M. W. DeWOLF.

METALLIC SEALS.

No. 179,280. Patented June 27, 1876.

Fig: 1

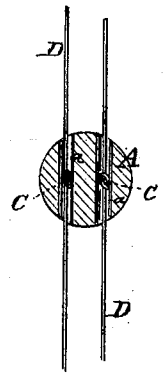

Fig: 2

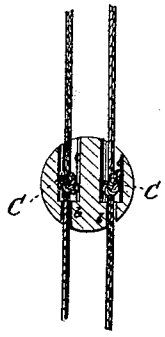

Fig: 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

MELVILLE W. DE WOLF, OF NEW YORK, N. Y.

IMPROVEMENT IN METALLIC SEALS.

Specification forming part of Letters Patent No. **179,280**, dated June 27, 1876; application filed July 30, 1875.

To all whom it may concern:

Be it known that I, MELVILLE W. DE WOLF, of the city, county, and State of New York, have invented a new and Improved Metal Seal; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon making a part of this specification.

This invention is in the nature of an improvement in metal seals; and the invention consists in a metal seal constructed with perforations of such diameter as will receive a knot formed in the wire bow or shackle, so that when the seal is pressed together the wire cannot be withdrawn.

In the accompanying sheet of drawings, Figure 1 is a section, showing wire with knot and perforations with same diameter throughout in the seal; Fig. 2, section showing cord with knots and holes of varying diameter in the seal; and Fig. 3, edge view of same.

Similar letters of reference indicate like parts in the several figures.

A represents a soft-metal seal, preferably made from soft lead, and of any desired size and form. Into the edge of this seal are formed perforations *a a*. These perforations may be of the same diameter throughout, or they may be of one diameter through a portion of the seal, as at *b*, Fig. 2, and of a greater diameter through the other portion of the seal, as at *c*, Fig. 2. These perforations being made, a knot, C, is formed in a single piece of untwisted wire, D, and the ends of this wire are inserted into the perforations *a*, which perforations should be sufficiently large to allow the knots to be received within them. Pressure then being applied to the sides of the seal, it is forced together, and the soft metal of which the seal is composed is pressed compactly about the knot. It is unnecessary to make the perforations in the seal of the same diameter throughout; in fact, it will be better to make them of two diameters, as shown in Fig. 2, the larger diameter receiving the knot in the wire, and the lesser diameter preventing the knot being drawn entirely through the perforations before the seal is compressed, thus insuring the knots being in the center of the seal, which is their proper position.

Instead of wire to attach the seal, they may be attached by a cord, as shown in Figs. 2 and 3, the knots being formed in the cord instead of in the wire, and when the lead is compressed it is forced around these knots, holding the string tightly in place.

From the foregoing description it is obvious that a perfect seal is formed through which the wire cannot be withdrawn, and without the necessity of casting into the seal the wires or any special device for holding them to the seal, as is the manner generally adopted in the construction of these seals; and, besides, by my invention a single piece of wire may be used instead of three or more wires twisted together, since it is not possible to draw the wire through the seal so long as they are provided with knots.

In most, if not all, of the attachments intended to be used in soft-metal seals it has been found necessary to construct the wire attachment of several strands or pieces, laid up in a "cable-twist," so that when the lead has been forced into the irregularities in the surface of the attachment, by casting or otherwise, the increased friction that would be produced when endeavoring to pull the attachment through the seal would increase the difficulty of so doing; but, as a matter of fact, no very great difficulty is experienced in drawing such wire attachment through the seal, or of cutting off the wires, committing the theft, and then putting the ends of the wires that have been cut a short distance into the seal, so that the theft would not be made known until some future time, the seal presenting the appearance of being intact; but by my invention it would be impossible to draw the wire through the seal, or to cut the wire off and insert it into the seal, giving the appearance of security when none existed; and, besides, the economy of the construction of my attachment in using but a single strand of wire instead of several, and producing a perfect union between the wire and the seal, without the necessity of casting a fastening device into the seal, is apparent.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A soft-metal seal, provided with one or

more orifices of varying diameters, substantially as and for the purposes described.

2. The bow or shackle, having knots formed thereon, substantially as and for the purpose described.

3. In a sealing device, the bow or shackle formed with knots, in combination with the soft-metal seal, substantially as and for the purpose described.

4. A wire and lead seal, constructed substantially as described, with a wire bow or shackle, separable from the lead disk and carrying its own anchoring device, as specified.

5. A wire bow or shackle, constructed with one or more anchoring protuberances, in combination with a soft-metal disk constructed with cavities, within which the said protuberance or protuberances of the shackle may be slipped in applying the seal, substantially as set forth.

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