

N^o 21,626



A.D. 1897

Date of Application, 21st Sept., 1897

Complete Specification Left, 21st June, 1898—Accepted, 27th Aug., 1898

PROVISIONAL SPECIFICATION

Improvements in Lanterns.

We, ARTHUR COLLINGS WELLS, Engineer, of the Firm of A. C. Wells & Co., of 103, Midland Road, St. Pancras, in the County of London, and EDWARD GRUBE, Engineer, of Alt-Rahlstedt, Holstein, in the Empire of Germany, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to improvements in lanterns, and has reference more particularly to what are known as hurricane lanterns.

In this kind of lantern the glass globe is usually very wide, and therefore causes inconvenience in packing and as it is the most prominent portion of the lamp it is very liable to receive injury.

10 Now according to our invention we overcome these objections by dispensing with the globe and substituting therefor a chimney of comparatively small diameter the upper part of which is of metal while the lower part in proximity to the flame is of suitable transparent material. This chimney may be made removable and its upper or metal portion may be connected to a pair of plates
15 which form the upper and lower end covers of the air chamber or drum usual at the top of a hurricane lamp. A transverse metal strip or bridge piece is secured to the upper plate and the extremities of this bridge piece are suitably shaped to engage projections on the outer wall of the said air chamber.

The end covers of the air chamber need not be actually secured to the outer wall
20 thereof but may only fit closely thereto and the arrangement may be such that after the ends of the bridge piece have been disengaged, the chimney and the aforesaid end covers can all be lifted away together from the rest of the lamp.

According to one construction, the chimney has an upper tapered portion of sheet metal while its lower end is closed by a metal cap having a central aperture
25 to fit over the lamp cone. The transparent portion of the chimney may be formed say of three pieces of mica secured in position by metal strips and these strips may advantageously have inwardly projecting ribs or beadings against which the edges of the pieces of mica press with sufficient force to keep the said pieces normally in their proper position, whilst however allowing them to be readily disengaged
30 should it be desired to remove them say for the purpose of cleaning them or for replacing them by fresh pieces.

The plates forming the end covers of the air chamber are carried by vertical arms which extend upward from the metal portion of the chimney, and the transverse metal strip or bridge piece has its ends projecting horizontally beyond the
35 edges of the upper plate and formed with notches or recesses which can be caused, by giving a partial turn, to engage the upright stems of the eyes or loops in which the handle is secured.

The upper one of the aforesaid end covers has a flanged edge which fits over the top edge of the outer wall of the air chamber or drum, while the lower one has
40 also a flanged edge adapted to fit closely against the inner side of the said wall.

[Price 8d.]

BIRMINGHAM
FREE LIBRARIES

Wells and Grube's Improvements in Lanterns.

The lower cover also has a central aperture or perforation and care is taken that the joints between the end covers and the outer wall of the air chamber, while sufficiently tight to prevent undue entrance of air, are not so tight as to interfere with the removal of the said end covers and chimney when such is desired.

Dated, this 21st day of September 1897.

5

HASELTINE, LAKE & Co.,
45, Southampton Buildings, London, W.C., Agents for the Applicants.

COMPLETE SPECIFICATION.

Improvements in Lanterns.

We, ARTHUR COLLINGS WELLS, Engineer, of the Firm of A. C. Wells & Co., 10 of 103, Midland Road, St. Pancras, London, and EDWARD GRUBE, Engineer, of Alt-Rahlstedt, Holstein, in the Empire of Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in lanterns, and has reference more particularly to what are known as hurricane lanterns.

In this kind of lantern the glass globe is usually very wide, and therefore causes inconvenience in packing and as it is the most prominent portion of the lamp it is very liable to receive injury.

Now according to our invention we overcome these objections by dispensing with the globe and substituting therefor a chimney of comparatively small diameter the upper part of which is of metal while the lower part in proximity to the frame is of suitable transparent material. This chimney is made removable and its upper or metal portion is preferably connected to a pair of plates which form the upper and lower end covers of the air chamber or drum usual at the top of a hurricane lamp. A transverse metal strip or bridge piece is secured to the upper plate and the extremities of this bridge piece are suitably shaped to engage projections on the outer wall of the said air chamber.

The end covers of the air chamber need not be actually secured to the outer wall thereof but may only fit closely thereto and the arrangement may be such that after the ends of the bridge piece have been disengaged, the chimney and the aforesaid end covers can all be lifted away together from the rest of the lamp.

In order that our said invention may be clearly understood and readily carried into effect we will now proceed to describe the same more fully with reference to the accompanying drawings in which;—

35

Figure 1 is a central vertical section, and

Figure 2 a plan of our improved hurricane lamp.

Figure 3 is a transverse section on the line *xx* of Figure 1.

Figure 4 is a side elevation of the chimney removed from the lantern.

A is the lamp chimney and B is the air chamber or drum which occupies the position usual in lamps of this description and is connected to the burner C by the hollow side arms DD through which the air passes from the drum B to the burner as is well understood.

The chimney has an upper tapered portion *a* of sheet metal while its lower end is closed by a perforated metal cap *a*¹ having a central aperture to fit over the lamp cone *c*. The transparent portion of the chimney is preferably formed of sheets or pieces of mica *a*². These sheets or pieces of mica are secured in position by metal strips *a*³ having inwardly projecting ribs or beadings *a*⁴ against which the edges of the sheets or pieces of mica press with sufficient force to keep them—

45

Well's and Grube's Improvements in Lanterns.

selves normally in their proper position, whilst permitting of their being readily disengaged should it be desired to remove them, for the purpose of cleaning them or for replacing damaged sheets by fresh ones.

5 The plates $b\ b^1$ forming the end covers of the air chamber B are carried by vertical arms $b^2\ b^2$ which extend upward from the metal portion a of the chimney, and the transverse metal strip or bridge piece b^3 has its ends projecting horizontally beyond the edges of the upper cover b^1 and formed with notches or recesses b^4 which can, by giving a partial turn to the chimney be caused to engage with the upright stems b^5 of the eyes b^6 in which the handle b^7 is secured. b^8 is a loop
10 with which the bridge piece b^3 is provided to enable the chimney to be readily turned.

The aforesaid upper end cover b^1 has a flanged edge which fits over the top edge of the outer wall of the air chamber or drum B, while the lower cover b has also a flanged edge adapted to fit closely against the inner side of the said wall. The
15 lower cover also has a central aperture or perforation b^x for the heated air ascending from the flame of the lamp to enter the air chamber B.

In order to remove the chimney from the lantern a partial turn is given to the strip b^3 in the direction of the arrows, (Figure 2), whereby the recesses b^4 are released from the handle loop stems b^5 , and the chimney together with the
20 plates b and b^1 , can be lifted out of the lantern as shown in Figure 4.

Care should be taken that the joints between the end covers $b\ b^1$ and the outer wall of the air chamber, be sufficiently tight to prevent undue entrance to the chamber of cool air, without being so tight as to interfere with the removal of the chimney and the said end covers as above stated.

25 Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A hurricane lantern provided with a chimney composed partly of metal and partly of transparent material and adapted to be removed through the air chamber
30 of the lantern substantially as described and for the purpose specified.

2. In a hurricane lantern the combination with a detachable chimney having an upper metal part and a lower translucent part, of a pair of metal plates forming the upper and lower end covers of the air chamber substantially as described and for the purpose specified.

35 3. The manner of securing the translucent sections of the lantern chimney in position by inwardly projecting ribs or beadings against which the vertical edges of the translucent sections bear, substantially as described and for the purpose specified.

4. A lantern constructed substantially as herein described with reference to the
40 accompanying drawings for the purpose specified.

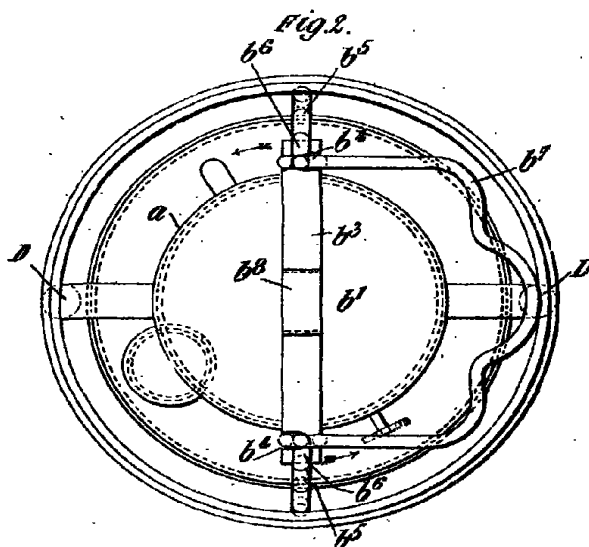
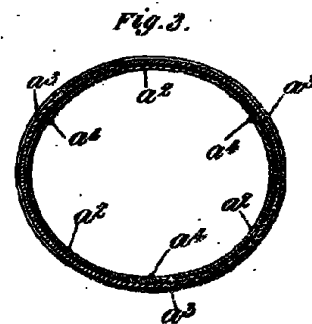
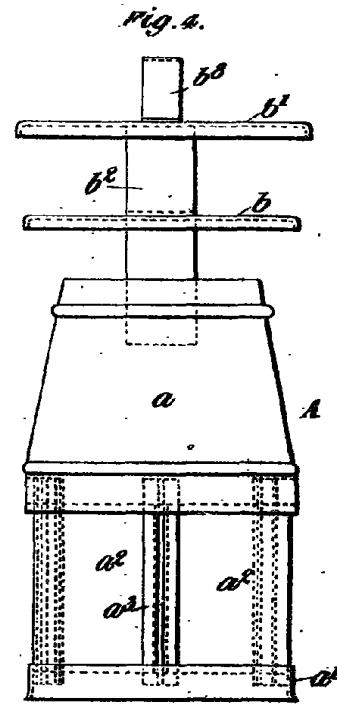
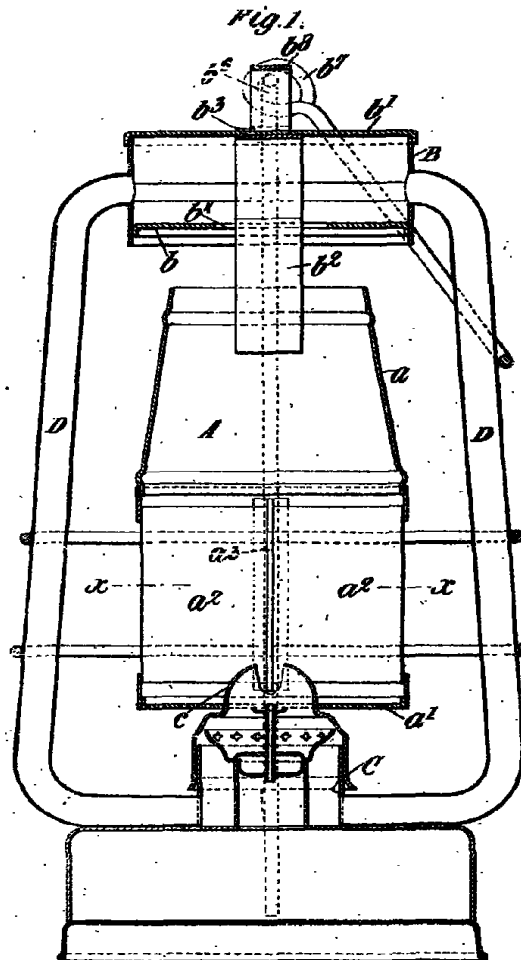
Dated this 21st day of June 1898.

HASELTINE LAKE & Co.,
45, Southampton Buildings, London, W.C., Agents for the Applicants.

A.D. 1897. SEP. 21. N° 21,626.

WELLS & another's COMPLETE SPECIFICATION.

(1 SHEET)



[This Drawing is a reproduction of the Original on a reduced scale.]