

(No Model.)

E. J. BROOKS.  
SEAL.

No. 521,757.

Patented June 19, 1894.

Fig. 1.

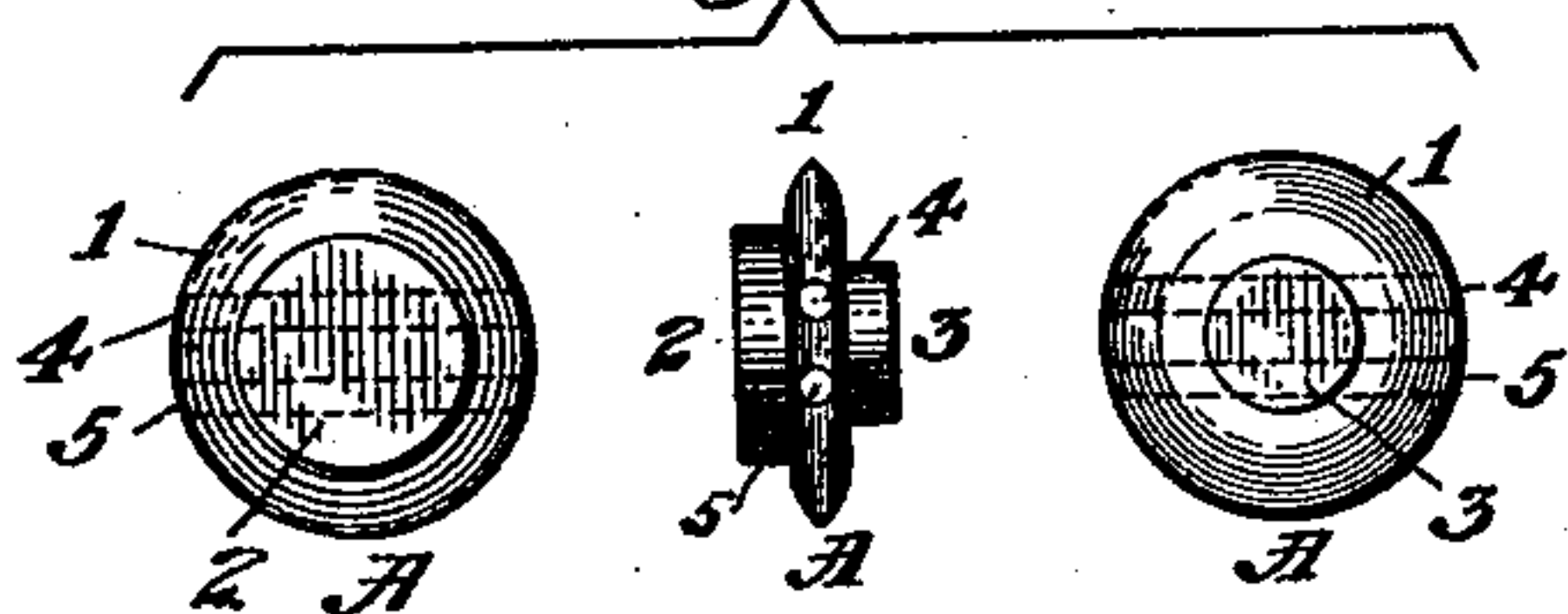


Fig. 2.

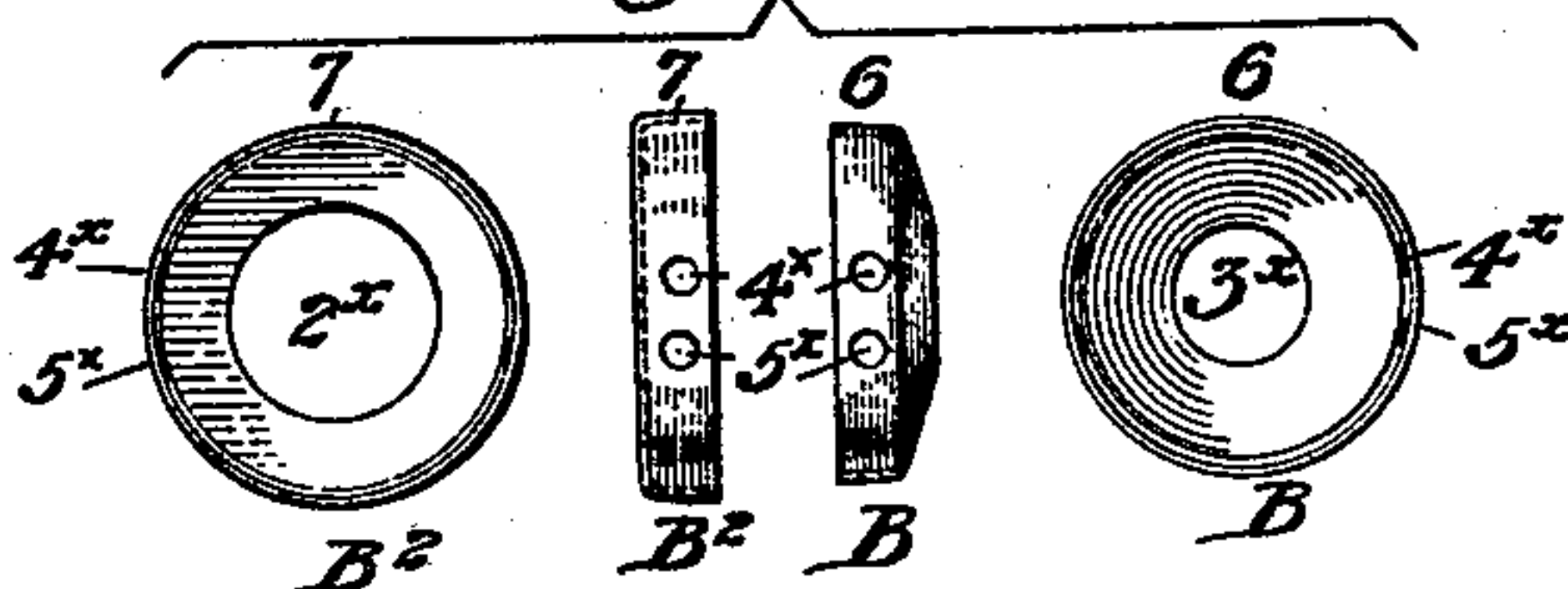


Fig. 3.

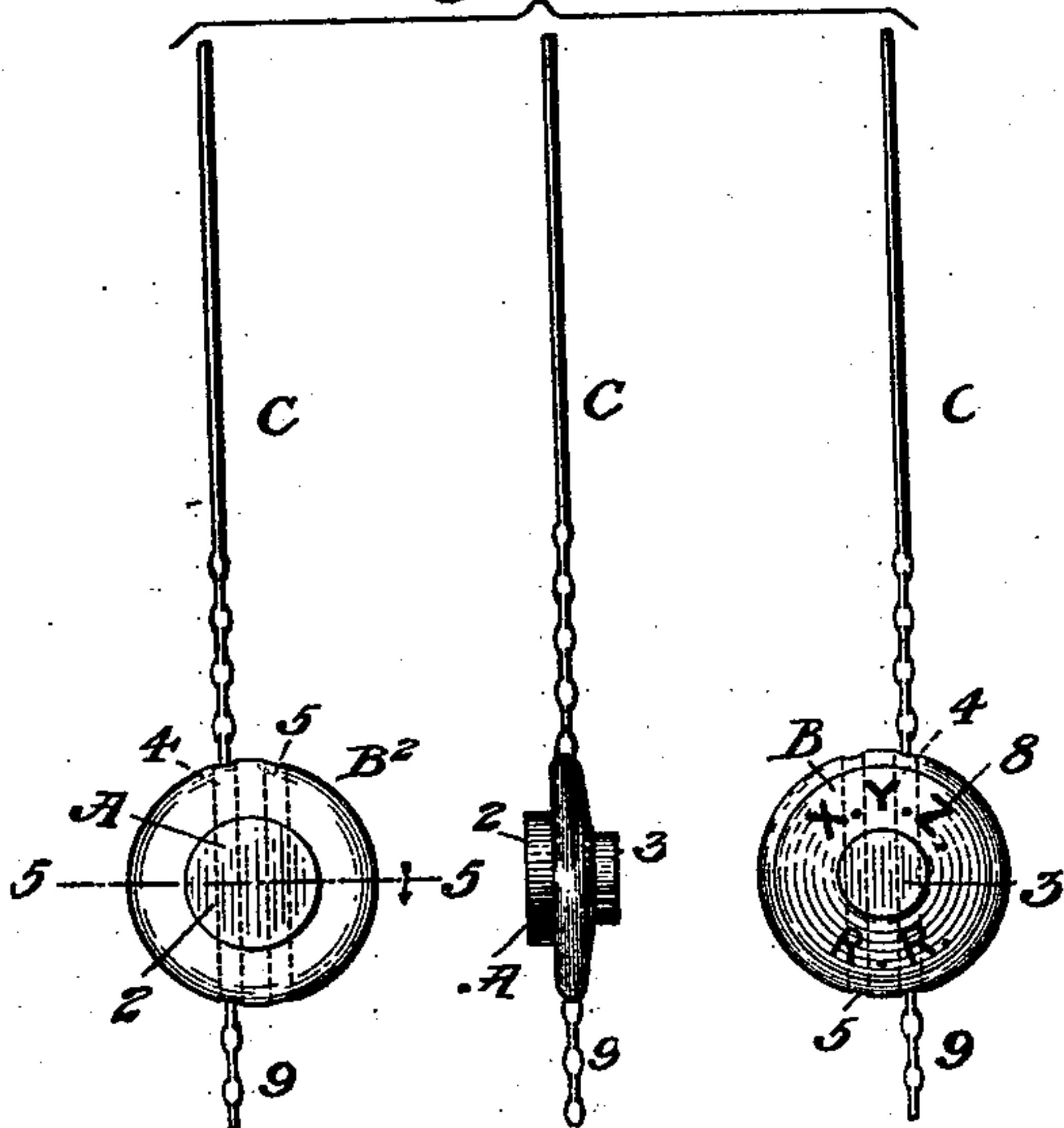


Fig. 4.

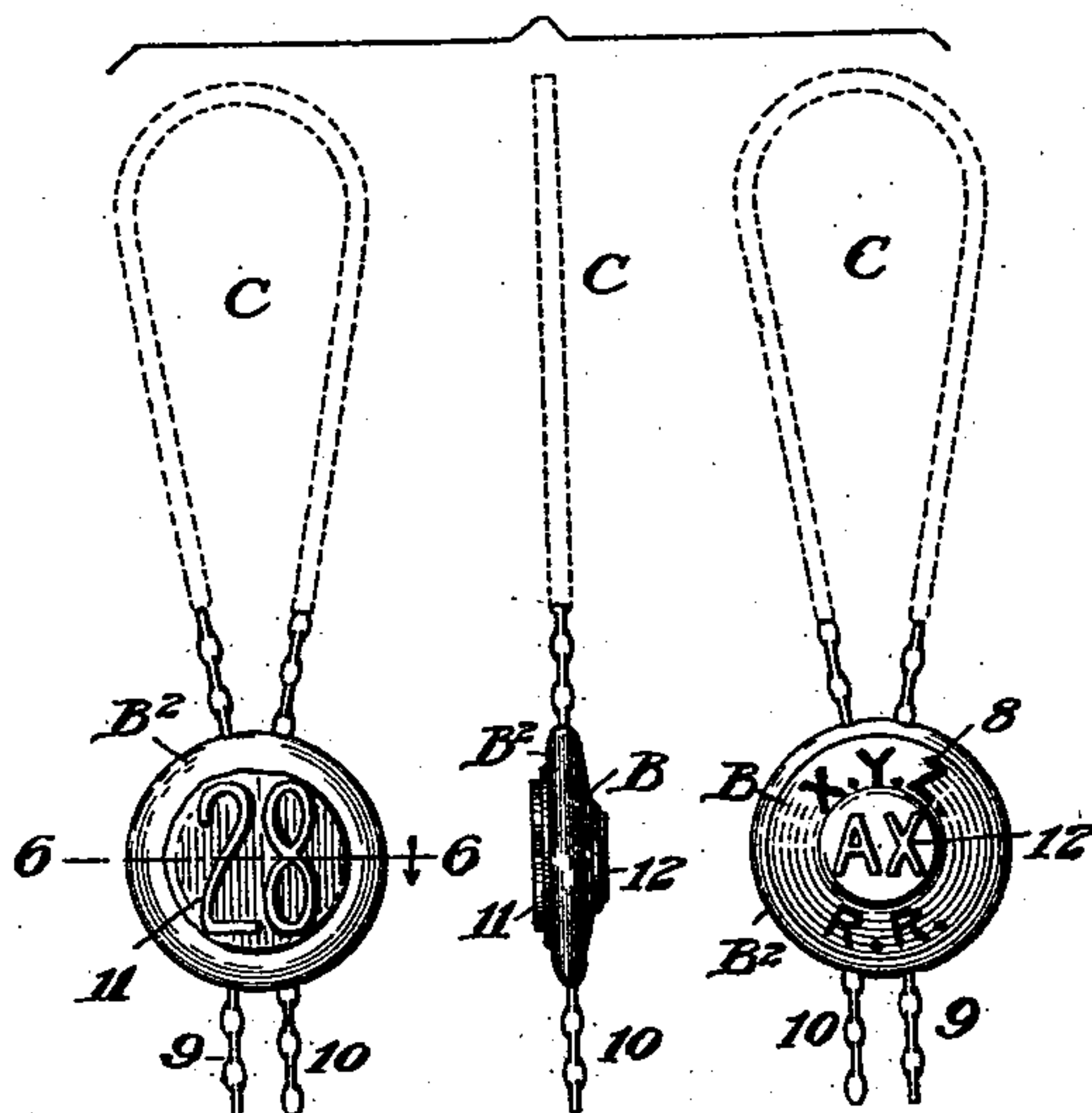


Fig. 5.

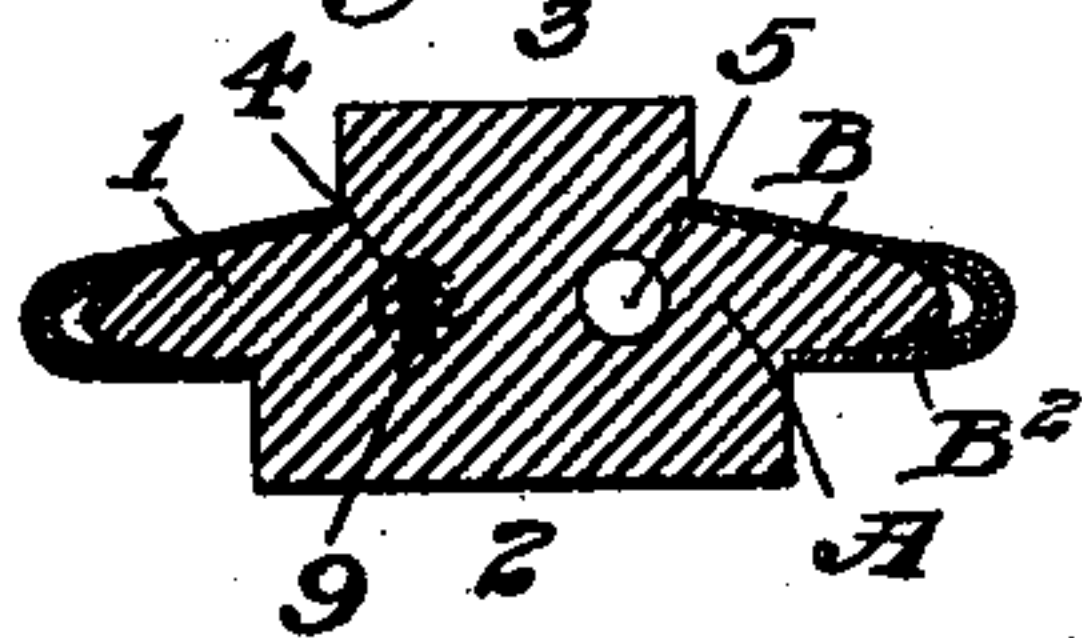


Fig. 6.

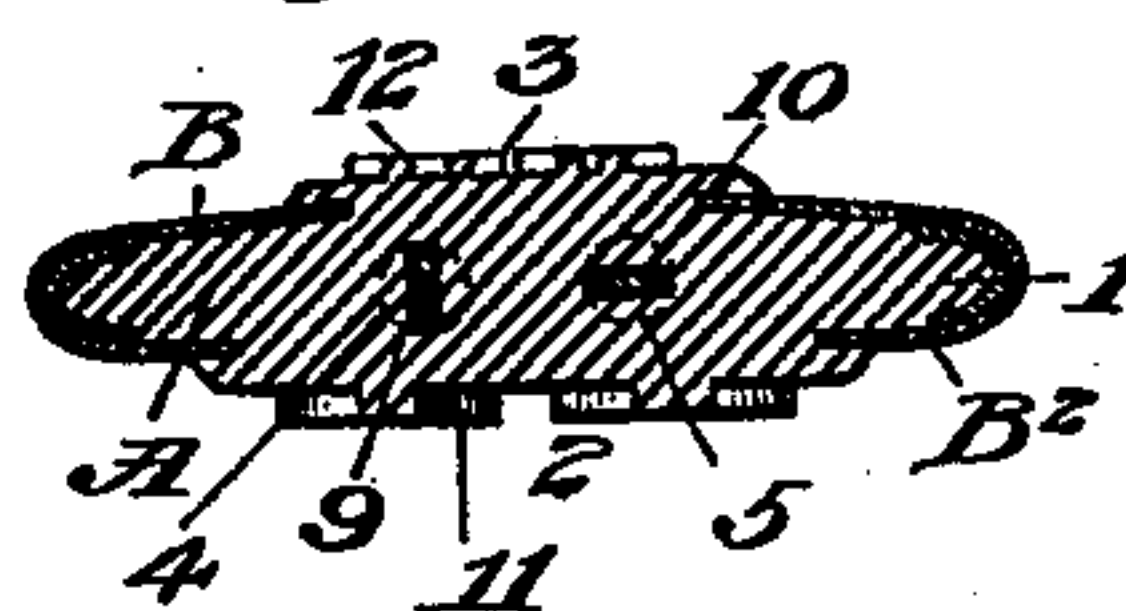
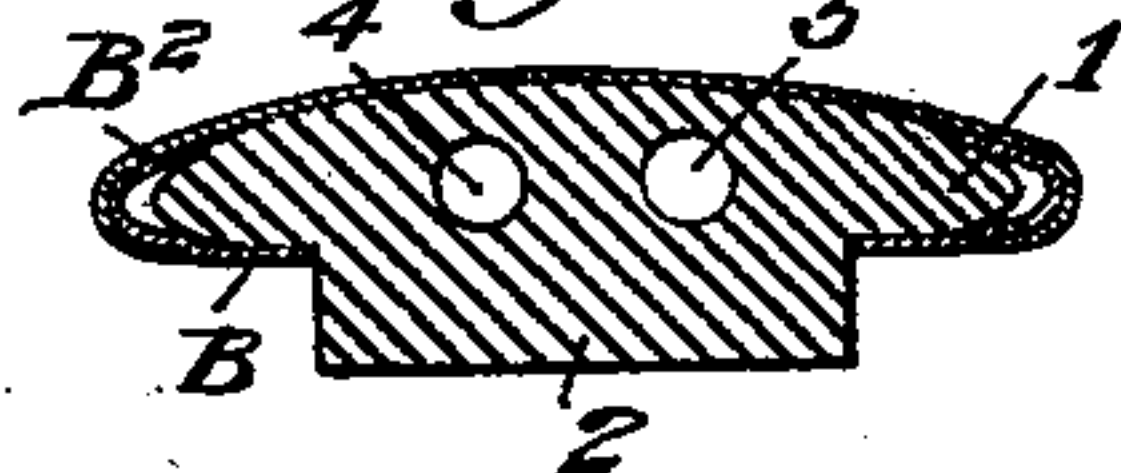


Fig. 7.



Witnesses:

L. A. Comer  
Geo. M. Whitney

Inventor.

Edward J. Brooks  
by *[Signature]*  
Attorney.



# UNITED STATES PATENT OFFICE.

EDWARD J. BROOKS, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO THE  
E. J. BROOKS & COMPANY, OF NEW YORK, N. Y.

## SEAL.

SPECIFICATION forming part of Letters Patent No. 521,757, dated June 19, 1894.

Application filed January 23, 1894. Serial No. 497,799. (No model.)

### *To all whom it may concern:*

Be it known that I, EDWARD J. BROOKS, a citizen of the United States of America, and a resident of East Orange, in the State of New Jersey, have invented a new and useful Improvement in Seals, of which the following is a specification.

This invention relates to what are known as "lead-and-wire" seals, fastened by means of "seal-presses" and employed to secure the doors of railway freight-cars, &c., against being opened by unauthorized persons, or to insure the detection of any such violation of a fastening, and to locate the same.

The subject-matter of the present invention is an improved seal, of the above description, the vital part of which, where the shackle-ends are anchored, is completely inclosed in a sheet-metal shell, so as to preclude successfully tampering with the seal by cutting into the lead, and which is at the same time adapted to be shipped and handled as one part, including the wire, to be threaded without bending either shackle-end, like ordinary lead and wire seals, and to be easily pressed in ordinary seal-presses of different makes, and to be provided with distinguishing marks sufficiently large to be readily recognized. A comparatively small central portion of the lead is all that has to be compressed by the seal-press in order to securely fasten the seal, and stamp either or both of its faces with distinct press-marks in a neat and finished manner.

The invention consists in certain novel combinations of parts, embodied in said improved seal, as hereinafter set forth and claimed.

A sheet of drawings accompanies this specification as part thereof.

Figure 1 of the drawings shows face and edge views of that part of the improved seal which is made of lead. Fig. 2 shows corresponding inside face and edge views of the two shell-parts, which are made of sheet-metal. Fig. 3 shows face and edge views of the improved seal as it leaves the factory. Fig. 4 shows face and edge views of the improved seal after it has been fastened in a seal-press. Fig. 5 represents a magnified cross-section on the line 5—5 Fig. 3. Fig. 6

represents a magnified cross-section on the line 6—6 Fig. 4; and Fig. 7 represents a magnified cross-section of a modified seal, unpressed.

Like letters and numbers refer to like parts in all the figures.

Each of the improved seals shown in the accompanying drawings is composed of a compressible casting A of lead, hereinafter termed the leaden part, or the lead, two shell-parts B B<sup>2</sup> of stamped sheet-metal, such as the iron used for making button shells, and a shackle-wire C of any suitable description. The leaden part A is cast with a disk-shaped body, 1, Fig. 1, preferably in the form of an oblate ellipsoid, or convexo-convex, and with "heads" 2 and 3, preferably of different sizes to distinguish them from each other, at the respective faces of the body; a pair of threading holes 4 and 5 extending through the lead, from edge to edge, either parallel with each other as shown, or so as to cross the shackle ends as in my drawings forming part of Patent No. 161,475, dated March 30, 1875. To inclose said body 1 of the leaden part A constructed as above, the shell-parts B and B<sup>2</sup> of the improved seal are both annular as shown in Fig. 2, having apertures 2<sup>x</sup> 3<sup>x</sup> for the protrusion of said heads 2 and 3 respectively, and overlapping marginal flanges 6 and 7 provided in common with holes 4<sup>x</sup> 5<sup>x</sup> corresponding with said threading holes 4 and 5 of the lead; one or both shell-parts being preferably provided, in the stamping dies by which they are produced, with permanent lettering or distinguishing marks, 8, of any suitable description, such as the name or initials of a railway or express company in whose behalf the seal is to be used.

The particular shackle wire shown at C in the drawings is of the description set forth in my specification forming part of Patent No. 179,260, dated June 27, 1876, being of thick single wire provided with anchoring indentations in its threading ends 9 and 10.

In assembling the parts at the factory, the lead A is placed within the shell-part B with its threading holes in line with those of the shell-part, and is covered by the shell-part B<sup>2</sup>. One end (9) of the shackle wire C is then inserted through one set of threading-holes,



(4×4,) and a pin is inserted in the other, (5×5.) The shell-parts B B<sup>2</sup> are then subjected to the action of a machine similar to the machines used for completing buttons containing such shell-parts, the effect of which is to securely interlock the shell-parts with each other, and to close the threading holes first named within the lead to a sufficient extent to permanently fasten in the wire C, as in Figs. 3 and 5. Said pin is then withdrawn, leaving the other set of threading holes clear. These eventually receive the other end (10) of the shackle-wire C, and the seal is finally fastened in an ordinary seal-press by pressure applied to the heads 2 and 3, compressing the lead around those portions of the shackle-ends which are within the seal-disk, and stamping the respective heads with distinguishing marks 11 and 12, as in Figs. 4 and 6. In this pressing operation the exposed "heads" 2 and 3 and the lead directly beneath them is all that need be acted on by the seal-press; the threading-holes 4 and 5 being located in this portion of the lead as in Figs. 1 and 5. The dies of the press may consequently be of small diameter as compared with the diameter of the seal-disk, and but comparatively little power is required to perfectly press and stamp the seal as compared with other seals having threaded disks of like diameter as heretofore constructed.

The modifications illustrated by Fig. 7 consist in omitting one of the heads of the lead A and the corresponding aperture of one of the shell parts B B<sup>2</sup>, and in keeping both of the threading-holes 4 and 5 open when the shell-parts are united, so that the improved seal-part, consisting of the lead in its shell, may be used in connection with shackles of different lengths or of different makes or kinds. The permanent lettering 8 and the press-marks 11 and 12 may of course be of any preferred description, and either cameo or intaglio in each instance; it is not essential that the parts A B and B<sup>2</sup> should be circular; nor that a second shell-part, B<sup>2</sup>, should be employed in all cases; nor that the leaden part A should project or be exposed at either or both faces of the seal-disk when preliminarily inclosed by a two-part shell as above described, provided that the shell in this modification is compressible together with the leaden part; and other like modifications

will suggest themselves to those skilled in the art.

The improved seals hereinbefore described are distinguished from the Wappenstein seal, set forth in expired Patent No. 87,017, by the impossibility of uniting the parts of the latter until the seal is ready to be pressed, which involves carrying and handling its rivet at least separate and distinct from the remainder of the seal, and the bending of the shackle-ends within the cut-proof shell to admit the rivet. In cold weather and at night such complications are serious difficulties. In the improved seals all the parts may be preliminarily united at the factory as illustrated by Figs. 3 and 5 of the drawings accompanying this specification, and in the modified seal represented by Fig. 7 the lead part A and the shell-parts B and B<sup>2</sup> which form its cut-proof shell are inseparably united at the factory, and the improved seal-disk formed by these parts may be attached to one end of the shackle by compressing one side of its head 2 preliminary to finally threading and pressing the seal.

Having thus described the said improvement, I claim as my invention and desire to patent under this specification—

1. The combination, in the unpressed seal, of a leaden part having a disk-shaped body provided with a pair of threading-holes and a pair of sheet-metal shell-parts having overlapping marginal rims provided with holes in line with said threading-holes, the seal-disk so formed being adapted to be fastened on one end of a shackle-wire by preliminary compression, substantially as hereinbefore specified.

2. The combination, in the unpressed seal, of a leaden part having a disk-shaped body provided with a pair of threading-holes and with oppositely projecting heads of less diameter than said body, a permanently-attached sheet-metal shell exposing said heads, and provided with holes in line with said threading-holes, and a shackle-wire one end of which is fastened by preliminary compression within one of said threading-holes, substantially as hereinbefore specified.

EDWARD J. BROOKS.

Witnesses:

NORMAN S. KLINE,  
H. L. C. WENK.