

F. P. PFLEGHAR.
MECHANICAL SEAL.
APPLICATION FILED MAR. 13, 1908,

919,761.

Patented Apr. 27, 1909.

Fig. 1.

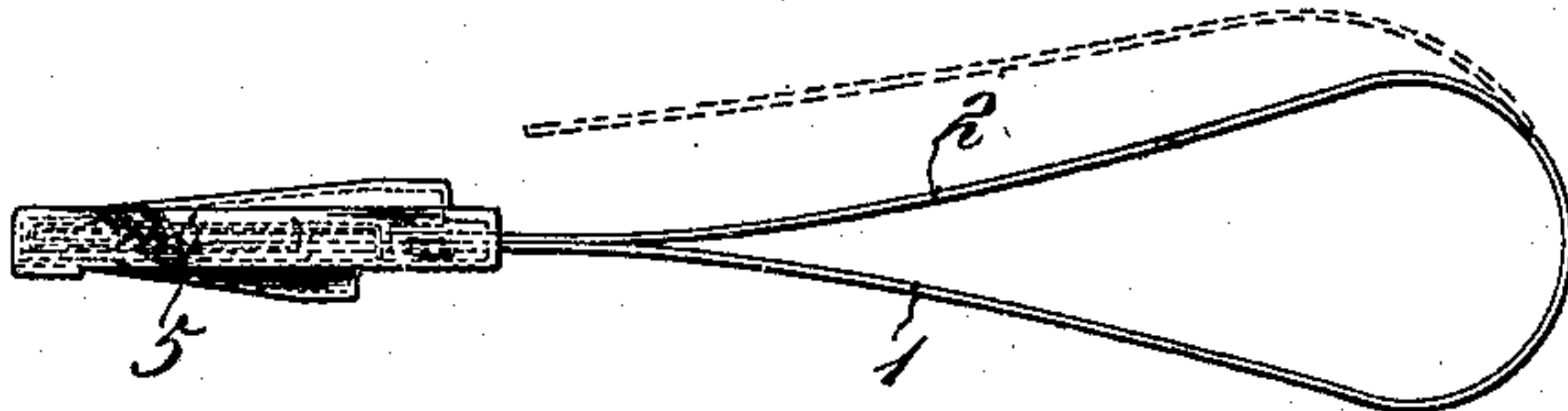


Fig. 2.

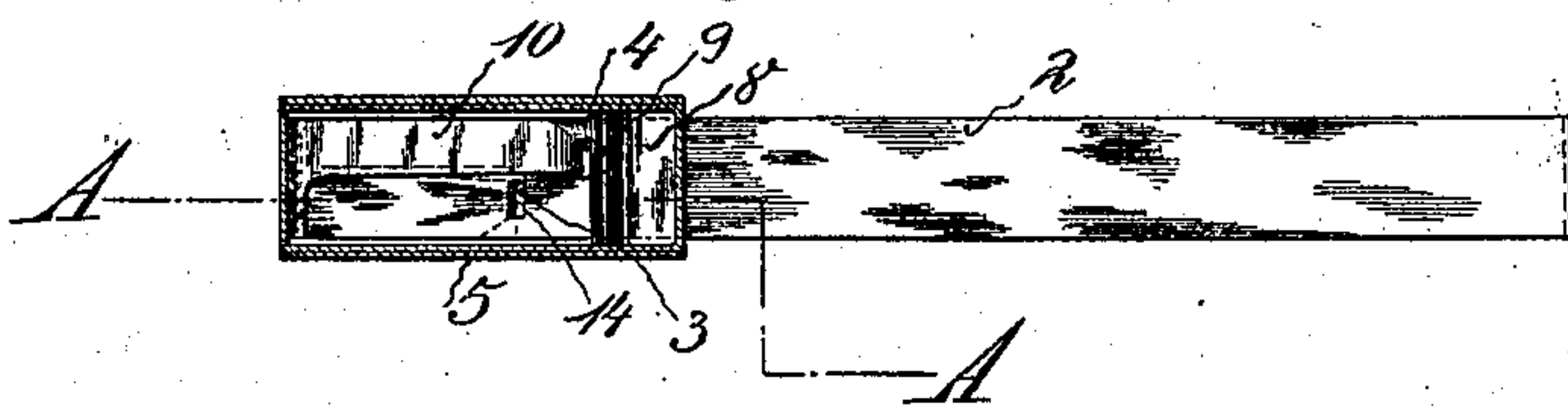


Fig. 3.

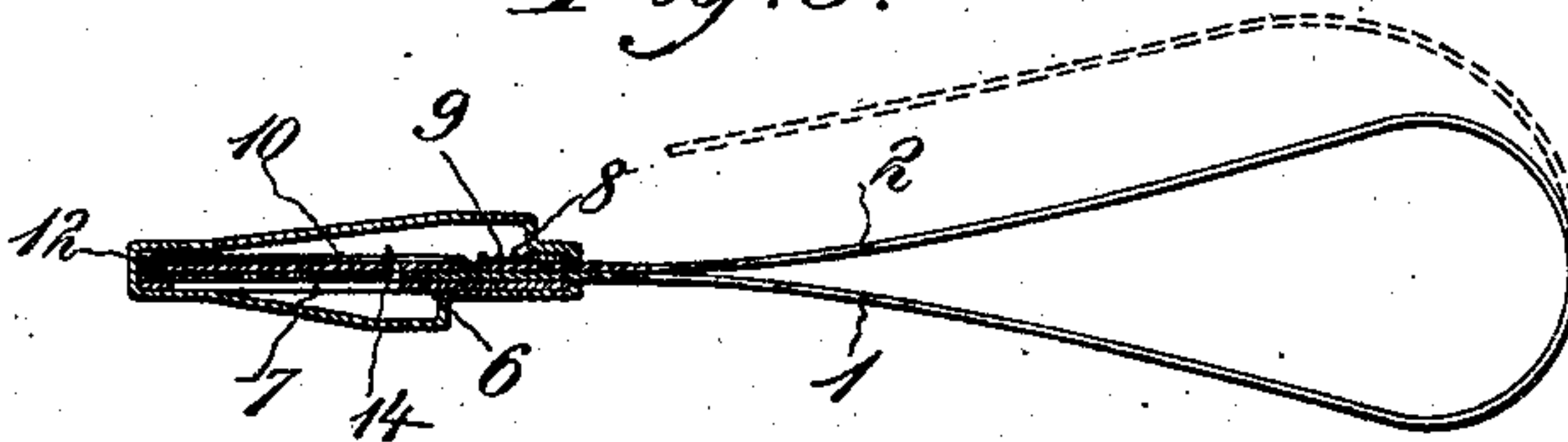


Fig. 4.

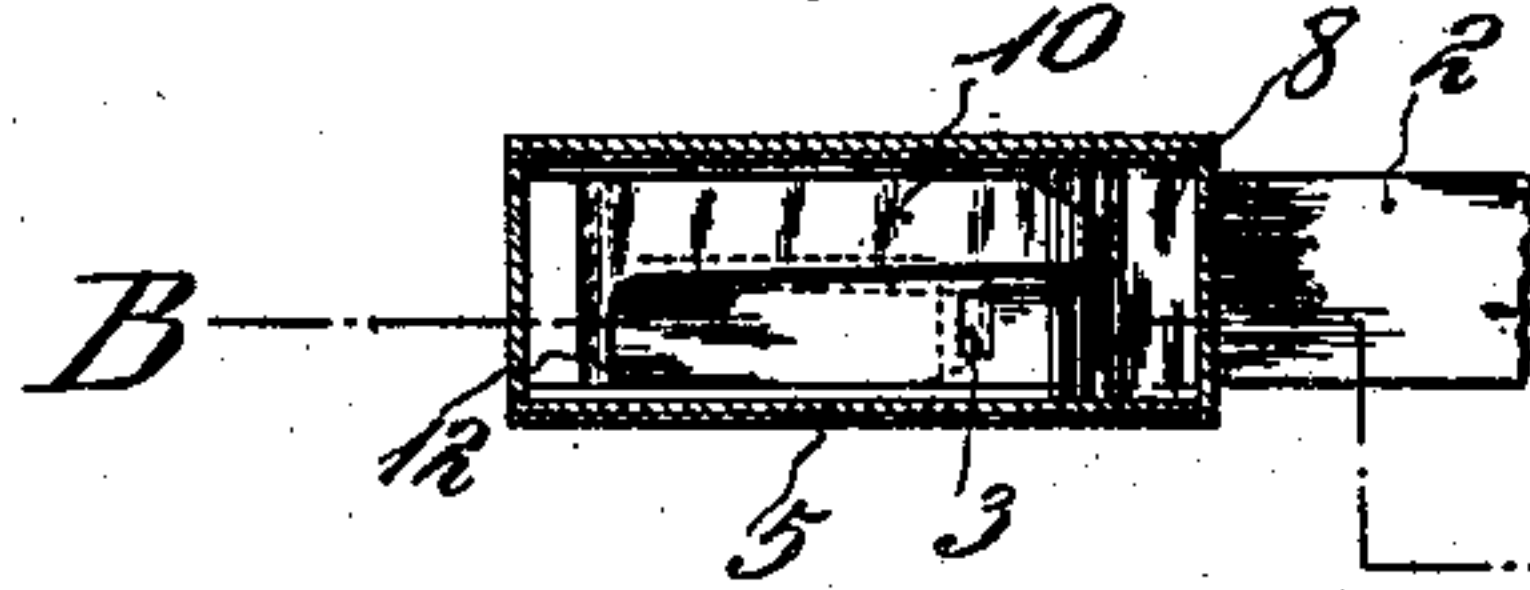


Fig. 5.

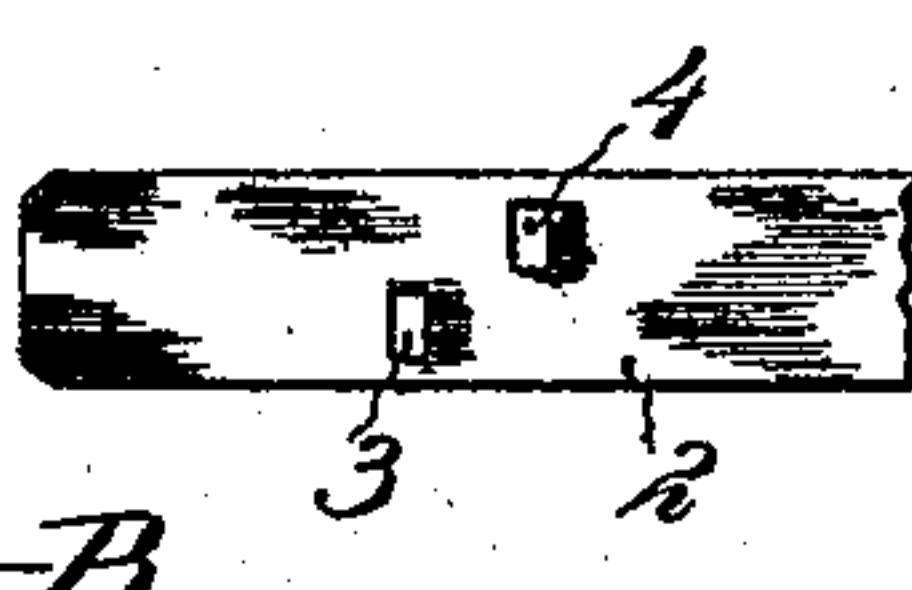


Fig. 7.



Fig. 6.

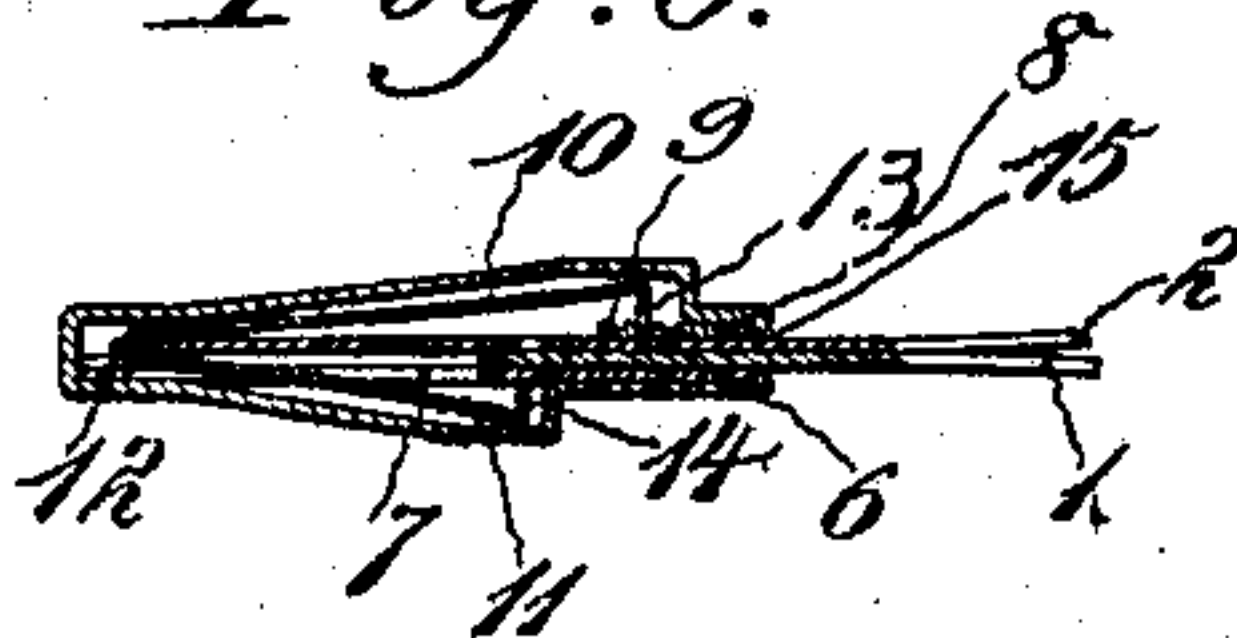
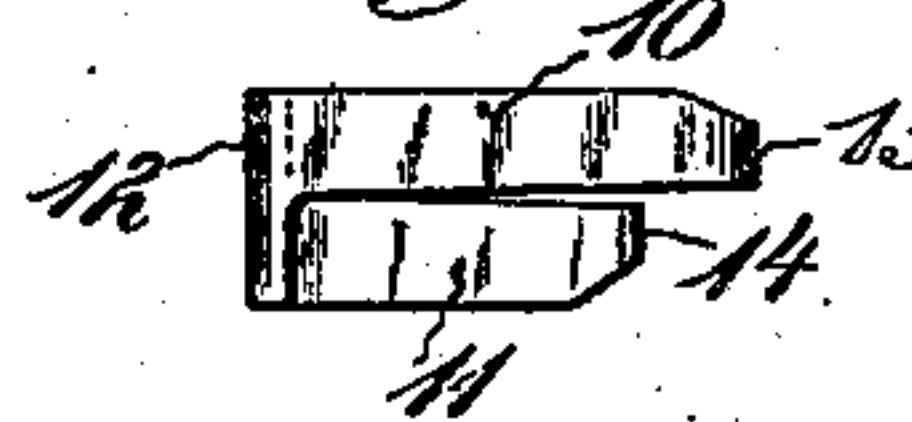


Fig. 8.



Witnesses:
M. G. [Signature]
J. George Barry.

Inventor:
Frank P. Plegghar
By Brown & [Signature]
his Attorneys

UNITED STATES PATENT OFFICE.

FRANK P. PFLEGHAR, OF NEW HAVEN, CONNECTICUT.

MECHANICAL SEAL.

No. 919,761.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed March 13, 1908. Serial No. 420,835.

To all whom it may concern:

Be it known that I, FRANK P. PFLEGHAR, a citizen of the United States, and resident of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Mechanical Seals, of which the following is a specification.

My invention relates to a mechanical seal with the object in view of providing a simple and effective seal of this character.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the seal in side elevation showing in full lines the positions the parts occupy when the seal is locked and in dotted lines the position which the shackle may assume before it is locked, Fig. 2 is a section through the casing taken edgewise and showing the locking spring and locked end of the shackle in top plan as well as the retaining ledge for holding the spring out of locking position, Fig. 3 is a section through the casing and parts therein in the plane of the line A—A of Fig. 2, Fig. 4 is a section through the casing, similar to that shown in Fig. 2, but showing the locking spring out of locking engagement, Fig. 5 is a plan view in detail of the free or locking end of the shackle, Fig. 6 is a section in the plane of the line B—B of Fig. 4, Fig. 7 is an edge view in detail of the locking spring, and Fig. 8 is a top plan view of the same.

The part of the shackle which is permanently secured to the casing is denoted by 1 and the part which is to be inserted and locked within the casing in adjusting the seal for use, is denoted by 2.

The part 2 is provided with openings 3 and 4, in the present instance out of transverse alinement for the purpose of receiving the hooked ends of the locking spring.

The casing is denoted by 5 and may be made from a single piece of sheet metal properly stamped into a flattened elongated form with its upper and lower surfaces struck outwardly to furnish room for the play of the operating parts.

I have shown, within the casing 5, a plate 6 which may be provided with an elongated opening 7 and may be folded at its forward end toward the mouth of the casing to form a ledge 8 for temporarily holding one branch of the locking spring out of locking position and for the purpose of retaining the said

locking spring against any unintentional displacement during the handling of the seal before its use, I prefer to provide the ledge 8 with depressions or corrugations 9.

The locking spring consists of an irregular U-shaped piece of spring metal, the branches 10 and 11 of which project in the same general direction from the bight 12 but are not opposite one another, the branch 11 being located toward one edge or side of the casing 5 and adapted to spring through the opening 7 in the ledge plate 6 while the branch 10 is near the opposite edge or side of the casing.

The free ends of the branches 10 and 11 are provided with hooked portions 13, 14, directed inwardly and these hooked portions are adapted to rest before the seal is used in the position shown in Fig. 6, the hook 13 resting on the corrugated portion of the ledge 8 and the hook 14 resting on the ledge plate 6 in proximity to the end of the opening 7.

The opening 15 at the end of the casing is made just wide enough to receive therein the two parts 1 and 2 of the shackle and the part 2 of the shackle is intended to slide along the part 1 between the ends of the hook portions 13, 14, of the spring until it reaches the bight 12 of the locking spring when its end will engage within the bight 12 and the further inward push on the part 2 of the shackle will slide the locking spring bodily along within the casing relieving the hook 13 from its supporting ledge and the hook 14 from its supporting ledge and permitting these hooks to pass through the openings in the end 2 of the shackle, the hook 13 passing through the opening 4 and the hook 14 passing through the opening 3 as clearly shown in Figs. 2 and 3. These hooks having once been permitted to spring toward one another and adjust themselves in the openings 3 and 4, the end 2 of the shackle is permanently locked within the casing against any possibility of displacement save by distortion or breaking of the parts, which can be readily observed by the eye of the inspector.

Any attempt to draw the spring piece forward after it is once engaged with the end 2 of the shackle is prevented by the engagement of the outer face of the hook 13 with the end of the ledge piece 8 and the outer end of the hook 14 with the end wall of the opening 7 in the ledge plate 6.

The seal so constructed is simple and occupies but little space.

What I claim is:—

A mechanical seal comprising a suitable casing, a spring having a general U-shape, the branches of said spring being of different lengths and laterally offset from each other
5 and provided with hooked ends, the hooked portions of the ends extending in opposite directions, means for retaining the said spring within the casing with the hooked ends of its branches separated and retained
10 against unintentional displacement, and a shackle having one end permanently secured to the casing and the other end provided with a plurality of perforations out of transverse alinement for receiving the hooked
15 ends of the spring, the said perforated end

being adapted to enter the casing between the hooked branches of the locking spring to slide the spring bodily within the casing, thereby forcing the spring out of its non-locking position and permitting it to occupy
20 its locking position with both hooked ends engaging the shackle.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this ninth day of
25 March, 1908.

FRANK P. PFLEGHAR.

Witnesses:

MAE D. CONATY,

FRANCES I. MARTIN.