J. W. HAINES.

ATTACHING GLASS-KNOBS TO METAL-SOCKETS.

No. 192,759. Patented July 3, 1877.

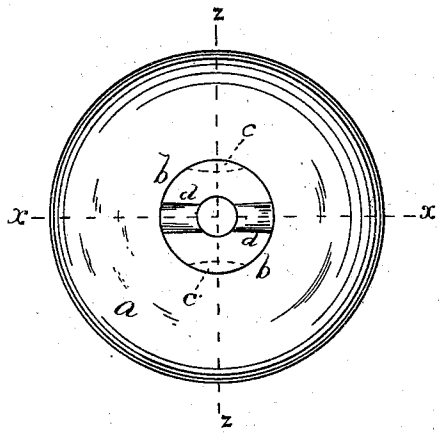


Fig. 1.

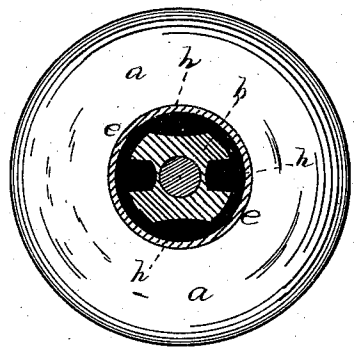


Fig. 3.

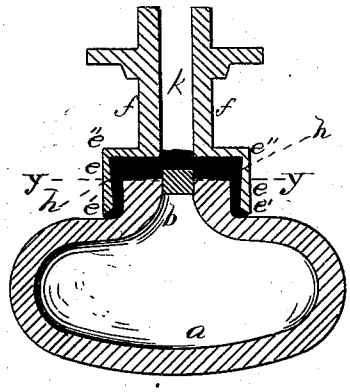


Fig. 2.

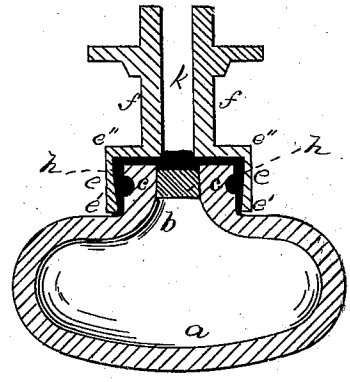


Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN W. HAINES, OF CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN ATTACHING GLASS KNOBS TO METAL SOCKETS.

Specification forming part of Letters Patent No. **192,759**, dated July 3, 1877; application filed March 19, 1877.

To all whom it may concern:

Be it known that I, JOHN W. HAINES, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Joining Glass Door-Knobs to Metal Sockets, which improvement is fully set forth and described in the following specification and accompanying drawing, in which—

Figure 1 is a plan view of the glass door-knob and the pin or shank upon its inner surface. Fig. 2 is a sectional view of the door-knob attached to its socket upon line *x x* of Fig. 1. Fig. 3 is a horizontal section upon line *y y*, Fig. 2, and Fig. 4 is a section upon line *z z* of Fig. 1.

Similar letters of reference indicate corresponding parts.

Upon reference to the United States Letters Patent numbered 126,805, issued to me May 14, 1872, a method of joining glass door-knobs to metal sockets may be seen. In that patented invention it is necessary to pour in the lead through a hole in the flange, thus necessitating the use of shields to prevent the lead from running upon the outer surface of the flange, and also marring the appearance of the flange. In this invention I obviate this difficulty and do away with the hole in the flange, thus producing a neat whole flange by means of channels or gutters upon the surface of the pin or shank, as below described, and, by means of the lead in said gutters, effectually prevent turning and wrenching off on the part of the knob.

In the drawing, *a* represents the glass knob, and *b* the pin or shank upon its inner surface. *c c* are the recesses upon the surface of the pin or shank. *d d* are two channels or gutters leading from the center of the pin or shank to opposite edges of the same, thus allowing the lead to flow from the center to and around the edges of the pin and into the recesses *c*. *e* is the flange of the socket, slightly dovetailed, to prevent any liability of the socket coming off after it is attached to the knob. Upon reference to Fig. 2 it will be seen that the portion *e'* of the flange is thicker than the portion *e''*. *f* is the neck of the socket.

In practical operation the molten lead enters through a square tube, made in two parts, with a gateway in the center, said tube having been placed within the opening *k* in the neck *f*. The molten lead passes quickly through the gutters *d* and fills the recesses *c*, the gutters, and around the sides of the pin or shank, as represented at *h* in the drawing. The tube is then taken out, the parts opened, and the gateway drops out. Of course there is nothing new in the particular instrument or appliance for introducing the molten lead; hence it is not illustrated. The gutters *d* may be more or less in number.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

The flanged socket, in combination with the knob-pin or shank *b*, provided with one or more gutters, *d*, for the purpose of conducting the molten lead from the opening *k* to the sides of and recesses in said pin or shank, substantially as shown and described.

JOHN W. HAINES.

Witnesses:

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