W. W. JOHNSON.
METALLIC-SEALS.

No. 193,709. Patented July 31, 1877.

Fig. 1.

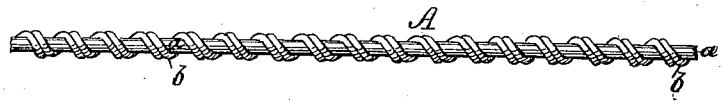
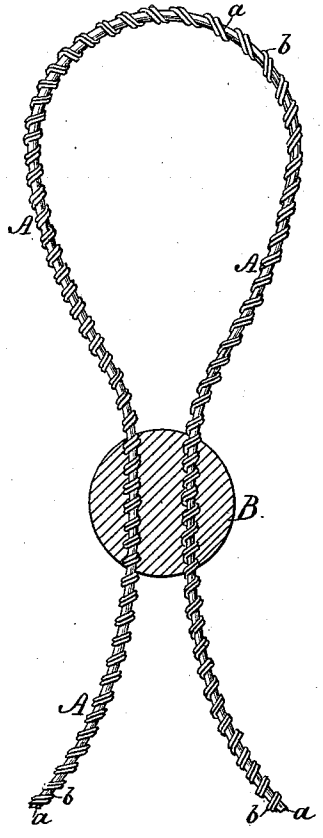


Fig. 2.



Witnesses;
Hugh Canall
Robert S. Barnes

Inventor;
William W. Johnson

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM W. JOHNSON, OF NASHVILLE, TENNESSEE.

IMPROVEMENT IN METALLIC SEALS.

Specification forming part of Letters Patent No. **193,709**, dated July 31, 1877; application filed March 26, 1877.

To all whom it may concern:

Be it known that I, W. W. JOHNSON, of Nashville, in the county of Davidson and State of Tennessee, have invented a new and Improved Metallic Seal; and I do hereby declare that the following is a full, clear, and exact description of the same.

The bows or shackles of metallic seals have been usually constructed of several strands of wire twisted together in such manner that the bows have a comparatively smooth exterior, and, in consequence of such construction, they may be withdrawn from the lead ball without injuring it materially, thus destroying the practical efficiency of the seal.

It is the object of my invention to provide a metallic seal whose bow or shackle, although constructed as cheaply and simply as those previously used, cannot be withdrawn from the lead ball or seal proper without defacing or injuring it to such an extent as to render detection easy.

To this end the invention consists in forming the bows or shackles of a central wire, around which one or more wires are spirally wrapped or wound, as shown in accompanying drawing, forming part of this specification, in which—

Figure 1 represents a plan of a fragment of the bow or shackle, and Fig. 2 shows it connected with the lead ball.

The bow or shackle A is formed of the central wire *a* and outer wire or wires *b*, which are wound spirally around it in such manner as to leave a considerable interval of space between the respective convolutions, thereby forming a composite wire screw with widely-separated threads. The ends of the bow or shackle thus constructed are inserted through the holes previously formed in the lead ball B, and the latter being compressed sufficiently to close said holes and cause the lead to set firmly around the wire screw, the latter will be held so tightly that it cannot be withdrawn without seriously defacing or mutilating the ball, and thus disclosing the fact that the seal has been tampered with, which is the object ultimately had in view.

What I claim is—

A metallic seal consisting of the bow or shackle formed of a central wire having a wire or wires wrapped around it in such manner that the convolutions are separated by a greater or less space, and a ball of soft metal, combined as shown and described, and for the purpose specified.

In testimony of which invention I hereunto set my hand.

WILLIAM W. JOHNSON.

Witnesses:

HUGH CARROLL,

ROBERT A. BARNES.