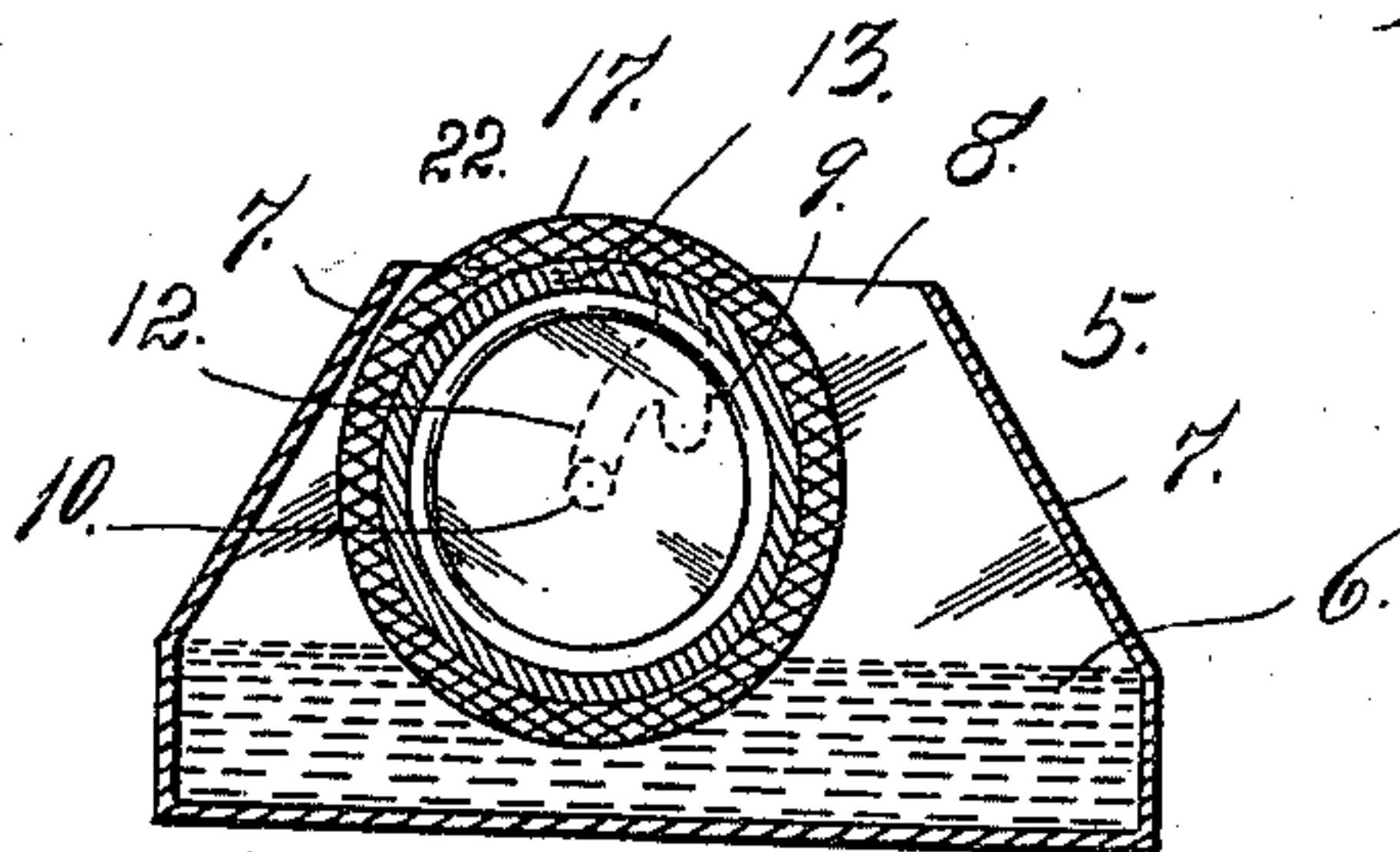
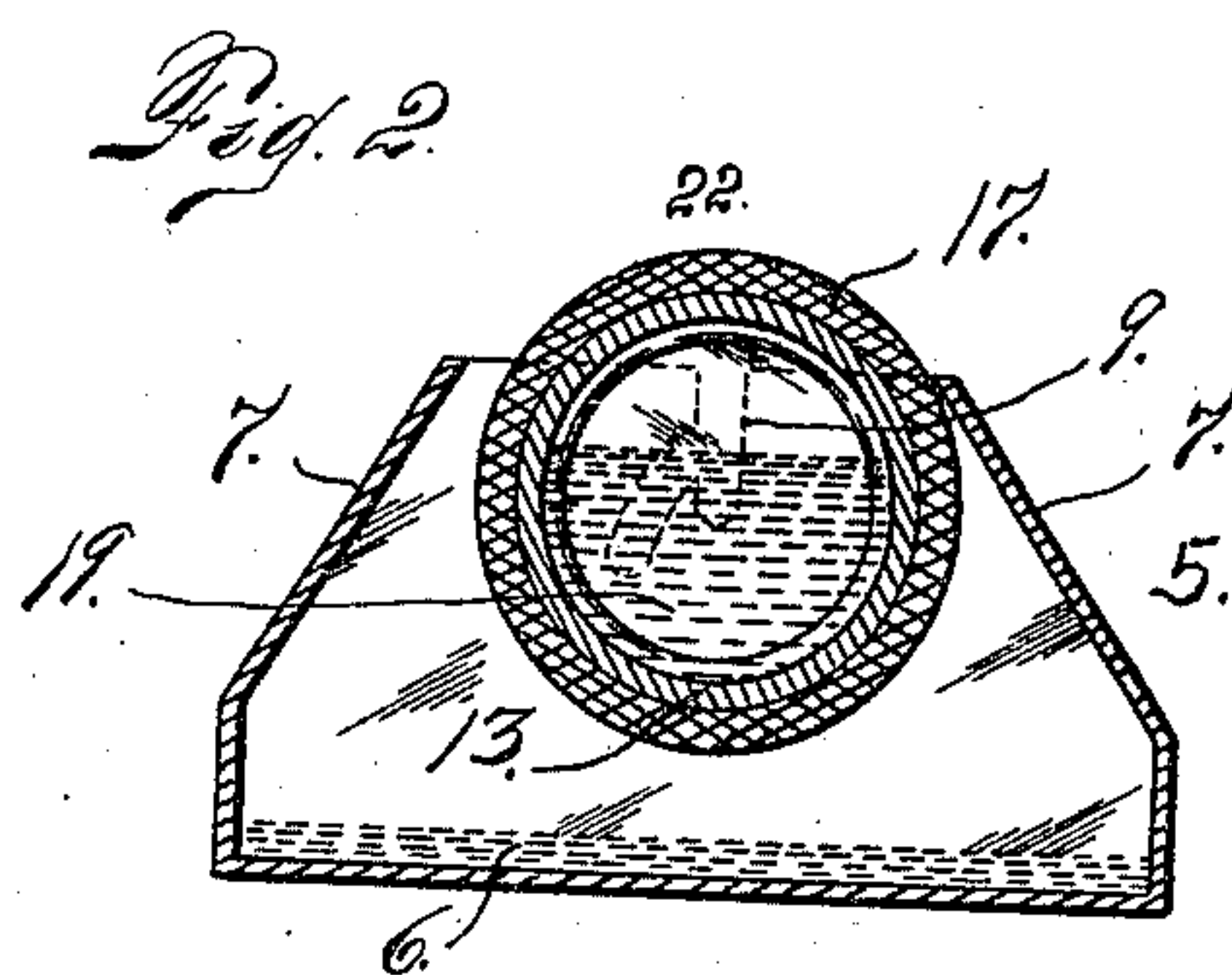
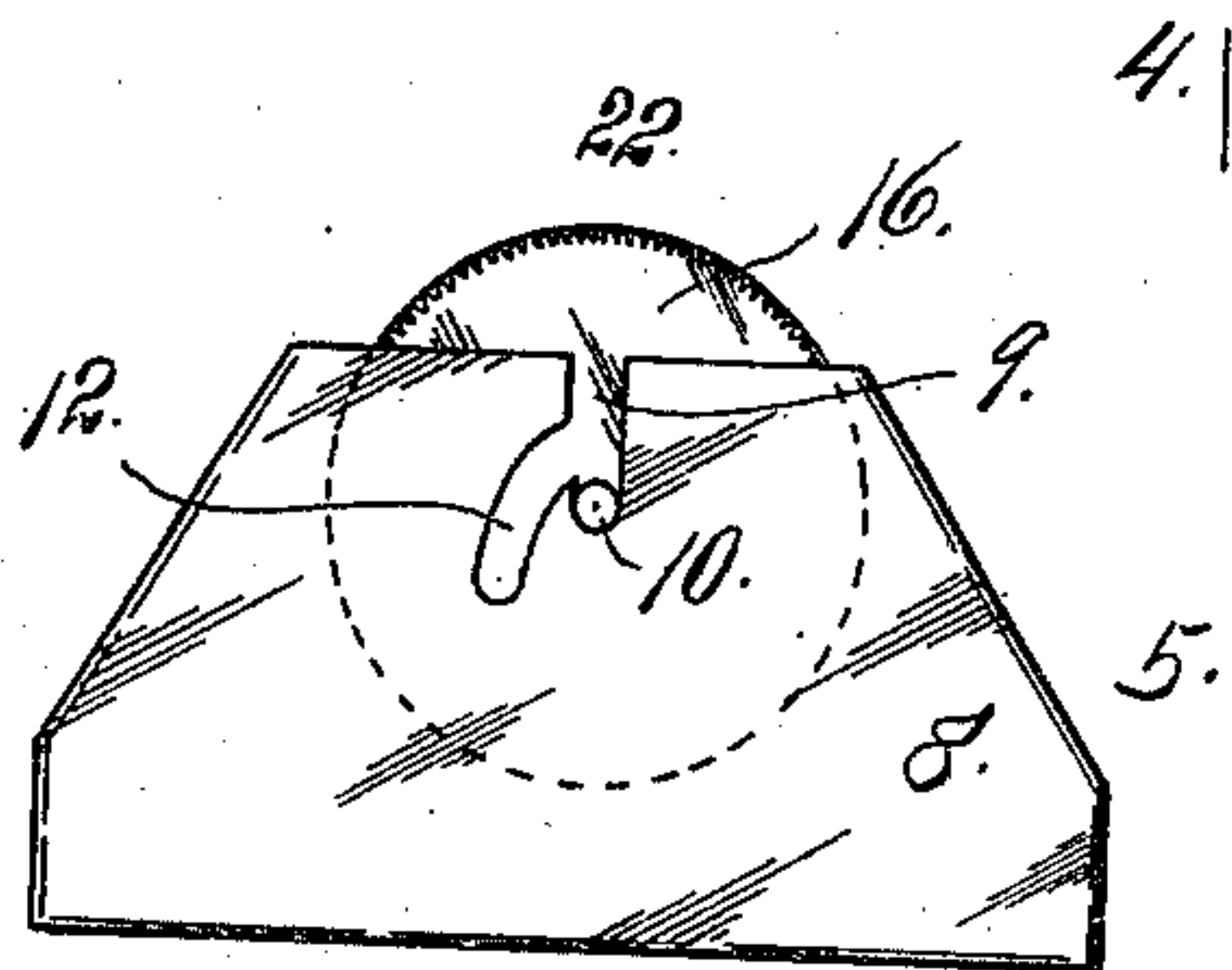
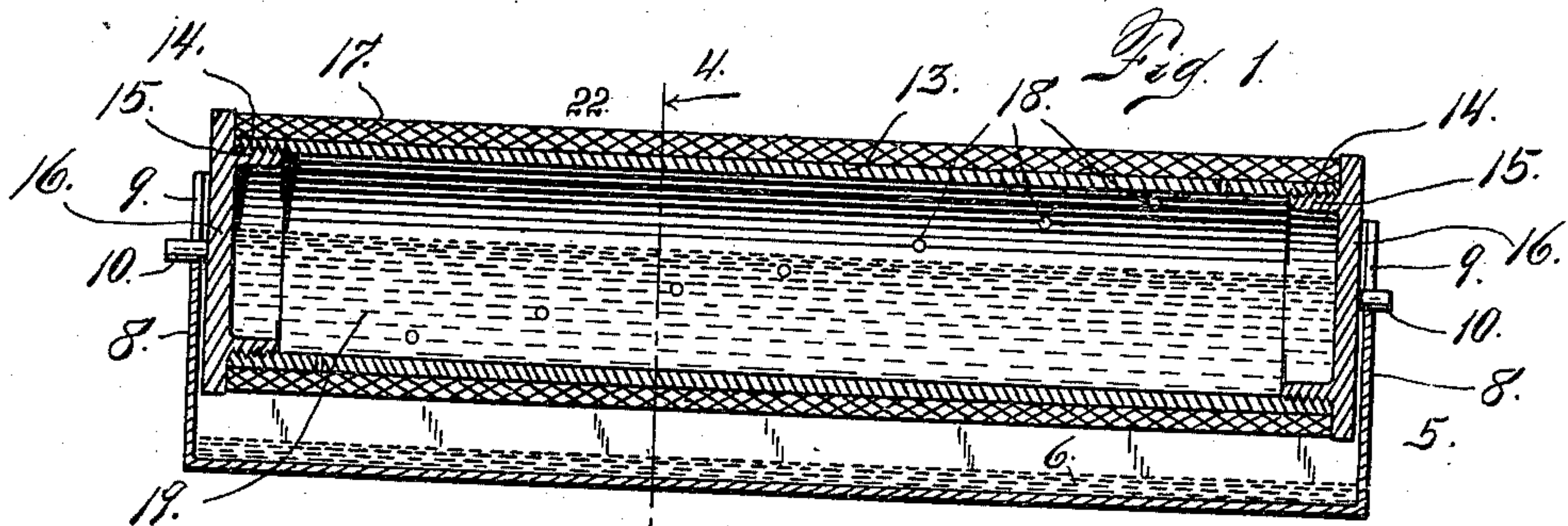
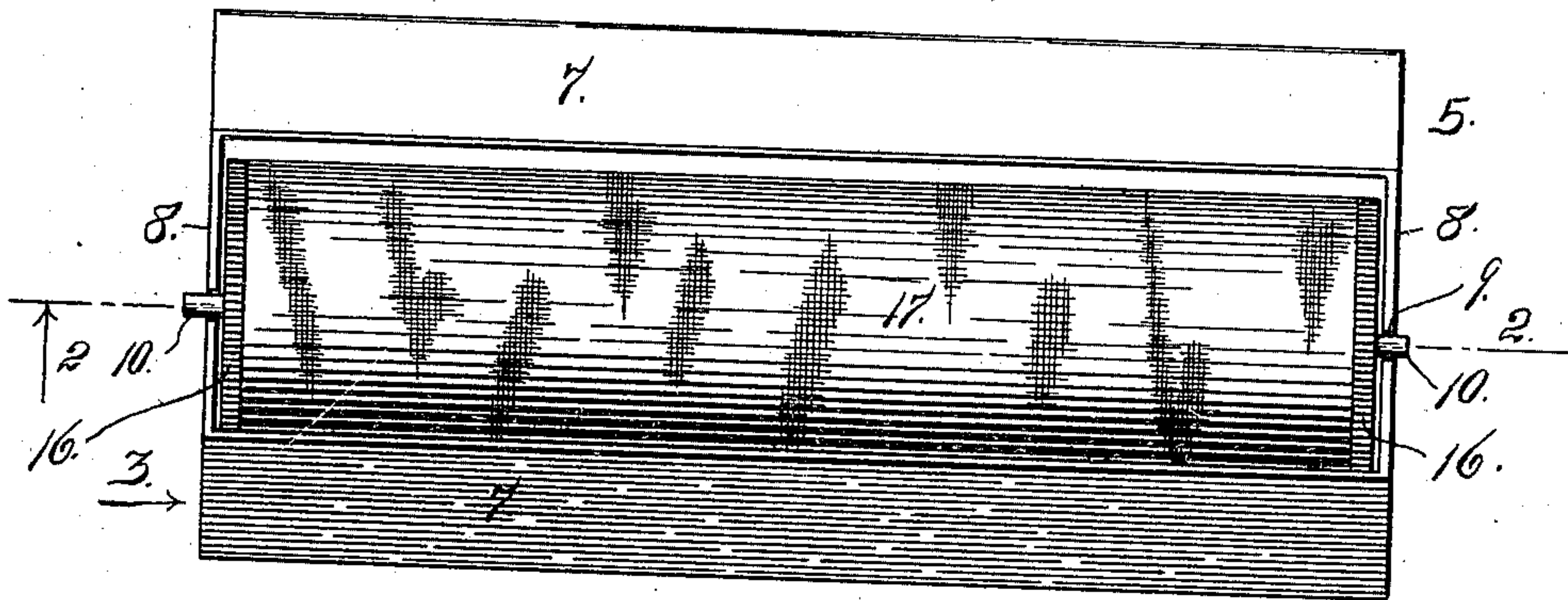


O. L. ZITTLE & A. KONRAD.
ENVELOP MOISTENER.
APPLICATION FILED JULY 10, 1909.

989,685.

Patented Apr. 18, 1911.



Witnesses
Otto E. Haddock
J. D. Thornburgh.

Fig. 5.

Inventors
O. L. Zittle
A. Konrad.
By A. J. O'Brien Attorney

UNITED STATES PATENT OFFICE.

ORION L. ZITTLE AND ALBERT KONRAD, OF DENVER, COLORADO.

ENVELOP-MOISTENER.

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Specification of Letters Patent.

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Application filed July 10, 1909. Serial No. 507,011.

To all whom it may concern:

Be it known that we, ORION L. ZITTLE and ALBERT KONRAD, citizens of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Envelop-Moisteners; and we do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in envelop moisteners or devices adapted for applying moisture to the gummed flap of the envelop prior to sealing.

Our object is to provide a device of this class which shall be well adapted to perform the moistening function, and which shall be ready for use at all times.

The construction generally expressed consists of a receptacle containing a rotatable cylinder, the latter being hollow and adapted to hold water, its wall having a number of perforations to allow the water to escape therefrom into an absorbent covering with which the outer surface of the cylinder is provided. The moistening cylinder is mounted to rotate in suitable bearings with which the ends of the receptacle are provided. When the cylinder is mounted in the upper bearings it is not supposed to dip into the water in the container or receptacle. If, however, the water becomes exhausted in the cylinder it may be dropped downwardly, whereby its journals engage the lower set of bearings, thus allowing the cylinder to dip into the water within the receptacle.

Having briefly outlined our improved construction, we will proceed to describe the same in detail, reference being made to the accompanying drawing, in which is illustrated an embodiment thereof.

In this drawing: Figure 1 is a top plan view of our improved moistener. Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1. Fig. 3 is an end elevation of the device. Fig. 4 is a cross section taken on the line 4—4 of Fig. 2. Fig. 5 is a view similar to Fig. 4 but showing the moistening cylinder in its lowered position.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a receptacle adapted to contain water, which is designated by the numeral 6. (See Figs. 2, 4 and 5.) As shown in the drawing, this receptacle is widest at the bottom and tapers toward the top on opposite sides, as shown at 7. In the opposite ends 8, of the receptacle are formed vertical slots 9, open at the top to receive the journals or trunnions 10, of the moistening cylinder 22, whereby the latter is adapted to rotate freely within the receptacle.

The upper part of the cylinder protrudes or projects above the top of the receptacle, in order to allow the envelop to be brought into operative engagement therewith for the purpose of moistening the gummed flap. As the envelop is applied to the cylinder and drawn over its exposed or protruding surface, the cylinder rotates on its journals, and by virtue of this fact, the upper exposed portion of the absorbent covering of the cylinder is kept constantly charged with moisture. In any event the water will travel to the upper part of the absorbent covering of the cylinder by capillary attraction so long as there is any water within the cylinder or within the receptacle. Assuming that the cylinder is lowered to dip into the said water, the upper exposed surface of the cylinder will be in condition for properly performing the moistening function. When the journals of the cylinder are in engagement with the bottoms of the bearing slots 9, it is assumed that the cylinder is raised sufficiently to maintain it above the level of the water in the receptacle, assuming that the latter contains water. The extremities of the receptacle 5 are also provided with branch slots 12, whose lower extremities extend downwardly considerably farther than the lower extremities of the vertical bearing slots 9, so that when the journals of the cylinder are in engagement with the lower extremities of the slots 12, the cylinder will occupy a lowered position within the receptacle and will be in position to dip into the water 6 therein, assuming that the water is of suitable depth for the purpose, (see Fig. 5.)

It will be readily understood that the moistening cylinder may be of any suitable

construction. As illustrated in the drawing, this cylinder is composed of a hollow body portion 13, preferably composed of sheet metal as aluminum which will not readily corrode or rust under ordinary conditions. The extremities of this hollow cylindrical body are interiorly threaded, as shown at 14, to receive circular flanges 15, projecting inwardly from the heads 16, of the cylinder, the latter forming closures for the ends of the water containing cylindrical body member. The heads 16, project considerably beyond the flanges 15, so that the outer edges of the heads are approximately flush with the outer surface of the moistening surface of the cylinder, when the latter is completed for use in our improved device. These heads 16, are equipped with the journals or trunnions 10, which engage the bearing slots formed in the ends of the receptacle 5, as heretofore explained.

Applied to the outer surface of the cylindrical body 13, is a layer of suitable absorbent material 17, which may be composed of any suitable substance as shrunk wool or felt, or both of these substances may be applied to advantage. In any event, the absorbent substance 17 of the cylinder, should be reasonably thick, whereby it is adapted to hold a considerable quantity of liquid, in order that it may properly perform the moistening function. This layer 17 of absorbent material should be manufactured in cylindrical form so that it may be slipped over either end of the cylindrical body before the heads of the latter are applied, and so that it will not be necessary to form a seam in the layer of absorbent material. After the heads 16 are applied, the absorbent covering 17, will be locked in place upon the cylinder. Furthermore, it will be understood that a tubular covering of this character will slip easily over the body of the cylinder when the covering is in a dry state. After, however, it has become wet, it will shrink to such an extent as to form a tight fit, whereby any tendency for it to move upon the cylindrical body is prevented or overcome. The body 13, of the cylinder, is provided with a number of perforations or openings 18, to allow water or other suitable liquid 19, with which the body of the cylinder is charged, to escape therefrom into the absorbent covering, whereby the latter is at all times in a suitable condition for performing the moistening function.

In order to place the device in condition for use, it is only necessary to remove the moistening cylinder from its bearings in the receptacle, unscrew one of its heads, and pour a quantity of water thereinto. The hollow cylindrical body may be filled with water, if desired, and in this event, one charging of the cylinder will be sufficient to

maintain its absorbent covering in a properly moistened condition for a considerable period, approximately a week. However, as an auxiliary expedient, the receptacle 5, may contain a quantity of water 6, as heretofore explained, and its depth may be such that when the cylinder is supported in the upper bearing slots, its lower surface will be raised above the level of the water within the receptacle 5. When, however, it is desired to allow the cylinder to dip into the water within the said receptacle, the latter may be adjusted to cause its trunnions 10, to rest in the bottoms of the branch slots, 12, thus allowing the absorbent covering of the cylinder to occupy a position sufficiently low within the receptacle to dip into the water contained therein, as heretofore explained. In this event the absorbent covering is brought directly into contact with the moistening liquid.

From the foregoing description, the use of our improved device will be readily understood. Assuming that the cylinder is charged with water and that the receptacle 5 also contains water, the cylinder will first be so mounted that its trunnions 10, engage the end slots 9, of the receptacle. In this event the water within the hollow body of the cylinder will pass out through the perforations 18, and saturate the absorbent covering 17, in order to moisten an envelop for sealing purposes, its gummed flap is drawn over the upper protruding surface of the absorbent covering 17, of the cylinder, preferably in such a manner, that the cylinder will rotate during the moistening operation, thus preventing the cylinder from removing any of the gum from the surface of the flap, as might be the case if the cylinder remained stationary. It will be understood that envelop flaps may be very readily moistened by the use of our improved device, particularly after the user has had a little experience therewith. Now in the event that the moistened covering should indicate signs of dryness, and it is desired to re-charge the cylinder immediately, the latter may be adjusted to allow its bearings to occupy the branch slots 12, whereby the lower portion of the absorbent covering of the cylinder, is allowed to dip into the water 6, of the receptacle. In this event the said covering directly moistened will become rapidly saturated with the moistening liquid by capillary attraction even before the cylinder has been rotated.

While the device has been heretofore described particularly with reference to its use as an envelop moistener, it is evident that it may be employed to equal advantage in moistening gummed surfaces of any kind, as postage stamps, gummed labels or any other articles whose gummed surfaces require moistening, in order to cause them to

readily adhere to the surface to which they are to be applied.

Having thus described our invention, what we claim is:

5 1. An envelop moistener comprising a receptacle provided with sides tapering inwardly from the vertical extension of the said sides to an opening in the top, the said receptacle having its extremities provided
10 with main slots and branch slots, the latter extending downwardly beyond the main slots, an absorbent cylinder journaled within the said receptacle and protruding through the opening in the top, the main
15 slots adapted to support the cylinder above the water level in the receptacle and the branch slots to support the cylinder within an immersed position, substantially as described.

2. An envelop moistener, comprising a receptacle having an opening in the top and provided with main slots and branch slots in its extremities, of an absorbent cylinder journaled within the receptacle and protruding through the opening in the top
20 thereof, the main slots being adapted to support the cylinder above the water level, and the branch slots to support the cylinder in a submerged position, substantially as described.
25 30

In testimony whereof we affix our signatures in presence of two witnesses.

ORION L. ZITTLE.
ALBERT KONRAD.

Witnesses:

JESSIE F. HOBART,
W. R. FERRY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
