

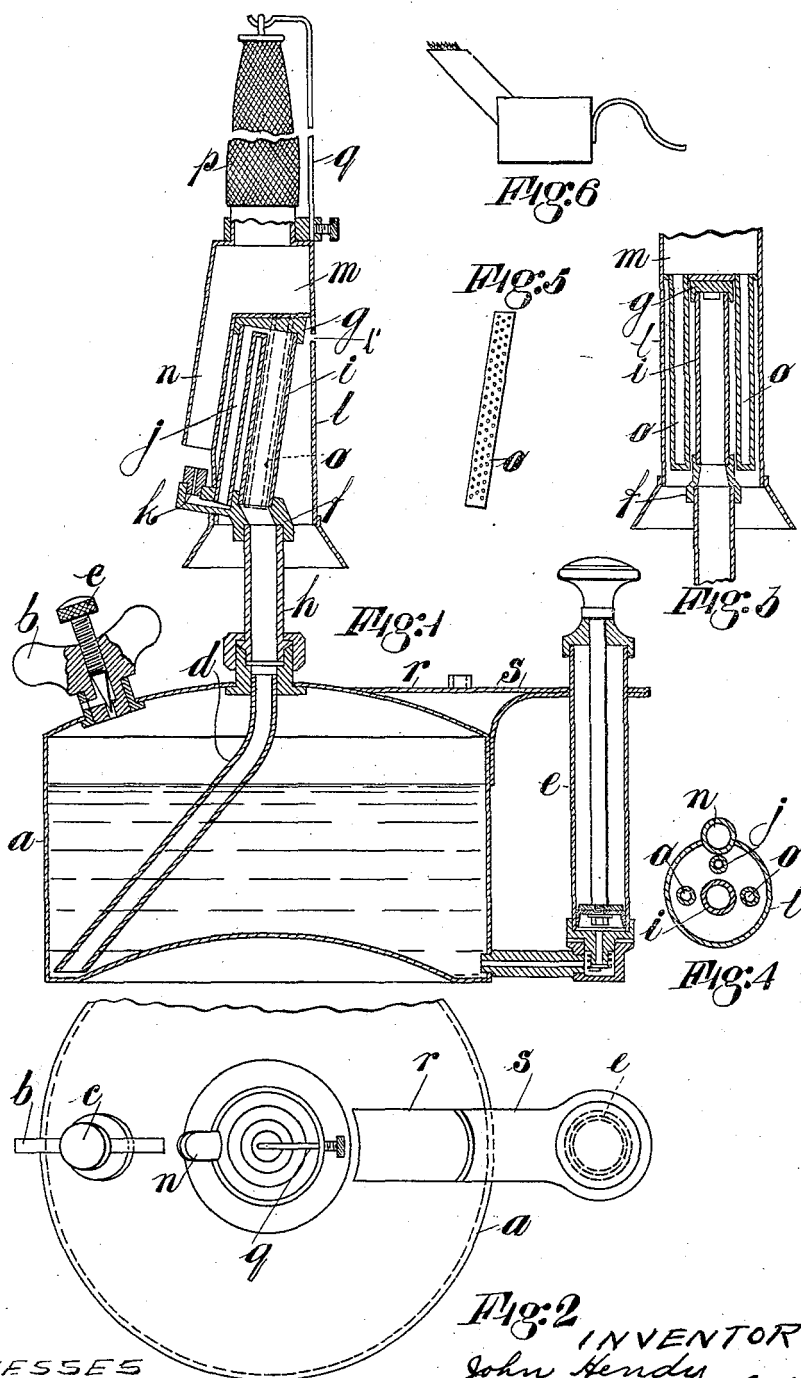
No. 868,184.

PATENTED OCT. 15, 1907.

J. HENDY & H. J. S. STOBART.

OIL VAPOR LAMP.

APPLICATION FILED AUG. 28, 1906.



WITNESSES

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Fig. 2

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JOHN HENDY AND HENRY JOHN SCOTT STOBART, OF WEST SMETHWICK, ENGLAND.

OIL-VAPOR LAMP.

No. 868,184.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed August 28, 1906. Serial No. 332,352.

To all whom it may concern:

Be it known that we, JOHN HENDY and HENRY JOHN SCOTT STOBART, subjects of the King of Great Britain and Ireland, and residing at Lighthouse Works, West 5 Smethwick, in the county of Stafford, England, have invented certain new and useful Improvements Relating to Oil-Vapor Lamps, of which the following is a specification.

This invention relates to oil vapor lamps and comprises particularly a portable incandescent oil vapor lamp constructed in the manner hereinafter described.

Referring to the accompanying sheet of explanatory drawings:—Figure 1 is a sectional elevation and Fig. 2 a plan of a portable incandescent oil vapor lamp constructed in accordance with this invention. Fig. 3 is a sectional elevation of the vaporizer taken at right angles to the view shown at Fig. 1; Fig. 4 is a sectional plan of the vaporizer. Fig. 5 shows one of the subsidiary or vaporizer burner tubes. Fig. 6 is an illustration of the 15 small lamp employed for starting the vaporizer.

The same reference letters in the different views indicate the same or similar parts.

The oil or petroleum is placed in the vessel, *a*, which serves also as the base of the lamp. The oil is introduced by way of an aperture which is closed by the screw plug, *b*; the said plug is fitted with an air release valve *c*, as shown. The oil is forced up the internal tube, *d*, to the vaporizer by means of air drawn from the atmosphere and forced under pressure to the upper part 25 of the vessel, *a*, by the pump, *e*; the latter is permanently attached to the lamp and serves as a handle for carrying same. The vaporizer comprises short straight lengths of tube arranged in the manner illustrated between the base piece, *f*, and the cap piece, *g*. The oil 30 or petroleum flows from the aforesaid internal or supply tube, *d*, through the vaporizer connecting or supporting tube, *h*, and thence up the tube, *i*, and down the tube, *j*, to the vapor outlet orifice, *k*. The ends of the tubes, *i* and *j*, are respectively secured to the base piece, *f*, and cap piece, *g*, while the vapor outlet orifice or jet *k*, is 40 formed through a small plug like part fitted in the base piece, *f*.

Surrounding the base, *f*, cap, *g*, and tubes *i*, and *j*, is the cover tube, *l*. The said tube, which is supported 45 or retained in position by the base, *f*, and cap, *g*, has a chamber as *m*, in the upper portion of its interior to serve as a mixing and superheating chamber for the oil vapor and air admitted to the said chamber by way of the connection, *n*, which is formed with the cover tube, 50 *l*. In communication with the afore-said chamber, *m*,

there are arranged subsidiary or vaporizer burner tubes, *o*, whereby the oil or petroleum is vaporized as it passes through the tubes, *i* and *j*, as aforesaid. The said tubes or burners, *o*, which are closed at their lower ends but perforated through their length, are supplied with 55 combustible mixture from the chamber, *m*. The cover tube, *l*, has suitable apertures *l'* just below the chamber *m*, to permit of the escape of the gaseous products of combustion from the subsidiary or vaporizer burners, *o*. The upper portion of the tube, *l*, serves as the main 60 burner tube; a suitable gauze is provided and the mantle, *p*, is carried in any convenient manner, such as by the stem, *q*.

For starting purposes the small lamp shown at Fig. 6 is placed on the seating, *r*, formed by the handle arm or 65 bracket, *s*, until the main lamp is fairly alight.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is:—

1. In oil vapor lamps, the combination consisting of vaporizer base and cap pieces, straight tubes fitted between 70 the said base and cap pieces and forming a circuitous path for the flow of the vapor, a cover tube surrounding said base and cap pieces and the tubes and provided with an internal mixing and superheating chamber, subsidiary burner tubes closed at their lower ends and opening at their upper ends into the said mixing and superheating chamber, said burner tubes being placed along side the straight tubes and an outlet fitting on the said vaporizer base piece. 75

2. In oil vapor lamps, the combination consisting of vaporizer base and cap pieces, straight tubes fitted between 80 the said base and cap pieces and forming a circuitous path for the flow of the vapor, a cover and burner tube surrounding said base and cap pieces and the tubes and provided with an internal mixing and superheating chamber, subsidiary burner tubes closed at their lower ends and opening 85 at their upper ends into the said mixing and superheating chamber, said burner tubes being placed along side the straight tubes an outlet fitting on the said vaporizer base piece, and a mantle mounted on the cover and burner tube, as set forth. 90

3. In oil vapor lamps, the combination consisting of vaporizer base and cap pieces, straight tubes fitted between the said base and cap pieces and forming a circuitous path 95 for the flow of the vapor, a cover and burner tube surrounding said base and cap pieces and the tubes and provided with an internal mixing and superheating chamber, subsidiary burner tubes closed at their lower ends and opening at their upper ends into the said mixing and superheating chamber, said burner tubes being placed along side the straight tubes an outlet fitting on the said vaporizer 100 base piece, a mantle mounted on the cover and burner tube, a reservoir base, and a connecting tube between the said reservoir base and the vaporizer base fitting, as set forth.

4. In oil vapor lamps, the combination consisting of vaporizer base and cap pieces, straight tubes fitted between the said base and cap pieces and forming a circuitous path 105

5 for the flow of the vapor, a cover and burner tube surrounding said base and cap pieces and the tubes and provided with an internal mixing and superheating chamber, subsidiary burner tubes closed at their lower ends and opening at their upper ends into the said mixing and superheating chamber, said burner tubes being placed along side the straight tubes and outlet fitting on the said vaporizer base piece, a mantle mounted on the cover and burner tube, a reservoir base, a connecting tube between the said reser-

voir base and the vaporizer base fitting, and an air pump 10 serving as a handle for the complete lamp, as set forth.

In testimony whereof we have signed our name to this specification in the presence of two subscribing witnesses.

JOHN HENDY.

HENRY JOHN SCOTT STOBART.

Witnesses:

EDWARD MARKS,

JOHN MORGAN.