

No. 720,597.

PATENTED FEB. 17, 1903.

L. H. MARTELL.
PACKING RING FOR PISTON RODS, &c.

APPLICATION FILED AUG. 29, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

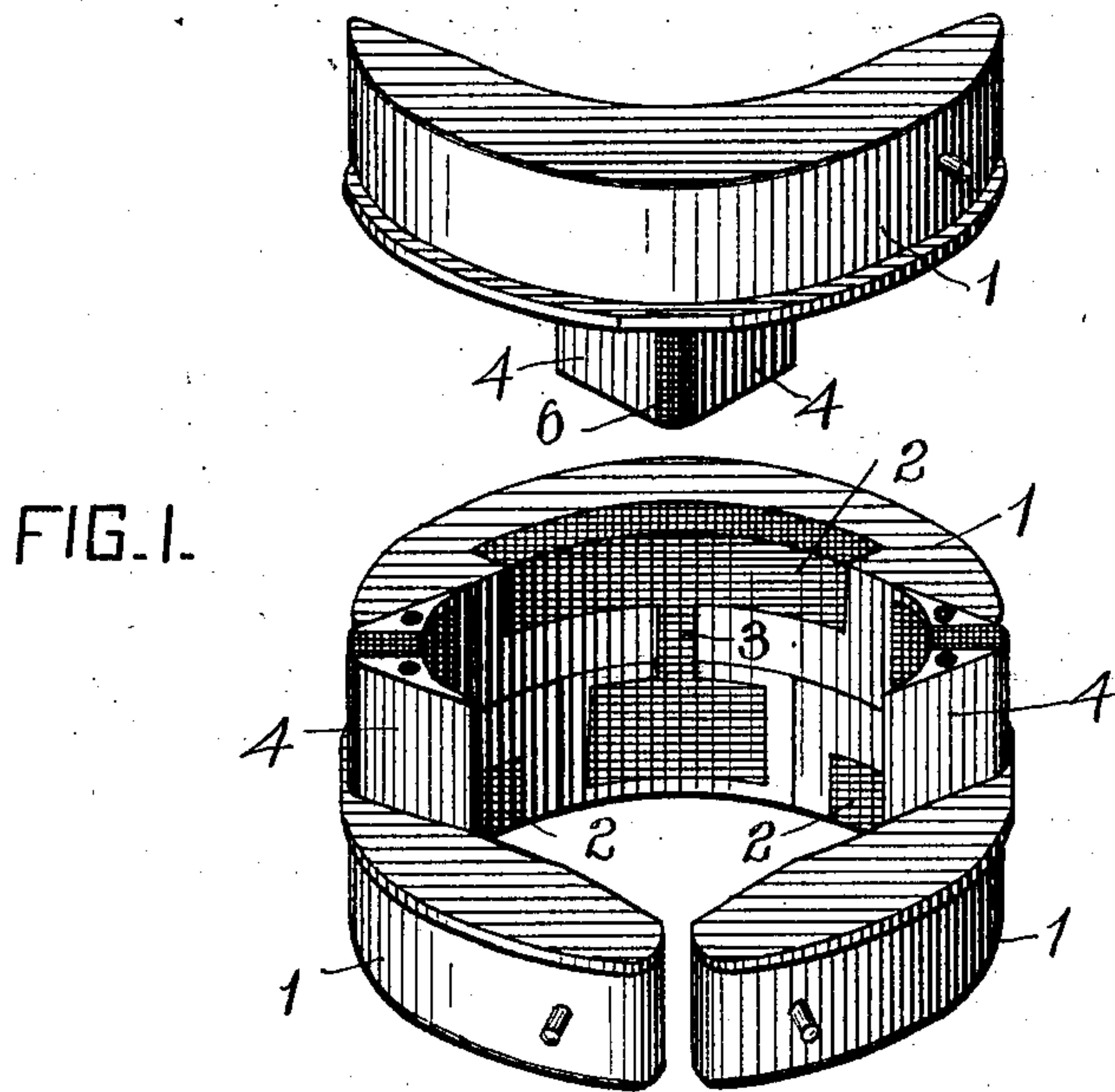


FIG. 2.

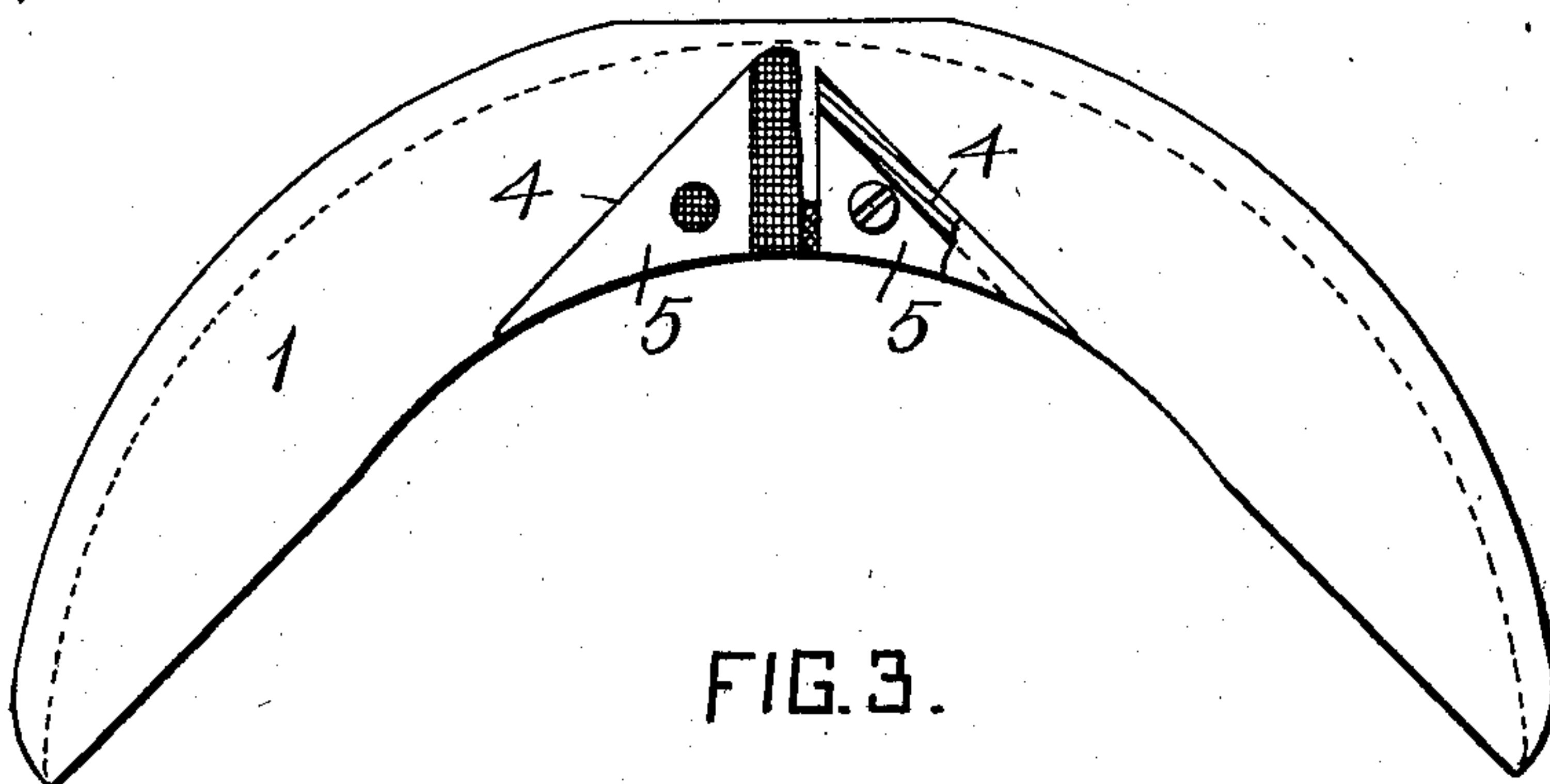
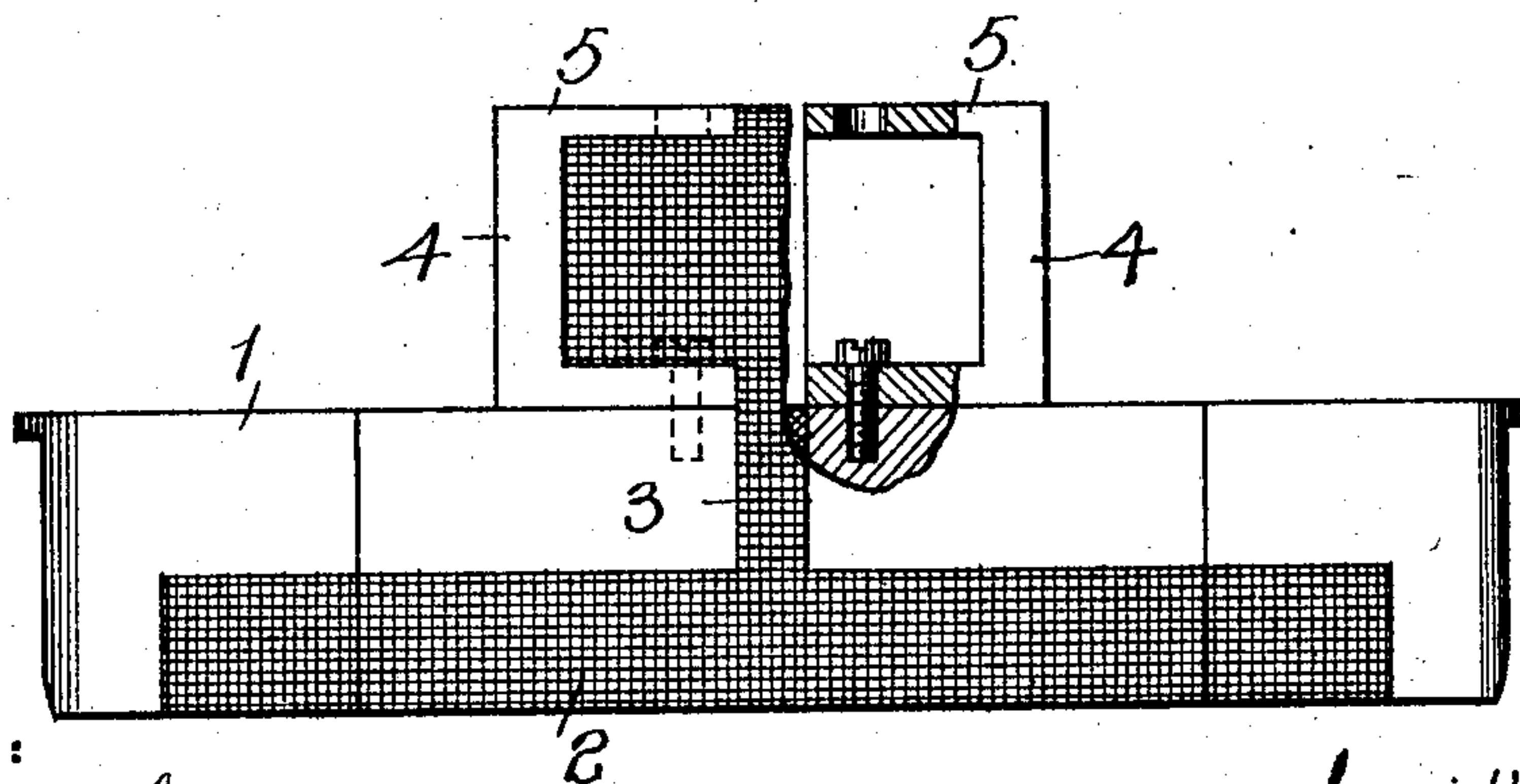


FIG. 3.



WITNESSES:

Herbert Bradley.
Fred Kirchner.

INVENTOR

Louis H. Martell
by Saml B. Wolcott Att'y.

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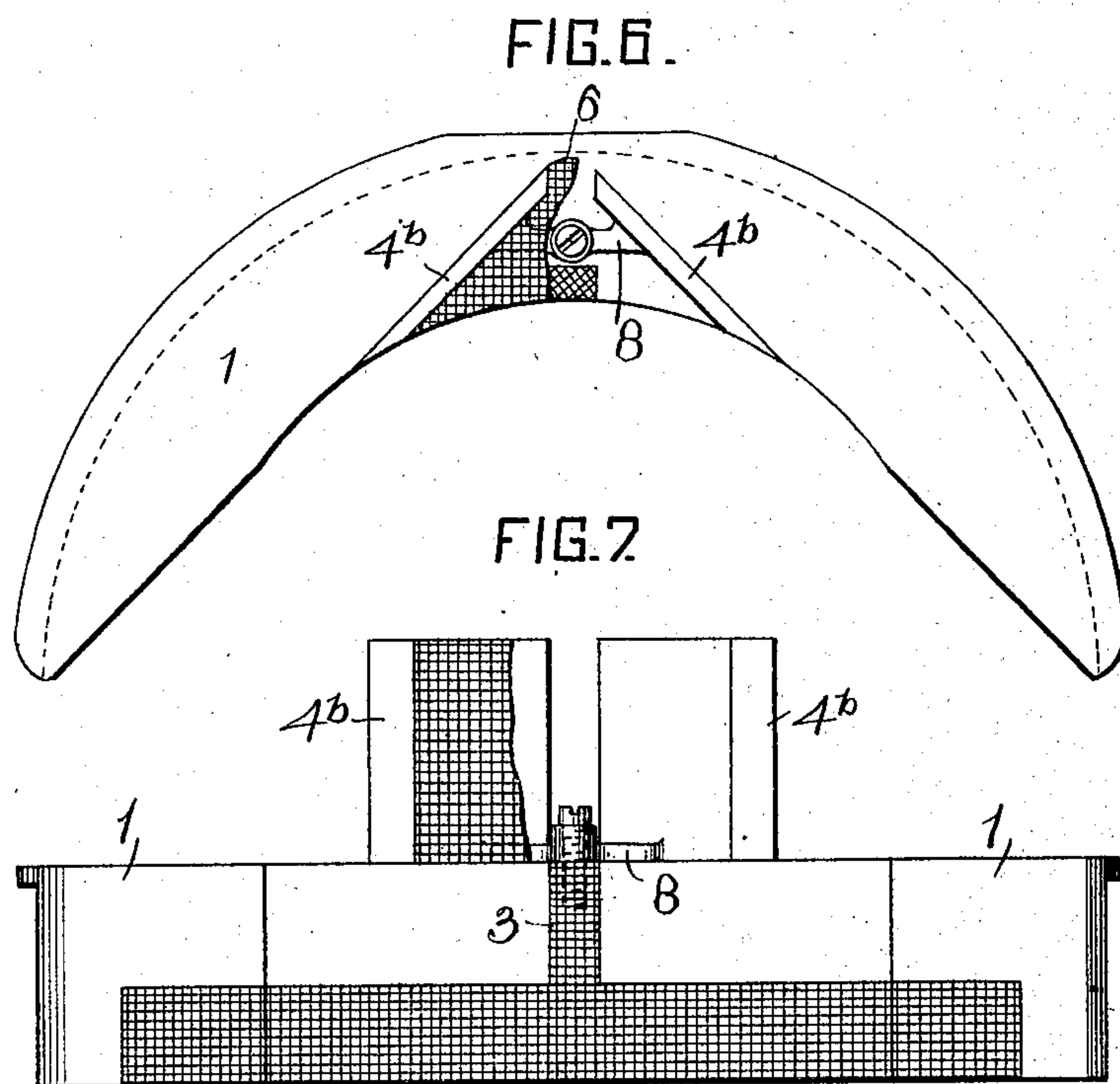
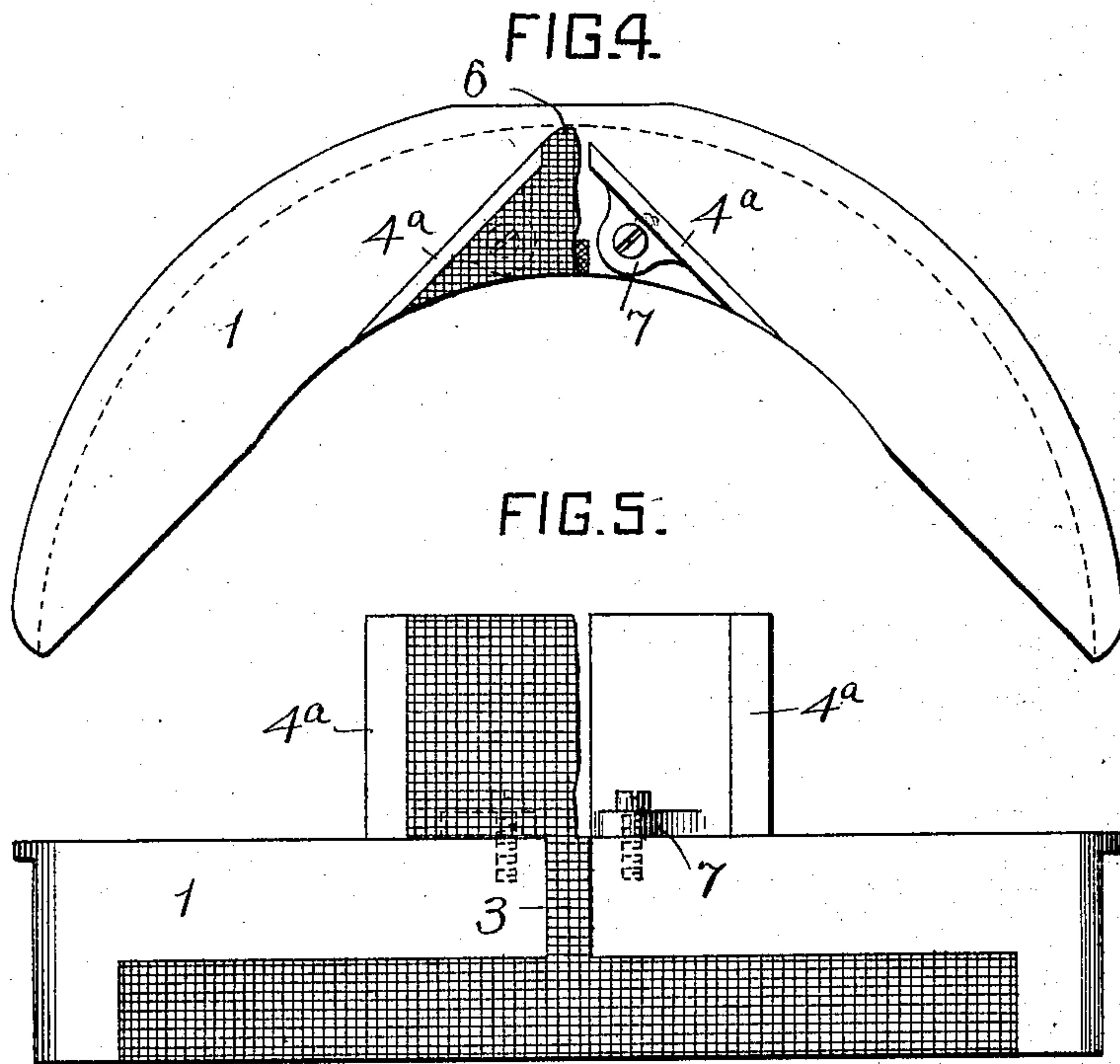
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2 SHEETS—SHEET 2.



WITNESSES:

Herbert Bradley.
Fred Kirchner.

INVENTOR

Louis H. Martell
by De Witt S. Wolcott Att'y.

UNITED STATES PATENT OFFICE.

LOUIS H. MARTELL, OF WILKINSBURG, PENNSYLVANIA.

PACKING-RING FOR PISTON-RODS, &c.

SPECIFICATION forming part of Letters Patent No. 720,597, dated February 17, 1903.

Application filed August 29, 1902. Serial No. 121,431. (No model.)

To all whom it may concern:

Be it known that I, LOUIS H. MARTELL, a citizen of the United States, residing at Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Packing-Rings for Piston-Rods, &c., of which improvements the following is a specification.

The invention described herein relates to certain improvements in packing-rings for piston-rods, &c., of that class or kind consisting of two segmental rings, each segment being a duplicate of the other and the several segments interlocking or having a bearing upon adjacent segment.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of a piston-packing embodying my improvement, one of the segments being raised from the others. Fig. 2 is a plan view, on an enlarged scale, of one of the segments, a portion being broken away. Fig. 3 is a side elevation of the same. Figs. 4, 5, 6, and 7 are views similar to Figs. 2 and 3, illustrating modifications of my improvement.

In the practice of my invention each segment 1 may form a nearly semicircle or other desired portion of a circle and is generally formed of brass or other suitable hard metal. The inner or bearing face is formed in part of Babbitt or other metal suitable for bearing-surfaces by recessing the inner face of the segment and filling said recess with such metal, as at 2. The projection on the side of the segment has heretofore been formed wholly of the same metal as the filling 2 and connected therewith by a tongue 3, extending from the filling 2. This construction is objectionable not only on account of lack of strength, but also on account of the labor and time involved in the manufacture therefor. In forming these projections of Babbitt metal it is necessary that the segments be clamped together around a suitable core and the metal poured in. The proper clamping of the segments together involved the formation of radially-projecting ears on the ends of the segments, so as to connect adjacent segments together. After the Babbitt metal had been poured these lugs were cut away and the

ends of the segments properly shaped. During these operations the segments were liable to be bent, and thereby rendered useless.

In lieu of forming the wedge-like projection entirely of Babbitt or other soft metal I provide two retaining-walls 4, which form the outer side walls of the projection. These retaining or reinforcing walls are preferably formed of the same metal as the body of the segments and are detachably secured in position on the segments by screws or other suitable means. In the construction shown in Figs. 1, 2, 3 the retaining-walls 4 form parts of hollow wedge-like structures 5, having the inner wall cut away. These wedge-like structures are secured on the segments by screws 6, with their inner or adjacent ends separated a short distance, as shown. Babbitt or other suitable metal is now poured into the structures 5, filling the same and the space between the inner ends thereof and flowing through a suitable channel into the recess in the inner face of the segment forming the bearing-face 2. It will be observed that in the complete segment portions of the inner faces of the segment proper and the wedge-like projection are formed in part by Babbitt or good bearing metal, as is also the apex 6 of the wedge-like projection, and that the soft-metal portions of the projection are braced or reinforced by the hard-metal walls 4.

In the construction shown in Figs. 4 and 5 the retaining-walls 4^a are provided with lugs 7, whereby the walls may be secured in position on the segments proper. In this construction the upper and lower sides shown in Figs. 2 and 3 are omitted, the retaining or reinforcing walls being formed of flat plain pieces of metal bearing the lugs 7.

In the construction shown in Figs. 6 and 7 the retaining-walls 4^b are connected by a narrow web portion 8, through which passes the securing-screw. In this construction the retaining-walls are braced one by the other through the connecting-web, which is made sufficiently light to permit flexure, so that the two walls may be adjusted relative to each other, as may be required.

It will be understood that the plain retaining-walls in the construction shown in Figs. 4 to 6 serve as backings for Babbitt or other soft metal, as in Figs. 1, 2, and 3, and that

said walls serve to brace and strengthen the wedge-like projection of which they form a part.

When forming my improvement, the retaining-walls are secured in position after the segments have been completed, except a light finishing cut, and the projection is completed by placing the segment on a suitable core or convex surface and closing the opening between the adjacent ends of the retaining-walls and pouring in the Babbitt metal. After the Babbitt metal has been poured in the segments are completed by a light finishing cut.

I claim herein as my invention—

1. A packing-ring consisting of segments, each segment provided with a wedge-like

projection having its side or retaining walls formed of hard metal and a filling of soft metal, substantially as set forth.

2. A packing-ring consisting of segments, each segment provided with a wedge-like projection having its side or retaining walls formed of hard metal adjustably connected together and a filling of soft metal, substantially as set forth.

In testimony whereof I have hereunto set my hand.

LOUIS H. MARTELL.

Witnesses:

DARWIN S. WOLCOTT,
GEO. B. BLEMING.