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W. LIVINGSTONE.

GLOBE HOLDER FOR GAS BURNERS.

APPLICATION FILED MAR. 11, 1907.

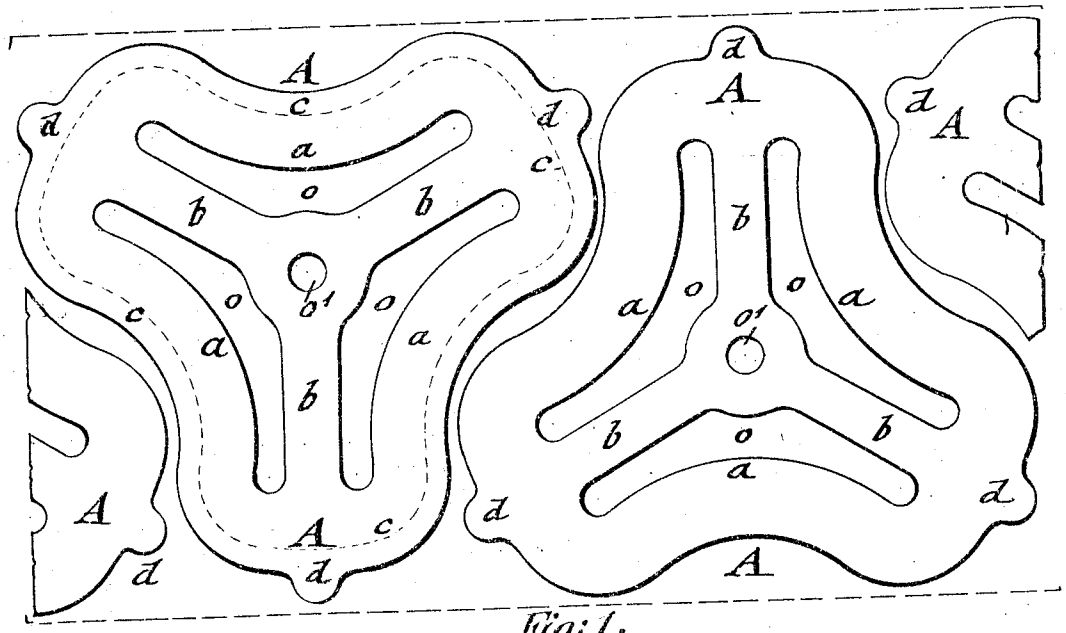


Fig: 1.

Fig: 2.

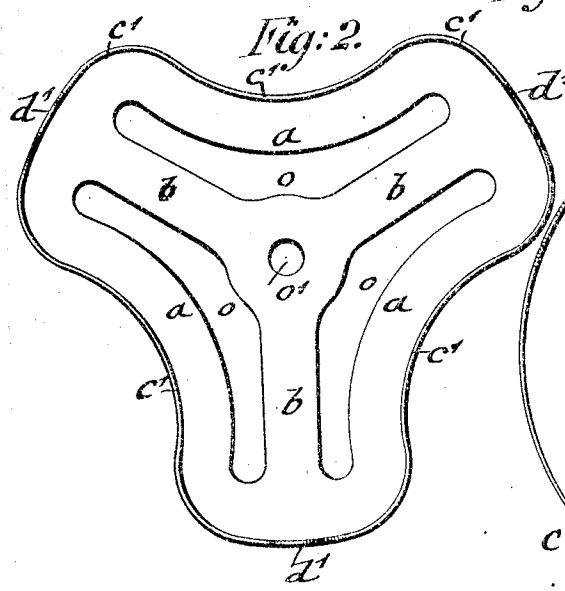


Fig: 3.

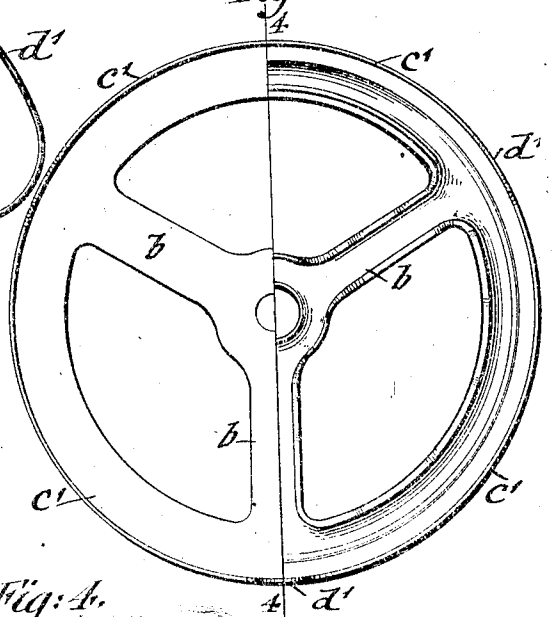
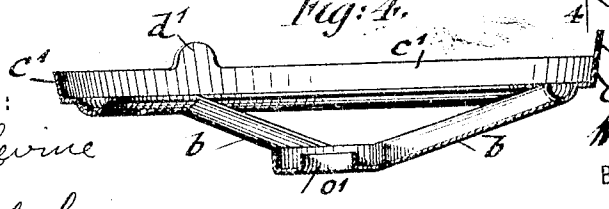


Fig: 4.



WITNESSES:

David Levine

H. J. Leibrier

INVENTOR

Wm Livingstone

BY Howson & Howson

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM LIVINGSTONE, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND JOHN H. DALE, OF NEW YORK, N. Y.

GLOBE-HOLDER FOR GAS-BURNERS.

No. 878,299. Specification of Letters Patent. Patented Feb. 4, 1908.

Application filed March 11, 1907. Serial No. 361,734.

To all whom it may concern:

Be it known that I, WILLIAM LIVINGSTONE, a citizen of the United States, residing in New York, in the borough of Queens, county of Queens, and State of New York, have invented certain new and useful Improvements in Globe-Holders for Gas-Burners, of which the following is a specification.

This invention relates to an improved globe-holder for gas-burners.

Heretofore globe-holders were made from disk-shaped blanks of sheet-metal from which a considerable portion has to be punched out so as to provide for the sector-shaped openings between the radial arms. Besides the blanks have to be cut from a strip of sheet-metal somewhat wider than the diameter of the globe-holder plus the height of the rim and a semi-circular screw-lug, each globe-holder requiring an area equal to the square of the width of the strip, or, in other words, for producing a globe-holder say 4 inches in diameter, it requires an area of 23.75 square inches of sheet-metal, while the finished globe-holder has only a superficial area of 10.50 square inches.

The object of this invention is to produce globe-holders with considerably less waste of material, so that they can be made at a much lower price than by the methods heretofore in use; and for this purpose the invention consists in a globe-holder for gas-burners such as will be hereinafter described and finally pointed out in the claims.

In the accompanying drawings, Figure 1 shows a plan-view showing several improved blanks for globe-holders for gas-burners cut from a strip of metal, Fig. 2 is a plan-view of the blank, with the circumferential rim bent up from the same, Fig. 3 is a plan-view of one half of the blank shown in Fig. 3, expanded into circular form, and a plan-view of one half of the completed globe-holder, and Fig. 4 is a vertical transverse section on line 4, 4, Fig. 3.

Similar letters of reference indicate corresponding parts throughout the several figures.

In making my improved globe-holder for gas-burners, the blanks A are cut from a sheet-metal strip which is a little wider than the full width of the blank, said blank being of such a configuration as to contain not only the required superficial area of the globe-holder, but also the exact length of the circumference of the finished globe-holder, but, instead of being made in circular shape, the circumferential portions of the blank are curved inwardly between the arms so as to be susceptible of being expanded into the desired circular form, without detrimental effects of crowding and kinking the sheet-metal in one part or unduly stretching or straining it in another part. Thus the blank from which each globe-holder is made is of substantially triangular shape, with elongated openings extending substantially parallel to the sides. The corners of the blank are convex, as shown, while the sides are inwardly curved.

To properly describe the method of making a globe-holder from the blank shown in Fig. 1, the rim-line c of the blank must represent a radius of say 2 inches so as to produce a globe-holder having a diameter of say 4 inches. While the inner radius of the rim-line c, shown in Fig. 1, is 2 inches, the radius of the rim shown in dotted lines in Fig. 1, at the center-line of the arms b, has to be so much larger as is required by the inclination of the arms toward the depressed center, Fig. 4, which in this case would be a radius of 2.09 inches. The inwardly-curved portions a of the blank being parallel with the inwardly-curved portions of the rim-line c, will partake of any changes of direction from their sinuous course to a circular shape when they are forced in outward direction for completing the circular shape of the globe-holder. The radial arms b divide the blank and the globe-holder made therefrom into three parts which are exactly alike, the arms and rims being corrugated so as to impart the required strength to the globe-holder.

In making the globe-holder, the blanks are first cut out from a strip of metal, as shown in Fig. 1, each blank being provided at the outer circumference of the convex portions and in the center-lines of the arms with semi-circular projections d which serve for holding small screws to secure the globe in the rim of the globe-holder when the same is placed in position on the finished globe-holder. In cutting out the blank, the narrow curved openings o between the arms and the inwardly curved portions, and the openings o^1 at the center-portion e are cut out at the same time. The so-formed blank A is then first subjected to the action of dies by which the rim c^1 is bent up, with the lugs d^1, so that the blank

assumes the shape shown in Fig. 2. The inwardly-curved portions of the blank are then subjected to an outward bending operation by means of suitable dies, or by the circular action of rollers, so that the rim c^1 assumes a circular shape and the arms b the required inclination towards the center, as shown in the right half of Fig. 3. The arms and the circumferential portion adjacent to the rim are then subjected to the action of dies by which the arms are centrally corrugated and the portion adjacent to the rim provided with a circular corrugation by which sufficient strength is imparted to the globe-holder to support the globe. Finally the projecting lugs d^1 are provided with screw-holes for the screws by which the bottom rim of the globe is retained on the holder.

The essential feature of novelty consists in the peculiar shape of the blank, with its alternating inwardly-curved or concave portions and intermediate arc-shaped or convex portions and the narrow segmental openings in the body of the blank, the concave portions being then forced in outward direction so as to complete the circular shape of the globe-holder. By this arrangement the waste in stock which occurs in the globe-holders heretofore made is reduced to a minimum. This reduces the expense of the globe-holders, while globe-holders of exactly the same size, strength and finish are obtained. Moreover, this particular shape of the blank will permit of the reversing of the blanks when cutting them from the strip, so that the length of the strip required will be considerably shortened for any number of blanks, or, in other words, while one gross of 4 inch globe-holders under the old method will require a strip of 5″x56.28 ft. or an area of 23.45 square feet, my improved method will only require 4.7/16″ x42.47 feet or an area of 15.7 square feet at a saving of 7.75 square feet or about 33%. The same method of construction will apply to globe-holders of any size or diameter.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A blank for globe-holders consisting of a substantially triangular piece of sheet-metal having elongated openings substantially parallel to the sides.

2. A blank for globe-holders consisting of a piece of sheet-metal of substantially triangular shape, having inwardly curved sides and inwardly curved elongated openings parallel to the sides.

3. A blank for globe-holders consisting of a substantially triangular piece of metal having convex corner-portions and openings extending approximately parallel to the sides of the blank.

4. A blank for globe-holders consisting of a substantially triangular piece of sheet-metal having convex corner-portions and concave side-portions, there being elongated openings extending substantially parallel to the sides and defining arms extending radially from the center to the corner-portions.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

WILLIAM LIVINGSTONE.

Witnesses:
PAUL GOEPEL,
HENRY J. SUHRBIER.