

No. 786,541.

PATENTED APR. 4, 1905.

F. W. BROOKS.
SEAL.

APPLICATION FILED JULY 28, 1904.

Fig. 1.

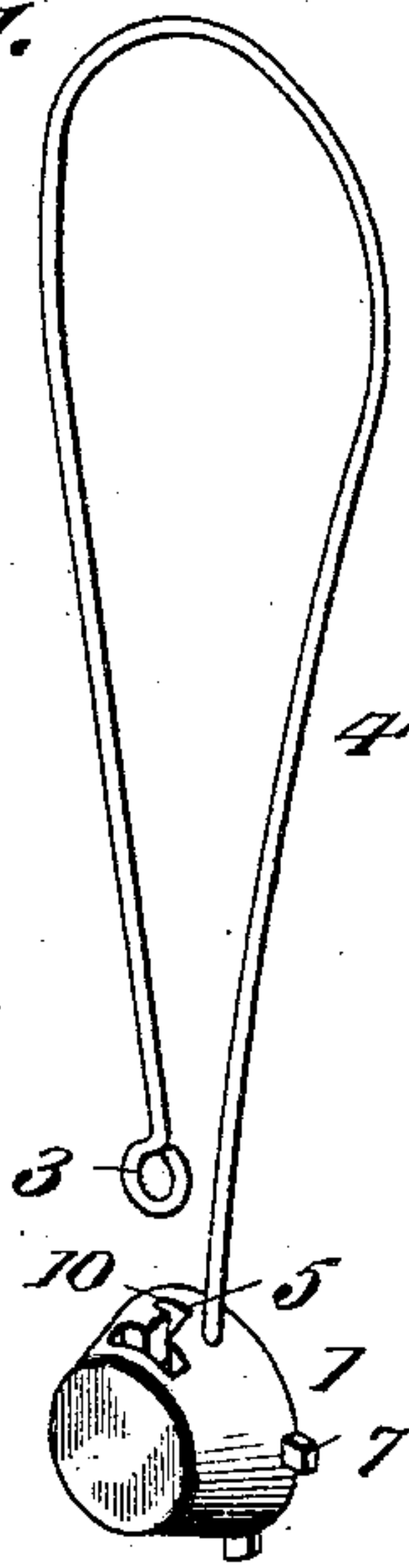


Fig. 2.

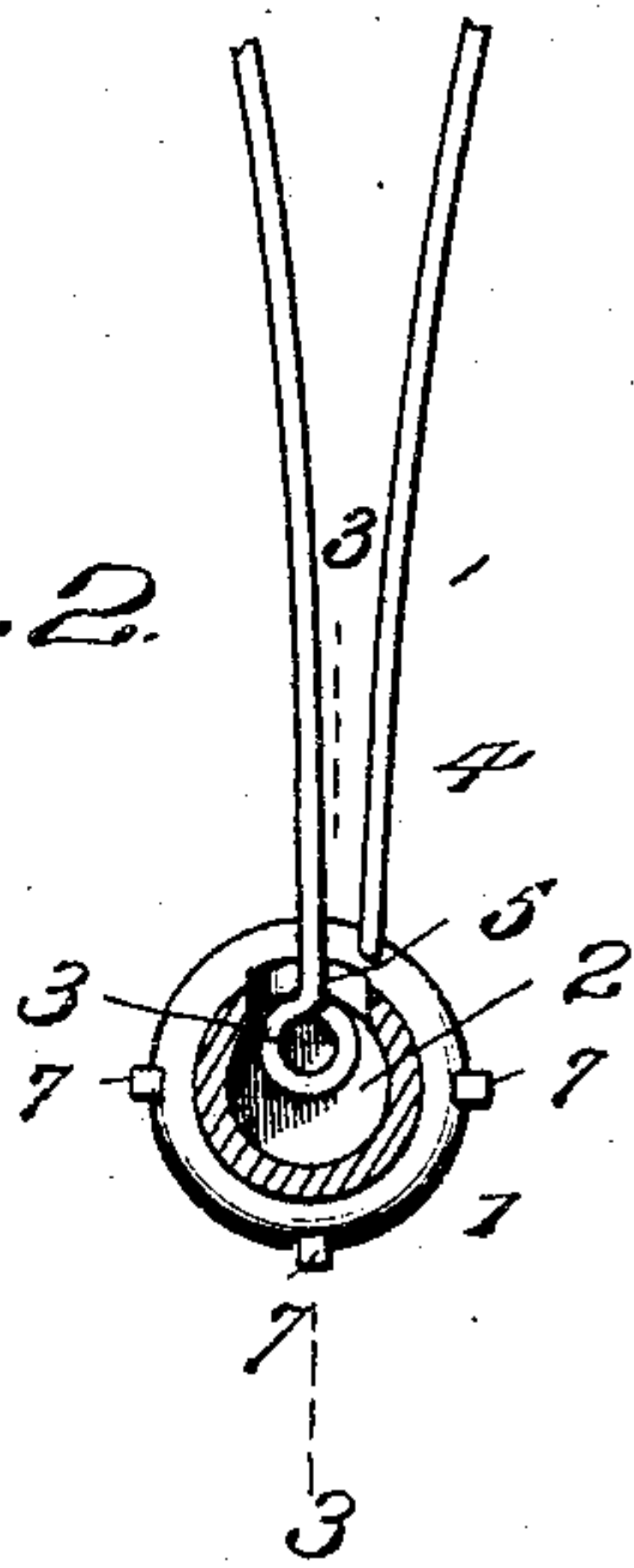


Fig. 3.

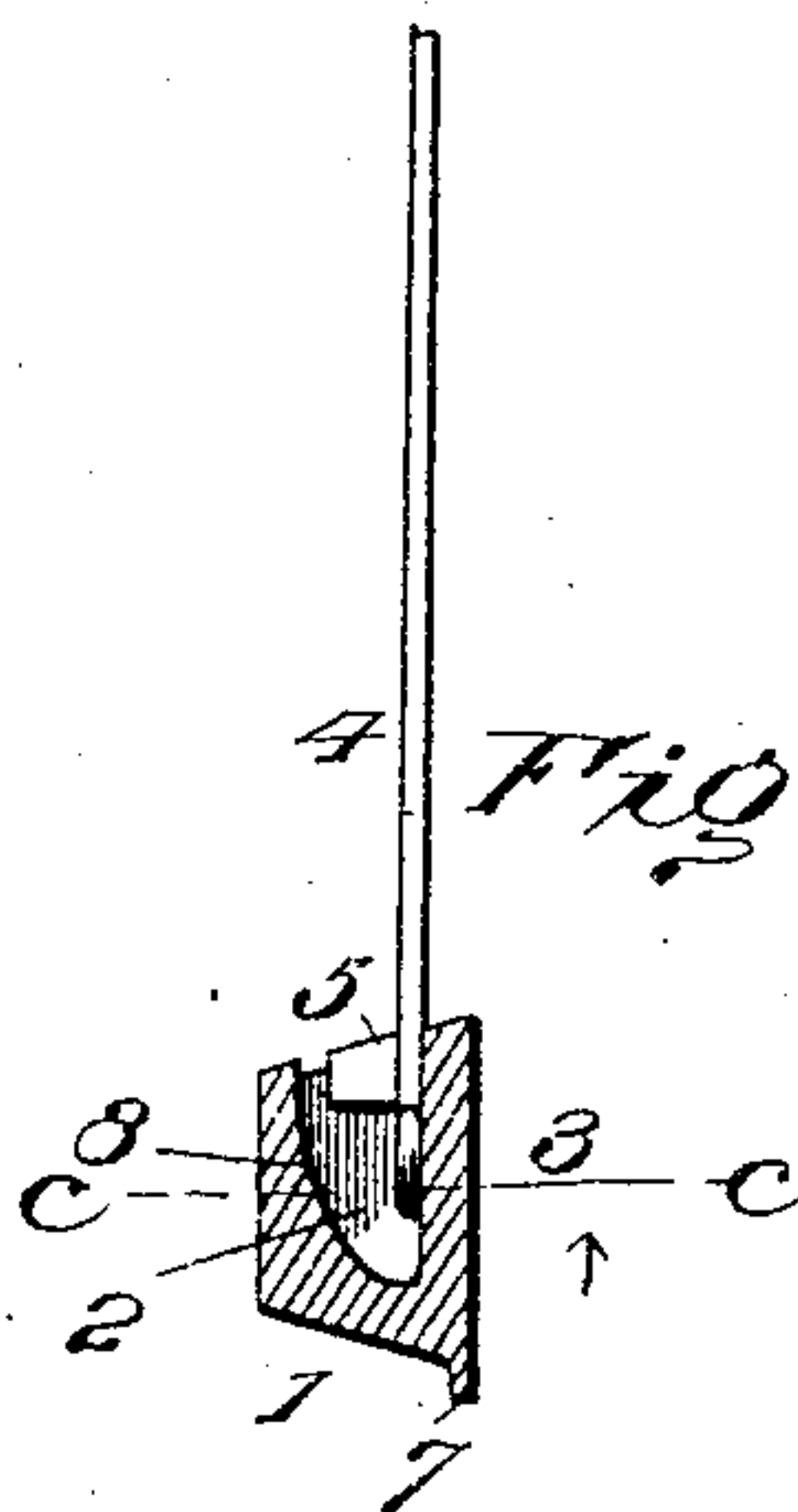


Fig. 4.

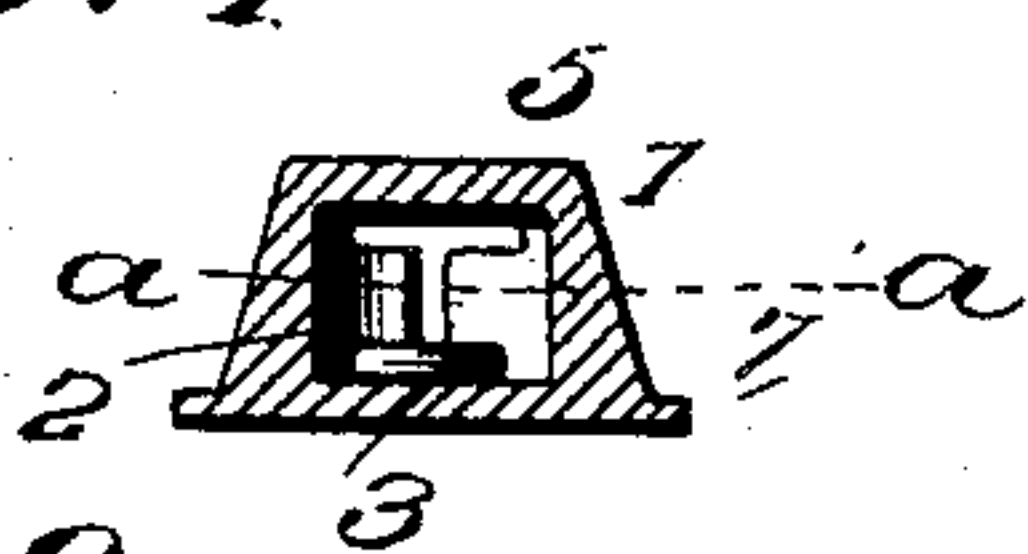


Fig. 5.

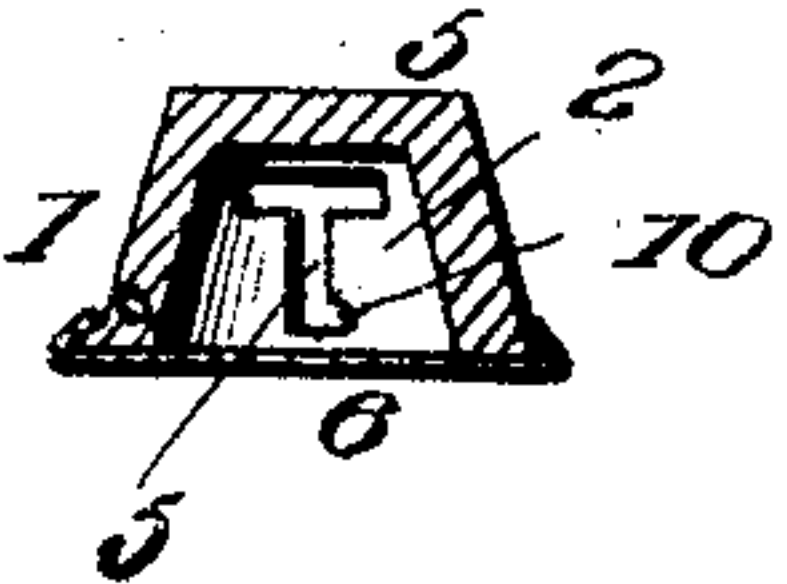


Fig. 6.

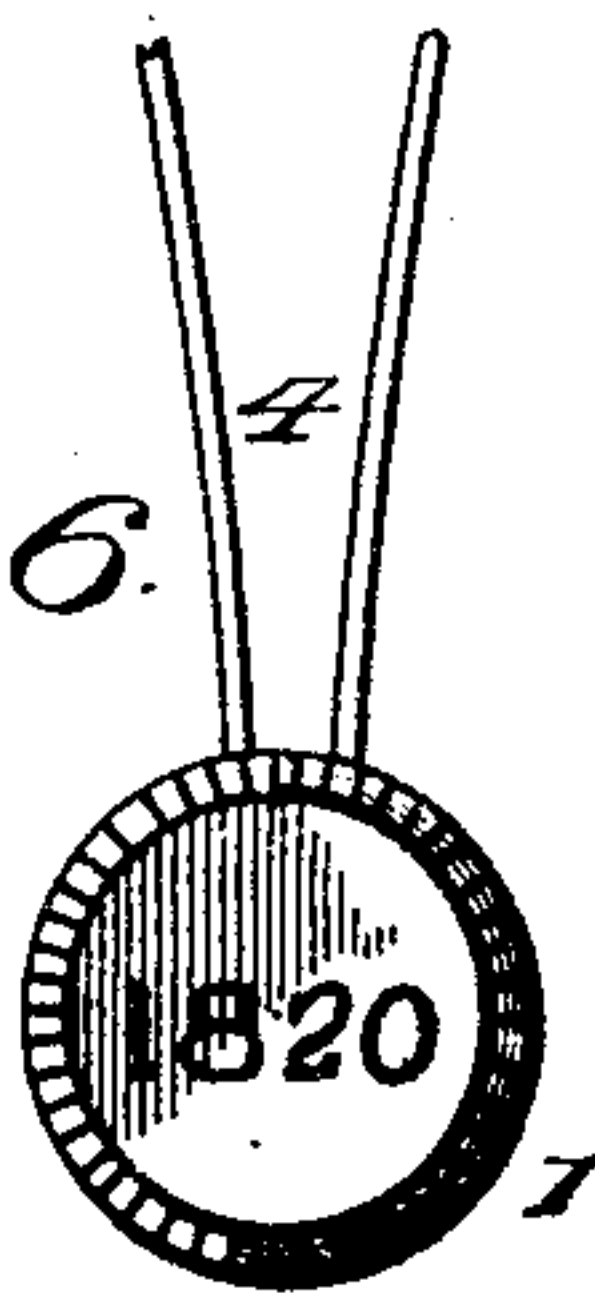


Fig. 7.

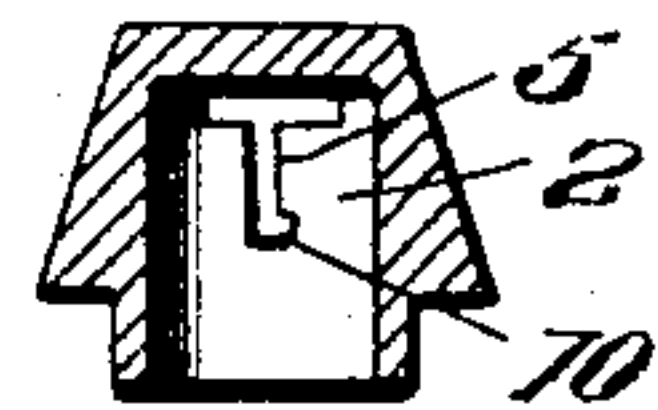


Fig. 8.

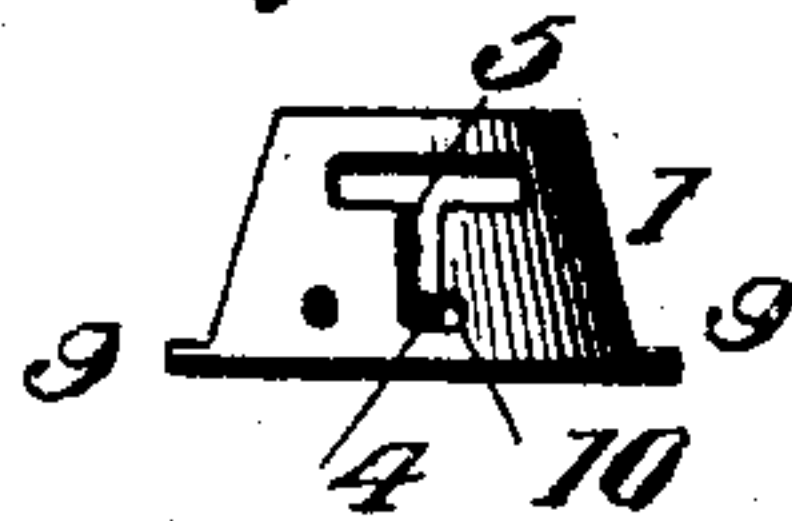
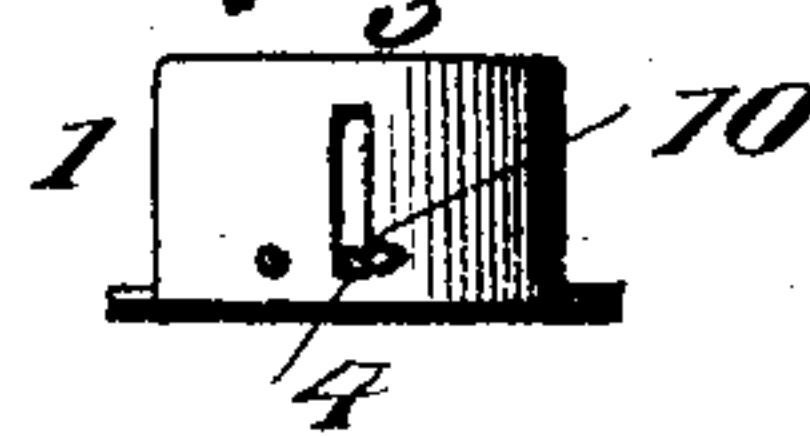


Fig. 9.



Witnesses

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SEAL.

SPECIFICATION forming part of Letters Patent No. 786,541, dated April 4, 1905.

Application filed July 28, 1904. Serial No. 218,562.

To all whom it may concern:

Be it known that I, FRANKLIN W. BROOKS, a citizen of the United States, residing at Washington city, in the District of Columbia, have invented certain new and useful Improvements in Seals; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in soft-metal seals, and particularly to that class in which one end of the shackle-wire is cast or otherwise secured in the body of the seal and the other end formed with a loop or eye adapted to be located within a centrally-disposed recess communicating with a radial opening or gateway. In seals such as referred to the loop or eye at the free end of the shackle is passed over a central disposed stud or post projecting vertically within the recess of the seal, while the shackle passes out through a radial slot or gateway in the wall of the seal, and in order to permit this manipulation the top or head of the seal is necessarily open, exposing the central stud or post and the surrounding wall of the seal. In seals of this kind the successful and satisfactory results to be secured through the agency of the sealing-press depend upon the care taken to properly locate the eye on the free end of the shackle at the bottom of the recess surrounding the central stud or post, for if the eye of the shackle should be located near the top of the stud or post or intermediate the top thereof and the base of the recess the soft metal above it when compressed will not constitute a substantial covering or anchor to the eye of the shackle and the same may be readily removed by exerting a comparatively light strain upon the shackle. Imperfections in sealing with this class of seals frequently occurs, owing to the fact that the work must often be done at night and with great expedition, and as the wire of which the shackles are composed possesses more or less springy characteristics it frequently follows that even though care be exercised in properly locating the free end of the shackle the latter will be fore the press can be applied to the seal spring

upwardly, so that the eye will take position away from the bottom of the recess and not infrequently entirely escapes from the recess, and consequently when the metal is compressed the free end of the shackle is either very imperfectly anchored or sometimes is left entirely free. Furthermore, the presence of the central stud or post around which the eye at the end of the shackle-wire is located renders it absolutely necessary that the top end of the seal should be left open, so that the stud or post and the surrounding wall of the seal are necessarily separated, and when the seal is compressed there is not that homogeneity and amalgamation which will result in a safe anchorage of the shackle and presentation of a satisfactory surface for receiving designating characters from the dies.

My invention has for its objects to avoid all of the enumerated objections in that class of seals referred to and to provide a seal in which when the eye or loop on the free end of the shackle is introduced into the recess or cavity of the seal it will be so located and held that when the seal is compressed it will be fully covered and securely anchored.

My invention has also for its object to dispense with the necessity of a centrally-disposed stud or post, such as hereinbefore referred to, and to at the same time provide a complete cover or cap integral with the wall, adapted to fully conceal and anchor the shackle, and to at the same time constitute an unbroken surface adapted to receive designating impressions from the die of the press.

With these ends in view my invention consists of a seal composed of soft metal, having an integral side wall and cap, an interior recess or well, and a passage or gateway through the side wall communicating with the interior recess or well, and a shackle-wire having one end cast or otherwise permanently secured in the body of the seal and a free end formed with a loop, eye, or enlargement adapted to enter through the passage or gateway in the side wall of the seal and into the interior recess thereof and held therein against accidental displacement until the seal is fully compressed, all as will be hereinafter more fully explained.

My invention consists, further, in forming

the under surface of the cap or cover of a seal such as described with a bevel or curve terminating in a plane below the upper extremity of the passage or gateway in the wall of the seal, so that when the eye on the free end of the shackle is introduced through the passage or gateway the bevel or curved under surface of the cap or cover will cause the free end of the shackle to travel toward the base of the interior recess or well, all as will be presently more fully explained.

In order that those skilled in the art to which my invention appertains may know how to make and use the same and fully appreciate its advantages, I will proceed to describe the construction and manner of using my improved seal, referring by numerals to the accompanying drawings, in which—

Figure 1 is a perspective view of one of my improved seals ready for use and with the free end of the shackle exposed. Fig. 2 is a horizontal section on the line *a a* of Fig. 4. Fig. 3 is a transverse section on the line 3 3 of Fig. 2. Fig. 4 is a vertical section on the line *c c* of Fig. 3. Fig. 5 is a plan view after compression and showing characters impressed upon the upper portion or cap of the seal. Fig. 6 is a similar view showing numerals impressed upon the bottom or base of the seal. Fig. 7 is a side elevation with the shackle-wire in section. Fig. 8 is a view similar to Fig. 7, but showing a different design or shape to the body of the seal and a modified form of gateway or passage for the free end of the shackle-wire. Fig. 9 is a central vertical section showing a modification in which the base of the seal and the central cavity or recess are inclosed or covered by a sheet-metal cap or disk; and Fig. 10 is a similar view showing the seal formed without a bottom and provided at the base of the recess or well with a projecting circumferential rib, which when subjected to pressure by a suitable press is forced inwardly and serves to close the open bottom of the recess or well and present a suitable surface for receiving any desired impressions from the die of the press.

Similar numerals indicate like parts in the several figures of the drawings.

1 represents the body of my improved seal, which may have the preferred design of a truncated cone, as shown in most of the figures of the drawings, cylindrical, as shown at Fig. 8, or of any other design. It is formed with a central interior recess 2 of suitable area to receive the loop, eye, or other enlargement 3 of the free end of the shackle-wire 4, and 5 is a radial passage or gateway, preferably of T shape, although it may be of the modified form shown at Fig. 8 when the shackle is manipulated as will be presently explained.

The side wall, top, and bottom of the seal are cast integral, as shown at Figs. 1, 2, 3, 4, 7, and 8, or if it be desired to provide the seal with a sheet-metal cup-base 6, as shown at

Fig. 9, the bottom of the seal may be dispensed with and the interior recess 2 closed by the sheet-metal cup or base, in which case the seal is provided with a flange at the base, to which the sheet-metal cup or base is secured during the manufacture of the seals at the factory in a well-known manner. In either case the interior recess or well 2 is completely surrounded by metal and is of an area sufficient to freely receive and accommodate the eye or enlarged free end 3 of the shackle-wire, while the radial passage, if made of the T form 5 shown, is of such proportions that the enlarged end 3 of the shackle-wire may pass through the head of the T and will be held within the recess by the narrow vertical leg portion of the passage or gateway, as most clearly shown at Figs. 2 and 3.

In order that when the enlarged portion or eye 3 of the shackle-wire is passed through the head or horizontal portion of the passage or gateway 5 the said enlargement or eye may be automatically located behind the narrow vertical portion or leg of the passage or gateway, and thus held against accidental displacement, the under surface or inside of the top portion of the seal is curved or inclined, as shown at 8, Fig. 3, so that the eye or enlargement 3 will be forced below the plane of the horizontal or head portion of the passage or gateway 5.

When the seal is of the form shown other than as illustrated at Fig. 9, it is cast with three radial projections 7 at its base, the purpose of which is to secure proper axial relation between the seal and the dies of the press in order to effect the proper location of the impressions produced by the dies.

The recess or well 2 not only permits the free entry thereto of the enlarged end of the shackle-wire, but also permits of the free movement of the same therein between the top and bottom of the seal in order that proper adjustment may be secured, and differs essentially from that class of seals having a radial socket to receive a hook-shaped end of a shackle-wire, and in which the depth of the socket between the disk faces of the seal is substantially equal to the cross-section area of the shackle-wire.

While I have shown and prefer to make the passage or gateway 5 of T shape in order that the eye or enlargement 3 of the free end of the shackle-wire may be located within the recess 2 of the seal, as described, it will be understood that the passage or gateway may be of the form shown at Fig. 8, in which case it would be necessary after passing the eye or enlargement 3 of the shackle-wire through the passage or gateway 5 to twist the shackle a quarter-turn to lock the eye or enlargement within the recess 2 of the seal. I do not consider this as at all desirable; but I have shown and described this construction, as I do not wish to be limited to any precise form of the

passage or gateway 5 and because I wish it to be understood that my invention comprehends the broad idea of a soft-metal seal with an interior recess or well inclosed at the top and surrounded by a side wall (the top and side wall being integral) and adapted to be closed at the bottom also to positively conceal and anchor the free end of a shackle-wire, the side wall being provided with a passage or gateway leading into the interior recess or well.

While I have shown and described the under side of the top or cap portion of the seal with its under surface curved or inclined to automatically force and hold the eye or enlarged end of the shackle-wire down toward the bottom of the recess or well, the passage or gateway may be formed at any desired locality with a laterally-disposed pocket or recess 10, into which the shackle-wire may be forced and which will operate to hold the same against any tendency to accidental upward movement and consequent displacement of the eye or enlarged end.

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

1. A soft-metal seal having integral top, bottom, and side wall, a central interior recess or well; a radial gateway through the wall and communicating with the interior recess or pocket and a shackle-wire having one end anchored in the seal, and the opposite or free end formed with an eye or enlargement, substantially as and for the purpose set forth.

2. A soft-metal seal formed with a central recess or well, inclosed by integral top, bottom and side wall, a T-shaped passage or gate-

way in the wall, and a shackle-wire having one end cast in, or otherwise permanently secured to the seal, and its free end formed with an eye or enlargement adapted to enter the recess or well through the passage or gateway and to be held against accidental displacement, substantially as hereinbefore set forth.

3. A soft-metal seal having an inclosed recess or well adapted to receive the enlarged free end of a shackle-wire and with a radial passage or gateway in the side wall, the top of the seal being curved or inclined on its under surface, and a shackle-wire having one end permanently secured to the seal and its free end formed with an eye or enlargement adapted to enter the passage or gateway in the wall of the seal and to be located and held within the recess or well, substantially as hereinbefore set forth.

4. A soft-metal seal having an integral side wall and cap or top; an interior recess or well adapted to receive and accommodate the enlarged free end of a shackle-wire; a passage or gateway through the wall and leading into the recess or well; a notch or pocket in the side of the passage or gateway, and a shackle-wire having one end cast in, or otherwise permanently connected with the seal and its opposite free end formed with an eye or enlargement, substantially as hereinbefore set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANKLIN W. BROOKS.

Witnesses:

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D. T. STUART.