F. C. HAMILTON.

Metallic-Seal.

No. 167,525. Patented Sept. 7, 1875.

FIG. 1.

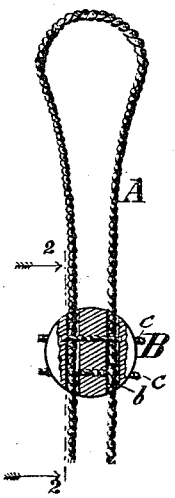



FIG. 2.

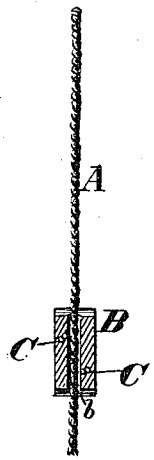



FIG. 5.


FIG. 3.

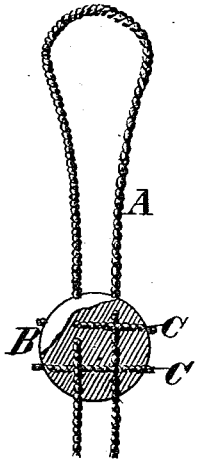



FIG. 4.

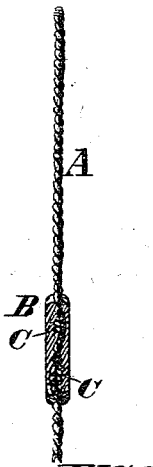



FIG. 6.

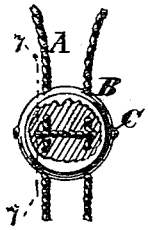



FIG. 7.

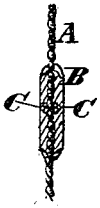
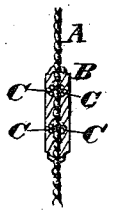



FIG. 8




WITNESSES

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# UNITED STATES PATENT OFFICE.

FRED C. HAMILTON, OF NEW YORK, N. Y.

## IMPROVEMENT IN METALLIC SEALS.

Specification forming part of Letters Patent No. **167,525**, dated September 7, 1875; application filed June 15, 1875.

*To all whom it may concern:*

Be it known that I, FRED C. HAMILTON, of the city, county, and State of New York, have invented a new and useful Improvement in Metallic Seals, of which the following is a specification:

My invention relates to that class of metallic seals which consist essentially of wire bows or shackles adapted to be passed through or otherwise applied to objects to be secured, and disks or balls of soft metal intended to unite the ends of the wire, and to receive distinguishing marks in the act of their compression upon the wire.

My improvement consists in applying within the soft-metal disk one or more locking or anchoring pieces of hard metal, so disposed as to deflect or gripe the shackle-wire when the lead disk is compressed, and with their ends projecting beyond the periphery of the disk, in order to show the existence and position of the said locking-pieces.

In the accompanying drawings, Figure 1 is sectional elevation of a seal illustrating my invention, showing the wire bow introduced before the seal is compressed. Fig. 2 is a section on the line 2 2, Fig. 1. Fig. 3 is a sectional elevation of the finished seal. Fig. 4 is a sectional edge view of the finished seal. Fig. 5 is an elevation of an improved seal, illustrating also the use of a tag or label in connection therewith. Fig. 6 is a sectional elevation of a seal illustrating a modification of the invention. Fig. 7 is a section on the line 7 7, Fig. 6. Fig. 8 is a view similar to Fig. 7, showing a second modification.

Like letters of reference indicate corresponding parts in the several figures.

A in each of the figures represents a bow or shackle, preferably of double or triple twisted wire; B, a ball or disk of soft metal, cast with one or more locking-pieces, C, of iron wire or other suitable hard material, so disposed that the apertures *b b*, through which the ends of the bow are to be passed, will cross the locking-pieces C C.

In order to cause the device to operate with the best effect, two locking-wires, C C, are placed, one a little below the other, in such a manner that they will, when the seal is completed, cross the ends of the bow at right angles to the latter, and one on each side thereof, as illustrated in Figs. 1, 2, 3, 4, and 5.

In the modification illustrated in Figs. 6 and 7 a pair of twisted-wire locking-pieces, C, are arranged on one level, on opposite sides of the bow ends.

In the modification illustrated in Fig. 8 two pairs of twisted-wire locking-pieces are arranged in the same manner.

A single locking-piece of wire, or one or more such pieces, of any suitable material, with ends protruding beyond the periphery of the seal, may be employed in a variety of ways, which need not be illustrated.

The locking-pieces are made of such length relatively to the diameter of the compressed seal as to cause their ends to project, as illustrated in Figs. 1, 3, and 6. The special object of this is to provide for identifying the seal found in use at any time, or to enable it to be readily ascertained whether or not a seal has the safety provision. If preferred, the ends can be covered up by films or projections of the soft metal and exposed for inspection by cutting the latter.

D represents a tag-label, which may be printed or marked in any preferred manner and placed upon the bow or shackle A, as illustrated, so as to be secured by the compressed ball or disk.

The bow or shackle A being passed over or through any object to be secured in customary manner, its ends are inserted in the lead ball or disk B, as illustrated in Figs. 1 and 2, passing through the apertures *b* and across the locking-pieces C, the tag-label D, if used, having been previously applied to the bow, as shown in Fig. 5, or in any other preferred manner. The lead seal B is then either pressed or stamped in customary manner, the effect of which is to force the locking-pieces into close contact with the bow ends so as to deflect the latter, as illustrated in Fig. 4, or so as to bite or clamp them, as illustrated in Figs. 7 and 8, thus affording a secure anchorage to the bow ends and preventing the possibility of their working loose.

I am aware that anchoring-pieces of hard metal have before been used in various ways

in lead seals. In the patent of Edward J. Brooks, dated the 1st of September, 1874, such anchoring-pieces consist of loops or bushings of wire, either made separately from the shackle-bow or formed in one end thereof, and so surrounding the perforation or perforations in the lead through which one or both of the shackle ends are passed as to be compressed on the shackle-wire when the lead is stamped. The objection to this is that, while the seal is somewhat costly and troublesome to make in a perfect state, there is nothing in the appearance of the seal, as sold to the consumer, to show the existence, nature, or position of the anchoring-pieces within the lead. My improved seal, while it is less costly and troublesome to make, is more salable and more effective in use.

I have described in another application a device of my own, in which the lead is formed with openings crossing at right angles, so that the ends of the shackle, after being passed through one pair of perforations, may be bent and crossed upon themselves within the lead. This seal furnishes a secure lock when properly applied, but it is more troublesome to apply. The seal which forms the subject of my present application is not costly to make. The mode of its application is as simple as that of the old style of wire and lead seal, and the position and nature of the locking-pieces are manifest, so that parties receiving the seals from the manufacturer in large quantities can readily inspect them without destroying specimens.

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

A wire and lead seal, constructed as herein described, with one or more locking-pieces of hard metal, applied transversely to the apertures which receive the wire bow or shackle, and with their ends projecting beyond the periphery of the disk, to show the existence and position of the locking-pieces.

FRED C. HAMILTON.

Witnesses:

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