

No. 706,700.

Patented Aug. 12, 1902.

J. W. STEPHENSON.  
JOURNAL BOX LID.

(Application filed Dec. 26, 1901.)

(No Model.)

4 Sheets—Sheet 1.

Fig. 2.

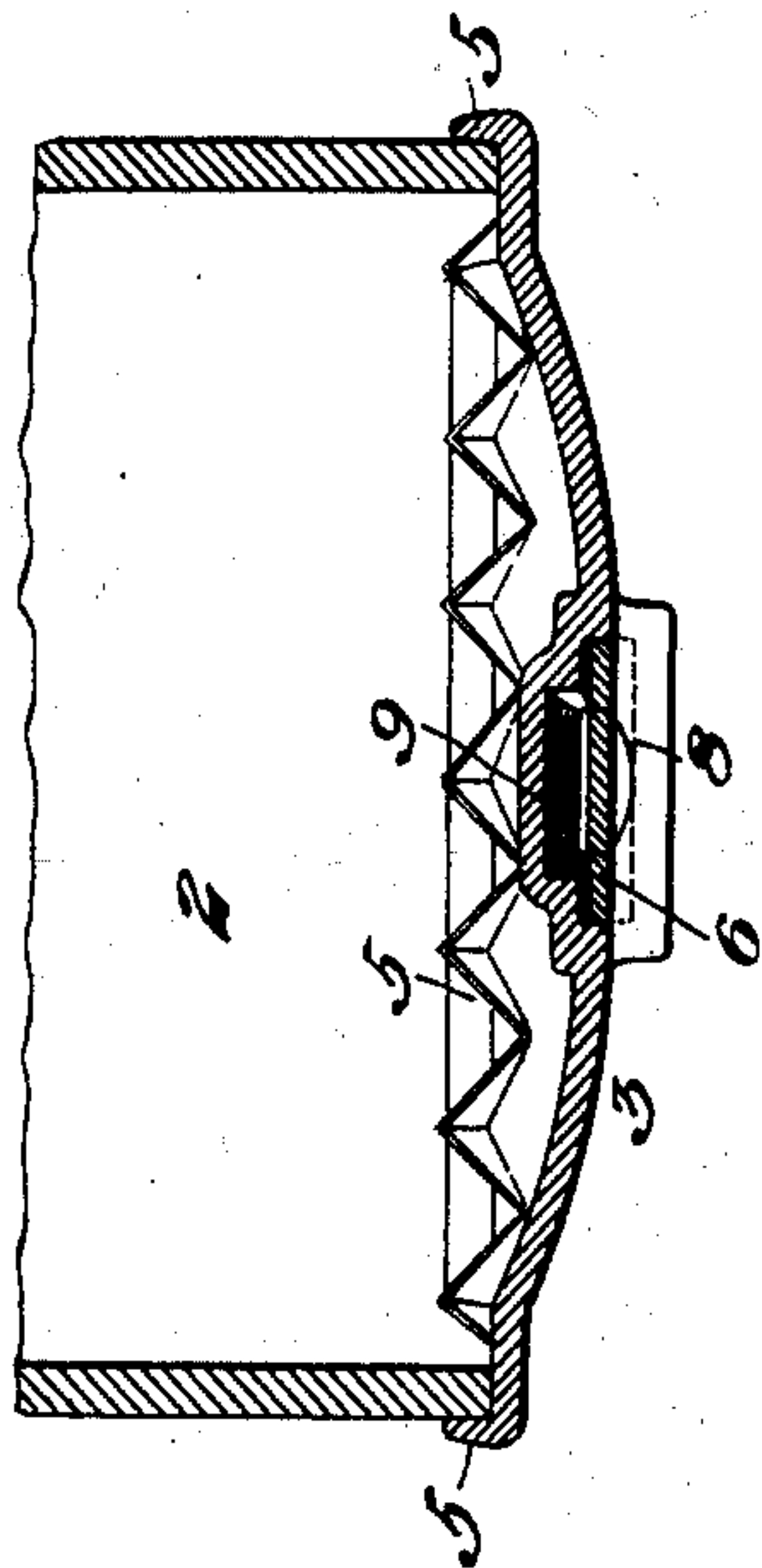
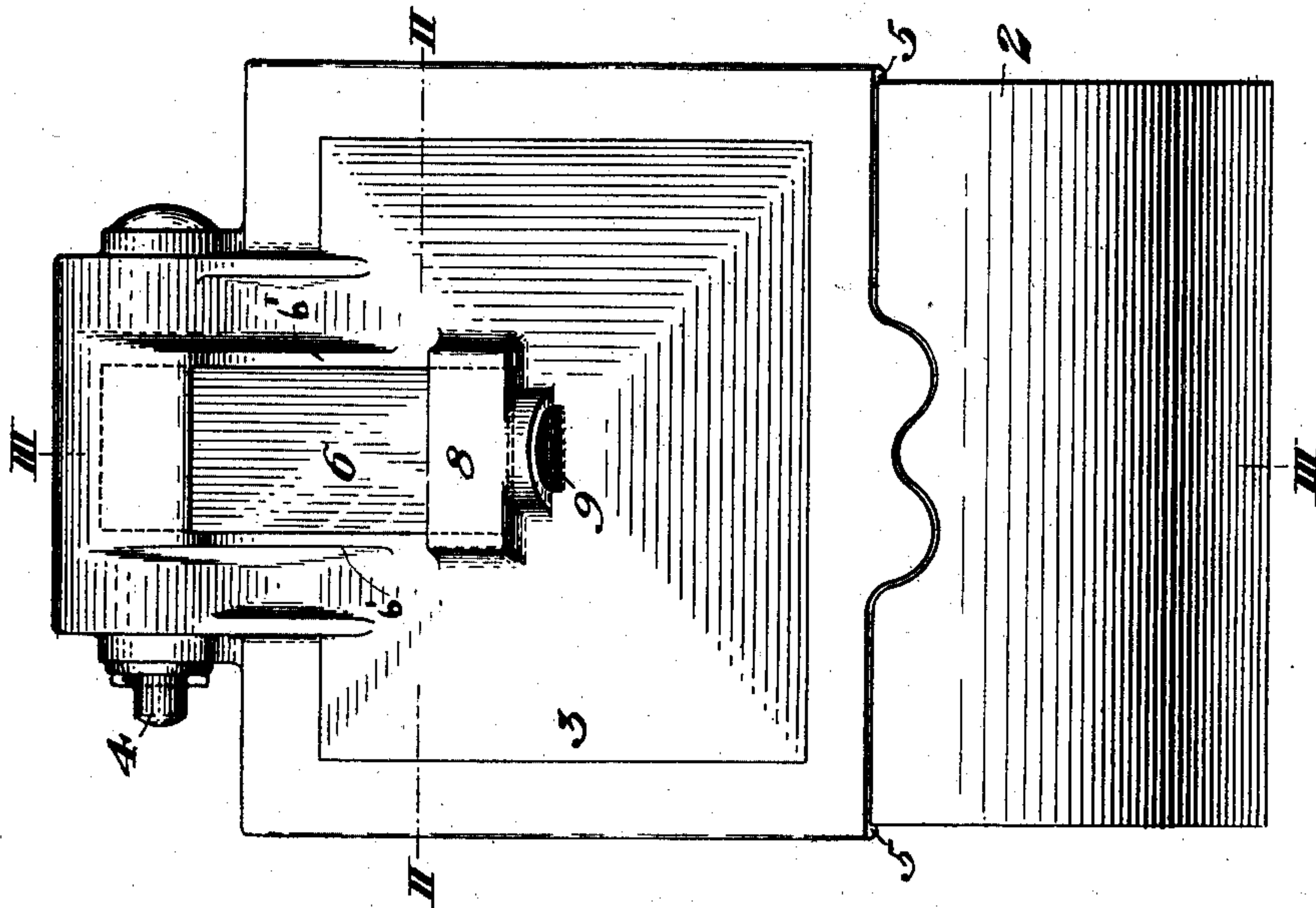


Fig. 1.



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Fig. 4.

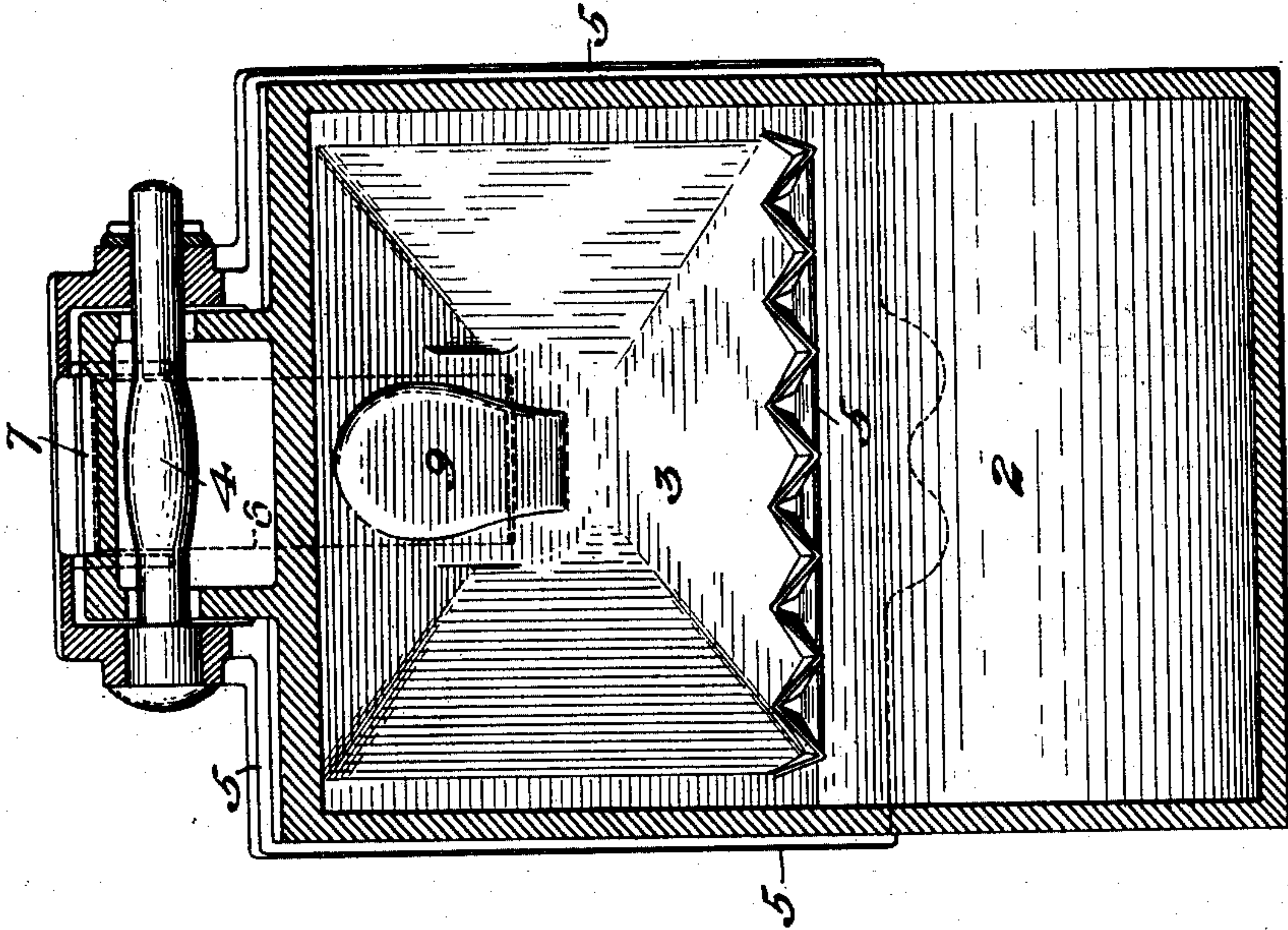
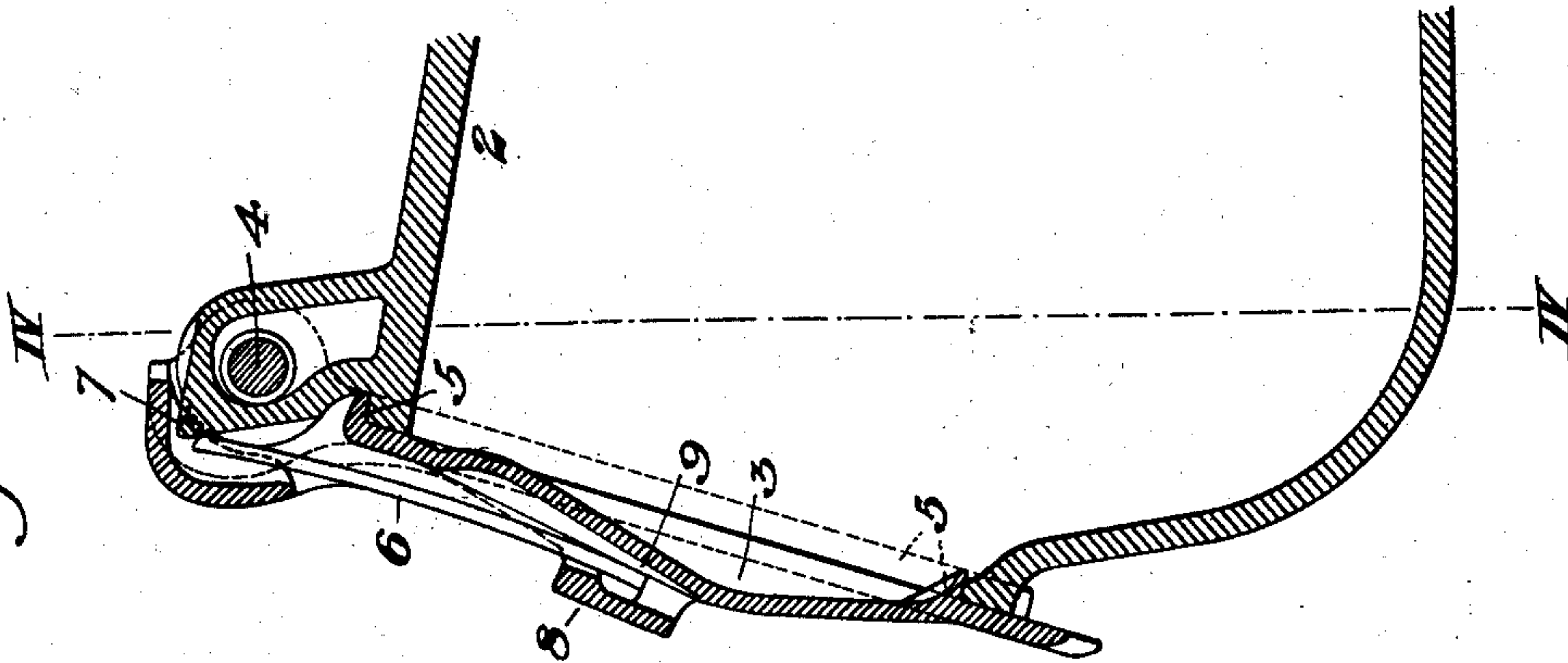


Fig. 3.



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Fig. 6.

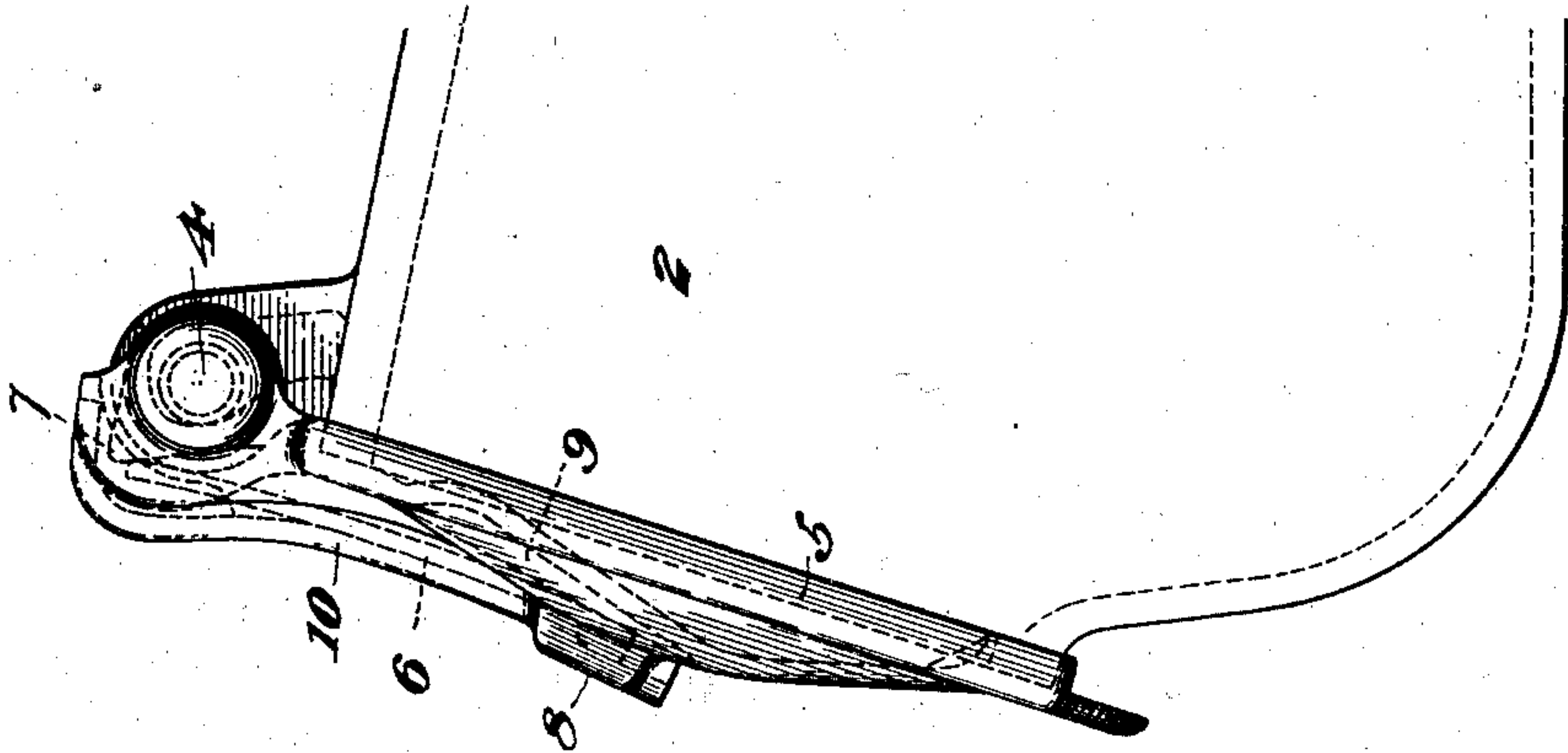
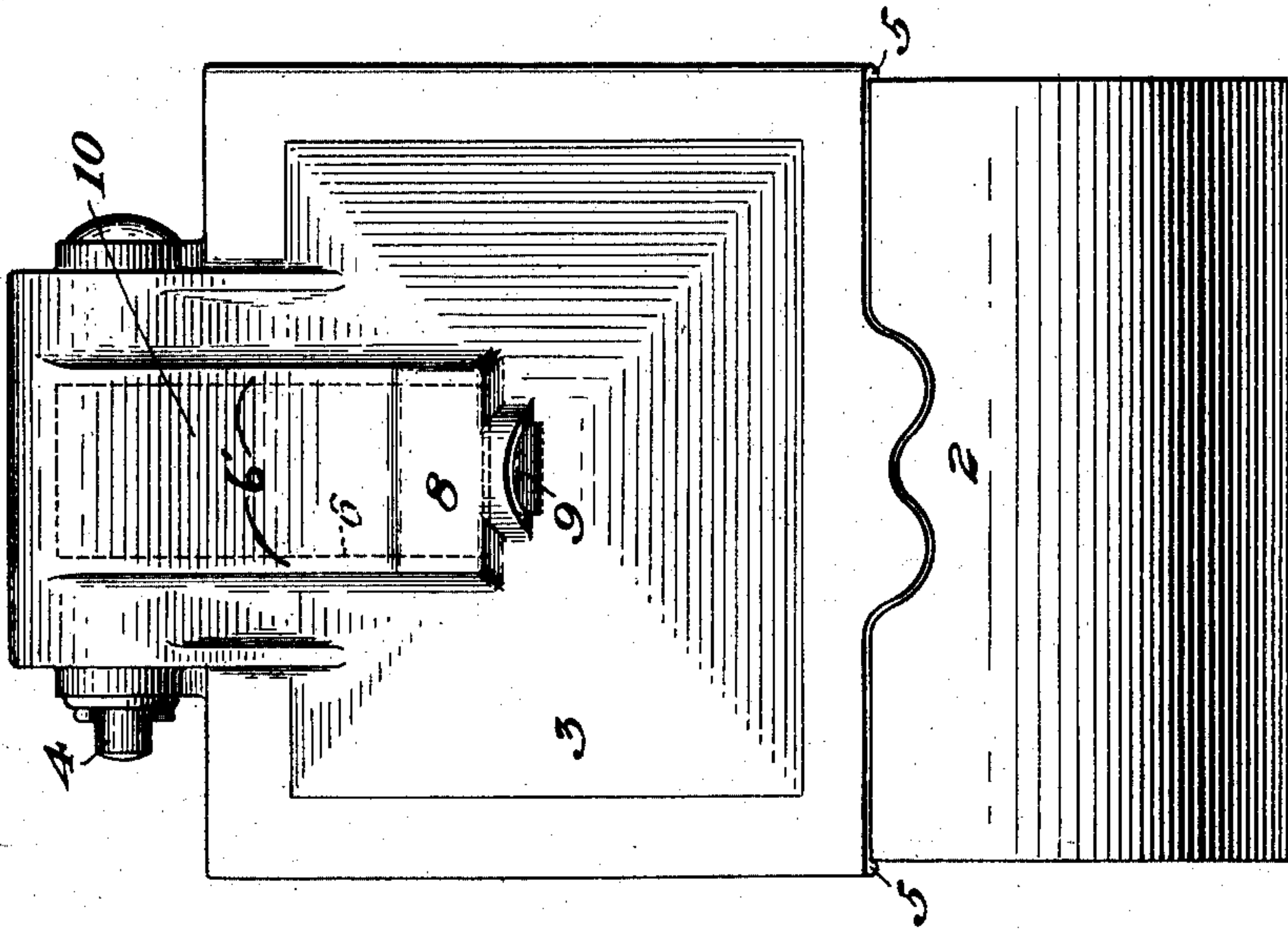


Fig. 5.



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Fig. 8.

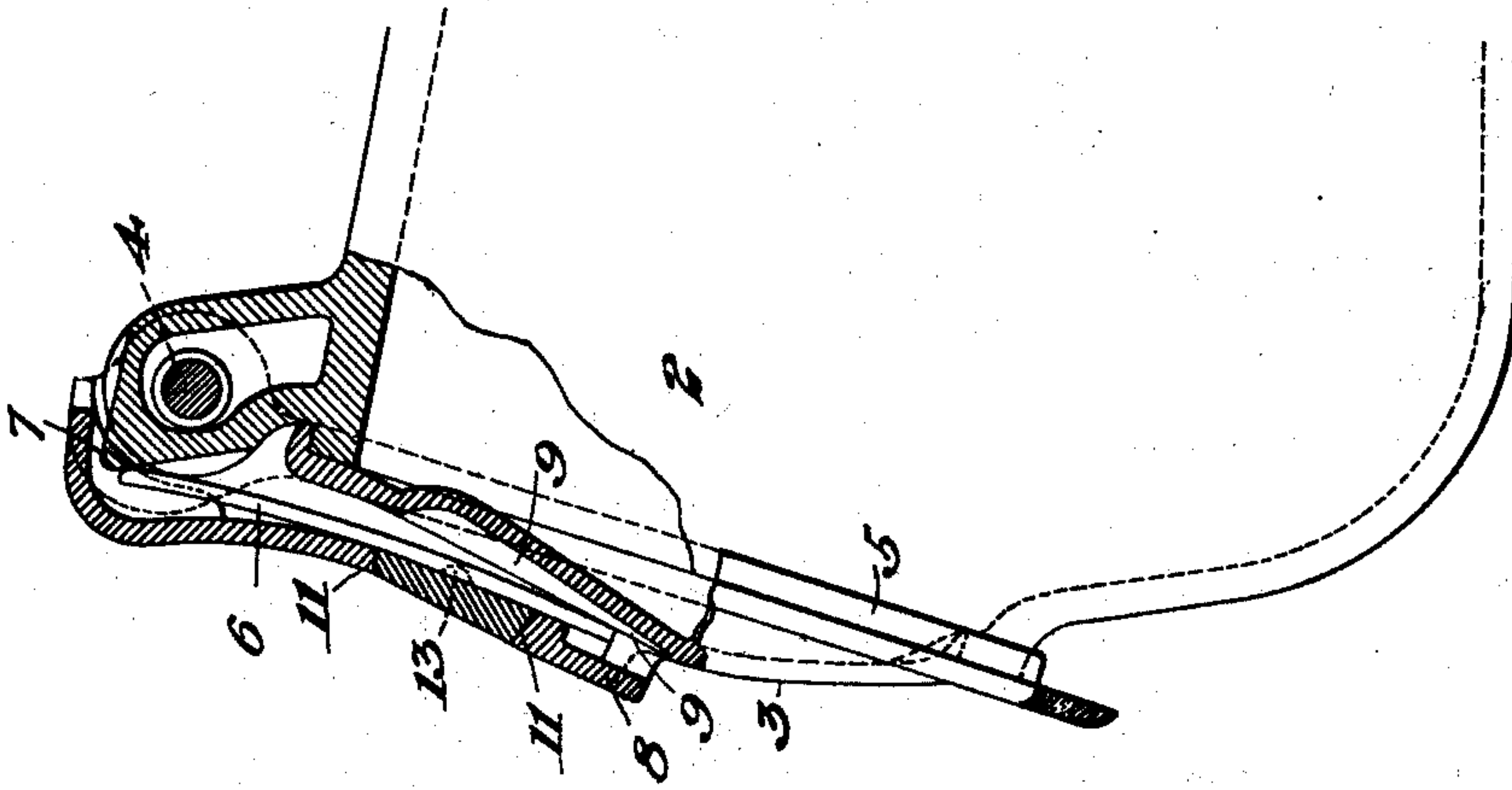
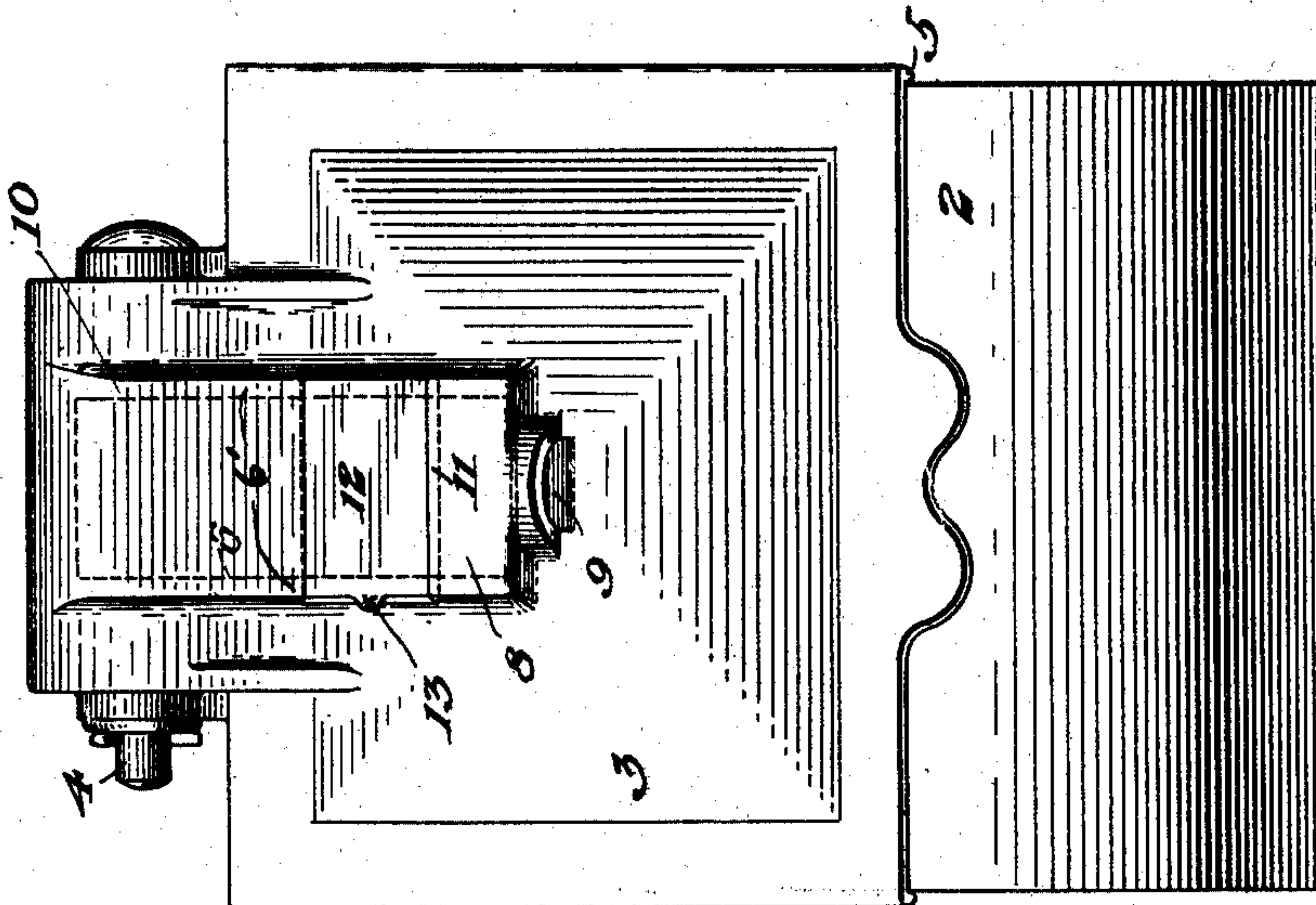


Fig. 7.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN W. STEPHENSON, OF TOLEDO, OHIO, ASSIGNOR TO THE NATIONAL MALLEABLE CASTINGS COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

## JOURNAL-BOX LID.

SPECIFICATION forming part of Letters Patent No. 703,700, dated August 12, 1902.

Application filed December 26, 1901. Serial No. 87,182. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. STEPHENSON, of Toledo, Lucas county, Ohio, have invented a new and useful Journal-Box Lid, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of a car-axle box provided with my improved lid. Fig. 2 is a horizontal section on the line II II of Fig. 1. Fig. 3 is a vertical section on the line III III of Fig. 1. Fig. 4 is a vertical section on the line IV IV of Fig. 3. The figures on the third and fourth sheets of drawings show modified constructions of my improvement, Fig. 5 and Fig. 6 being a front elevation and a side elevation of one modification, and Figs. 7 and 8 being a front elevation and vertical central section of another modification.

In the figures on the first sheet of the drawings, 2 represents the axle-box, which may be of ordinary construction, and 3 is the lid, which is pivoted on a pin 4 and is preferably provided with flanges 5, so as to fit the margin of the box. My invention relates to the arrangement of the spring and its connection with the box.

6 is the spring, which bears at one end upon a lug 7 of the box in any suitable or usual manner, as the arrangement of the spring at this end does not concern my invention. At the other end the spring is connected with the box-lid, being set detachably in a socket 8 on the exterior of the lid. This socket is open at the upper end to receive the spring and is also open at the lower end, the box-lid being provided, as shown in Figs. 1 to 4, with a depression 9 at the base of the socket under the spring, so as to afford a clear opening back of the spring and through the socket. This socket is on the same part or element which fits against the edges of the journal-box and closes it. The advantages of this space are that it provides for the free discharge of any dirt which may accumulate under the spring and which if not thus discharged would injuriously affect the operation and tension of the spring and would prevent the lid from seating properly

on the box. The spring itself is preferably made of the full width of the socket 8 and has a bearing against ribs 6' on the exterior of the lid, which are substantially coextensive in length with the spring, the space between them being about the same as the width of the spring, and against the side walls of the socket, which tends to hold it steadily in place.

In Figs. 5 and 6 I show a modified construction, in which the front of the spring is not exposed, as in Fig. 1 and Fig. 2, but is covered by a hood 10, integral with the lid; but the construction is otherwise as illustrated in the figures above described.

In Figs. 7 and 8 I show a construction like that of Figs. 5 and 6, except that the hood is cast with an opening having beveled edges 11, and the opening is closed when the lid is finished by sliding a cover-section 12 into the opening and holding it therein by upsetting or bending down a flange or projection 13.

Modifications of my invention in various ways will be suggested to those skilled in the art on reading the foregoing description, since What I claim is—

1. A journal-box having a lid adapted to fit against the edges of the box, and a leaf-spring fitted to the said lid, the said lid having a recess extending under the spring for the discharge of dirt; substantially as described.

2. A journal-box having a lid adapted to fit against the edges of the box, a leaf-spring, and a socket for holding the spring, said socket being formed on the said lid, being open at its lower end and having a recess extending under the spring for the discharge of dirt, substantially as described.

3. A journal-box having a lid adapted to fit against the edges of the box, a leaf-spring, and a socket for holding the spring, said socket being formed on the said lid, being open at its lower end and having a recess extending under the spring for the discharge of dirt, the spring being substantially of the same width as the socket; substantially as described.

4. A journal-box having a lid adapted to fit against the edges of the box, and a leaf-spring fitted to the said lid, the said lid having a re-



cess extending under the spring for the discharge of dirt, and a hood which covers the spring; substantially as described.

5 A journal-box having a lid adapted to fit against the edges of the box, a leaf-spring fitted to said lid, ribs formed on said lid substantially coextensive in length with the spring, said spring fitting between the ribs and being of substantially the same width as  
10 the space between them, said ribs protecting said spring and preventing its sidewise displacement, and a socket at the lower end of said ribs adapted to hold the spring detachably in proper position to engage the box;  
15 substantially as described.

6. A journal-box lid having a leaf-spring, ribs formed upon the lid, said spring being confined between said ribs and protected thereby, and a recess formed between the ribs

and extending under said spring for the discharge of dirt; substantially as described. 20

7. A journal-box lid having a leaf-spring, ribs formed upon the lid, said spring fitting neatly between the ribs, said ribs protecting the spring and preventing its sidewise displacement, and a socket at the lower end of  
25 said ribs adapted to hold the spring in proper position to engage the box, said socket being open at its lower end and having a recess beneath the spring for the discharge of dirt; 30  
substantially as described.

In testimony whereof I have hereunto set my hand.

JOHN W. STEPHENSON.

Witnesses:

J. W. LYONS,  
E. D. POTTER.