

(No Model.)

E. J. BROOKS.

SEAL.

No. 304,258.
Fig. 1.

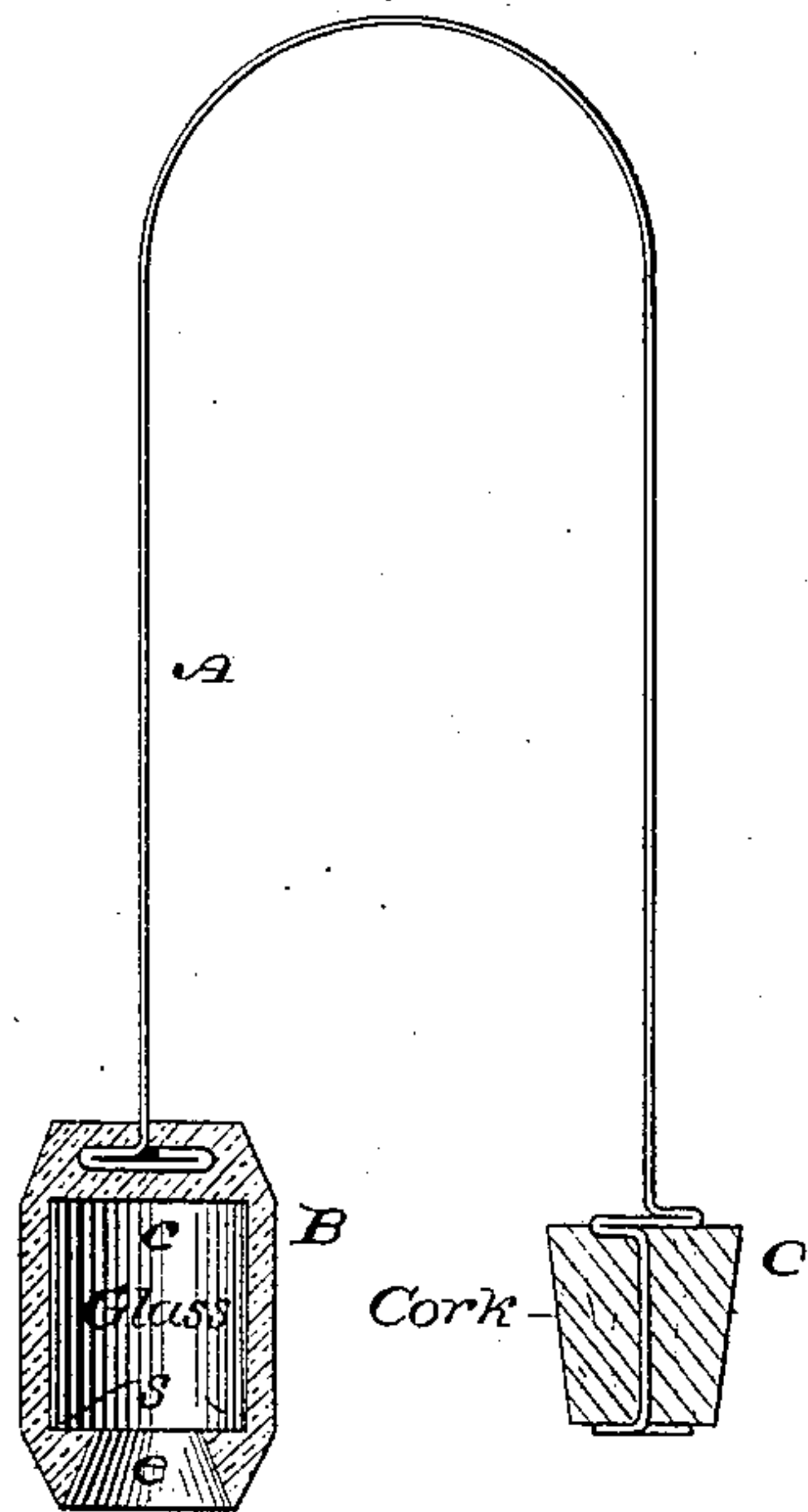


Fig. 2.

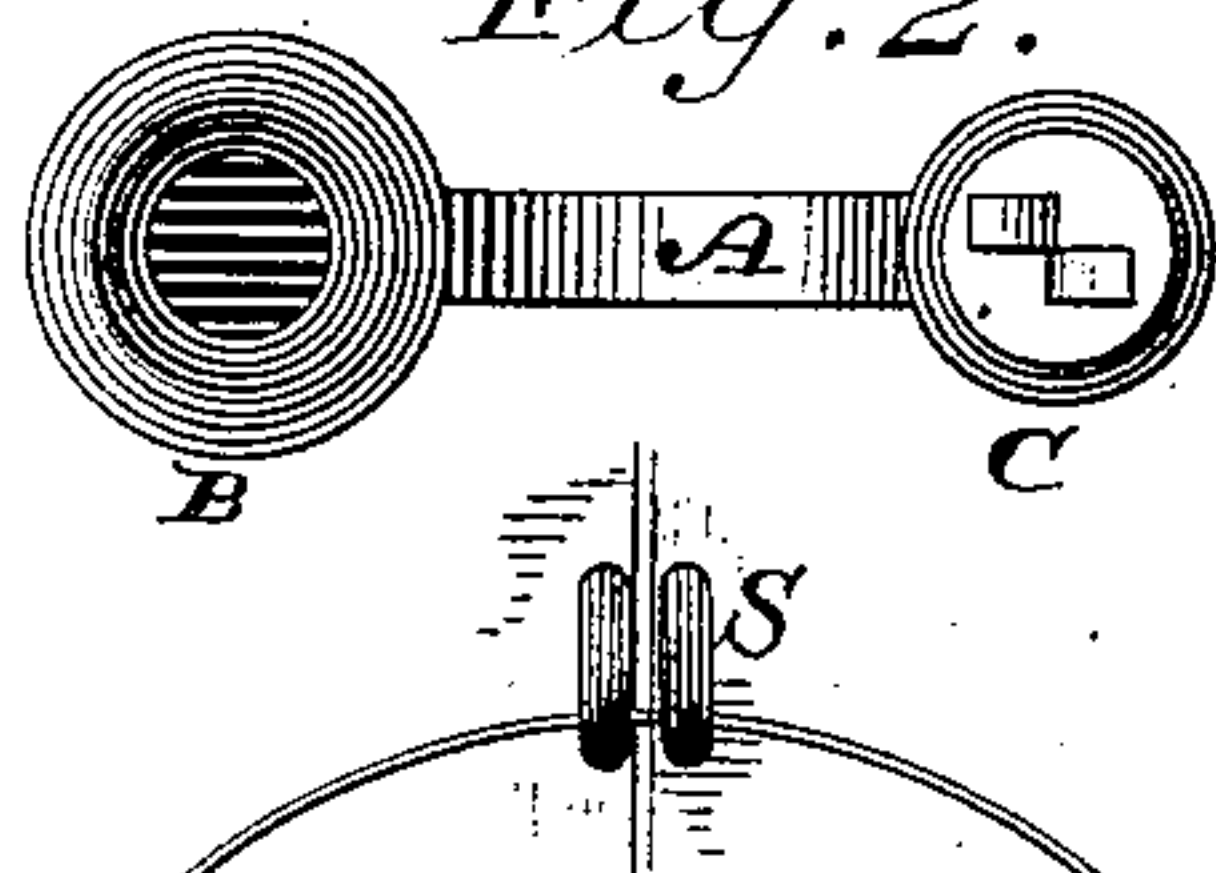


Fig. 3.

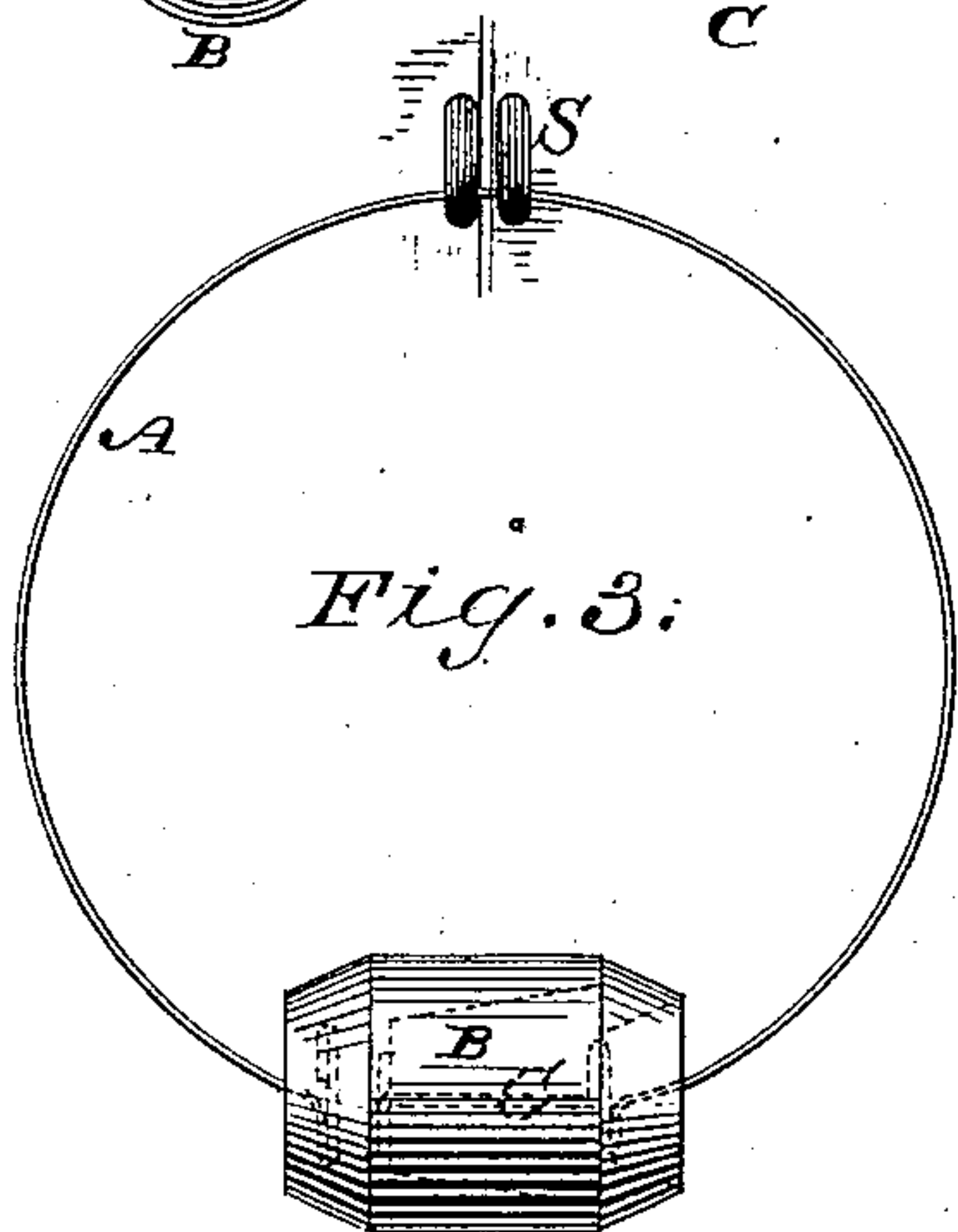


Fig. 4.

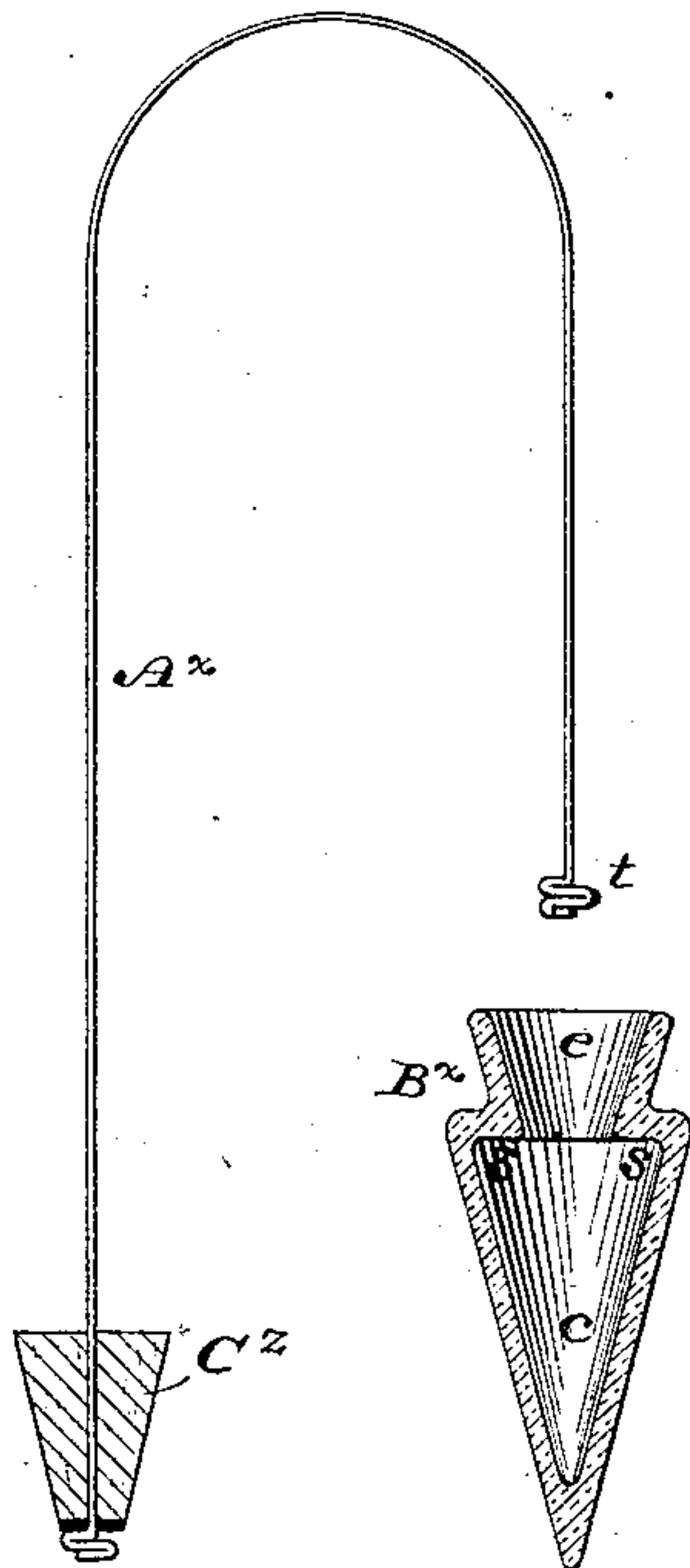


Fig. 5.

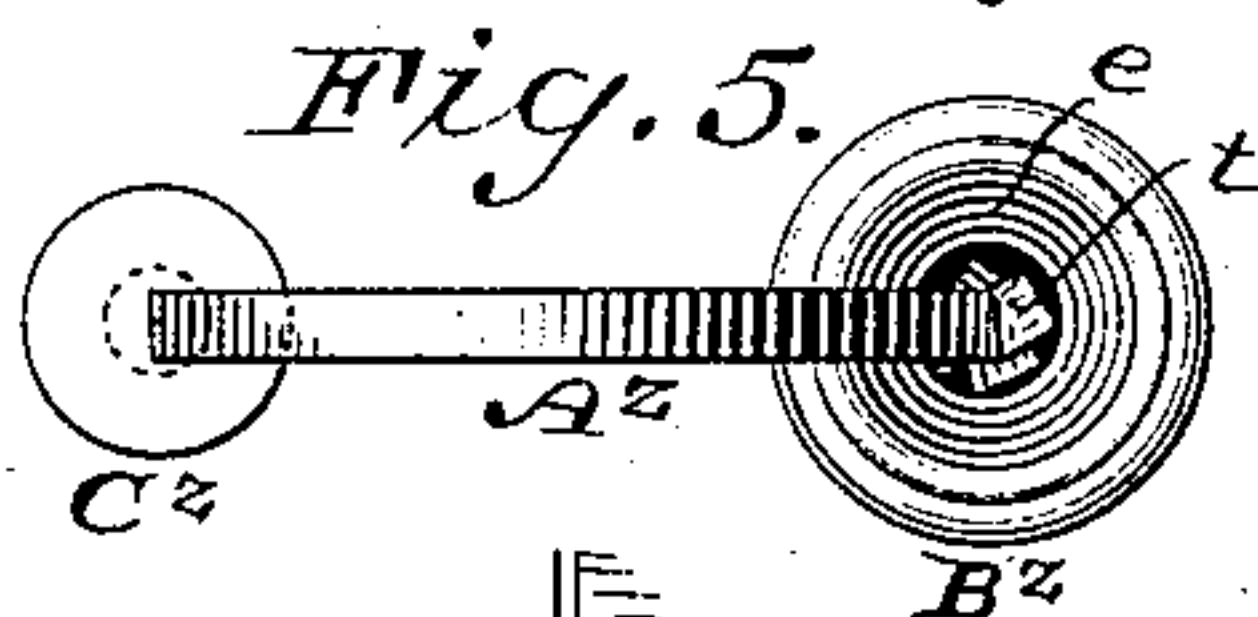
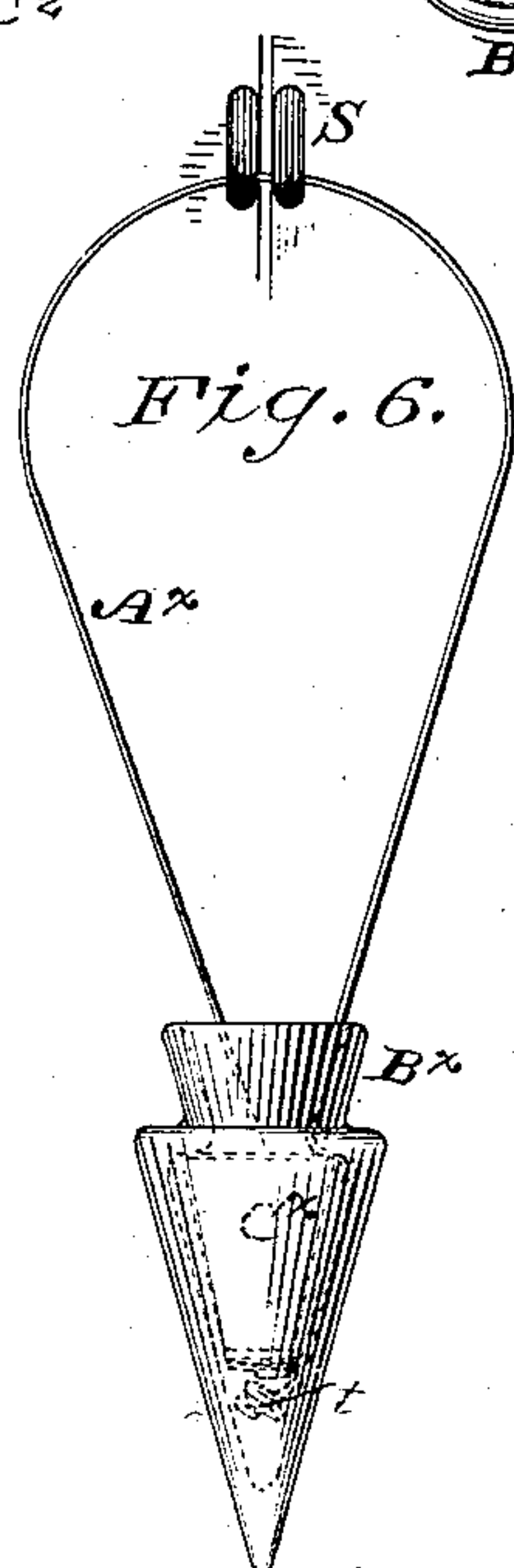


Fig. 6.



Patented Aug. 26, 1884.
Fig. 7.

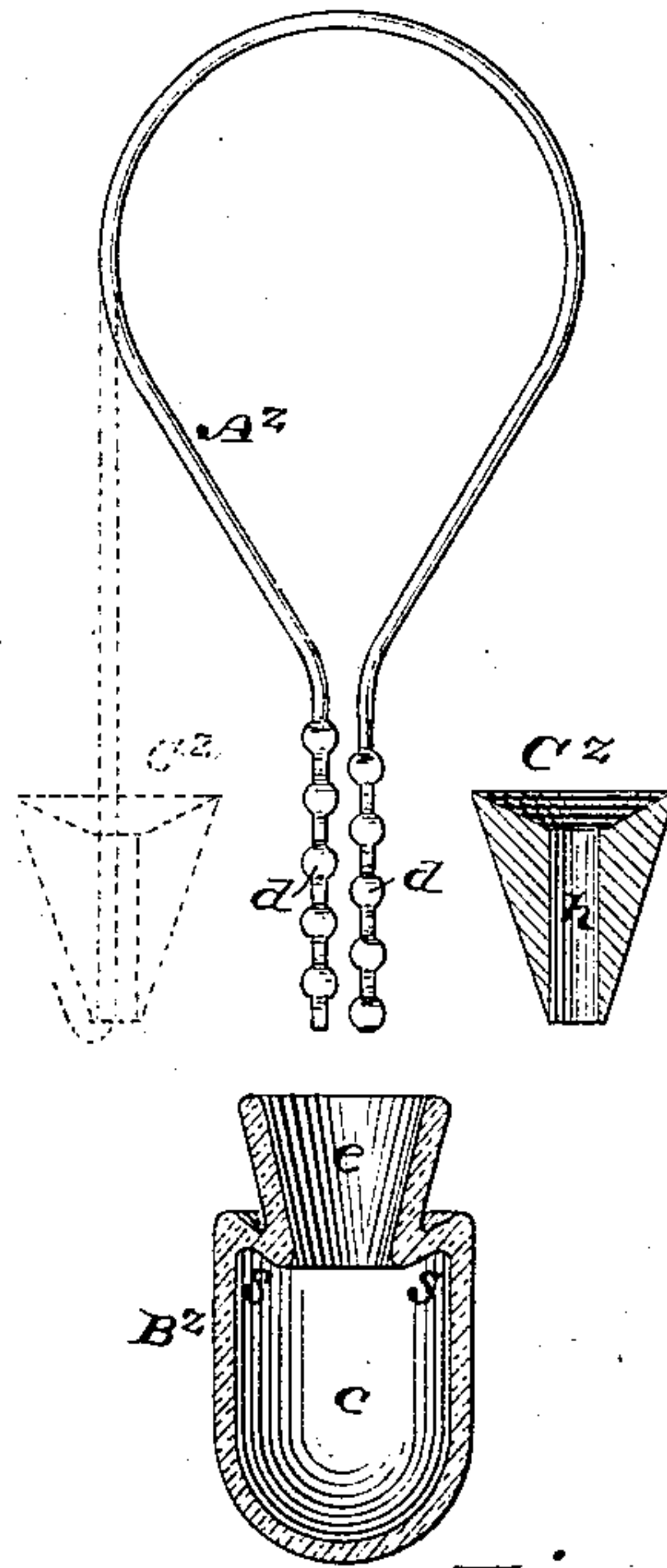


Fig. 8.

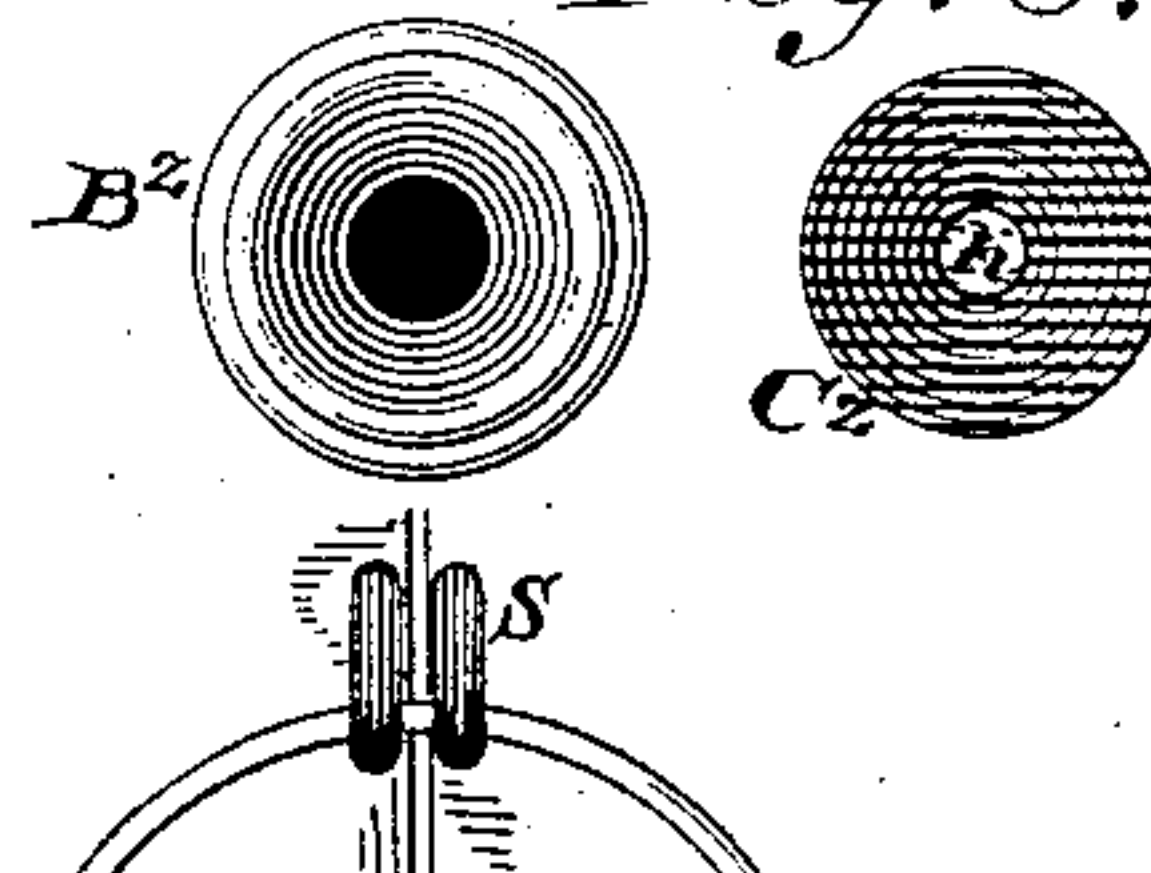
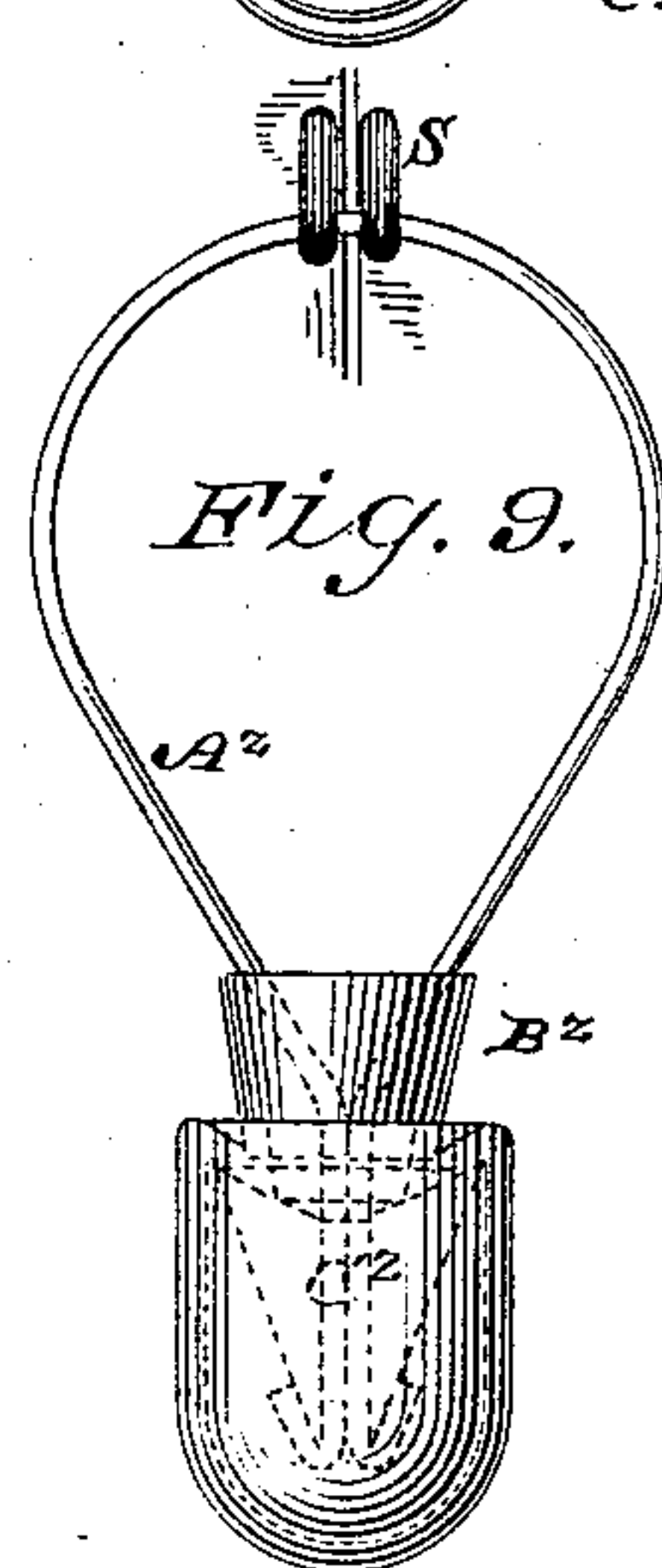


Fig. 9.



WITNESSES

Ed. A. Newman
Ch. C. Newman

INVENTOR

Edward J. Brooks,

By his Attorney

Wm. L. Ewin.

UNITED STATES PATENT OFFICE.

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

SEAL.

SPECIFICATION forming part of Letters Patent No. 304,258, dated August 26, 1884.

Application filed July 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. BROOKS, a citizen of the United States, residing at 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 improvements in "self-fastening" seals, as I have termed them, adapted to be applied to ordinary car-door staples and the like, and to be fastened without the aid of seal presses or punches.

The present invention consists in improved seals of this general description, each composed of a suitable shackle, a hard and brittle seal part, preferably of transparent glass, having a suitable cavity, a tapering entrance thereto, and abrupt internal shoulders at the inner end of said entrance, and an elastic "securer," preferably of cork and similar to a bottle-stopper, attached to one or both ends of the shackle, said securer being adapted to be inserted through said entrance at the sealing operation and to expand itself within said cavity, which it may fill or nearly fill, behind said shoulders, so as to prevent its withdrawal without such injury to the parts as would insure detection. These seals differ essentially from those heretofore invented by myself and all other self-fastening seals, so far as I am aware, in that the present seals are wholly without metallic snap-catches.

This invention consists, further, in the combination, in a self-fastening seal, of a flexible metallic shackle, a hard and brittle seal part of glass molded fast upon one end of said shackle, and having a suitable cavity, a contracted entrance thereto, and abrupt internal shoulders at the inner end of said entrance, and an elastic securer of cork or the like attached to the other extremity of said shackle and adapted for insertion at the sealing operation, as aforesaid. I thus provide for permanently uniting all the parts of each seal in the factory, so as to facilitate carrying and applying the seals, notwithstanding the diverse materials of which the several parts are composed.

A sheet of drawings accompanies this specification as part thereof.

Figures 1, 2, and 3 of these drawings represent a preferred form of my improved self-

fastening seal, and Figs. 4 to 6, inclusive, and 7 to 9, inclusive, two modifications thereof, Figs. 1, 4, and 7 being partially sectionized elevations of the seals as they leave the factory; Figs. 2, 5, and 8, end views of the same as shown in the views above; and Figs. 3, 6, and 9 elevations of the fastened seals represented as applied to car-door staples in an illustrative way.

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

In each of its forms this improved seal is composed of a suitable shackle, A, or A^x, or A^z, a hard and brittle seal part, B, or B^x, or B^z, preferably of transparent glass, and an elastic securer, C, or C^x, or C^z, preferably of cork, attached to one (at least) of the ends of the shackle before or at the sealing operation, and the seal part constructed with a suitable cavity, c, and a tapering entrance, e, to receive said securer, representing, respectively, the greatest size of the latter when expanded and its greatest reduction in diameter by compression, with abrupt internal shoulders, s, at the inner end of said entrance, adapted to coact with the securer in its expanded state to prevent its withdrawal. The other end of the shackle being securely held in any way, it will be apparent that when the shackle is passed through a pair of car-door staples, S, or otherwise applied to an object that is to be sealed fast, and the securer is forced through said entrance and expands in said cavity behind said shoulders, the seal will be securely self-fastened.

In the preferred form represented by Figs. 1, 2, and 3 a flexible metallic shackle, A, is employed. Sheet metal—such as "tin" (tin plate)—is represented; but flat wire A^x, round wire A^z, or other wire, single or of two or more strands, may be used. One end of this metallic shackle is connected, as aforesaid, with a tapering elastic securer, C, of cork, similar to a bottle-stopper. In the example, the shackle, being of sheet metal, is passed lengthwise through the securer from its larger end, and is made fast by slitting its extremity and bending its parts at right angles in opposite directions. They may be rebent and forced back into the cork for greater security,

or the securer may be attached in any approved way. This is done at the factory, the other end of the metallic shackle having been first molded fast within the closed end of a seal part, B, of glass, as represented, in the process of making the latter, which may be similar to that by which molded glass bottles are made. Thus constructed, the improved seal may be handled as a single part; and it is only necessary to pass the securer through the staples S or their equivalent and insert it to render the seal securely self-fastened, as represented by Fig. 3.

In the modification represented by Figs. 4, 5, and 6 a flexible shackle, A^x, which may be of flat wire, as represented, or of any approved description, including cord or twine, is connected at one end with an elastic securer, C^x, as aforesaid, and the shackle being of flat wire and the securer of tapering form, as represented, the shackle end is passed lengthwise through the securer from its larger end, and bent and rebent at its extremity to preclude its withdrawal, the other end of the shackle being provided (in like manner or in any approved way) with a terminal stop, t, which precludes its withdrawal past the internal shoulders, s, of a corresponding seal part, B^x, constructed as aforesaid, after the securer is inserted outside thereof, as represented in Fig. 6. In this form, it will be understood, after the shackle is passed through the staples S or their equivalent, its end bearing said stop t is first inserted through the entrance e into the seal-cavity c, followed by the securer attached to the other end of the shackle, and when the securer passes said shoulders s the seal is securely self-fastened.

In the modification represented by Figs. 7, 8, and 9 the shackle A^z is preferably, but not necessarily, of flexible wire, provided at its extremities with my detector-indentations d, and is combined with a bottle-shaped glass seal part, B^z, detached therefrom until the sealing operation, as in the form last described, and an elastic securer, C^z, which may also remain detached until the sealing operation, as shown in full lines in Fig. 7, or be preliminarily attached to one end of the shackle, as represented by dotted lines in Fig. 7, said securer having a longitudinal hole, h, Fig. 8, adapted to receive both shackle ends, to provide for attaching it to both ends after the shackle is

passed through the staples S or their equivalent, after which the securer is inserted into the seal part, to render the seal self-fastened and to prevent access to the fastenings of the shackle ends, as shown in Fig. 9.

Making the internal shoulders, s, of the seal part re-entrant and correspondingly shaping the outer end of the securer for additional security against the withdrawal of the latter is represented in Figs. 7, 8, and 9, and also coloring the exterior of the securer so that it may be more readily inspected through a seal part of transparent glass. These and like features, it will be obvious, may be embodied in either form of the seal; and the seal parts and shackles may furthermore be provided, in course of manufacture, with lettering or other distinguishing marks, including peculiar shapes, colors, and proportions, to render counterfeiting difficult or impossible, and to provide for readily indicating the roads or users to which particular seals belong.

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

1. An improved self-fastening seal composed of a suitable shackle, a hard and brittle seal part having a suitable cavity, a tapering entrance thereto, and internal shoulders at the inner end of said entrance, and an elastic securer of cork or like material attached to one or both of the ends of said shackle, and adapted to be forced through said entrance into said cavity at the sealing operation, and to expand itself behind said shoulders to prevent withdrawal, substantially as herein specified.

2. The combination, in a self-fastening seal, of a flexible metallic shackle, a hard and brittle seal part of glass, molded fast on one end of said shackle, and having a suitable cavity, a tapering entrance leading thereto, and abrupt shoulders at the inner end of said entrance, and an elastic securer of cork or like material attached to the other end of said shackle, and adapted to be forced through said entrance into the cavity of said seal part at the sealing operation, substantially as herein specified.

EDWARD J. BROOKS.

Witnesses:

THEO. S. GOTTLIEB,
HENRY L. C. WENK.