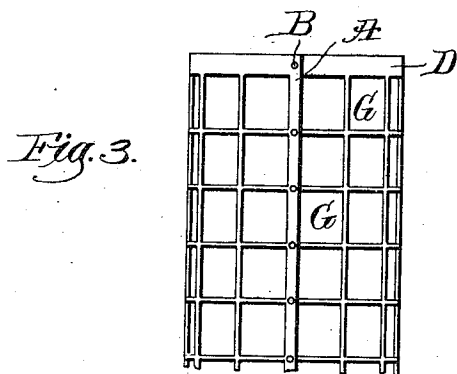
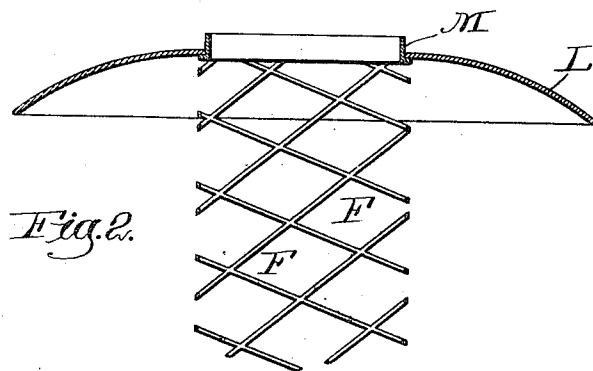
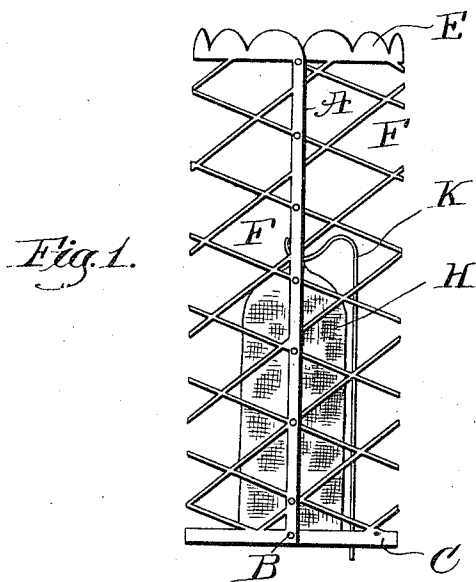


W. P. PINEL.
NON-BREAKABLE RETICULATED CHIMNEY.
APPLICATION FILED JULY 3, 1909.

972,640.

Patented Oct. 11, 1910.



Witnesses.

Thomas Drummond
Joseph M. Ward

Inventor.

Walter P. Pinel,
by Crosby & Gregory
Attys.

UNITED STATES PATENT OFFICE.

WALTER P. PINEL, OF QUINCY, MASSACHUSETTS.

NON-BREAKABLE RETICULATED CHIMNEY.

972,640.

Specification of Letters Patent.

Patented Oct. 11, 1910.

Application filed July 3, 1909. Serial No. 505,847.

To all whom it may concern:

Be it known that I, WALTER P. PINEL, a citizen of the United States, residing at Quincy, county of Norfolk, State of Massachusetts, have invented an Improvement in Non-Breakable Reticulated Chimneys, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to a chimney for incandescent gas mantles such as the well-known Welsbach mantle, and its object is to provide a chimney which shall be unbreakable and uninjured by heat and shall at the same time permit the free and unhindered passage of air to the mantle in order to secure perfect combustion, and the passage of the light therethrough unimpeded.

The glass and transparent chimneys in use are more or less fragile and readily injured by rough handling or by the heat from the mantle, especially if the heat be diverted against the chimney for any reason. These chimneys also do not allow the ready passage of air to the mantle and the combustion is more or less imperfect. They also serve to trap and hold insects or articles falling into the chimney which, coming in contact with the mantle, damage or destroy it. It has been proposed, and such devices are in use to some extent, to protect the mantle usually with the glass chimney, also by means of fine wire netting, thus preventing insects from coming against the mantle or entering the chimney, or any article from falling therein to damage or destroy the mantle.

The present invention eliminates the glass or transparent chimney, eliminates any guard of wire netting or similar material and substitutes a single unbreakable chimney, presenting large, narrowly-separated reticulations throughout its area. It is found that by the use of this device perfect combustion is secured as the air is freely admitted to all parts of the mantle; that the wires or supporting devices for the mantle have their life materially increased, being cooled by the passage of the air and not having the heat directed upon them so strongly as when inclosed; that the distribution of the light is not injured and, in fact, is greatly increased by reason of the more perfect combustion; that insects are not trapped in the chimney and, if through

accident they pass into the chimney, at once find their way out without injuring the mantle, and any articles falling by chance into the chimney, unless they strike the mantle directly, usually pass through the chimney without injuring the mantle; and the blackening or the smoking of the mantle is prevented by reason of the free passage of air thereto through the chimney at all points. The chimney is made of some suitable metal, such as aluminum; and is therefore practically indestructible.

The invention will more fully appear from the accompanying description and drawings and will be particularly pointed out in the claim.

The drawings illustrate preferred embodiments of the invention.

Figure 1 is a side elevation of a chimney embodying the invention, a gas mantle being indicated inside the chimney; Fig. 2 is an elevation in cross section of the upper portion of another form of chimney provided with a shade or reflector; Fig. 3 is a side elevation of the upper portion of a third form of chimney.

The chimney is made of metal and preferably of sheet metal. It is formed throughout its area with large, narrowly-separated reticulations and the examples given in the drawing, which are substantially full size, serve to illustrate well the size of the reticulations and the intervening spaces. The chimney may best be made by cutting or punching out a strip of metal, such as aluminum which has been found highly suitable for the purpose, leaving along each edge a narrow strip A to serve for attaching the edges of the strip together in any suitable way as by the rivets to bring it into cylindrical form, and leaving at the bottom a narrow strip C to serve as a base and at the top a narrow strip for strength which may be straight as at D in Fig. 3, or of any desired ordinary form as E in Fig. 1.

The reticulations are indicated at F in Figs. 1 and 2 and at G in Fig. 3, being diamond shaped in the former figures and rectangular in the latter, although they may be of any desired shape providing they are large in size and the intervening spaces are narrow in substantially the proportions indicated in the drawings.

In Fig. 1 the mantle H and its supporting wire K is indicated.

In Fig. 2 a shade L of the same material

as the chimney is shown and this may be attached to, so as to form a part of, the chimney in any suitable manner as by being sprung or clamped upon the chimney at its center, a shoulder M being shown as formed upon the upper edge of the chimney for that purpose.

The chimney as illustrated is applied to any ordinary style of upright mantle but it is obvious that it may readily be applied to the inverted type of mantle, the shape being modified therefor if desired.

Another advantage attaches to the chimney of this invention in that the mantle with its stiffening composition unremoved is placed upon the burner and the chimney put in position before burning off the composition. This can be done because in burning off the composition there is no danger of breaking the chimney nor is it blackened owing to the draft of air through the reticulations. In the case of glass and mica chimneys the mantle must be burned off before putting the chimney in place or the chimney will be broken or sooted. When the chimney is put in place, there is then great danger of destroying or injuring the mantle.

It will thus be seen that the device of the

invention presents all the advantages already cited as characterizing the invention.

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

A chimney for incandescent frangible gas mantles of substantially cylindrical shape and formed of thin metal having large reticulations throughout its surface whereby air is freely admitted to all portions of the mantle insuring perfect combustion and whereby the light from the mantle is freely emitted, the said reticulations being separated from each other by narrow portions of the metal sufficient to maintain the shape of the chimney but insufficient to materially obstruct the emission of light, and the said chimney extending to or above the full height of the mantle and open at both ends thus protecting the mantle and allowing free passage of air therethrough.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

WALTER P. PINEL.

Witnesses:

EMILY C. HODGES,

THOMAS J. DRUMMOND.