No. 801,319. PATENTED OCT. 10, 1905.

R. W. HUSS.

INCANDESCENT MANTLE SUPPORT FOR GAS LAMPS.

APPLICATION FILED NOV. 19, 1904.

Fig. 1.

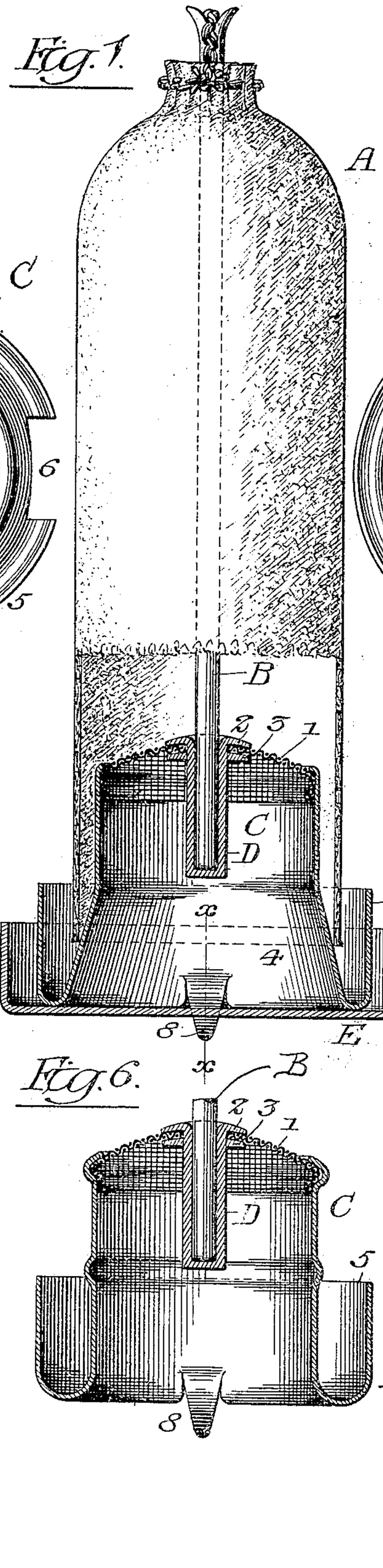

Fig. 2.

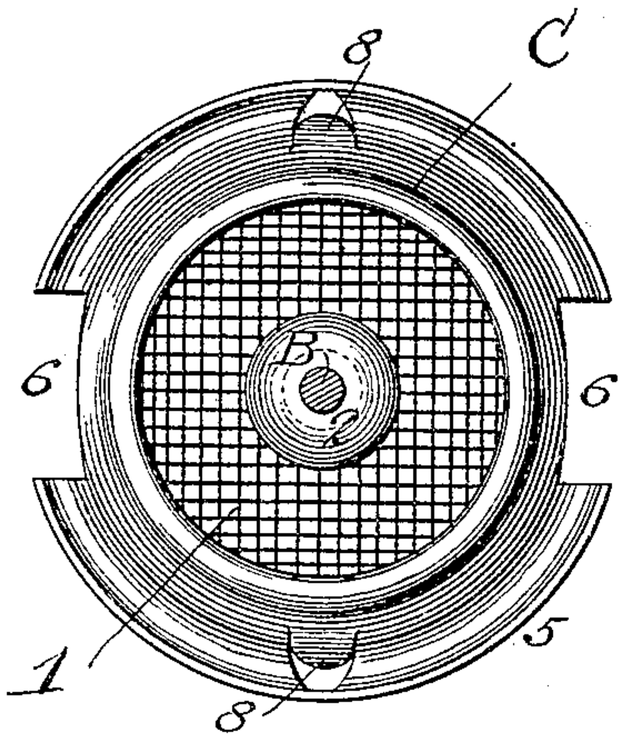

Fig. 3.

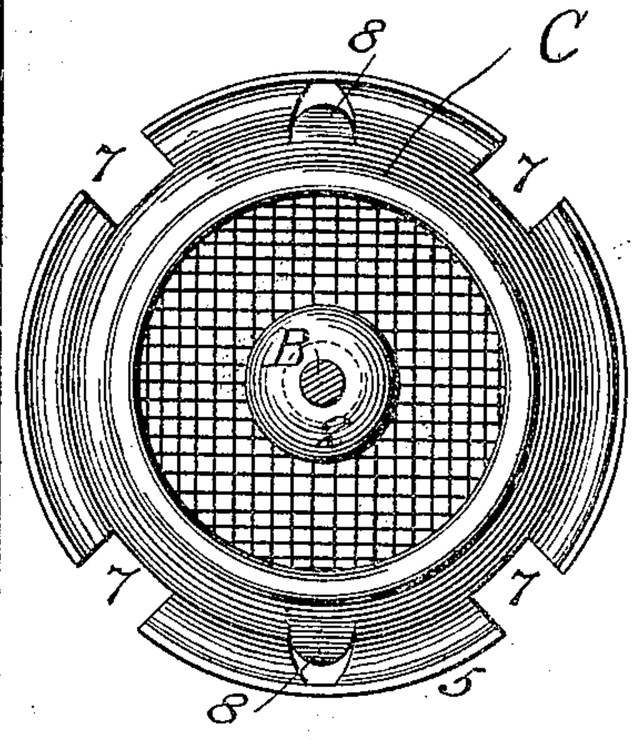

Fig. 5.

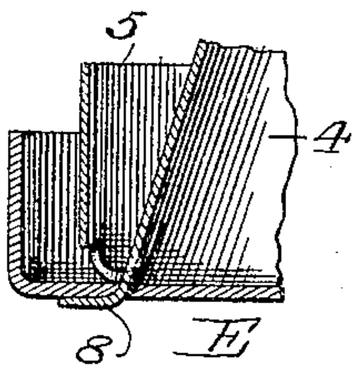

Fig. 4.

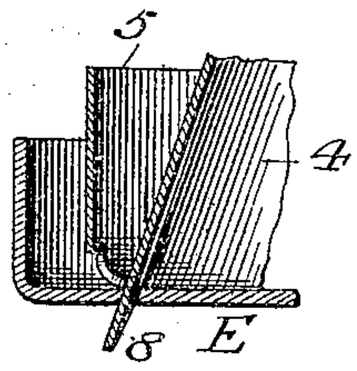

Fig. 6.

Witnesses:-
Louis H. Whitehead
Ottilie C. Freiberg

Inventor:-
Rudolph W. Huss
by:- Chas. G. Page
Atty:-

UNITED STATES PATENT OFFICE.

RUDOLPH W. HUSS, OF CHICAGO, ILLINOIS.

INCANDESCENT MANTLE-SUPPORT FOR GAS-LAMPS.

No. 801,319. Specification of Letters Patent. Patented Oct. 10, 1905.

Application filed November 19, 1904. Serial No. 233,438.

To all whom it may concern:

Be it known that I, RUDOLPH W. HUSS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Incandescent Mantle-Supports for Gas-Lamps, of which the following is a specification.

While various kinds of supports for incandescent mantles have been proposed, the construction commonly made and sold in the country comprises a metallic sleeve adapted to fit upon the burner-head and inserted in the open end of a mantle, said sleeve or cap having its upper end provided with a wire-gauze diaphragm and the mantle being supported by a couple of wire standards arranged outside the mantle with their lower ends detachably attached to the lower end of the sleeve and their upper ends bent inwardly and attached to the top end of the mantle. It has also been proposed to support the mantle by a single centrally-arranged standard resting upon the top end of the burner-head in one case and in another to secure a central standard to a spring intended to maintain its position within the burner-tube by its spring expansion against the wall of such tube; but so far as I am aware these or other arrangements of central standards are not to be found on the market, owing to certain defects which are overcome by my invention.

The objects of my invention are, first, to provide a mantle and central support therefor which can be sold as a single article and which can at any time be placed upon a burner-head without alternation; second, to render the central standard permanently rigid and, in effect, in one piece, with a cap adapted to fit an ordinary burner-head and having its top end formed by a wire-gauze diaphragm; third, to permit said mantle and holder as an article to be safely packed in a small tubular box and to steady such article therein; fourth, to avoid the adherence of the mantle to the side of the cap, it being observed that such adherence frequently occurs upon putting the mantle in use and primarily igniting the combustible matter contained in its meshes; fifth, to protect the lower end portion of the mantle and permit the cap to be easily taken hold of without touching the mantle; sixth, to steady the mantle during use, to avoid the use of spring attachments which necessarily soon lose their temper during use owing to their heated condition.

To the attainment of the foregoing and other useful ends my invention consists in matters substantially as hereinafter set forth, and illustrated by the accompanying drawings, in which—

Figure 1 is a vertical central section through the lower end portion of an incandescent mantle and my improved support therefor, the standard being shown partly in elevation and partly in dotted lines and the lower end portion of the mantle being broken away to show such lower end portion in vertical central section. This view also shows in section an end cap of a packing-box for the mantle and holder. Fig. 2 is a top plan of the cap C of Fig. 1 with the standard in cross-section, the outer guard-flange being notched at a couple of points. Fig. 3 is a like view with the outer guard-flange notched at more than two points. Fig. 4 is a detail showing a section on line $x\,x$ in Fig. 1, the attaching-lip being unbent. Fig. 5 is a like view with the attaching-lip bent under the cap of a packing-box. Fig. 6 illustrates in vertical central section the mantle-holder having a substantially straight cylindric tubular cap, the standard being broken away above the cap for convenience of illustration.

A indicates the incandescent mantle, which is shown somewhat larger than it is commonly made for use, and B denotes a rod or standard arranged centrally within the mantle and attached at its upper end to the upper end of the mantle in any suitable way.

C indicates a sheet-metal cap adapted to fit upon the burner-head of an incandescent gas-lamp and having its upper end provided with a foraminous or wire-gauze diaphragm which forms the upper end of the tubular cap.

The standard B is firmly attached to the cap C, and as a preferred way a socket D is inserted through the center of diaphragm 1 and provided at its upper end with an annular flange 2, which fits upon the said diaphragm. The socket D is also provided with a nut or disk 3, which is fitted against the under side of the diaphragm and secured in place in any suitable way.

The lower end of the standard B fits snugly in the socket D, whereby the standard is firmly held in place and prevented from lateral movement independent of the cap. By this arrange-

ment the presence of outside standards is avoided and at the same time the cap and standard are fitted together as an article of commerce.

In the first four figures of the drawings the lower portion 4 of the cap flares or gradually enlarges downwardly, so as to form an annular incline against which the edge of the lower open end of the mantle will rest or bear, as in Fig. 1, thereby steadying the lower end portion of the mantle in an exceedingly simple way and with a minimum area of contact-surface.

In Fig. 1 the lower marginal portion of the cone-shaped base of the cap is bent outwardly and upwardly, so as to form an annular flange 5, leaving between the cap and the flange an annular space for the lower end portion of the mantle. This flange 5 forms a guard or protector for the lower portion of the mantle and affords a rigid surface which can be grasped by an operator in fitting the cap to the head of a burner and without taking hold of or injuring the mantle. This guard 5 can also be made with one or more notches or gaps and still leave a guard which may be grasped by the operator. Thus in Fig. 2 the guard 5 is formed with two gaps or notches 6, while in Fig. 3 the guard is formed with a greater number of gaps or notches 7.

With the arrangement shown in Fig. 1 only the lower edge of the mantle touches the cap C, whereby adherence to any extent of the mantle to the sides of the cap is avoided when the inflammable matter in the mantle is burned out.

In all of the figures the base or lower end portion of the cap is provided or formed with pointed lips 8, which, preparatory to packing the combined mantle and holder in a tubular box, can be first inserted through an end cap E of such box, as in Figs. 1 and 2, and then bent against the outer side of the end of such box-cap, as in Fig. 5.

In Fig. 6 the cap C is substantially of straight cylindric form, but is provided with the upturned flange 5 and the socket D, and when desired this form of cap may be used. The cap in Fig. 5 is also provided with the fastening devices 8.

What I claim as my invention is—

1. The combination with an incandescent mantle, of a sheet-metal cap formed with a cylindric upper portion having a permanent foraminous top end, and a trunco-conical lower portion formed at its base with an outer upturned flange opposite the outer side of the said trunco-conical lower portion of the cap; and a mantle-supporting standard arranged centrally within the mantle and connected with the latter at its upper end portion; the cap being provided with a centrally-arranged socket rigid with and depending from the foraminous top of the cap, and the lower end portion of the standard being rigidly held within said socket.

2. The combination with an incandescent mantle, of a cap having a trunco-conical base integral with an upper cylindric portion and at its lower larger end portion extended outwardly and upwardly and forming thereby an upturned guard opposite the upwardly-tapered outer side of the trunco-conical base portion of the cap, said cap being constructed with a foraminous top end having a socket; and a mantle-supporting standard arranged centrally within the mantle and having its lower end portion fitted within said socket.

RUDOLPH W. HUSS.

Witnesses:

CHARLES G. PAGE,

OTTILIE C. FREIBERG.