No. 808,445. PATENTED DEC. 26, 1905.

W. T. & A. A. GIBBS.

LEADED LIGHT.

APPLICATION FILED DEC. 5, 1904.

Fig. 1.

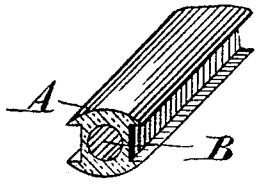


Fig. 2.

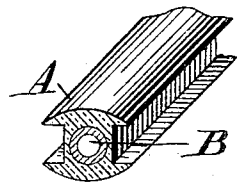


Fig. 3.

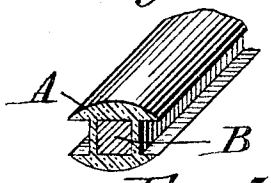


Fig. 4.

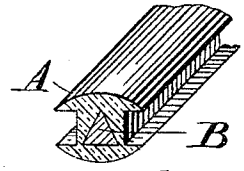


Fig. 5.

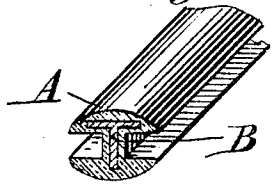


Fig. 6.

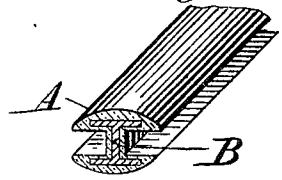
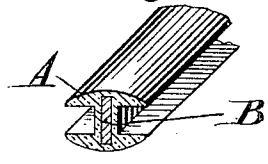


Fig. 7.



Witnesses:

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UNITED STATES PATENT OFFICE.

WALTER THOMAS GIBBS AND ARTHUR AUGUSTUS GIBBS, OF LONDON, ENGLAND.

LEADED LIGHT.

No. 808,445. Specification of Letters Patent. Patented Dec. 26, 1905.

Application filed December 5, 1904. Serial No. 235,603.

To all whom it may concern:

Be it known that we, WALTER THOMAS GIBBS and ARTHUR AUGUSTUS GIBBS, subjects of the King of Great Britain, residing at 2 Charlotte street, Blackfriars Road, London, England, have invented certain new and useful Improvements in Leaded Lights, of which the following is a specification.

The object of this invention is to strengthen leaded lights for windows, door-panels, skylights, lantern-lights, and the like, whereby the unsightly system of iron bars and copper ties on the surface of the lead are dispensed with.

Our invention will be clearly understood from the following description aided by the accompanying drawings, which show several examples of carrying our invention into effect.

Figure 1 is a sectional elevation of a portion of an ordinary lead bar or "came" with a strong round metal rod completely inclosed within it. Fig. 2 is a sectional elevation of a portion of lead bar with a strengthening-tube within its center. Fig. 3 is a sectional elevation of a portion of a lead bar with a square strengthening-rod in the center. Fig. 4 is a similar view with a triangular strengthening-bar in center. Fig. 5 is a similar view with the bar strengthened by a **T**-rod. Fig. 6 is a similar view with the bar strengthened by an **H**-rod. Fig. 7 is a similar view with the bar strengthened by a strip.

For the purpose of this invention we completely inclose within the lead A, used for making leaded lights, a rod, bar, or tube B, of iron, copper, brass, or any other hard metal and of a round, Fig. 1, square, Fig. 3, angular, Fig. 4, hollow, Fig. 2, **T**, Fig. 5, double **T** or **H**, Fig. 6, strip, Fig. 7, or other shape, the whole of the rod, bar, or tube B being covered by the metal A, forming the lead.

In carrying our invention into effect we make the lead bar or came with a shaped bore or hole shaped as required, and we take a length of the lead bar and insert within the bore for the full length the rod or tube of iron of an exterior shape to that of the bore of the bar or came of lead. The combined article is then passed through a lead-vise, which presses the lead to shape required by the aid of the cheeks and also forces the lead onto the hard-metal rod or tube, so as to cause it to grip the rod or tube that the rod or tube shall be firmly held in position, or the lead A can be cast over the rods, bars, or tubes B.

By this invention the lead has the same appearance as an ordinary lead, but is materially strengthened, and such system can be employed entirely throughout the light or only partially so, and, further, the surface may be entirely flat, thus giving extra facilities for cleaning when fixed, also saving time and labor and cutting about of beads, frames, or stonework.

What we claim, and desire to secure by Letters Patent, is—

A lead comprising a web, oppositely-disposed flanges extending along the outer portions of the web, and a reinforcing member embedded in the web and projecting uninterruptedly into the flanges, the projecting portions being laterally offset, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

WALTER THOMAS GIBBS.
ARTHUR AUGUSTUS GIBBS.

Witnesses:
WM. P. BROWN,
PERCY E. MATTOCK.