

G. W. LADD.  
METALLIC SEAL.

No. 176,013.

Patented April 11, 1876.

Fig. 1.

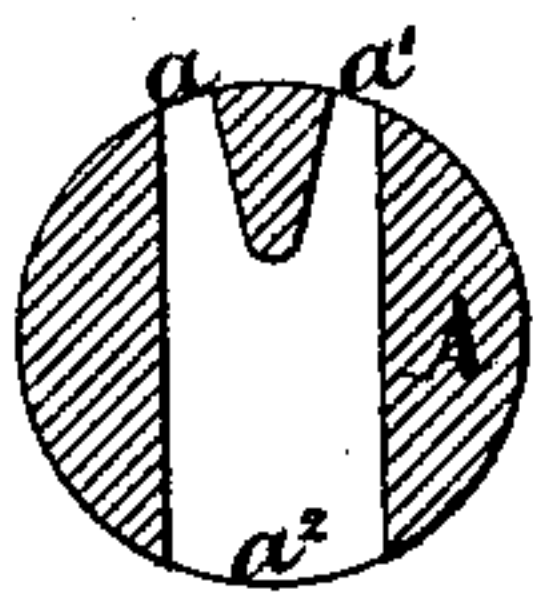


Fig. 3.

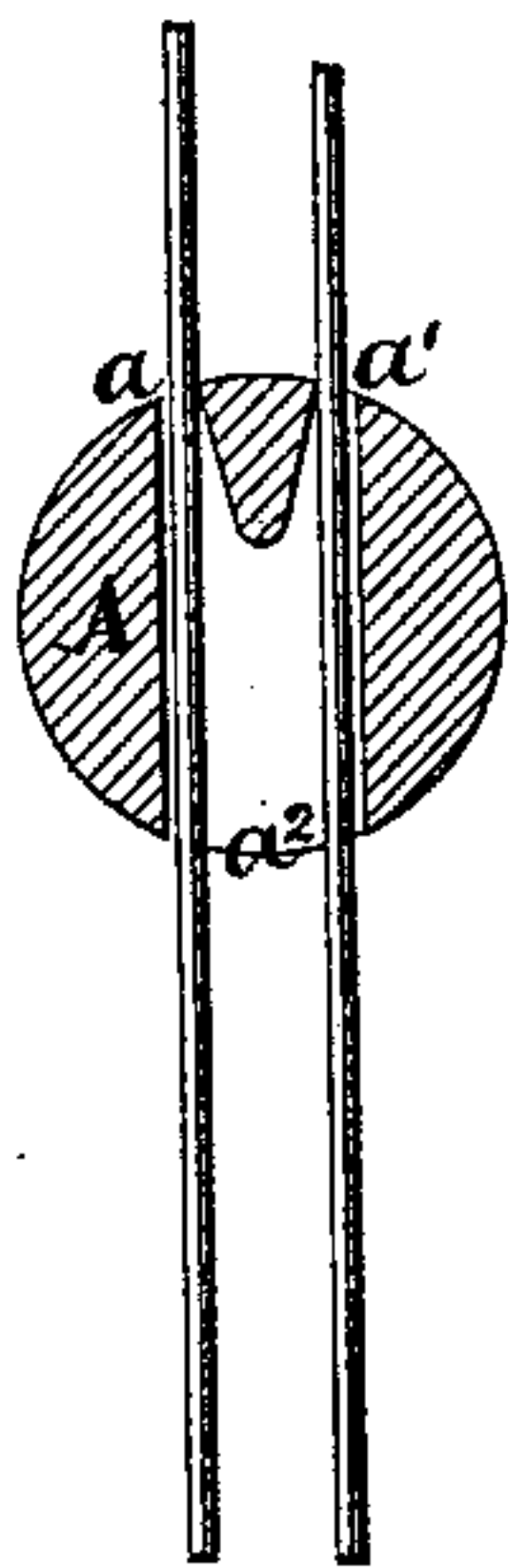


Fig. 2.

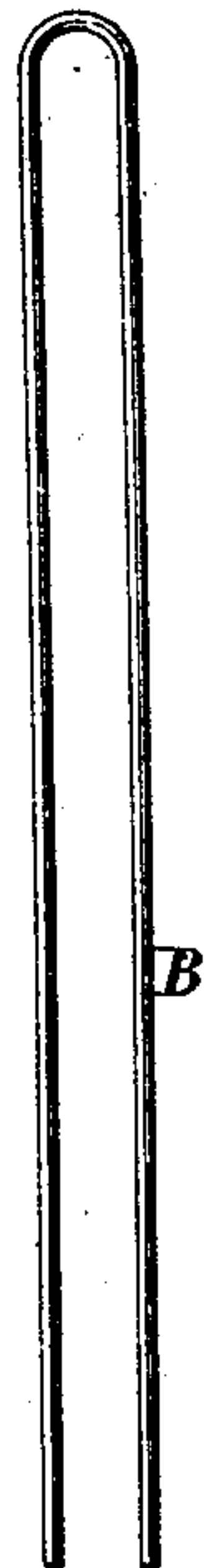
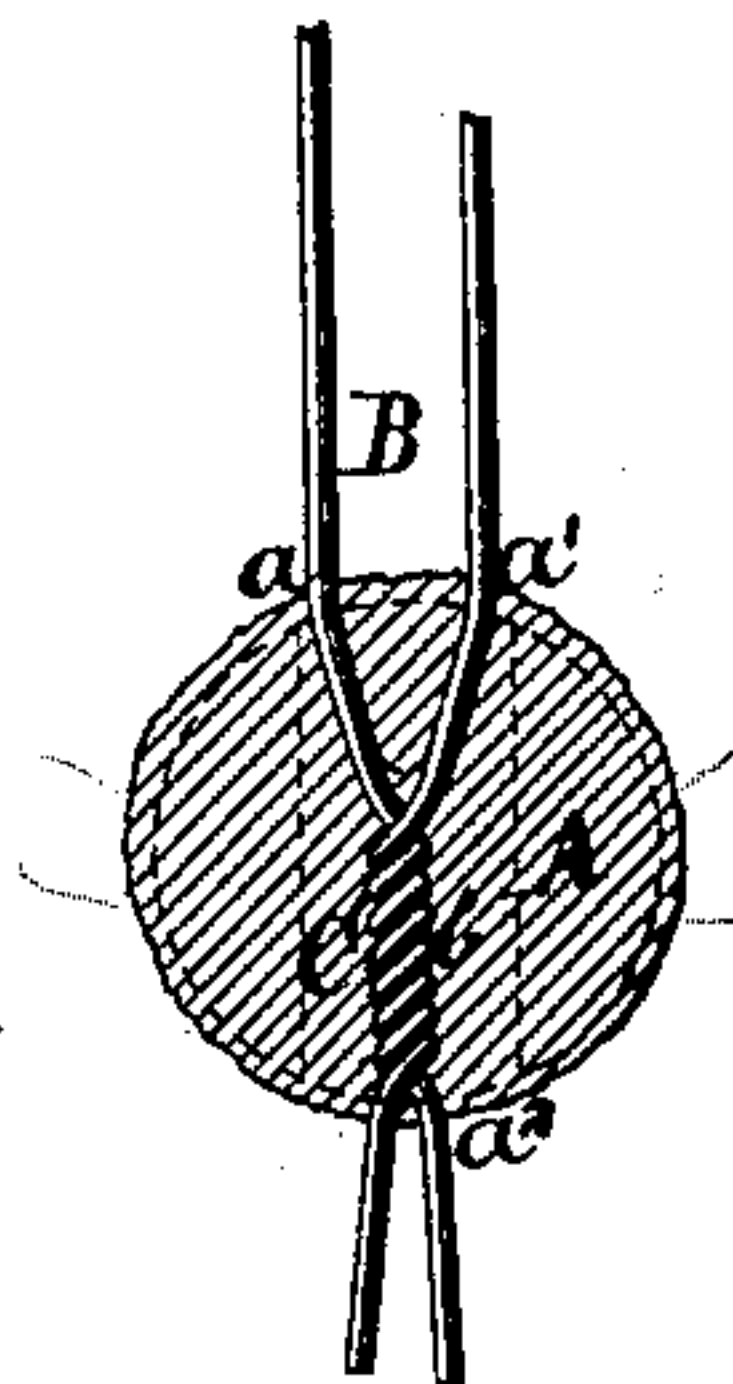


Fig. 5.



Fig. 4.



Witnesses.

Otto Hufeland.  
Chas. W. Hahler.

Inventor.

George W. Ladd.  
per  
Van Santvoord & Hauff  
Attorneys

# UNITED STATES PATENT OFFICE

GEORGE W. LADD, OF NEW YORK, N. Y.

## IMPROVEMENT IN METALLIC SEALS.

Specification forming part of Letters Patent No. **176,013**, dated April 11, 1876; application filed February 4, 1876.

*To all whom it may concern:*

Be it known that I, GEORGE W. LADD, of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Metallic Seals; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which—

Figure 1 represents a section of my seal-blank without the wire. Fig. 2 is a front view of the wire shackle detached. Fig. 3 shows the wire shackle after the same has been inserted into the seal-blank. Fig. 4 is a section of the seal complete. Fig. 5 is a side view of the same.

Similar letters indicate corresponding parts.

This invention consists in a metallic seal composed of a soft-metal seal-blank and a wire shackle, the seal blank being provided with openings for the passage of the shanks of the wire shackle, and with a cavity to admit a twist formed on the shackle after its shanks have been passed through the openings in the seal-blank, so that the seal-blank and the shackle can be inserted in an easy and expeditious manner, and that, by compressing the seal-blank after the twist has been formed on the shackle and drawn back into the cavity of the blanks, the metal of the said blanks becomes firmly embedded in the spirals of the twist, and the seal cannot be detached from the shackle without destroying it.

In the drawing, the letter A designates my seal blank, which is made of lead or other soft metal, and B is the shackle, which is bent

up of wire, as shown in Fig. 2. The seal-blank is provided with the holes  $a$   $a^1$ , which branch off from a cavity,  $a^2$ , as shown in Fig. 1, said holes and cavity being produced in the operation of casting the blank. The shanks of the shackle B are passed through the holes  $a$   $a^1$ , as shown in Fig. 3, and then the ends of said shanks are united by forming a twist,  $b$ , as shown in Fig. 4. This twist is drawn up into a cavity,  $a^2$ , and by compressing the blank A the metal composing the same is made to enter the spiral grooves of the twist, and said twist becomes embedded in the body of the blank, so that the seal cannot be separated from the shackle without demolishing the same entirely. By these means a metallic seal is obtained the parts of which can be united with great facility, and which cannot be tampered with clandestinely.

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

A metallic seal composed of a soft-metal seal-blank, A, having holes  $a$   $a^1$ , and a cavity,  $a^2$ , and a wire shackle, B, the shanks of which, after having been passed through the holes  $a$   $a^1$ , are united by means of a twist,  $b$ , which lodges in the cavity  $a^2$ , and which, when the blank A is compressed, becomes embedded in the metal composing said blank, substantially as shown and described.

GEO. W. LADD. [L. S.]

Witnesses:

W. HAUFF,  
P. A. CURTIS.