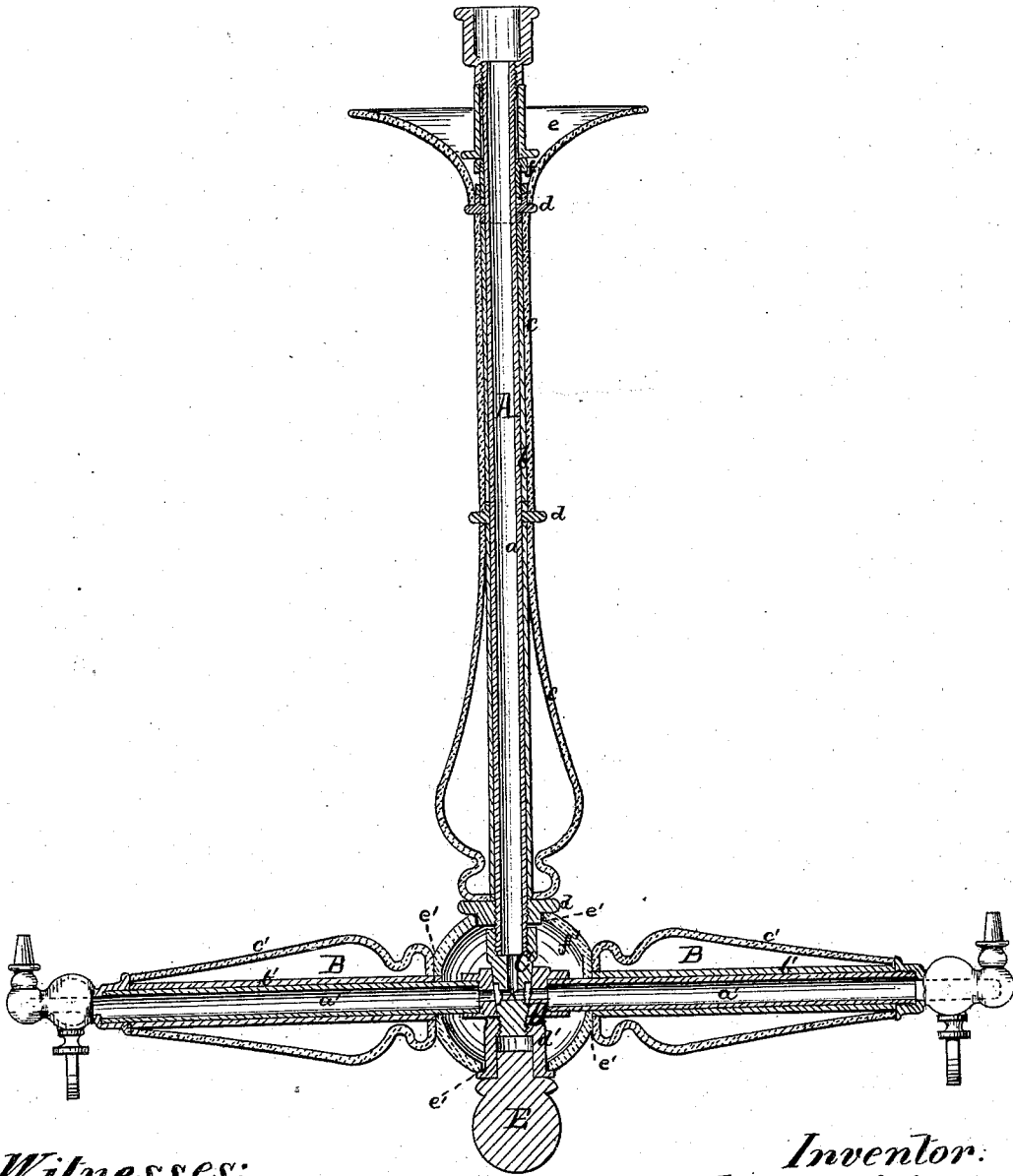


F. S. SHIRLEY.  
CHANDELIER.

No. 170,194.

Patented Nov. 23, 1875.



*Witnesses:*  
*Henry Eichling.*  
*Fred. J. Bond.*

*Inventor:*  
*Frederick S. Shirley*  
*By Rich. & Rich*  
*His Attys.*

# UNITED STATES PATENT OFFICE.

FREDERICK S. SHIRLEY, OF NEW BEDFORD, MASSACHUSETTS.

## IMPROVEMENT IN CHANDELIERS.

Specification forming part of Letters Patent No. **170,194**, dated November 23, 1875; application filed July 24, 1875.

*To all whom it may concern:*

Be it known that I, FREDERICK S. SHIRLEY, of New Bedford, county of Bristol and State of Massachusetts, have invented an Improved Opal Chandelier, of which the following is a specification, reference being had to the accompanying drawings, forming part hereof:

My invention consists in a chandelier composed partly of metal and partly of opal or porcelain-ware, having an elastic substance, such as india-rubber, interposed between the opal and the metal parts, whereby the movement or jarring of the porcelain on the metal is prevented, and having a ground joint, of the peculiar construction hereinafter described, at the junction of the branch piece with the stem of the chandelier, whereby the branch piece, as a whole, is readily and conveniently detachable from the stem.

Figure 1 is a vertical central sectional view of an opal chandelier embodying my invention.

A is the stem or main piece of the chandelier, made, as shown in the drawing, with an interior metal gas-pipe, *a*, surrounded by an elastic casing, *b*, upon which is snugly fitted the opal or porcelain casing or exterior portion *c*. For convenience in fabricating my chandelier, and also to heighten the effect produced upon the eye when complete, I prefer to put the porcelain casing on, in sections, as shown in the drawings, with metallic rings *d* interposed between the ends of the sections. Upon the upper end of the pipe *a* is the porcelain ceiling-piece *e*, also provided with its elastic cushion *f*, as shown. B is the branch piece, each branch being constructed similarly to the stem, with the interior gas-pipe of metal *a'* surrounded by the elastic casing *b'*, upon which is snugly fitted the exterior opal casing *c'*. Any suitable elastic fabric may be employed as the casing interposed between the metal piping and the opal or porcelain parts; and, instead of forming a continuous casing, it may be employed in sections or rings, properly arranged, and still perform its office, which is to prevent the opal or porcelain parts from being broken by movement or jarring upon the interior metal surfaces. C and D are two

pieces of metal, of the shape shown in the drawing, forming a ground gas-joint, the piece C being secured upon the end of the pipe *a* of the stem A, and arranged to fit within an aperture in the piece D, as shown, to which piece D are attached the branches of the branch piece B. The lower extremity of the piece C extends through the aperture in the piece D when adjusted in its seat therein, and is provided with a screw-thread, upon which is screwed the metal nipple *d'*, which is attached to or carried by the porcelain ball or thumb-piece E, as shown. The parts C and D are concealed within the opal or porcelain globe-piece *f'*, which has apertures at *e'*, for the various joints of the stem and branch piece.

In fabricating my chandelier the stem A is made complete as one piece, with the part C attached to it, and the branch piece B is also made complete as one piece with the part D, having the branches secured to it in their proper position, and with the porcelain globe-piece *f'* surrounding the part D. For convenience in carriage, the nipple-piece F may be screwed to the part C. In this condition, the stem and branch piece being in two detached parts, my chandelier is more readily and conveniently packed for shipping, and in a less space, and with less liability to breakage, than is possible with chandeliers as usually constructed with the stem and branches attached together.

In putting up chandeliers as ordinarily constructed, and having long branches, it is frequently necessary when the space is circumscribed—as, for instance, in a shop-window—to unscrew and detach the branches, in order to screw the stem to the gas-main in the ceiling. The branches are also frequently detached to enable the chandelier to be packed for transportation in a reduced space. When the branches are thus detached for any cause it is very generally found that the screw-joints, by which the branches are united to the stem, are not perfectly tight when the branches are returned to their original position, and it becomes consequently necessary to give them an extra turn of a thread in their joints in order to render them tight, and at the same time to bring the burners into their proper upright position. This may be effected in a chande-

lier constructed wholly of metal, as the metal parts will "give" sufficiently to enable it to be done; but in a chandelier having an outer casing of opal or porcelain, with the joints or points of contact between the sections of the porcelain neatly and closely fitted together, such an operation would press the fragile parts so tightly together as to crush them and cause them to break to pieces.

Now, it is evident that in a chandelier embodying my invention this liability to fracture the porcelain parts is wholly obviated, for when it is desired to detach the branch piece from the stem for any reason, this may readily be done by unscrewing the nipple-piece E, and withdrawing the part C from its seat in the part D; and when it is desired to reattach the branch piece to the stem, it is, as a whole, re-adjusted to the stem, the part D being passed over the part C, and the joint screwed up tight by means of the nipple-piece E. No strain is

thus caused upon any of the porcelain parts by detaching and reattaching of any of the screw-joints; but the said screw-joints remain permanent as at first constructed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a chandelier composed of the interior metal pipe *a* and the exterior opal casing *c*, having the branch piece B, provided with the part D, detachable in one piece from the stem A, provided with the part C, together with the nipple-piece E, as described.

2. The combination of the elastic lining or cushion *b'* with the interior metal pipe *a* and the exterior opal casing *c*, as described, and for the purpose specified.

FREDERICK STACEY SHIRLEY.

Witnesses:

WM. W. CRAPO,  
THOS. J. COBB.