

No. 608,910.

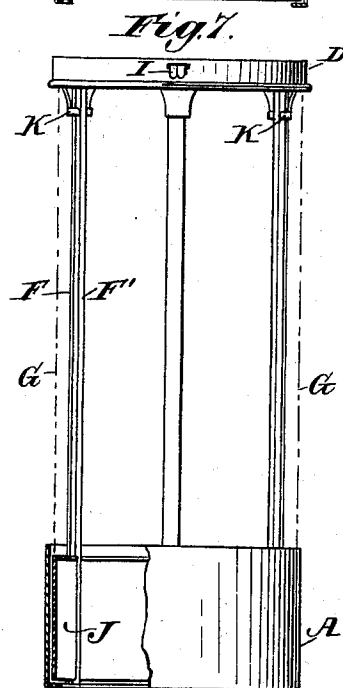
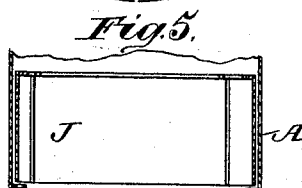
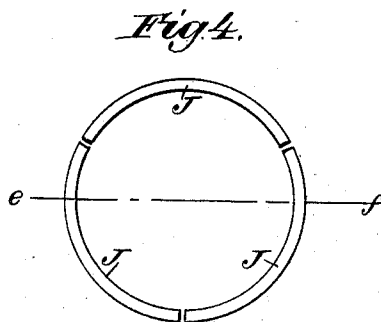
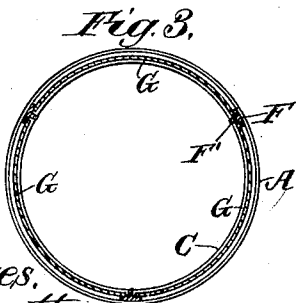
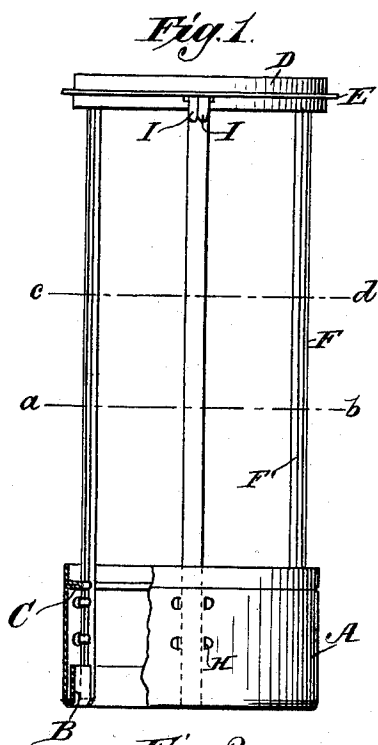
Patented Aug. 9, 1898.

T. REDMAN.  
LAMP CHIMNEY.

(Application filed Dec. 29, 1897.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses,  
Robert Everett,  
J. B. Keegan

Inventor,  
Thomas Redman,  
By James L. Norris,  
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No. 608,910.

Patented Aug. 9, 1898.

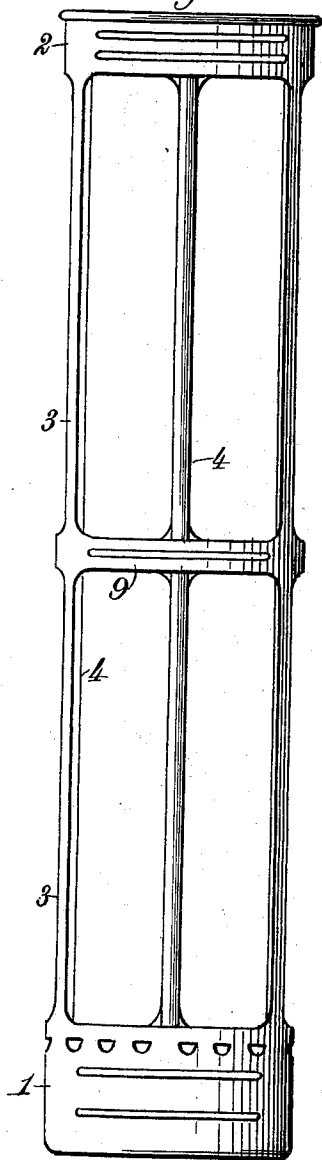
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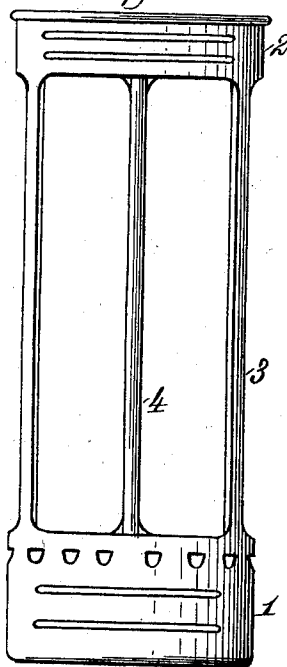
(No Model.)

2 Sheets—Sheet 2.

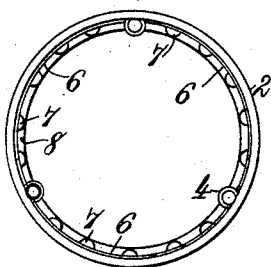
*Fig. 8.*



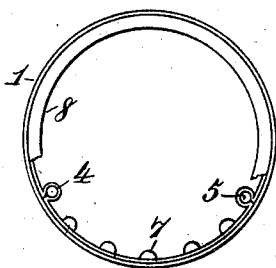
*Fig. 9.*



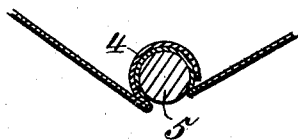
*Fig. 10.*



*Fig. 11.*



*Fig. 12.*



Witnesses.  
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# UNITED STATES PATENT OFFICE.

THOMAS REDMAN, OF BOLTON, ENGLAND.

## LAMP-CHIMNEY.

SPECIFICATION forming part of Letters Patent No. 608,910, dated August 9, 1898.

Application filed December 29, 1897. Serial No. 664,249. (No model.) Patented in England August 2, 1895, No. 14,699.

*To all whom it may concern:*

Be it known that I, THOMAS REDMAN, a subject of the Queen of Great Britain, residing at Bolton, in the county of Bradford, England, have invented new and useful Improvements in Lamp-Chimneys, (patented in Great Britain August 2, 1895, No. 14,699,) of which the following is a specification.

This invention relates to lamp-chimneys of that character in which an open-work frame is provided for supporting and holding together removable sheets of mica or other transparent material.

The object of my invention is to construct the frame for supporting the mica or other suitable material forming the transparent portion of a lamp-chimney by a novel combination of parts so arranged that the rivets and binders as hitherto formed are dispensed with and in lieu thereof to so arrange the frame that any section of the transparent material may be readily placed in the lamp-chimney or removed therefrom for cleaning or other purposes and to so form the framework that it is more durable, not so liable to become distorted by the heat from the gas or other flame, and less costly to manufacture than is the case with chimney-frames of the ordinary construction.

My invention consists in features of construction and novel combinations of parts in lamp-chimneys and frames for lamp-chimneys, as hereinafter more particularly described and claimed.

In the annexed drawings, Figure 1 represents an elevation of a lamp-chimney frame formed according to one form of my invention, a portion of the bottom part being cut away to show the interior. Fig. 2 is a horizontal section of the same through the line *a b* of Fig. 1 with the mica or other transparent material removed. Fig. 3 is a similar section through the line *c d* of Fig. 1, showing the mica or other transparent material in position. Fig. 4 is plan of modified devices for connecting the lower ring of a lamp-chimney frame to the upright ribs. Fig. 5 is a vertical section of the lower ring and said connecting devices on the line *e f* of Fig. 4. Fig. 6 shows a modified construction of the upper ring with lugs thereon for connecting with the upright

ribs of the lamp-chimney frame. Fig. 7 is an elevation of the modified construction of lamp-chimney frame with its lower portion broken away. Fig. 8 is an elevation of a lamp-chimney frame having its several parts formed integral with each other. Fig. 9 is an elevation of a slightly-modified form of integral lamp-chimney frame. Fig. 10 is a top view of Figs. 8 and 9, looking down. Fig. 11 is a bottom view of the same, looking up, with part of the bottom flange removed. Fig. 12 is a detail view illustrating a mode of connecting together the side edges of cut-out metal sheets for a lamp-chimney frame.

In carrying out the form of my invention illustrated in Figs. 1, 2, and 3 I provide a metallic ring A for the base or bottom portion of the lamp-chimney frame. This bottom ring may be flanged inward and upward on its lower edge at B to give rigidity to the base, and near the top of said ring an internal horizontal flange C may be formed by compressing the material into the interior, or separate pieces may be inserted for the purposes hereinafter described.

The top of the lamp-chimney frame may be formed by a metal ring D, preferably provided with an external flange E, the top and bottom rings D and A being connected by two or more ribs or uprights F, provided with internal flanges F', so that when the said ribs or uprights F are in position a groove will be formed between the flanges F' of adjacent ribs for the reception of sheets of mica G or other transparent material, which when placed in the said grooves between the said flanges F' will rest upon the base-flange C or other suitable support formed or placed in the base-ring.

The flanges F' materially strengthen the respective ribs F, so that they are not so easily bent or distorted by the heat from the gas or other flame or by other causes. Obviously the ribs or uprights F may be connected with the rings A and D in various ways. As shown in Fig. 1, the lower portions of these ribs F may be provided with lugs H, passed through holes formed in the ring A and then bent over, and the top ends of said ribs may be secured by passing portions of the same through holes in the ring D and bending them

over, as at I, adjacent to the external flange E on said ring.

If preferred, the ribs or uprights F may be attached or sufficiently secured to the ring A by inserting the lower ends of said ribs into the said ring A and compressing between each pair of ribs a curved and loose piece J, Figs. 4 and 5, the said pieces J being of sufficient length and bent to a curve of greater radius than the ring A, so that when compressed between the flanges F' of the ribs F within the base-ring A they will hold the ribs F in position.

The top ring D may be attached to the ribs F by forming projections or lugs K on the ring, somewhat as shown by detail in Fig. 6, and bending them around the ribs, as shown in Fig. 7. In any case a groove or recess is formed in the interior of the frame between the internal flanges F' of adjacent ribs F, so that the sheets of mica or other transparent material G can be inserted into the lamp-chimney frame or be withdrawn for cleaning, renewal, or other purposes by sliding them within the lamp-chimney and between the flanges F' or the like without any alteration to the lamp-chimney frame. When inserted in the frame, the sheets G, of mica or other transparent material, may be supported on the base-flange C, Fig. 1, or on the inserted fastening devices J, Figs. 4, 5, and 7, as the case may be.

It will be obvious that the transparent sheets G may be secured within the lamp-chimney frame by dispensing with the lengthened flanges F' of the ribs F and substituting therefor similar but shorter flanges within the top and bottom rings D and A; but in that case the mica or the like will only be secured at top and bottom instead of the entire length, and besides the strength of the frame will be reduced.

As a very simple and comparatively inexpensive mode of construction I have illustrated in Figs. 8, 9, 10, and 11 an open-work lamp-chimney frame in which the parts are formed integral. In constructing this integral frame I form the same from a sheet of metal by stamping or cutting out the parts required to be open and pressing the remaining portions of the cut or perforated sheet metal to the necessary configuration for forming the bottom rim or ring 1, top ring 2, and the upright connecting ribs or columns 3 with suitable longitudinal flanges or beads 4 thereon at what is to be the inner side of the frame.

When the pressed and cut-out metal sheet is bent into circular or tubular form, the side edges of the sheet are connected together in any suitable manner, as by means of a wire 5, passed into the tubular or semitubular flanged portions of one of the ribs or columns 3, a partly-tubular portion of one of said columns or upright ribs being formed on one edge of the metal sheet and another partly-tubular portion being formed on the other edge of the sheet, as shown in Fig. 12, so that

one will interlock with the other and be keyed together by the wire 5, as shown.

The bottom and top rings 1 and 2 and the connecting ribs or columns 3, with the flanges 4 thereon, are so formed and arranged that plates or sheets 6, Fig. 10, of mica or other transparent material, may be readily inserted or removed, and when inserted the rings and ribs will retain the transparent material in position between the flanges of adjacent ribs. These sheets of mica or other transparent material may rest on indentations 7, formed in the base-ring 1 for that purpose. The lower ring 1 is preferably formed with a base-flange 8, a portion of which is shown as broken away in Fig. 11 to expose the indentations or shoulders that are to support the mica.

As shown in Fig. 8, the lamp-chimney frame may be formed with a ring 9 intermediate the frame ends to afford additional bracing for a lamp-chimney of considerable height.

If it is preferred to construct the lamp-chimney frame in sections, these may be formed by punching and pressing each section so that the same is flanged and thereby strengthened at the upright end ribs, which may be so formed, as shown at 4 in Fig. 12, that on placing the sections together they may be coupled by the insertion of a wire, or the ribs may be bent so as to form a T-joint, the sections of the frame being secured together by placing one within the other and bending the ribs or rib-flanges in such direction that the parts to be connected will be locked together the entire length of the frame, or the ribs may be cut and bent alternate ways to form the required joint.

What I claim as my invention is—

1. An open-work cylindrical lamp-chimney frame composed of a top ring, a bottom ring internally provided with means for supporting separately-removable sheets of mica or other transparent material, the said top and bottom rings being of the same diameter, and vertical connecting-ribs having central longitudinal flanges on their inner sides to hold the separately-removable sheets of transparent material from lateral displacement, substantially as described.

2. A lamp-chimney frame composed of one or more stamped open-work metal sheets comprising a top ring, a bottom ring provided with inward projections for supporting separately-removable sheets of mica or other transparent material, and longitudinally-flanged connecting-ribs integral with said top and bottom rings and provided with a joint at one side of said frame, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

THOMAS REDMAN.

Witnesses:

Rd. B. NICHOLLS,

THOMAS CROWTHER.