

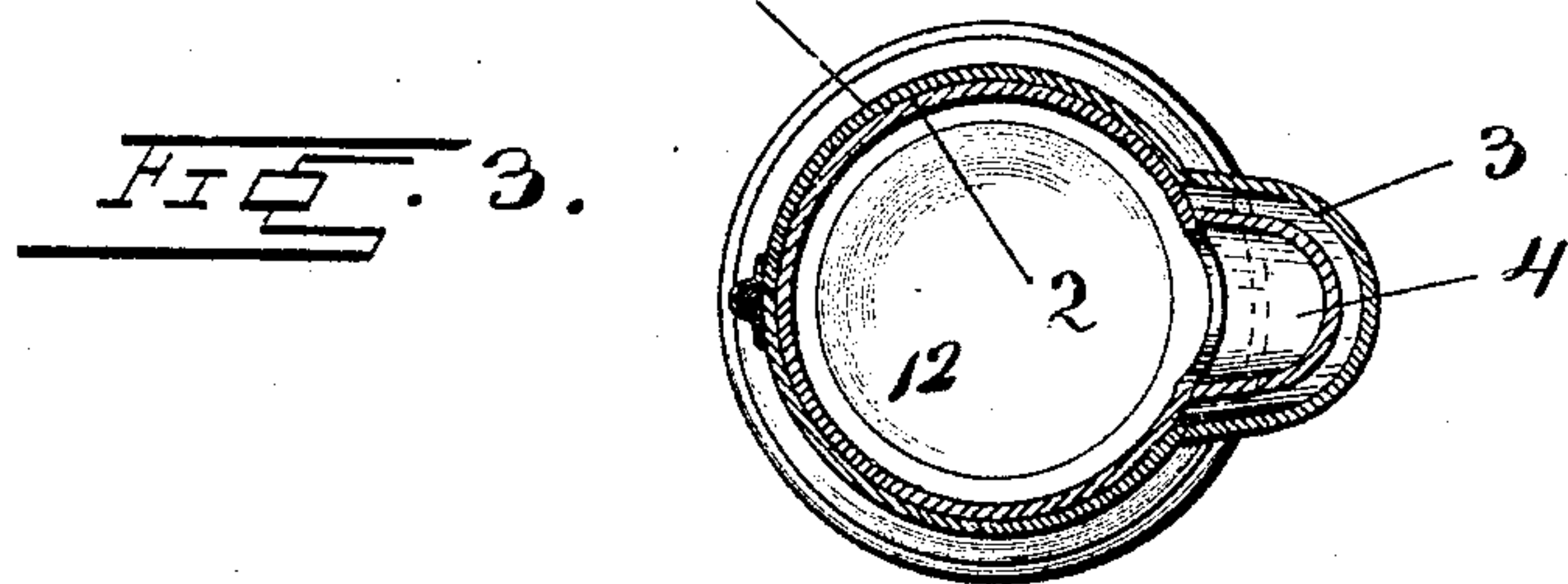
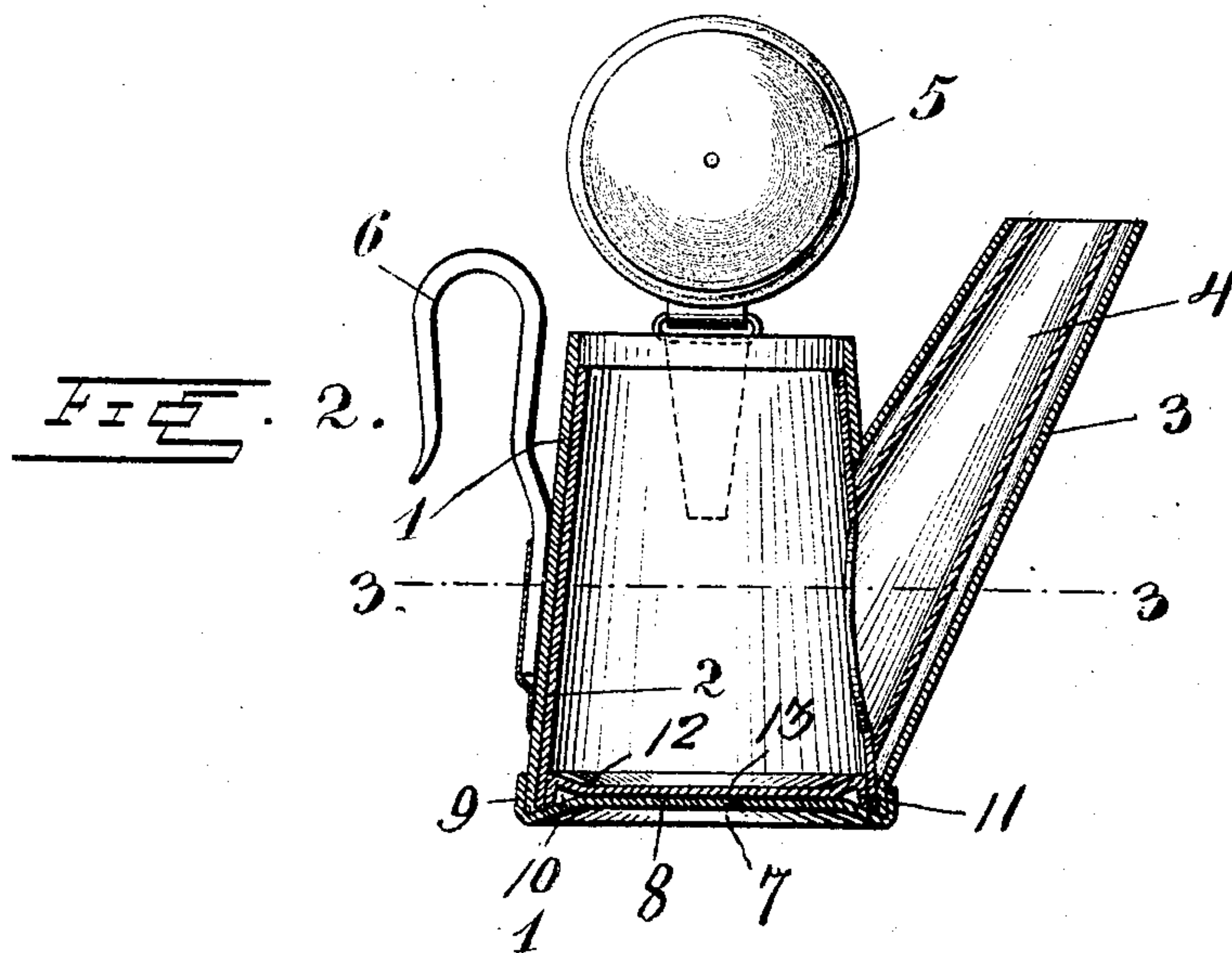
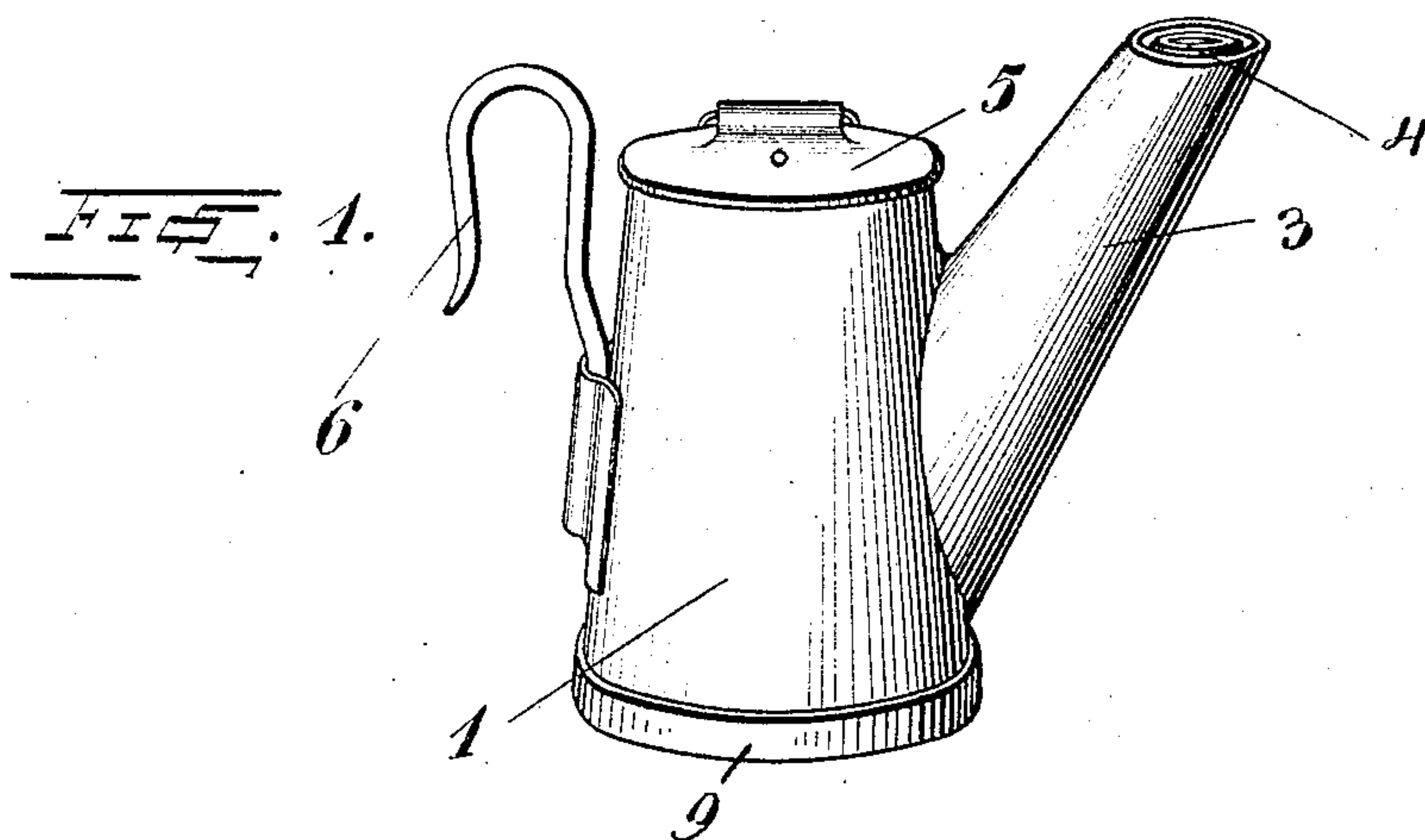
No. 764,700.

PATENTED JULY 12, 1904.

G. ANTON.
MINER'S LAMP.

APPLICATION FILED JAN. 4, 1904.

NO MODEL.



Witnesses

K. Munk
Edmundson

Inventor

George Anton

By

A. Blivison

Attorney

UNITED STATES PATENT OFFICE.

GEORGE ANTON, OF MONONGAHELA, PENNSYLVANIA.

MINER'S LAMP.

SPECIFICATION forming part of Letters Patent No. 764,700, dated July 12, 1904.

Application filed January 4, 1904. Serial No. 187,708. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ANTON, a citizen of the United States, residing at Monongahela city, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Miners' Lamps; and I do 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.

My invention relates to miners' lamps of that type which burn tallow, paraffin, wax, or the like.

The object of my invention is to improve and simplify the construction and operation of devices of this character, and thereby render them more durable and efficient in use.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a perspective view of a miner's lamp constructed in accordance with my invention. Fig. 2 is a vertical sectional view through the same. Fig. 3 is a horizontal section taken on the line 3 3 of Fig. 2.

In carrying out my invention I construct the lamp-body of an outer shell 1, of metal or other material which is a relatively poor conductor of heat, and an inner shell 2, of metal or other material which is a relatively good heat-conductor. These shells may be of any shape or form. In the drawings a well-known form of lamp is illustrated; but it will be understood that my invention may be embodied in any type of lamp for burning tallow, paraffin, wax, or the like. The inner shell or lining 2, which in practice I prefer to make of copper, may be spaced from the outer shell or body 1, which is usually constructed of tinned sheet-iron or sheet-tin; but I preferably have the two shells in contact with each other, as shown. The usual wick spout or tube projects angularly from the body of the lamp and comprises outer and inner tubes 3 and 4 of the same materials as the outer and inner shells of the body, the inner copper

tube 4 being preferably spaced from the outer sheet-iron tube 3, as shown, and being secured to the inner copper shell or lining 2 of the lamp-body without contacting with the outer tube 4 or the outer shell 1. The open top of the lamp-body is adapted to be closed by the usual hinged cover or closure 5, and the usual attaching hook or device 6 is provided on one side of the body.

By constructing the inner shell or lining 2 and the inner wick-tube 4 of copper or other material having a relatively high coefficient of heat conductivity and the outer shell 1 and wick-tube 3 of sheet-iron or other material having a relatively low coefficient of heat conductivity the heat generated by the flame at the outer end of the inner copper tube 4 will travel readily down the said copper tube and spread throughout the entire inner copper shell or body, and thereby produce sufficient heat within the lamp to maintain its entire contents in a liquid state, while at the same time the outer sheet-iron shell will remain sufficiently cool to be handled with the naked hands. Owing to the readiness of the copper tube and shell to conduct heat, the entire body of tallow, paraffin, wax, or other solid contents of the lamp will be quickly melted when the latter is lighted and will be maintained in its liquid state, thereby increasing the efficiency of the lamp.

It will be observed that the inner and outer shells are counterparts, each comprising a body, a bottom, and a wick tube or spout, these corresponding parts forming a double-walled device the outer wall of which is a poorer conductor of heat than the inner wall to prevent the radiation of heat, and thereby confine the heat to the inner shell. It will thus be seen that all of the heat transmitted to the inner shell from the wick-tube 4 will be retained and employed to secure a rapid melting of the contained fuel.

In order to effectually secure the parts together, I provide the bottom piece 7 of the outer shell 3 with an upwardly-projecting portion 8, formed by dishing the same, as shown in Fig. 2, and extend the edge upwardly to form a flange 9, this construction producing a groove or recess 10 between said

portion 8 and flange 9 to receive the edges of the body portions of said shells. This groove or recess 10 receives a downwardly-projecting flange 11 on the bottom piece 12 of the inner shell 4, which has a depressed portion 13 resting on the portion 8 of the outer bottom piece 7. By this construction it will be seen that the flange 11 crowds the edges of the body portions of the two shells against the flange 9, thus connecting them together. These parts may be further united by other means of fastening, if desired, and the construction shown will render the connection more secure. The portions 8 and 13 of the two bottoms contact, so that the same mutually reinforce each other, as will be readily understood.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is--

A lamp for burning tallow, wax or the like, comprising an outer shell of metal having a relatively low coefficient of heat conductivity, and an inner shell of metal having a relatively high coefficient of heat conductivity, each of said shells comprising a body, a bottom and a wick tube or spout, the bottom of the outer shell having a flange and a raised portion, forming an annular groove or recess receiving the lower edges of the body portions of the shells, and the bottom of the inner shell having a depressed portion seated on said raised portion of the bottom of the outer shell, and a flange projecting into said groove or recess and crowding the said lower edges of the body portions of the shells outwardly toward and against the said flange of the bottom of the outer shell, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE ANTON.

Witnesses:

CLIFFORD PATTERSON,
GEO. T. LINN.