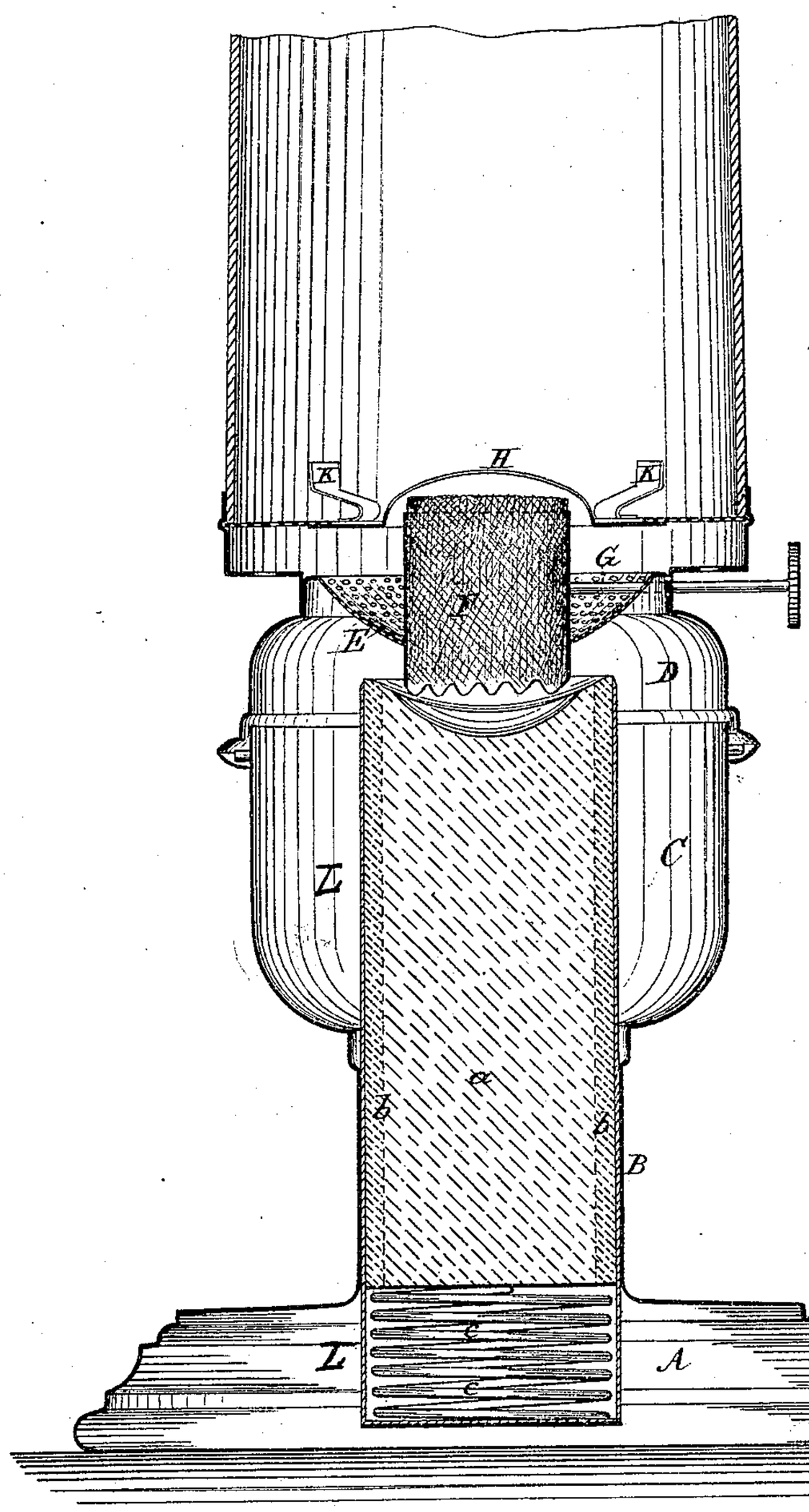
J. A. PEASE.

Candle Lamps.

No. 138,925. Patented May 13, 1873.

Fig. 1.



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JULIUS A. PEASE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CANDLE-LAMPS.

Specification forming part of Letters Patent No. **138,925,** dated May 13, 1873; application filed May 1, 1873.

To all whom it may concern:

Be it known that I, JULIUS A. PEASE, of the city of Boston, in the county of Suffolk and State of Massachusetts, have made a new and useful Improvement in Candles and in the devices used for burning the same, of which the following is a full and exact description, reference being had to the accompanying sheet of drawing, which forms a part of this specification, and which shows a longitudinal vertical section, partly in elevation.

The invention consists, first, of a compound wickless candle, the outer shell being made of a hard, difficult-fusing candle-stock, such as adamantine, and the filling or central portion of a cheaper stock, such as crude paraffine, tallow, and the cheaper kinds of wax. In fact, my improvement enables me to employ as the central portion many kinds of material which could not be used for ordinary candles. The shell being less fusible, the top of the candle while burning always presents a cup-shape to hold the melted material, which is taken up by a section of wick suspended above it in a lamp-head. The second part of the invention relates to certain modifications of the candle-burner whereby the combination is rendered more perfect, and the candle is prevented from melting by the action of the burner.

The general construction of the candle-burner or lamp is the same as what has been long known as the coach lamp or candle—that is, it contains a hollow upright cylinder or candle-tube L, supported either on a base when to be used as a table-light, or attached to a suitable bracket when used for lighting railroad cars, coaches, ship-cabins, and in other like situations in which it is to be left attached to any part of the structure. The mode of attaching the lamp by suitable fixtures, being well known, need not be described. In the drawing I have shown the invention in the form of a common metal table-lamp.

The following is a description of my candle-burning lamp: I make my lamp of any suitable material, with stand A, an upright cylinder connection B, waste-cup C, and cap D, in which I place a sunken perforated cone, E, through which my wick-tube F runs. My candle is made the size to fill the candle-tube L, or nearly so, and is forced against the bottom of the wick-tube F, by means of a spiral spring, *c*, placed in said candle-tube L, and under the candle. The candle is made without a wick, the wick being in the burner. The wick-tube projects, say a quarter of an inch, more or less, below the perforated cone. Said cone is a little above the tube, so as to prevent the tube from becoming heated, which would melt the candle on its sides and make it stick. A ratchet G in the wick-tube turns the wick up or down as usual in lamps to increase the light. The lamp-head is provided with a spreader, similar to the spreader of a kerosene lamp, with a chimney. The several parts of the lamp-head do not materially differ from what may be found in many oil lamps. The new feature is the so arranging the parts that there is no metallic contact of cone E and the candle-tube L, or between the wick-tube and the metal of the candle-tube. The object of this arrangement is to prevent the heat of the burner from being conducted to the candle-tube so as to melt it, and cause it to stick in the socket so that it could not be moved up by the spring. No melting will take place, except part at the top of the candle. Any overflow will run into drip-cup C.

The following is the construction of the candle: The central portion is made of any cheap, solid hydrocarbon, such as paraffine, wax, or of any solid fat, such as tallow, or equivalent material. It is not essential that it should have a high melting-point. I find that crude paraffine answers very well, and from its cheapness is a very suitable material. Other carbonaceous materials may be employed, either alone or combined with the paraffine or tallow, or with each other, such as rosin, asphaltum, vegetable wax. This central portion constitutes the body of the candle, and furnishes most of the light when burned. The shell or casing *b* must be made of a material not readily fusible, such as adamantine or equivalent hard candle-stock. As the shell melts at a greater temperature than the central portion, there will always be a cup-shaped top to the candle while burning, which serves as a reservoir to feed the wick. The spring *c* keeps the body of the candle pressed up against the cone, so that the wick always dips into the cup-shaped top of the candle. An ordinary lamp-chimney

is fastened to the lamp-head by any suitable fastening. In the drawing, the spring-catches K K show a suitable fastening for the chimney; but any other suitable device may be employed.

I do not claim the lamp-head or lamp-burner, with the devices for supporting the chimney; nor the means for lowering and raising the wick; nor the stand, the lamp-tube, and spring for raising the candle, as these are well known in the ordinary coach or lamp candlestick. The new feature in the construction of the apparatus for burning the candle is, the arrangement whereby the lamp-head is kept from contact with the metal tube which holds the candle, so as to prevent the melting of the candle.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The compound wickless candle, made of a shell of hard candle-stock and a central filling of other material, substantially such as specified.

2. The combination of the candle-tube and drip-cup with the wick-tube and perforated cone in the manner described, so that the cone and wick-tube do not come in contact with the candle-tube as and for the purpose set forth.

JULIUS A. PEASE.

Witnesses:
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