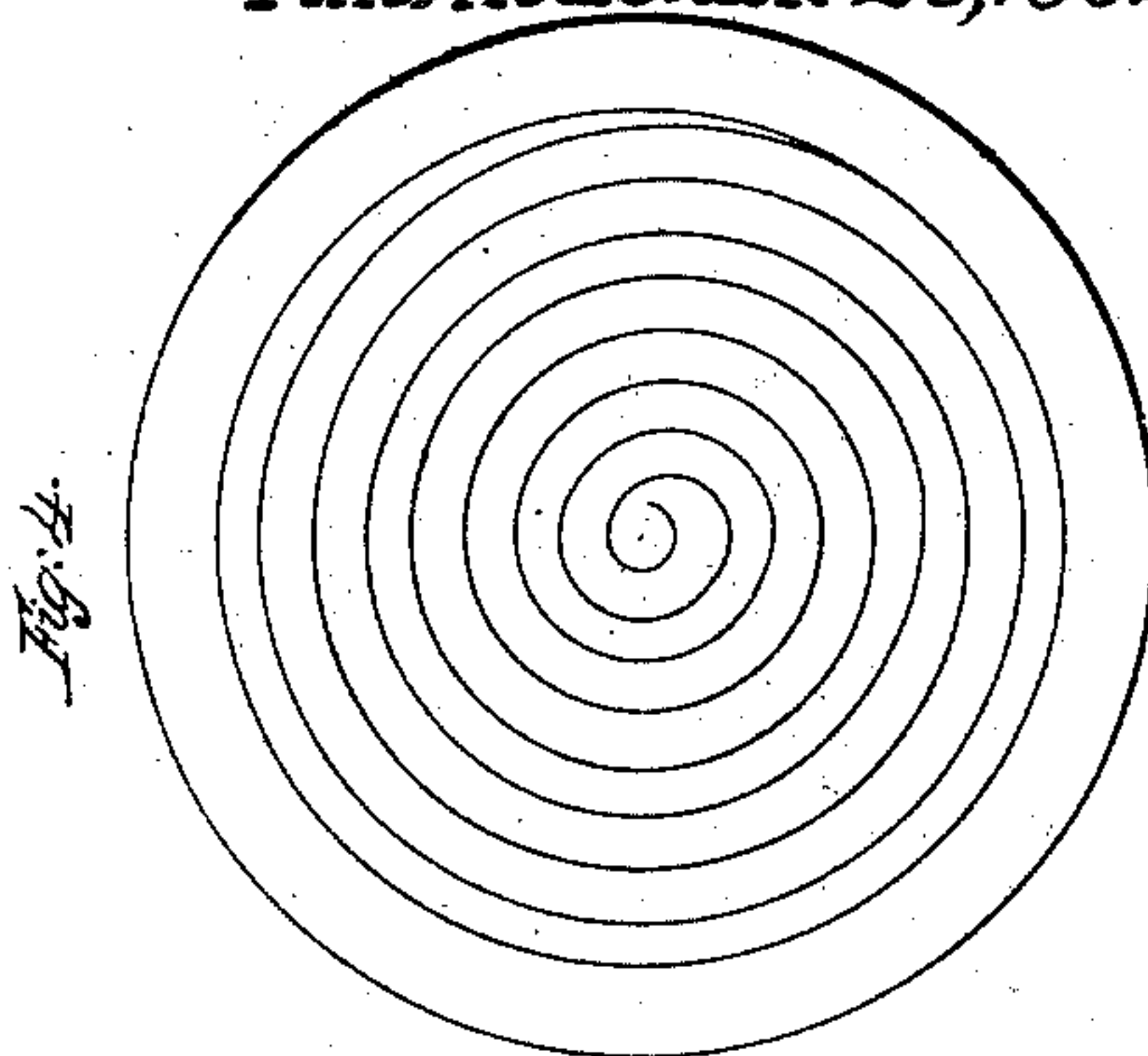
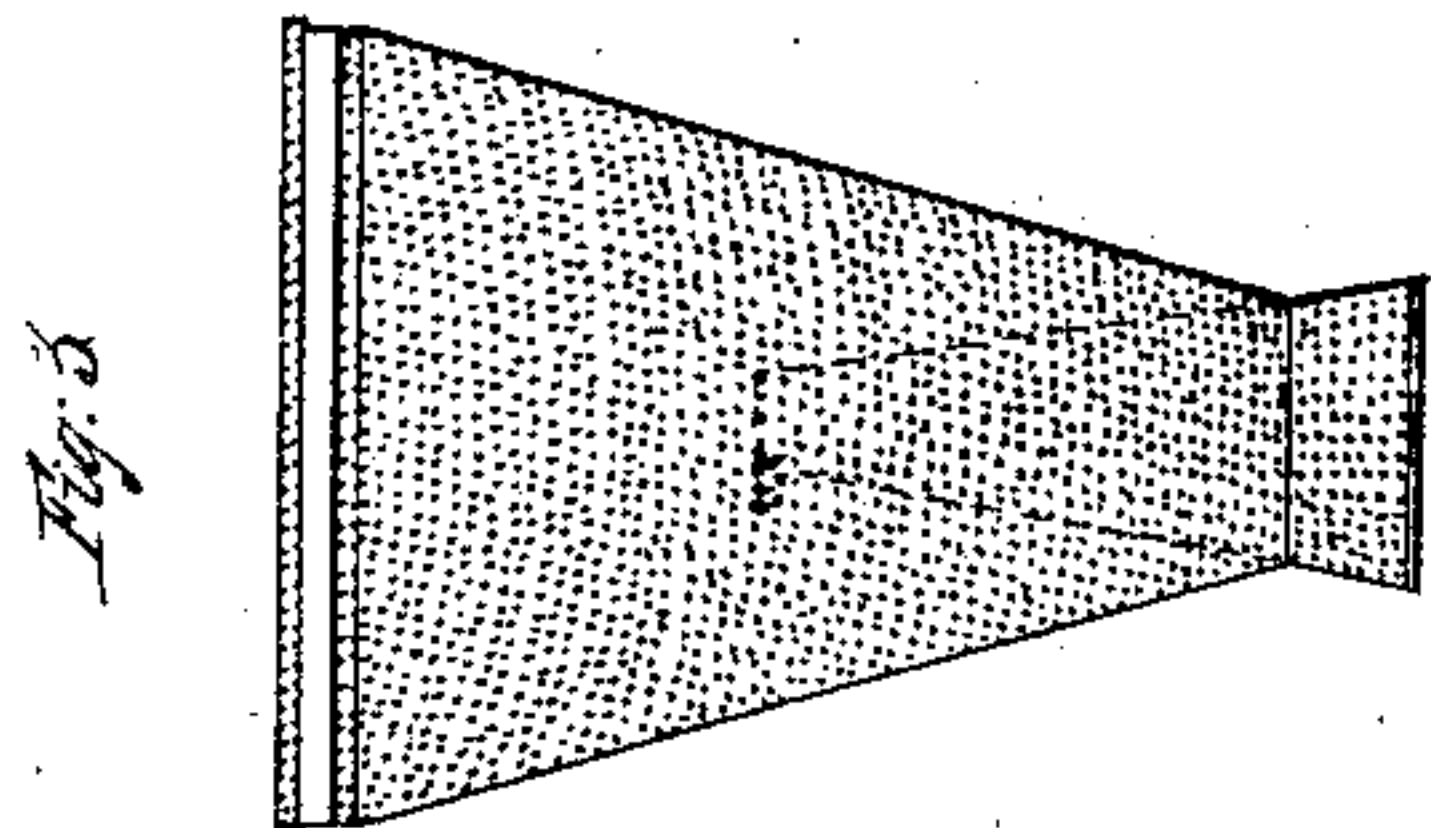


E. F. Woodward

Coffee Pot

No 34,801.

Patented Mar. 25, 1862.



Witnesses:

C. N. Arnold

Inventor:
E. F. Woodward
Per J. J. Burton

UNITED STATES PATENT OFFICE.

EDWARD F. WOODWARD, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN COFFEE-BOILERS.

Specification forming part of Letters Patent No. 34,801, dated March 25, 1862.

To all whom it may concern:

Be it known that I, EDWARD F. WOODWARD, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Coffee-Pots and other Boilers for Making Extracts, &c., a part of which are also applicable to other boilers for heating, making steam, &c.; and I do hereby describe and ascertain my said improvements, referring to the accompanying drawings, in which—

Figure 1 is a general view of the coffee-pot. Fig. 2 is a vertical section through the center. Fig. 3 shows the cone-holder for the ground coffee, &c. Fig. 4 is a plan of the bottom of the boiler.

My improvements consist in so constructing a coffee-pot or other boiler as to insure a perfect and rapid circulation of the water or other liquid within the boiler, so as to develop the greatest capacity for generating steam.

The construction is as follows: I form the sides, handle, and spout of the coffee-pot in any of the usual and convenient ways, one of which is shown in the drawings. The bottom of this boiler is a coiled tube, commencing at the periphery and terminating at the center, where it extends up in a vertical line a sufficient distance, as clearly seen in Fig. 2. I propose to make this coil in the following way: I take a plate of copper or other suitable metal and strike up or otherwise form (by any of the known devices for forming plate metal) the plate into a spirally-corrugated shape, representing the semi-diameter of the tubular bottom for the lower half. I then form a similar plate to correspond therewith, so that when the two are put together they shall complete the tube. In the upper plate there is an opening into the outer end of the tube, and at the center there is a similar opening. To the latter an upright tube is affixed, as at *a*, Fig. 2. When the bottom thus constructed is affixed in place, both plates may be soldered, seamed, or riveted in place; or for some purposes the inner plate may be removable.

When the boiler is used for making a decoction—as coffee, &c.—the top of the upright pipe *a* should be covered with a cap of wire-gauze or perforated metal, and onto it is fitted a perforated receiver *b*, in which the ground coffee is placed. This receiver should be in form an inverted cone or pyramid, although it may be of cylindrical or other

shape. A cover is fitted onto the rim, and on the under side of the cover of the boiler a perforated cone *c* is fitted, the base of which rests upon the top of the receiver and prevents its rising by the current of liquid, which is put into rapid circulation by the form of the bottom of the boiler.

The action is as follows: Heat is applied to the bottom of the boiler, which causes an upward current through the center tube *a*. This induces a downward flow at the opening into the coil at the periphery, and as the heat increases the current is quickened in the coil. As the hot water is thrown out into the receiver *b*, it is driven through the coffee or other material therein and exhausts the soluble properties thereof in the most efficient and perfect manner. The cone *c*, which holds down the receiver *b*, further serves to conduct heat to a reservoir or supplementary boiler *d* above when used, and this effect may be further aided by a central tube within the said reservoir *d*, into which the steam from the lower boiler rises, and through which it may, if desired, be made to pass. In the upper reservoir milk or eggs may be boiled, or it may be used for other purposes. A third reservoir may be added above, if found advantageous, for any purpose, and be in like manner heated from the first boiler.

It is obvious that the bottom plate or that above it may be made flat, the tube being only formed in one of them, in which case one side of the tube will be flat.

Having thus fully described my improvement in boilers, I wish it to be understood that I do not claim heating boilers or other vessels by a coil of pipe, as that has before been done; but

What I do claim as my invention, and for which I desire Letters Patent, is—

1. Causing a circulation by means of a tubular or channel-formed bottom, as herein set forth.

2. Forming the tubular bottom by means of one or two corrugated plates, as specified, in combination with the circulating apparatus, the receiver herein specified.

3. The cone *c* or its equivalent for conveying heat to the upper reservoir *d*, as described.

EDWARD F. WOODWARD.

Witnesses:

CHARLES F. SANFORD,
J. S. MERRIAM.