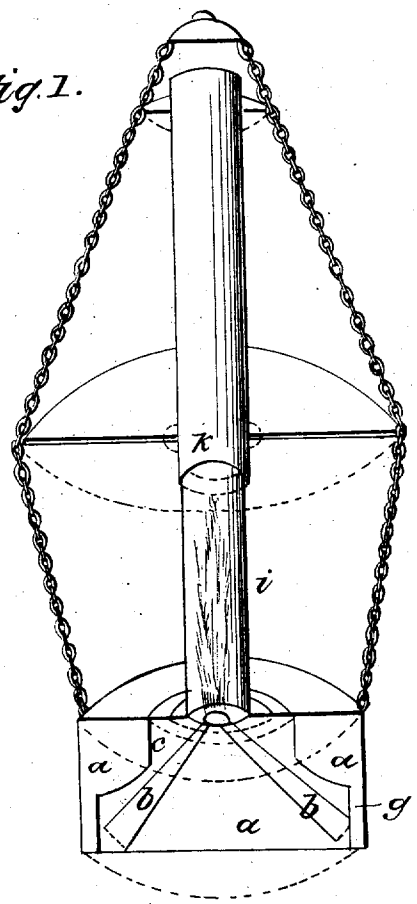
7843X

I. M. G. TRUMAN.

Lamp.

Patented Nov. 19, 1833.

Fig. 1.



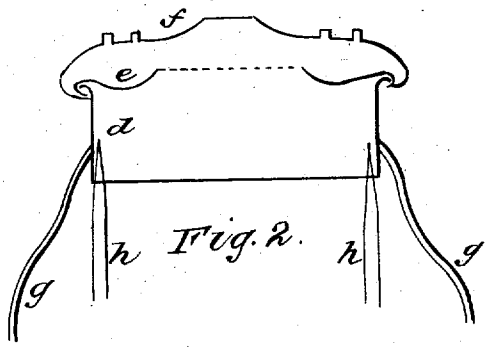


Fig. 2.

N. PETERS, Photo-Lithographer, Washington, D. C.

7843X Nov 19 1833 479

Joseph M. Truman & George Truman Philadelphia Penn.

Letters Patent

To all to whom these Letters Patent may come, Be it known, That the said Joseph M. Truman and George Truman having alleged that their improvement in Lamps called an Oil or Spirit gas Lamp

Now all whom it may concern, Be it known, That the said Joseph M. Truman and George Truman of Philadelphia in the County of Philadelphia have invented an improved Lamp for the burning of Oil Spirit or any of the combustible fluids, Camphine or fluid compounds usually burnt which Lamp is constructed by us the said inventors for oil or spirit gas Lamps and intend to employ it for illuminating Stores, Public buildings, Halls or other places where artificial light may be required and the nature of which invention that the said Lamp is and the manner in which the same is to be used having had to the drawings which accompany and make a part of this specification — We call our Lamp a Gas Lamp because there is a part of it which we denominate the retort or Gas generator in which the vapour arising from the burning fluid or wicks is so far decomposed as to prepare it for the immediate and perfect combustion with a due proportion of atmospheric air in a way to be presently described — By [illegible] in the accompanying drawings is a sectional section shewing that portion of the whole apparatus in one of its forms shewing a Lamp which may be suspended in a Store or the like and a is the cup or reservoir which is to contain the oil or other fluid it has a bottom and sides like the common Sheet Lamp that are or any other number of tubes or burners for containing wicks these are soldered to the bottom of the Lamp by their lower ends which they incline towards each other at their upper ends and bring their flames when ignited into contact with each other or

nearly to C is the part called by us the retort or generator
In Fig 2. a section of this is seen of the full size intended
used by us. d. is a rim of brass or other metal which may
be about three fourths of an inch wide. e. f. are two concave
pieces of metal with their concave sides turned towards
each other thus leaving a channel or space between them they
are both edged, or otherwise joined to the rim d. The upper
plate f. has a round or other shaped orifice in its centre generally
of from three eighths to half an inch in diameter its inner edge being
turned up as shown in the sketch. Sometimes instead of one we make
several orifices, their number and form admitting of considerable
variation whilst their capacity or area is a point of considerable impor-
tance. In the lower plate e. a single orifice is made which may be
an inch or more in diameter or of such size as will take in the neck
or necks at the upper ends of the tubes or burners. Although the proper
to make the retort in the manner described or nearly so we do not con-
fine ourselves thereto but vary this also in different ways. Sometimes
we use a single plate f. omitting the plate e. Fig 2 in which case
it may be flat or concave instead of convex Still leaving the hole or
holes in the centre — As the lower edge of the rim d is not intended
to come into contact with the oil or other material in the reservoir of
the Lamp a. the air of the atmosphere is freely admitted under
it so as to mix with the Gas formed in the retort or generator and
effect its combustion but the rim d, may be perforated with holes
entirely surrounding it below the edging of the plates g. g. rep-
resent legs sometimes used to support the retort or generator
within the reservoir. When tallow or other hard fatty fluid or
stance is employed these legs should be made of stout copper to
serve as heaters that being the best conductor among the cheaper
metals — Instead of these legs we commonly use spring pieces
h. h. or wires to push into sockets rising from the inside of the reservoir
or lamp. other convenient means of supporting the retort will be well
known to be able to raise or lower it for trimming which will frequently

upper one and this the spring and socket readily allow. The flame which is to ascend through the orifice in the plate is to be surrounded by a glass chimney such as is ordinarily used with lamps but this is to be surmounted by a metallic or other tube or chimney which rests upon the lower end of which the glass chimney proper stands. This additional tube or chimney or illuminator is one important element of special importance in the Lamp which we have described. For Lamps of the ordinary size the length of the illuminator should be from twelve to sixteen inches and of about two inches in diameter varying of course with the size of the Lamp and the convergence enlargement or diminution of the flame. When this Lamp is to be used the tubes are to be lighted and shaded or so drawn up as to burn with a full large flame. The wick is then trimmed to a point brought down thereon say to a distance of from one half to one fourth of an inch from the tube, when a flickering blue flame will ascend through the orifice or orifices of the upper plate when more than one plate is employed, the light from which will be very feeble and without smoke. The glass chimney is then to be placed over the frame resting on the generator between small projecting rims this will produce a strong yellow flame rising to the top of the chimney with much smoke. The illuminator is then added which produces a clear brilliant stream of white flame ascending to the height of from four to six inches and without any smoke to hurt either. We have thus fully described the general construction of and the manner of using our Lamp and have indicated some of the numerous changes which may be made in it in more details of arrangement whilst the principle of its construction and action remain the same.

What we claim as our invention is the employment or use of the wick tube the external and internal tubes or chimneys or one or more plates to be placed upon the flame and we claim the burning out of the glass chimney by means of the illuminator without which the combustion will not be perfect

1843X

Specification of Improvement in Illuminating Stoves

To all whom it may concern Be it known that I Geo. H. Inman of the City of Philadelphia and State of Pennsylvania have invented a new and useful improvement in Illuminating Stoves which improvement is fully described in the following specification reference being had to the accompanying drawings forming part of the same

The nature of my invention consists in the application of a hollow cylinder of metal or other suitable material to the flame of a lamp or candle in such manner as to cause the heat and smoke to pass through the cylinder and thereby produce a draft sufficient to consume the smoke and carbon and render the flame perfectly white and free from smoke

To enable others skilled in the art to make and use my invention I will proceed to describe the manner of constructing and using the same

Fig 1 represents a perspective view of the cylinder and Fig 2 a vertical section of the same

The cylinder A is made of metal or other suitable material and is open at both ends it is supported by the arms B B which are attached to the collar C which fits on the top of the lamp or candlestick D

The cylinder is placed over the flame of the lamp or candle in such manner that the flame is in the center of the cylinder the heat and smoke passing through the cylinder produces a draft sufficient to consume the smoke and carbon and render the flame perfectly white and free from smoke

What I claim as my invention and desire to secure by Letters Patent is

The cylinder A when used in combination with the arms B B and collar C for the purpose and in the manner set forth

Geo. H. Inman

Witnesses

M. M. Hickman

Wm. C. Master

Geo. H. Inman

Specification of Improvement in Illuminating Stoves

Filed Dec 7 1843