

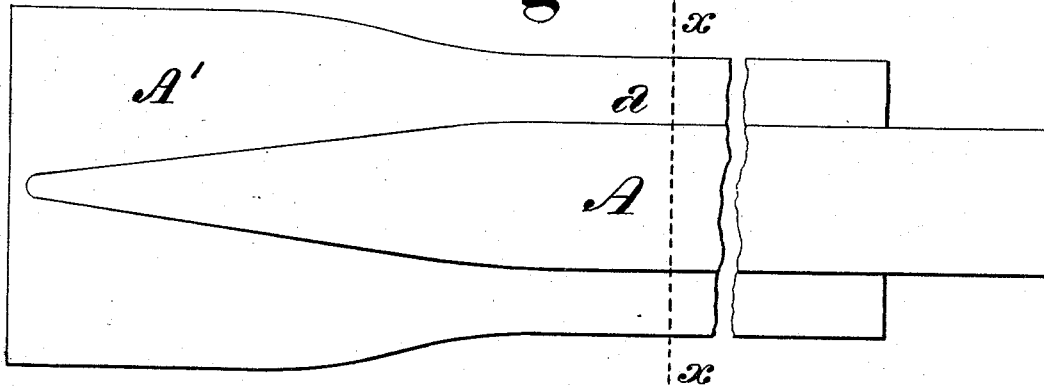
J. W. STARR, Jr.

Vertical-Bar for Gas-Holders.

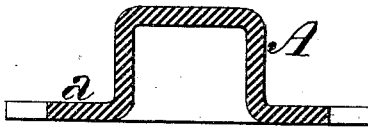
No. 168,799.

Patented Oct. 11, 1875.

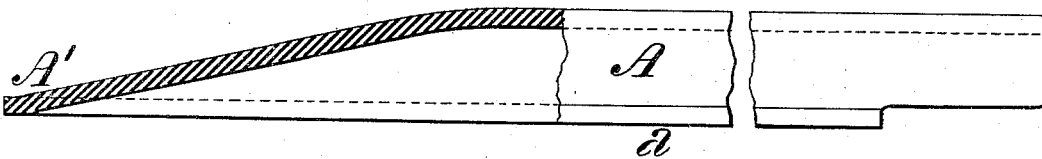
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



*Witnesses.*

*Geo. A. Vaillant.*  
*Chas. W. Schuellermann.*

*Inventor.*

*Jesse W. Starr, Jr.*  
*By J. Snowden Bell*  
*attor.*

# UNITED STATES PATENT OFFICE.

JESSE W. STARR, JR., OF CAMDEN, NEW JERSEY, ASSIGNOR TO JESSE W. STARR AND JESSE W. STARR, JR., OF SAME PLACE.

## IMPROVEMENT IN VERTICAL BARS FOR GAS-HOLDERS.

Specification forming part of Letters Patent No. **168,799**, dated October 11, 1875; application filed September 24, 1875.

*To all whom it may concern:*

Be it known that I, JESSE W. STARR, JR., of the city and county of Camden, in the State of New Jersey, have invented a certain new and useful Vertical Bar for Gas-Holders, of which the following is a specification:

My invention relates to the vertical bars employed in the construction of gas-holders for bracing and strengthening the same; and its object is to provide bars which, while combining strength and lightness in their capacity of braces, will further serve as bearings or guideways for the movement of the sections of a telescopic gas-holder one upon the other; to which end my improvement consists in a rolled metal bar of the form substantially as hereinafter set forth.

In the accompanying drawings, Figure 1 is a top view of a vertical bar embodying my improvement; Fig. 2, a side view, partly in section; and Fig. 3, a transverse section at the line *xx* of Fig. 1.

To carry out the object of my invention I provide a metal blank, which I roll into a bar of the form shown in the drawings—to wit., having its body or main portion *A* of an inverted trough-section, or that of a rectangle with one of its sides removed, and provided with side flanges *a*. The flanges *a* are widened out at one end after the bar is rolled, so as to form a flat head, *A'*, into which the rectangular body of the bar is carried by a gradual taper of its three sides, so as to disappear at

or near the wide end of the head. The bar may be rolled of any convenient length, and is of uniform section from the head *A'* to the opposite end, near which the flanges *a* are preferably cut off for a short distance.

In the application of my improved bars to a telescopic gas-holder they are secured to the sections with their flat heads *A'* downward, thus presenting closed inclined faces, against which the lip of the inner section bears in rising, so that the latter is guided to its proper position, and has no tendency, if canted, to catch and lift the outer section, as might otherwise be the case. The form of the body of the bar gives an ample bearing-surface or guideway for the inner section, combined with a light and strong brace for the outer. The bars are riveted to the sections of the holder through the side flanges *a* and heads *A'*, and the object of cutting away the flanges at one end is to keep them clear of the angle-irons on the ends of the sections.

I claim as my invention and desire to secure by Letters Patent—

As a new article of manufacture, a vertical bar for gas-holders, having its body of trough-section, provided with side flanges, and tapered at one end into a flat head in line therewith, substantially as set forth.

JESSE W. STARR, JR.

Witnesses:

J. SNOWDEN BELL,  
L. F. DELACROIX.