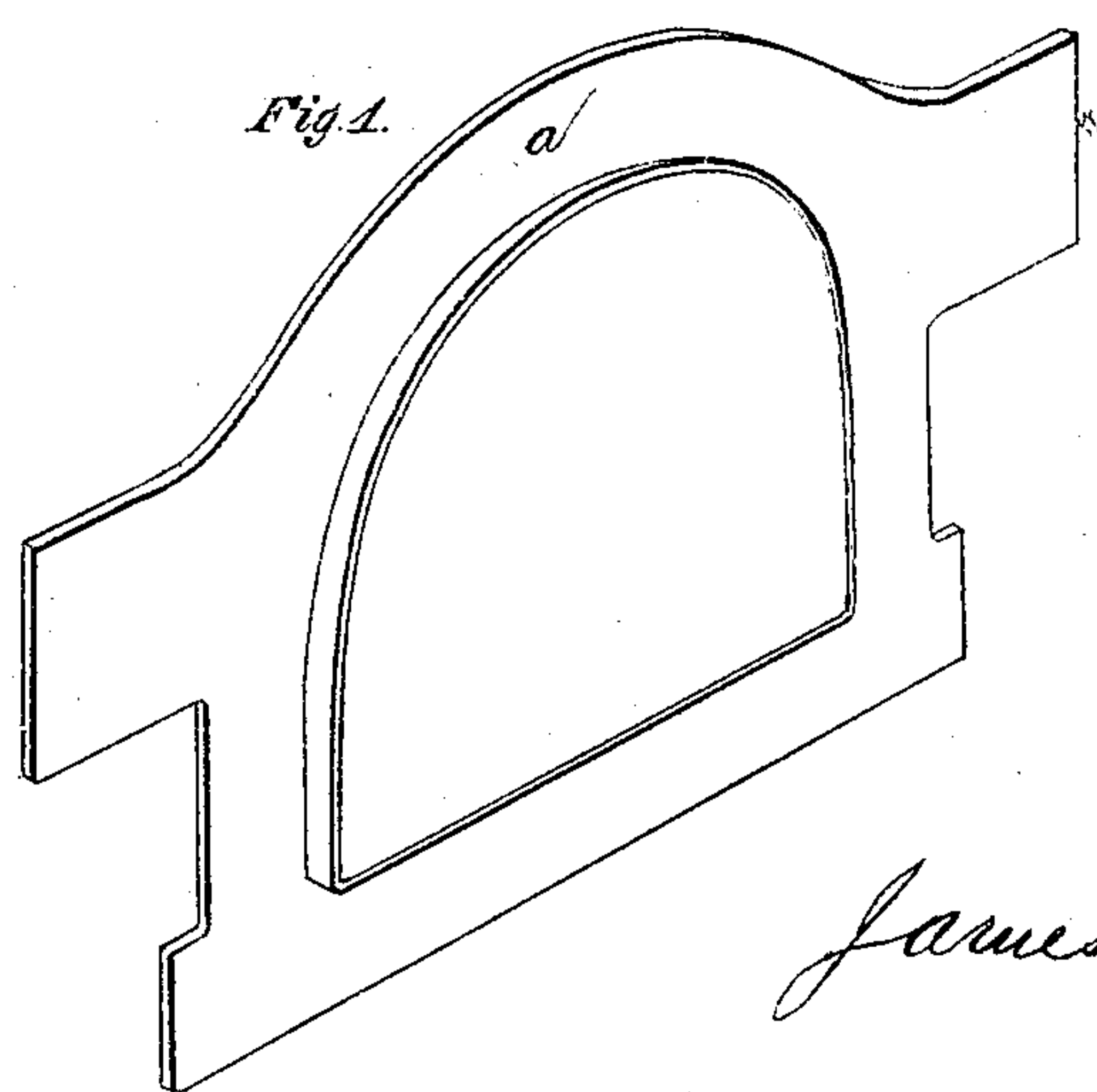
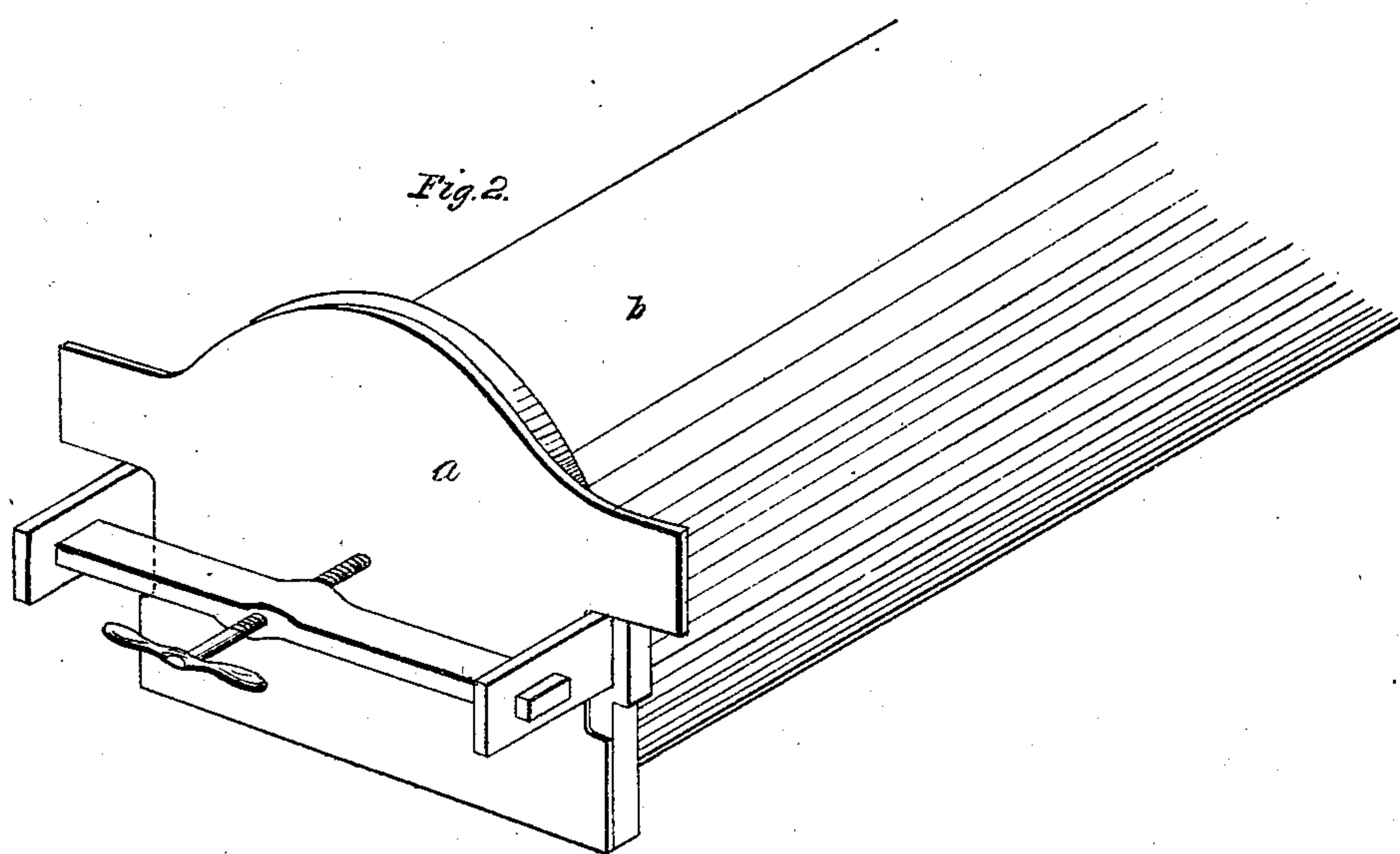


J. R. FLOYD.
GAS RETORT COVER.

No. 17,854.

Patented July 21 1857.



Inventor:
James R. Floyd

UNITED STATES PATENT OFFICE.

JAMES R. FLOYD, OF NEW YORK, N. Y., ASSIGNOR TO THEODORE C. KIBBE, OF SAME PLACE.

RETORT-COVER.

Specification of Letters Patent No. 17,854, dated July 21, 1857.

To all whom it may concern:

Be it known that I, JAMES R. FLOYD, of the city, county, and State of New York, have invented a new and useful Improvement in the Covers of Gas-Retorts; and I have herein fully described and ascertained said invention, for a view of which I refer to the accompanying Figure 1, showing the inside of the cover, and Fig. 2, the cover fastened to the retort; *a*, the cover; *b*, the retort.

In all the manufactories of gas and public gas works the retorts are closed with a heavy cast iron cover. These covers in the usual sized works such as the Manhattan, the Philadelphia, and the Boston works, weigh about seventy pounds. In a bench of five retorts (the most usual number) the upper one is at least five feet from the ground and every time the retorts are discharged and charged this heavy cover has to be taken down and put up by the operatives. To add to the difficulties of doing this besides the weight the cover is very highly heated and in practice must necessarily be handled roughly, the consequence of which is the lugs and corners are frequently broken off and the cover thereby rendered useless. If the cover falls from the upper retort it is sure to break. The consumption of covers, and expense attending it is very great, amounting in the Manhattan gas works to about five hundred per annum. My improvement is for the purpose of obviating all these troubles.

I make a cover of equal strength and about one half the weight and having all the advantages of the former cover without the possibility of its being broken in handling in the usual manner. To effect this I form a casting as seen in the figure (the pattern being made to suit the retort on which it is to be used) and make it malleable by the usual process of rendering cast iron malleable, which, as it is well known, need not here be described. The pattern is made much lighter than the ordinary one and the cover possesses equal strength, with lightness, weighing in no case over twenty-eight pounds.

This cover is easily handled and should it chance to fall no permanent injury is done to it. A lug cannot be broken off by such an accident and if it is bent it is easily straightened again.

I have had this cover thoroughly tested in some of the most important gas works in the country where they are now superseding all others.

Having thus fully described my new retort cover and its purposes and advantages, what I claim and desire to secure by Letters Patent is—

The constructing gas retort covers of malleable iron in the manner and for the purposes set forth.

JAMES R. FLOYD.

Witnesses:

ALB. H. HAUR,
HEZEKIAH BRADFORD.