

(No Model.)

C. L. POND.
METALLIC SEAL.

No. 367,442.

Patented Aug. 2, 1887.

Fig. 1.

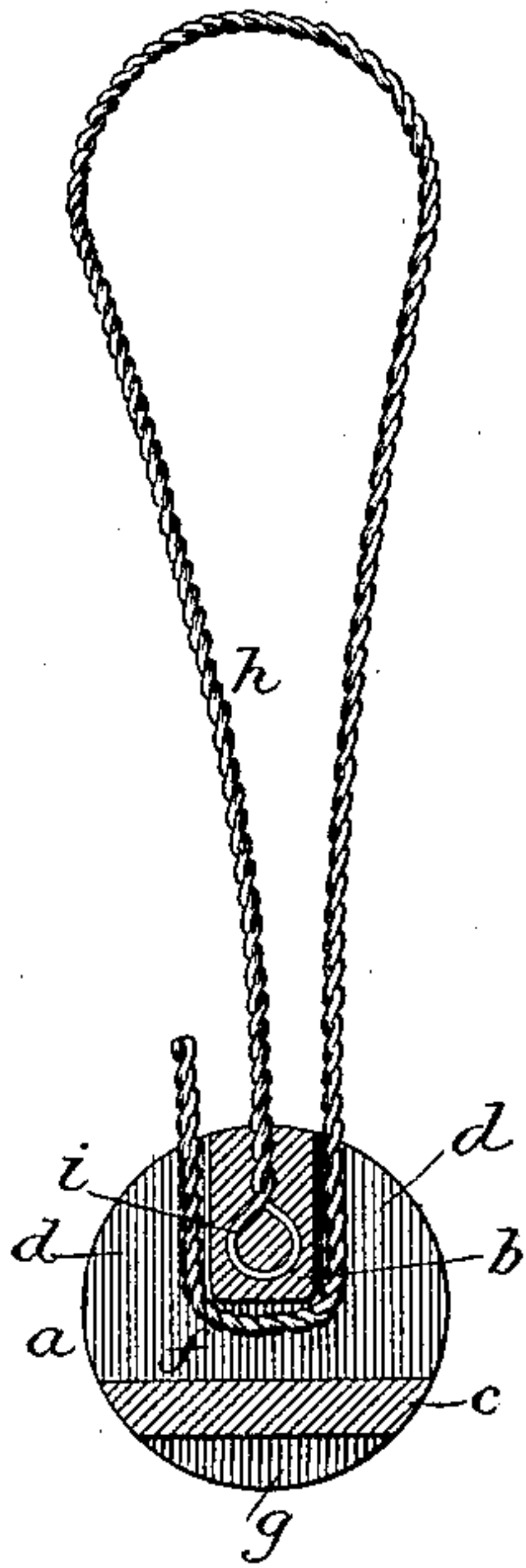


Fig. 5.



Fig. 2.

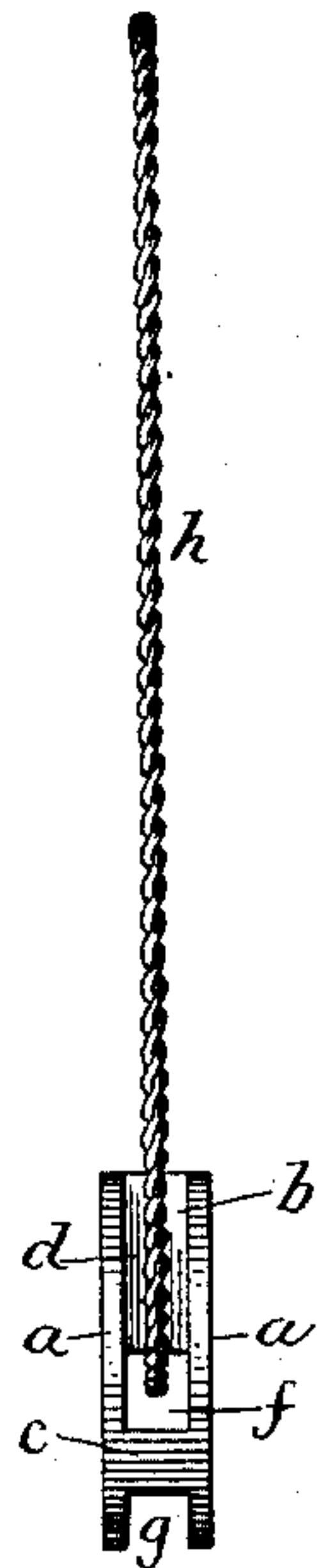


Fig. 3.

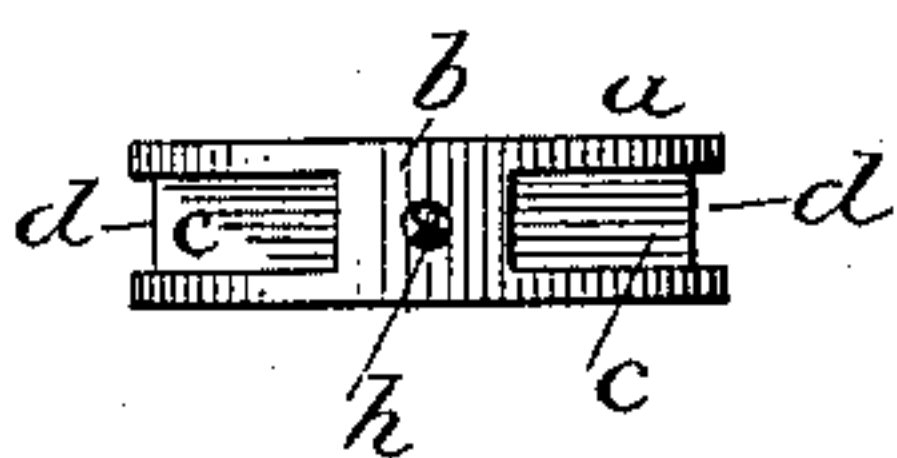
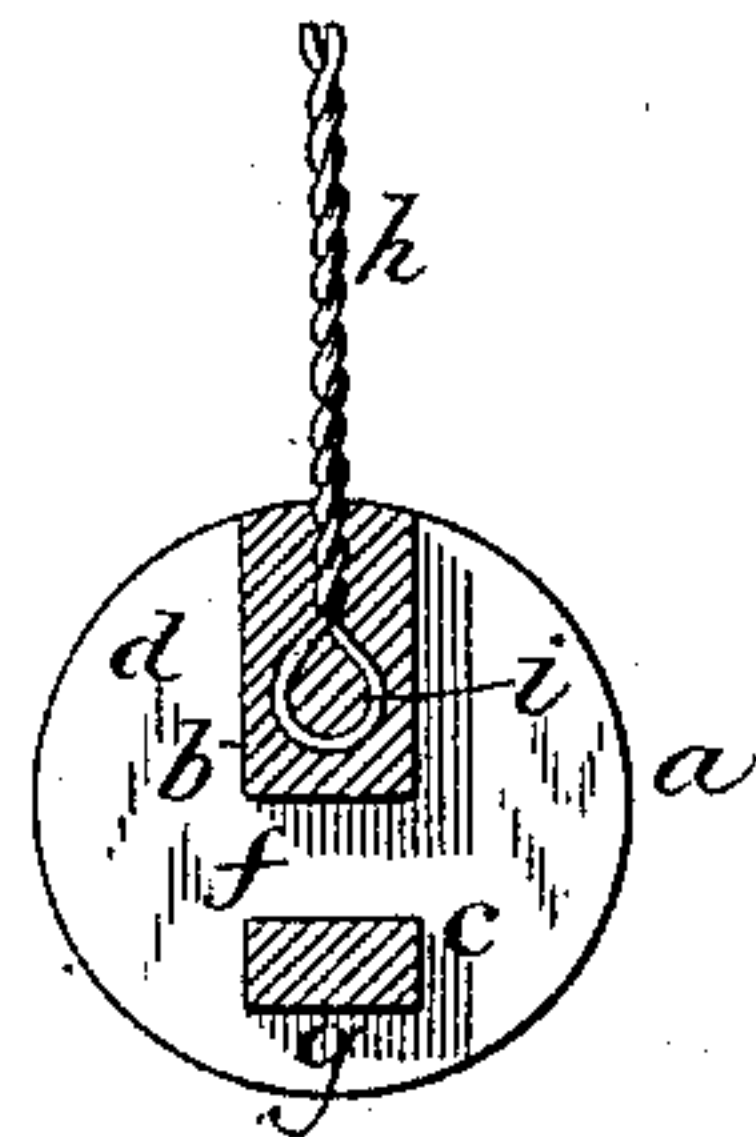


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES L. POND, OF BUFFALO, NEW YORK.

METALLIC SEAL.

SPECIFICATION forming part of Letters Patent No. 367,442, dated August 2, 1887.

Application filed February 20, 1882. Serial No. 53,196. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. POND, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and
5 useful Improvement in Metallic Seals, of which the following is a specification.

This invention relates to that class of seals which are constructed of soft metal and supplied with a wire, one end of which is secured
10 to the seal, while the other end of the wire is free to be drawn through openings in the parts to be secured together and then passed through an opening in the seal, in which it is secured by compressing the seal in a suitable press.

15 The object of my invention is to produce a simple seal, which can be readily applied and which cannot be stripped without detection; and my invention consists of the peculiar construction of the seal and of the wire attached
20 to the seal, as hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a vertical section, Fig. 2 a side elevation, and Fig. 3 a top plan view, of my improved seal. Fig. 4 is a vertical section showing a modified
25 construction of the seal. Fig. 5 is a view of the twisted wire which is used with my seal, with the ends of the two strands of the twisted wire slightly separated to better illustrate the manner in which the wire is formed.

30 Like letters of reference refer to like parts in the several figures.

My improved seal is composed of two parallel disks or circular plates, *a a*, which are connected by a vertical rib or bar, *b*, and a
35 transverse rib or bar, *c*, arranged opposite the lower end of the vertical bar *b*.

d d represent recesses formed between the disks *a a* and bounded by the latter and the bars *b* and *c*.

40 *f* is a horizontal opening located between the inner end of the vertical bar *b* and the horizontal bar *c* and connecting the recesses *d d*.

The horizontal bar *c* may extend downward to the periphery of the disks *a*, or it may be
45 a simple bar, as shown in the drawings, leaving a recess, *g*, between the disks *a* and below the bar *c*, thereby saving metal.

h represents the wire which is attached to the seal. This wire is formed by taking a
50 piece of wire, twice as long as the length of the wire required for the seal, and bending a loop,

i, in the middle thereof, and then twisting the two equal parts of the wire on opposite sides of the loop together, thereby forming a twisted wire having a loop, *i*, at one end, as represented
55 in Fig. 5. This wire is secured to the seal by placing it in the mold in which the seal is cast, with the loop *i* in the mold of the vertical bar *b*, and then casting the seal around the wire, whereby a portion of the metal fills the loop
60 of the wire and secures the latter firmly in the seal.

My improved seal is applied by drawing the free end of the wire through the openings in the parts to be secured together, and then passing the end of the wire through the opening
65 *f* in the seal and bending the wire upward on the opposite side of the vertical bar *b*, as represented in Fig. 1. The seal is then compressed by any suitable seal-press, whereby those portions of the disks *a* which project beyond the bars *b* and *c* are firmly closed down upon the bent portions of the wire, thereby
70 securing the latter in the seal. The return-bend of the wire renders it impossible to strip the seal from the wire without defacing the seal. The recesses *d*, as shown in Fig. 1, guide the end of the wire toward the opening
75 *f*, and thereby render it easy to pass the wire through said opening, which can be readily accomplished in the dark. If desired, however, the bar *c* below the opening *f* need not be made longer than the width of the vertical bar *b*, as represented in Fig. 4. The loop *i*
80 serves to firmly anchor the wire in the seal, and the metal filling the loop prevents the looped end of the wire from being drawn out of the seal except by cutting the metal which fills the loop or breaking the wire.

I claim as my invention—

1. The combination, with a suitable seal-wire, of a soft-metal seal secured to one end of said wire and provided with an aperture through which the free end of the wire is threaded, and with a recess in one of its edges
95 at one end of said aperture, substantially as set forth.

2. The combination, with a seal-wire, of a soft-metal seal provided with an aperture through which the wire is passed, and having
100 recesses in its edges at both ends of said aperture, one recess for guiding the wire to said

aperture and one for receiving the bent end of the wire, substantially as set forth.

3. The combination, with a seal-wire, of a soft-metal seal cast on one end of said wire
5 and provided with an aperture through which the other end of the wire is passed, and having recesses in its edges at both ends of said apertures, one recess for guiding the wire to said aperture and one for receiving the bent
10 end of the wire, substantially as set forth.

4. The combination of a twisted wire provided at one end with a loop connecting the two strands of the wire, and a soft-metal seal cast on the looped end of the wire, the metal
15 filling the loop of the wire, whereby the loop

is firmly secured in the seal and prevented from being drawn out of the seal except by cutting the metal which fills the loop, substantially as set forth.

5. The combination, with a soft-metal seal, 20 of a twisted two-strand seal-wire provided at one end with a loop formed of a single thickness of wire and connecting the two strands, which are made of equal length and twisted together from the loop to the free end of the 25 wire, substantially as set forth.

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Witnesses:

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