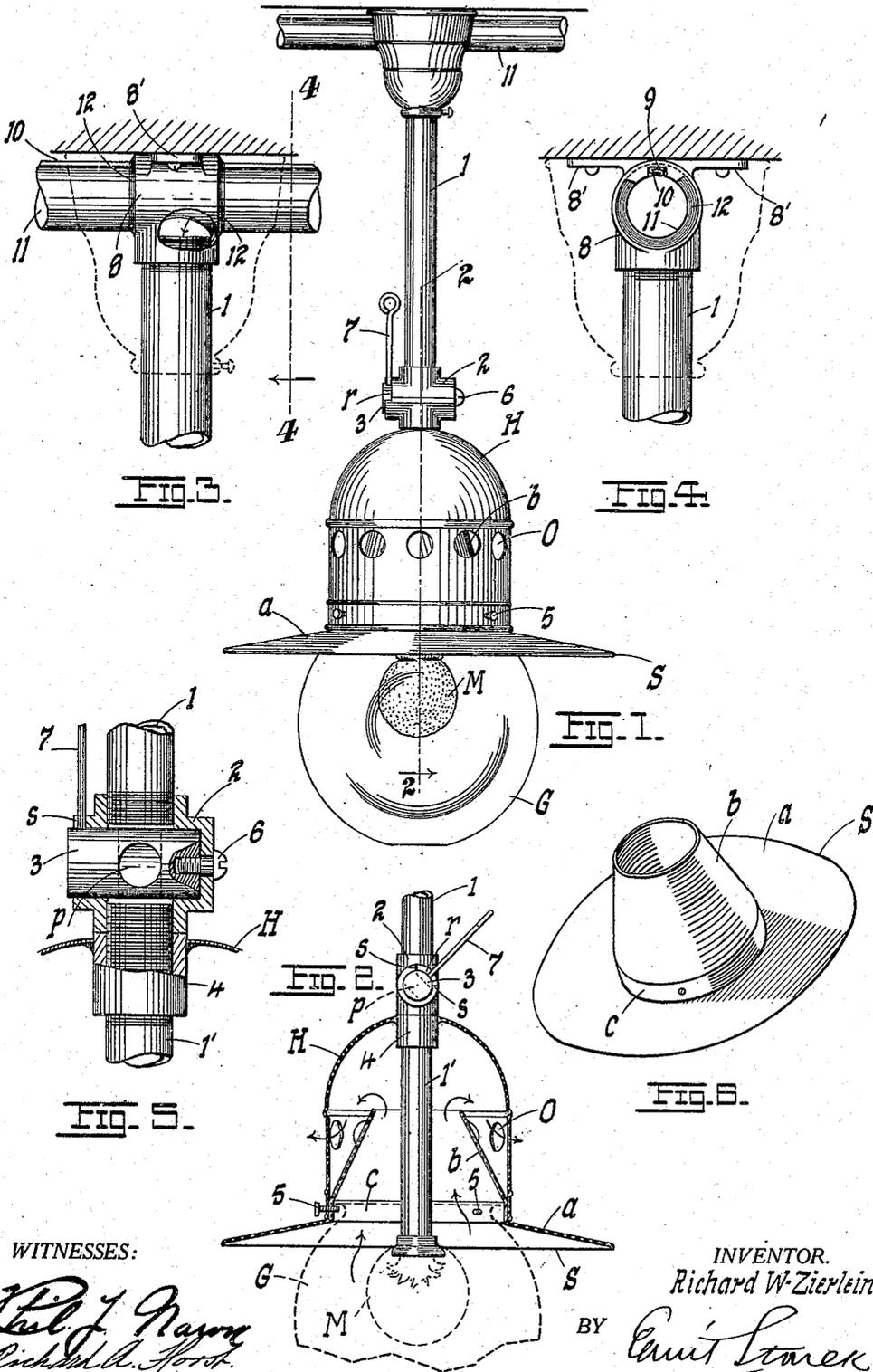


R. W. ZIERLEIN.
 VAPOR BURNING LAMP.
 APPLICATION FILED AUG. 3, 1908.

930,451.

Patented Aug. 10, 1909.



WITNESSES:
Paul J. Payne
Richard A. Horst

INVENTOR.
Richard W. Zierlein
 BY *Ernest Lorenz*
 ATTORNEY.

UNITED STATES PATENT OFFICE.

RICHARD W. ZIERLEIN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-FOURTH TO RICHARD A. HORST, OF ST. LOUIS, MISSOURI.

VAPOR-BURNING LAMP.

No. 930,451.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed August 3, 1908. Serial No. 446,650.

To all whom it may concern:

Be it known that I, RICHARD W. ZIERLEIN, citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Vapor-Burning Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in vapor-burning lamps; and it consists in the novel details of construction more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of my improved lamp, showing the parts all assembled; Fig. 2 is a vertical section on the line 2—2 of Fig. 1; Fig. 3 is an enlarged side elevational detail showing the connection between the main supply-pipe and the burner-pipe; Fig. 4 is a cross section on the line 4—4 of Fig. 3; Fig. 5 is an enlarged sectional detail showing the manner of mounting the feed-valve in the tee interposed between the outer or upper and inner or lower sections of the burner pipe; and Fig. 6 is a detached view showing in perspective the removable draft-shield.

The object of my invention is to construct a vapor-burning lamp to the burner of which the mixture of air and hydrocarbon is supplied from a source removed a suitable distance from the lamp, the present invention being restricted to details which are independent of the means by which the mixture is produced. In other words, the present lamp is devoid of any so-called mixing chamber characteristic of the majority of vapor-burning lamps.

A further object is to provide special means of effecting a connection between the burner-pipe of the lamp and the main supply-pipe; to provide a special construction of feed-valve; to provide special means of securing the draft-shield, and to provide further and other details the advantages of which will be apparent from a detailed description of the invention which is as follows:

Referring to the drawings, 1 represents the upper section of the burner-pipe, the base thereof carrying a tee 2 serving as a casing for the feed-valve 3, the lower leg of the tee being screwed to the upper end of the lower section 1' of the burner-pipe as shown.

The upper end of the section 1' is itself screwed into the hollow boss 4 formed in the crown of the hood H, the lower end of the pipe serving as a burner, about the flame of which may be suspended any form of incandescent mantle M as shown. The hood H is preferably dome-shaped, being provided with a series of peripheral draft openings O, at points about midway the height thereof, the base of the hood serving to support the draft-shield S by means of a series of screws 5, 5, the inner ends of the latter also serving to engage the upper flange of a globe G where occasion arises to employ a globe. As shown in the drawings, the draft shield comprises an outer basal flange *a*, an inner terminal tapering or conical mouth *b* and an annular or cylindrical intermediate or connecting portion *c* through which the screws 5 pass, and which telescopes with the inner face of the base of the hood H. For out-door use the shield S is generally employed; for indoor use it may be removed, leaving the screws 5 to support the globe G if desired.

The tee 2 uniting the upper and lower sections 1, 1' of the burner-pipe serves as a casing for the rotatable feed-valve 3, the latter comprising a cylinder having a through passage-way *p* which may be turned to register with the passage way of the pipes 1, 1'; or turned out of register as obvious. One of the terminals of the horizontal legs of the tee 2 is closed; the wall at that end serving as a bearing for the screw-spindle 6 of the valve, said spindle having a threaded portion engaging a screw-threaded socket in the adjacent end of the valve whereby the latter can be secured in position within its casing, the unthreaded portion of the screw serving as a spindle about which the valve may freely rotate. This rotation is accomplished by an arm or lever 7 projecting from the periphery of the valve at the opposite end thereof, the casing having formed thereon a terminal recess *r* to allow for the necessary play of the arm, the swing of the arm (and rotation of the valve in consequence) being limited in either direction by the shoulders *s s* defining the limits of the recess referred to.

The upper end of the pipe-section 1 terminates in a socket 8 having flanges 8' for securing the same to the ceiling, the interior wall of the socket being formed with a

longitudinal groove 9 to engage a corresponding tongue or seam 10 formed in the main supply pipe 11, whereby a connection between said pipe and socket is readily effected, a band of solder 12 being subsequently passed about the seam between the pipe and each end of the socket. The tongue and groove connection between the parts 8 and 11 insures against any possible twisting or displacement of the parts since it acts as a perfect lock. Of course the positions of the tongue and groove may be reversed as is obvious.

As seen from the drawings, the conical mouth of the draft-shield which encompasses the pipe 1', is at the same time sufficiently spaced apart from the hood, so that the products of combustion may freely circulate outwardly through the openings O formed in the hood. The shield too prevents any drafts from interfering with the flame, such drafts being deflected by the conical inner portion and caused to escape through the openings O. The arrangement resorted to for securing the shield at the same time serves to support a globe when necessary, and when neither globe nor shield are required both may be removed without disturbing other portions of the lamp. So too, the globe may be removed without the shield, and vice versa.

A decided advantage follows from the manner of assembling the parts as herein indicated, and that is, that once the pipe sections 1, 1' are screwed into position on the hood, all parts are in their proper relation without further adjustment. This insures a uniform position for the mantle; and the lamp may be assembled by even an unskilled mechanic. Such features as may be illustrated but to which no reference is made are old and require no description in this connection.

Having described my invention what I claim is:

1. In combination with a burner-pipe, a hood located thereon at a point removed

from the burner end of the pipe, a feed-valve in the pipe, a draft-shield having an inner tapering mouth encompassing the inner end of the pipe and spaced a suitable distance from the hood, an intermediate portion of the draft-shield telescoping with the free end of the hood and supported thereby, and an outer flanged portion of the draft shield projecting beyond the hood, substantially as set forth.

2. In combination with a hood having a closed crown and open at the bottom, a burner pipe composed of two sections united at the crown and extending into and out of said crown, a tee at the juncture of the sections located adjacent to and exterior to the hood, one of the terminal walls of the horizontal member of the tee being closed, a rotatable valve mounted in said horizontal member, a screw spindle connecting the valve to the wall aforesaid, an arm carried by the periphery of the valve at the opposite end, the casing member being suitably recessed to permit of the necessary oscillation of the arm, substantially as set forth.

3. In combination with a burner-pipe, a hood located thereon at a point removed from the burner end of the pipe, a feed-valve in the pipe accessible from a point outside the hood, a draft-shield having an inner conical mouth encompassing the inner end of the pipe and spaced a suitable distance from the hood, an intermediate annular portion of said draft-shield telescoping with the free end of the hood, and an outer flanged portion projecting beyond the hood, and securing screws passed through the hood walls and said intermediate portion of the draft shield, the inner ends of the screws being available for supporting a globe, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

RICHARD W. ZIERLEIN.

Witnesses:

EMIL STAREK,
FANNIE E. WEBER.