

B. F. HARMAN.
 INCANDESCENT MANTLE CHIMNEY.
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1,024,334.

Patented Apr. 23, 1912.

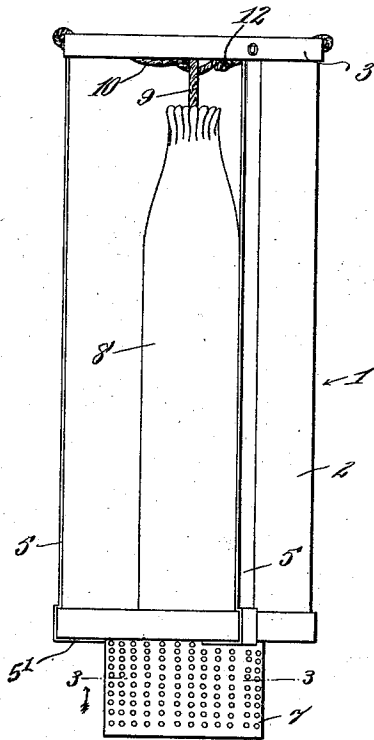


Fig. 1.

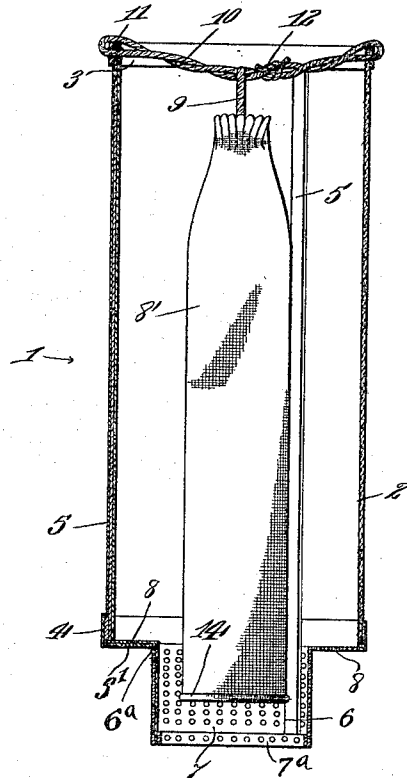


Fig. 2.

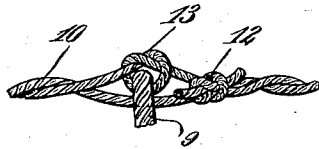


Fig. 4.

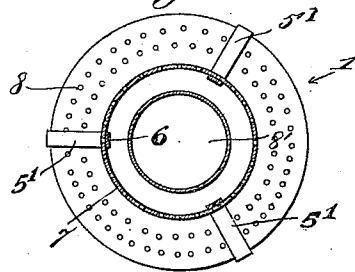


Fig. 3.

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UNITED STATES PATENT OFFICE.

BENJIMAN FRANKLIN HARMAN, OF TULSA, OKLAHOMA.

INCANDESCENT-MANTLE CHIMNEY.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BENJIMAN F. HARMAN, a citizen of the United States, residing at Tulsa, in the county of Tulsa and State of Oklahoma, have invented new and useful Improvements in Incandescent-Mantle Chimneys, of which the following is a specification.

This invention relates to incandescent mantle chimneys, the object of the invention being to provide a construction of chimney whereby the portion of the chimney most exposed to the heat of the flame will be protected and kept cool and prevented from becoming blistered or otherwise injured, and whereby contact between the mantle and the chimney will be prevented, thus prolonging the life of the chimney and mantle.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Figure 1 is a view in side elevation of a mantle and chimney embodying my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a transverse section on the line 3—3 of Fig. 1. Fig. 4 is a detail view showing the mode of supporting the mantle.

Referring to the drawings, 1 designates a transparent chimney, composed of one or more pieces of mica 2 suitably secured to a frame composed of top and bottom rings 3 and 4 and an annular series of longitudinal connecting strips 5. Secured to the bottom ring 4 by angular continuations 6 of the bent strips 5 is a base formed of a tube 7 of perforated sheet metal, which tube is of smaller diameter than said ring, and a flange 8 extending between the upper edge of the tube and the lower edge of the ring, which flange is also formed of perforated sheet metal, as shown. The lower ends or continuations 6 of the metallic strip 5 are connected with the body portions of said strips by angularly bent or offset portions 5', which extend beneath the flange 8, ring 4 and edge of the metallic body and through slits 6^a formed in the tube 7, the extensions 6 projecting downwardly on the inner side of said tube and being clamped against the tube by a folded or inturned portion 7^a at the lower edge of the tube, as shown.

The mantle 8' is provided at its upper end

with the usual suspending loop 9, and is supported from the frame ring 3 by a flexible cord 10, of asbestos or other suitable flexible non-combustible material. This cord is passed through openings 11 formed in diametrically opposite sides of the ring 3 and has its ends tied or otherwise suitably united as at 12. The strands of the cord are, for purposes of securing additional strength intertwisted, and one of said strands is passed loosely through the loop 9, while the other strand is formed with a tie 13 to engage the loop, by which the mantle is firmly supported in position against sagging, while at the same time is permitted to have a universal swinging movement. By this mode of suspending the mantle, the latter is permitted to adjust itself to variations in the change of position of the chimney and to accommodate itself to shocks and jars received by the chimney, so that it is much less liable to be broken or injured than if it were rigidly mounted in the usual manner or permitted to have only a slight degree of swinging motion. The mantle is also free from contact with the burner or parts of the chimney, and, hence, can not be injured by physical engagement therewith.

The lower end of the mantle extends into the tube 7 which receives the burner and is of sufficiently less diameter than the tube to provide a space for the free passage of air and to permit the mantle to have a desired independent swinging motion for the purpose above described. In order to prevent the lower edge of the mantle from raveling, disintegrating or becoming injured by contact with extraneous objects, such portion of the mantle is thickened and reinforced, preferably by turning the edge of the mantle outwardly and upwardly in the form of a roll 14. The perforations in the ring 7 and flange 8 are of sufficiently restricted size to prevent injury to the mantle from the introduction of a match in attempts to light the mantle from below, and said ring and flange are so arranged as to admit air around and for a sufficient distance above the lower end of the mantle to promote combustion of the gas at this point, as well as to keep the base of the chimney cool, so that it can not become blistered or otherwise injured from the effects of the heat from the flame, as is a common objection with mica chimneys of ordinary construction. It will thus be ap-

parent that the mantle and lamp are adapted to effectually withstand shocks, jars, and rough handling without liability of breakage, while the mantle will remain unaffected
5 by vibrations from the lamp fixtures and the chimney by the heat of the flame, so that the article may be used for a long period before sufficient deterioration has occurred to require its discardment.
10 It will be observed that with the construction described the perforated base is adapted to admit air around and above the base of the mantle and between the same and the bottom of the body of the chimney, by which combustion of the gas is promoted, while at the same time the flame
15 from the burner is prevented from coming in direct contact with the chimney and the latter is consequently kept cool and prevented from becoming blistered or otherwise injured. A chimney constructed in accordance with my invention consequently possesses durability and capacity for wear rendering it economical in use, as will be
20 readily understood.
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Having described my invention, I claim:—

An incandescent lamp chimney comprising a hollow mica body, bands secured to and reinforcing the upper and lower ends of the body, a perforated sheet metal cylinder depending from the lower end of the body and of less diameter than said body, a perforated horizontal flange connecting the upper edge of the cylinder with the lower reinforcing band, said cylinder being provided with slits in its sides adjacent said flange, and longitudinal reinforcing strips secured to the reinforcing bands and having offset portions extending beneath the horizontal flange and through the slits into the cylinder and down upon the inner side thereof, and secured at their lower ends to the lower edge of the cylinder.

In testimony whereof I affix my signature in presence of two witnesses.

BENJIMAN FRANKLIN HARMAN,

Witnesses:

C. O. BAKER,

HARRY M. CHOICE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."