

W. H. PARTON.  
 AUTOMATIC TANK VALVE.  
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913,554.

Patented Feb. 23, 1909.

Fig. 1.

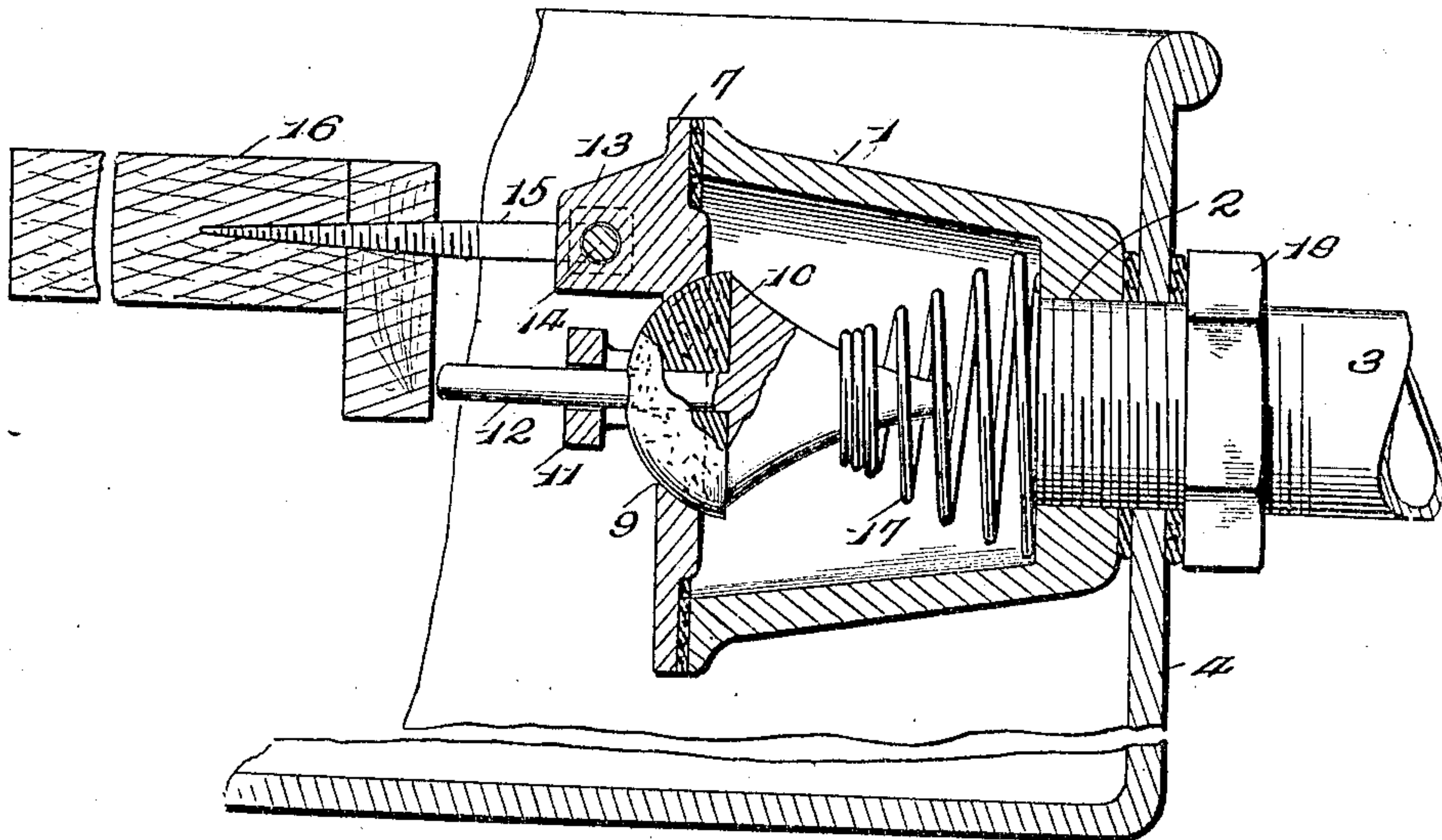


Fig. 2.

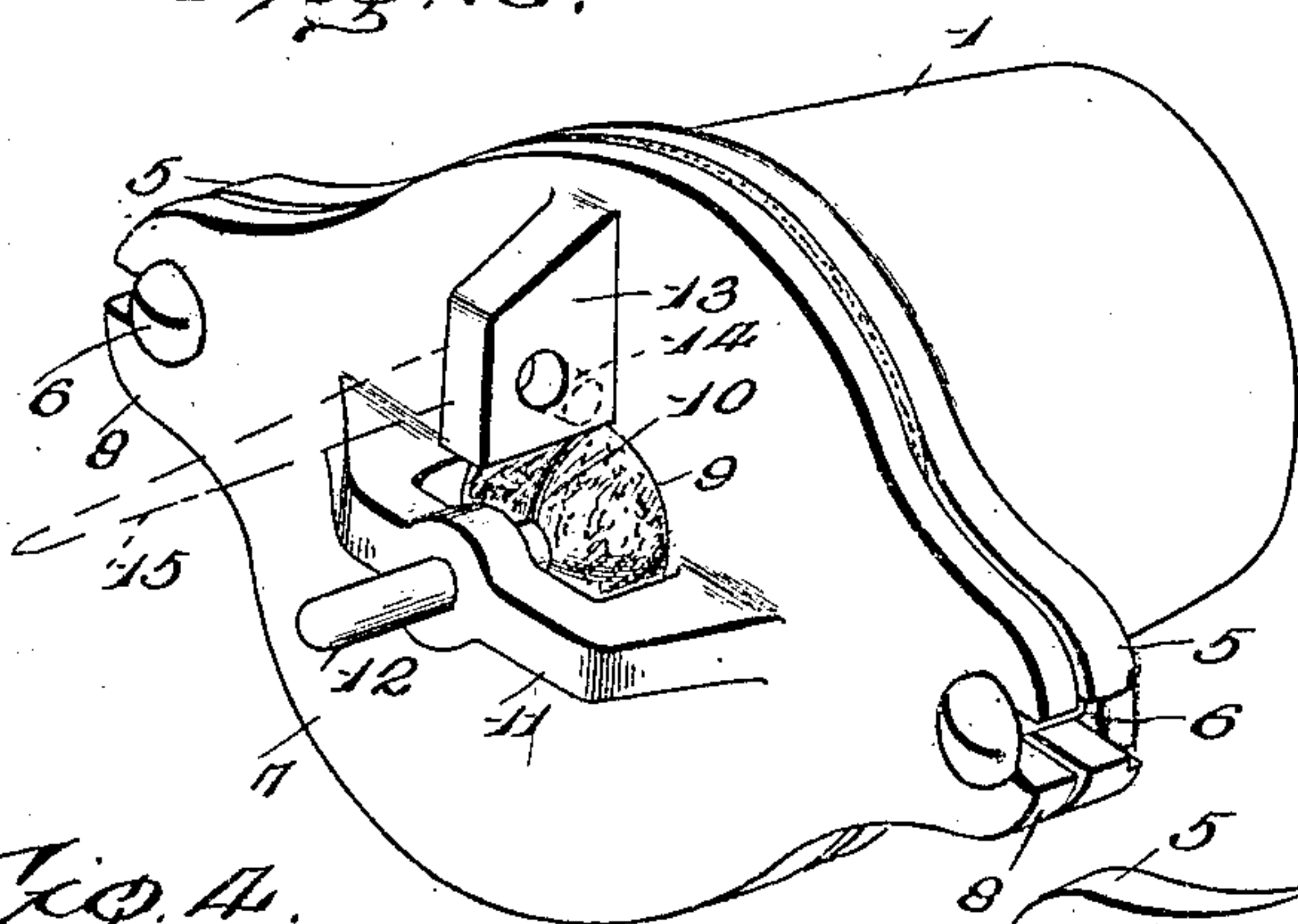


Fig. 3.

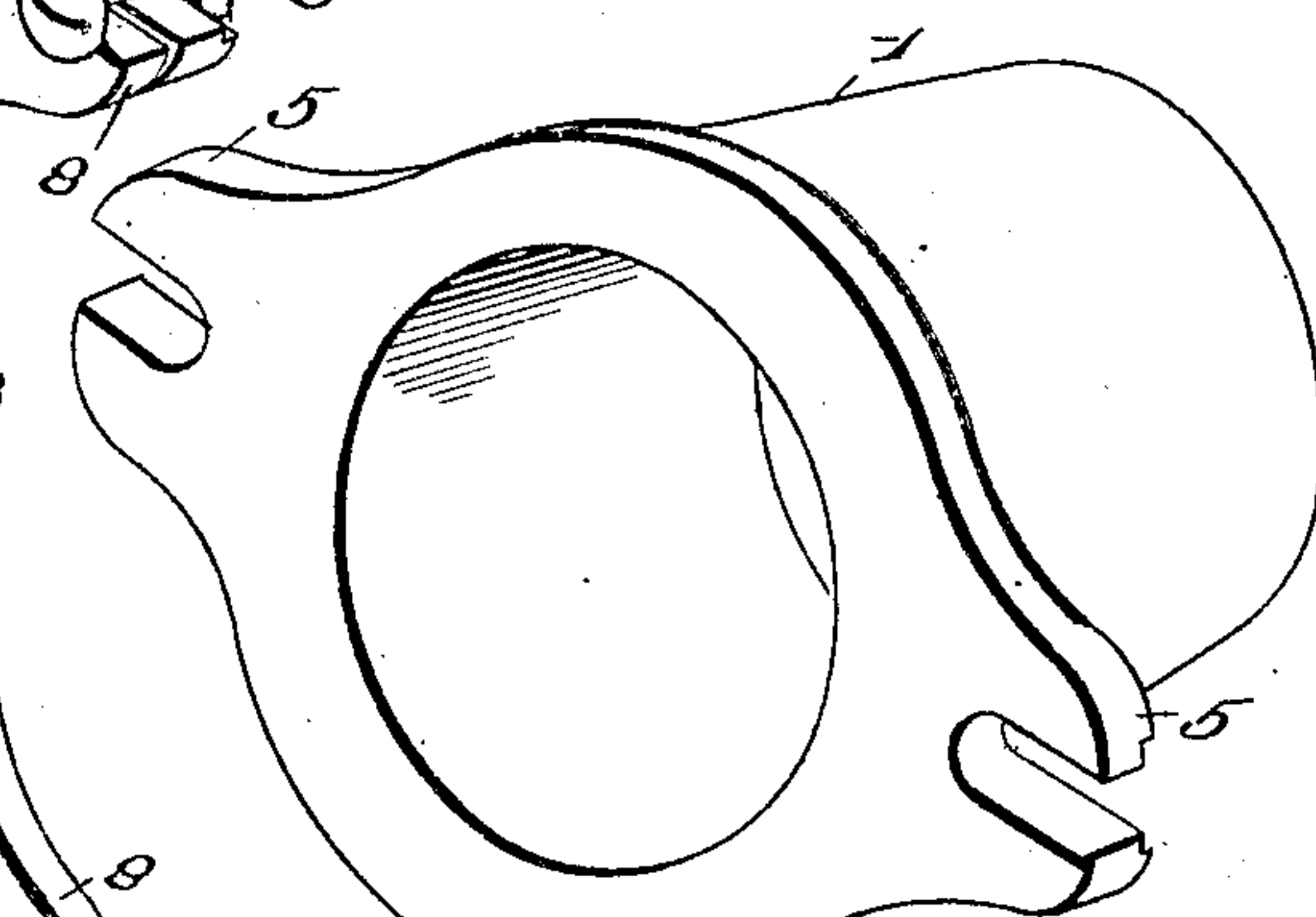
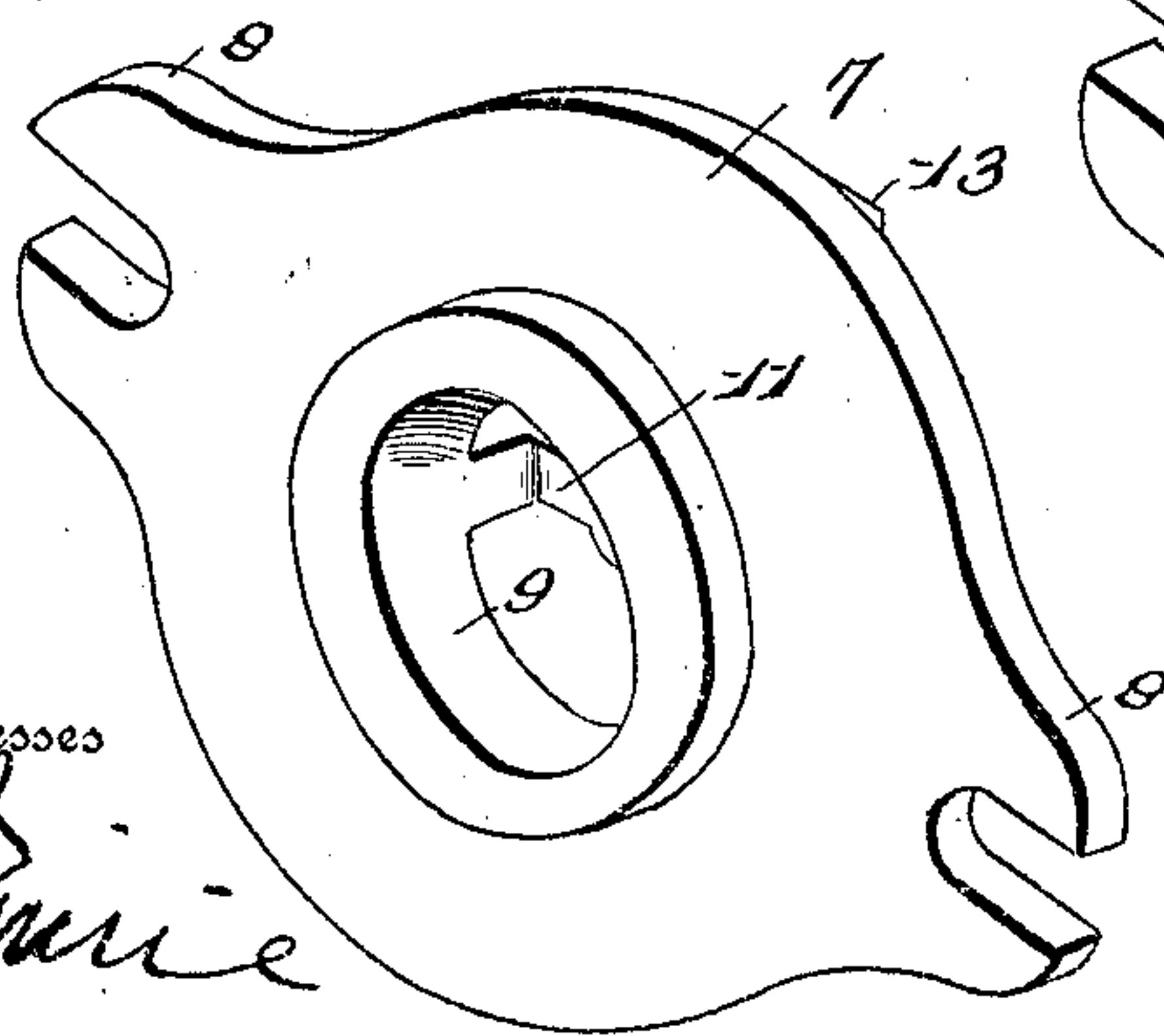


Fig. 4.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC TANK-VALVE.

No. 913,554.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed November 30, 1907. Serial No. 404,530.

*To all whom it may concern:*

Be it known that I, WILLIAM H. PARTON, citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Automatic Tank-Valves, of which the following is a specification.

This invention provides a novel form of valve of the type designed for regulating the supply of water to a trough or tank and which is automatic in action and operated by the change of level of the water.

The purpose of the invention is to devise a valve of the character aforesaid which will involve a simple and compact construction, embody a minimum number of parts, admit of instantly changing the valve to vary the level of the water and which finally is sensitive and responsive to changes in the level of the water so as to maintain the same at the predetermined point.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which:

Figure 1 is a sectional view of a portion of a stock watering trough or tank provided with a valve embodying the invention. Fig. 2 is a perspective view of the valve having the float disconnected. Fig. 3 is a detail perspective view of the valve casing. Fig. 4 is a detail perspective view of the cap plate.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The valve casing 1 is open at one end and closed at the opposite end, the latter having a threaded opening 2 to receive the pipe 3 by means of which water is supplied to the trough 4 or like part from any suitable source. Notched ears 5 project from opposite sides of the casing 1 at its open end and receive bolts or fastenings 6. A cap plate 7 closes the open end of the casing 1 and is

provided at opposite points with notched ears 8 to receive the bolts or fastenings 6 employed for securing the cap plate 7 to the said casing. The central portion of the cap plate is thickened and formed with an opening 9, which is inwardly flared to provide a seat upon which a valve 10 closes, said valve being of rounded form to insure a tight joint between it and the seat. A cross bar 11 spans the opening 9 and is arranged upon the outside of the cap plate and is widened at a central point and formed with an opening to receive the stem 12 of the valve so as to direct the latter in its movements and insure a firm seat thereof. A lug 13 is also formed upon the outer side of the cap plate to one side of the opening 9 and is transversely apertured to receive the bent end 14 of a screw hook 15, the latter being threaded into an end of a float 16. A conical spring 17 is interposed between the valve 10 and the inner closed end of the casing 1 and normally exerts a pressure to hold said valve seated.

When the valve is in position in a stock watering trough, tank or other receptacle, it is placed with its closed end against the inner wall of the said trough so as to receive the threaded end of the pipe 3, a set nut 18 mounted upon the threaded portion of the pipe 3 serving to clamp the intervening portion of the trough or like part between the valve casing and said set nut, thereby dispensing with other securing means. Suitable packing may be interposed between the valve casing and set nut and between the cap plate and said valve casing to insure a water tight joint. The float 16 may consist of a section of board or plank into the edge of which the threaded end of the screw hook 15 is inserted, the bent portion 14 of said screw hook entering the transverse opening of the lug 13 and forming the hinged or pivotal connection of the float with the valve. The hinged end of the float is adapted to engage with the outer end of the valve stem 12 so that when the water in the trough, tank or the like has receded so as to fall below a given level, the valve is automatically opened and water permitted to flow from the pipe 3 through the valve into the trough or like part until the given level has been reached, when the float will be buoyed so as to clear the valve stem and admit of the spring 17 seating the valve and



thereby shutting off further supply of the water and preventing overflow of the trough or like part. By adjustably connecting the screw hook 5 with the float 16, the relative distance between the hinged or pivotal end of said float and the outer end of the valve stem 12 is varied when the float is in a horizontal position, thereby making provision for adjustment of the float to vary the level of the water in the trough, tank or the like.

From the foregoing it will be readily understood that the part 16, while designated as a float, performs another function in closing the valve, the same being seated by means of the springs 17 when relieved of the weight of the float when the latter is buoyed upward by the water. The float may properly be designated as a weight board, since its function is solely to open or unseat the valve when the water in the tank or trough falls below the predetermined level.

Having thus described the invention, what is claimed as new is:

In a valve of the character set forth, the combination of a valve casing having oppo-

sitely disposed notched ears, a cap plate therefor, having corresponding notched ears and an opening, a valve seat at the inner end of said opening, a cross bar spanning the opening and formed with a central opening, and a transversely apertured lug at one side of the opening, fastenings removably fitted in the notched lugs by a lateral movement and securing the cap plate to the casing, a spring actuated valve located within the casing and adapted to close outwardly against the said seat and having a stem operating through said cross bar, a screw hook having its bent end fitted in the aperture of said lug, and a float adjustably connected with the threaded stem of said screw hook and adapted to press upon the valve stem.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. PARTON. [L. s.]

Witnesses:

SAM S. WHITING,  
BARR PARKER.