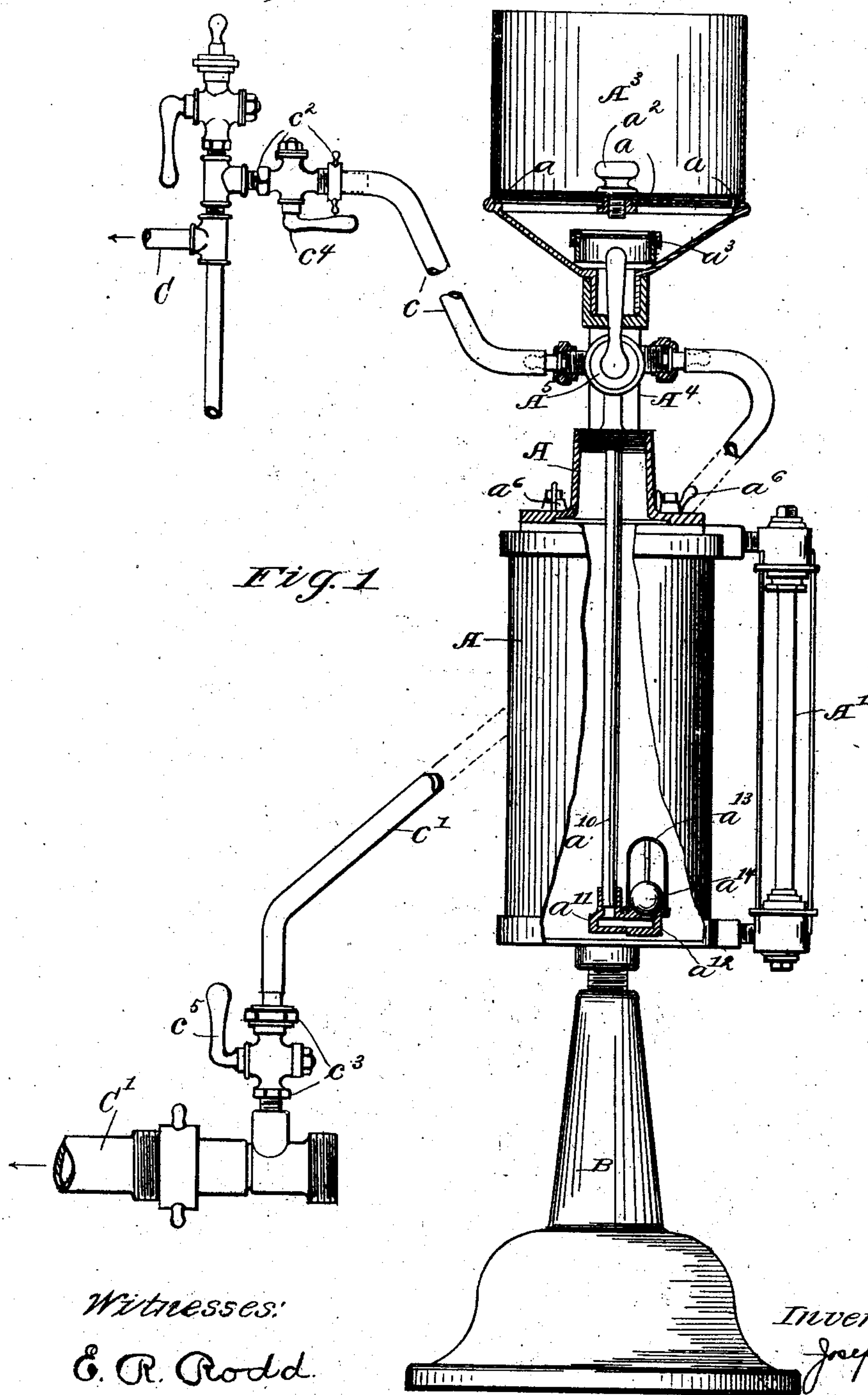


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BEER RECLAIMER.  
APPLICATION FILED MAR. 25, 1908.

973,757.

Patented Oct. 25, 1910.

2 SHEETS—SHEET 1.



Witnesses:  
E. R. Rodd.  
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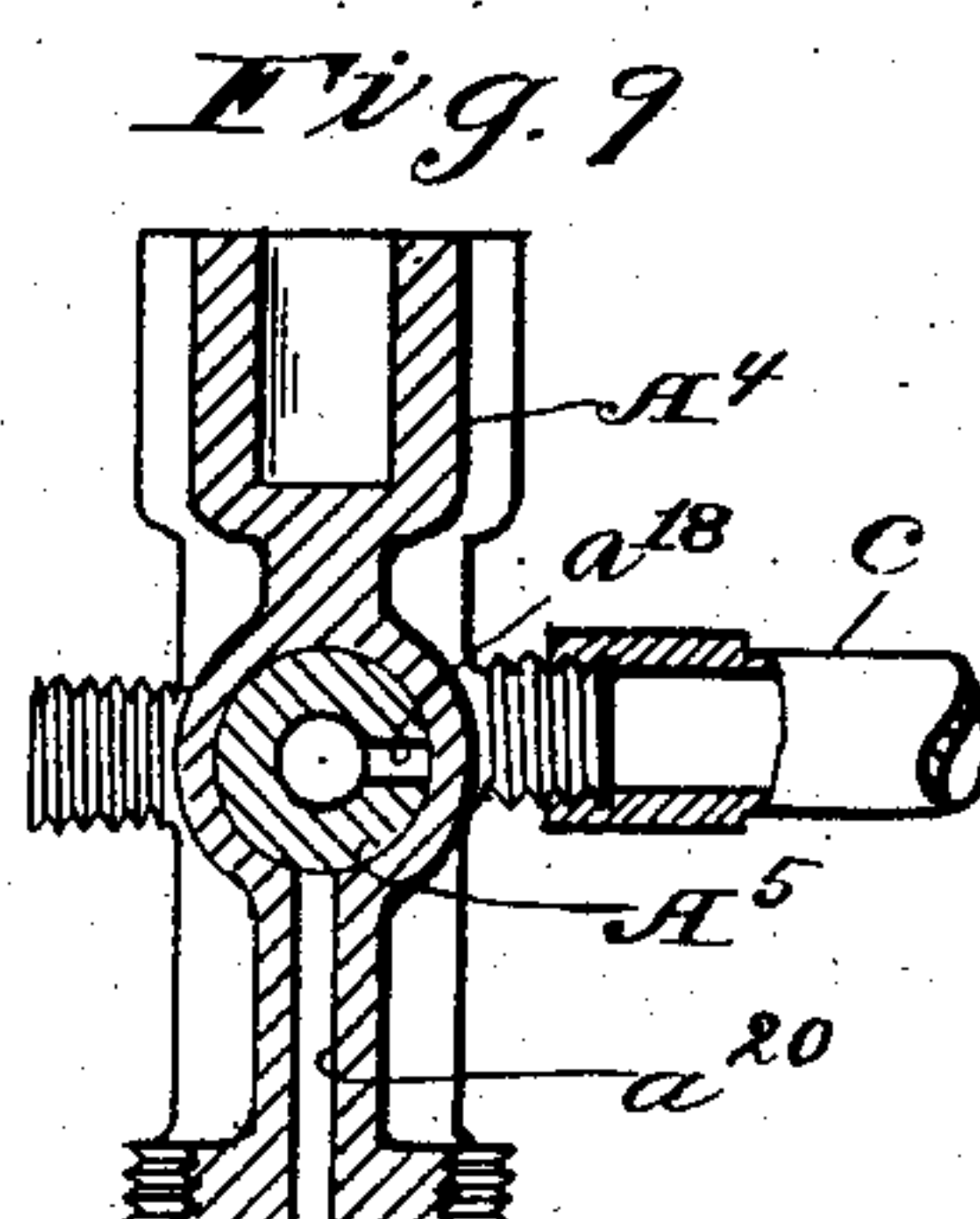
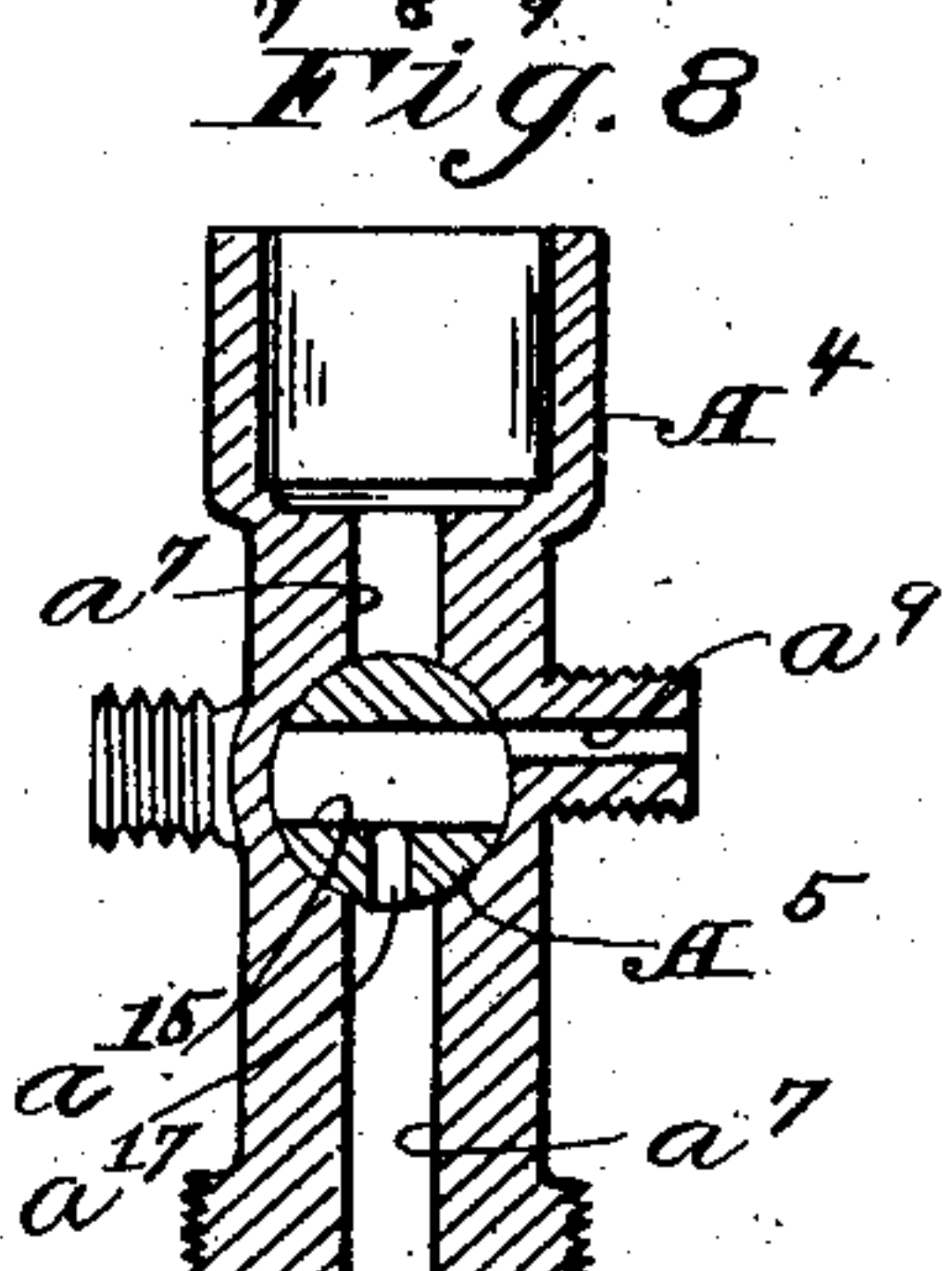
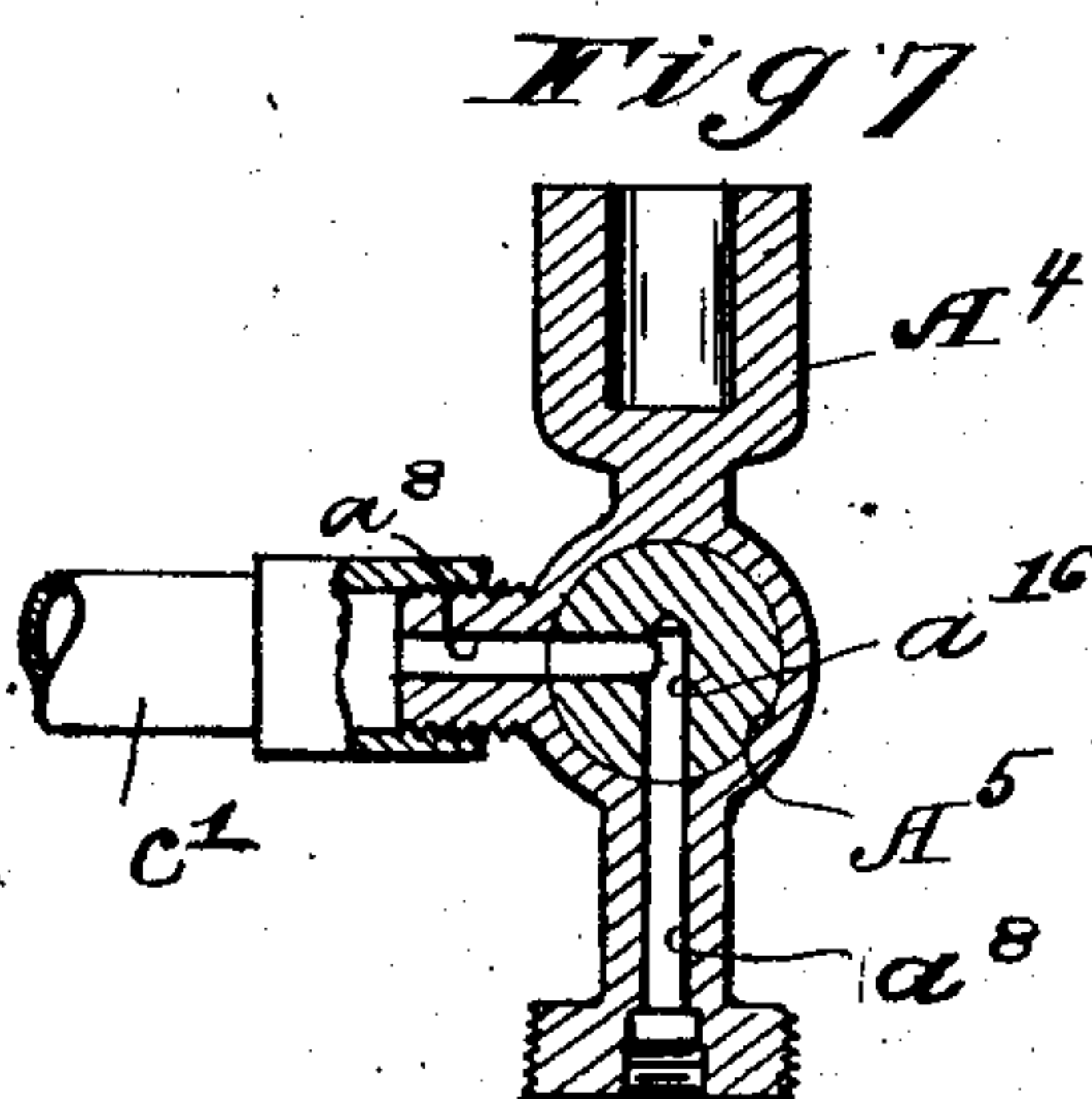
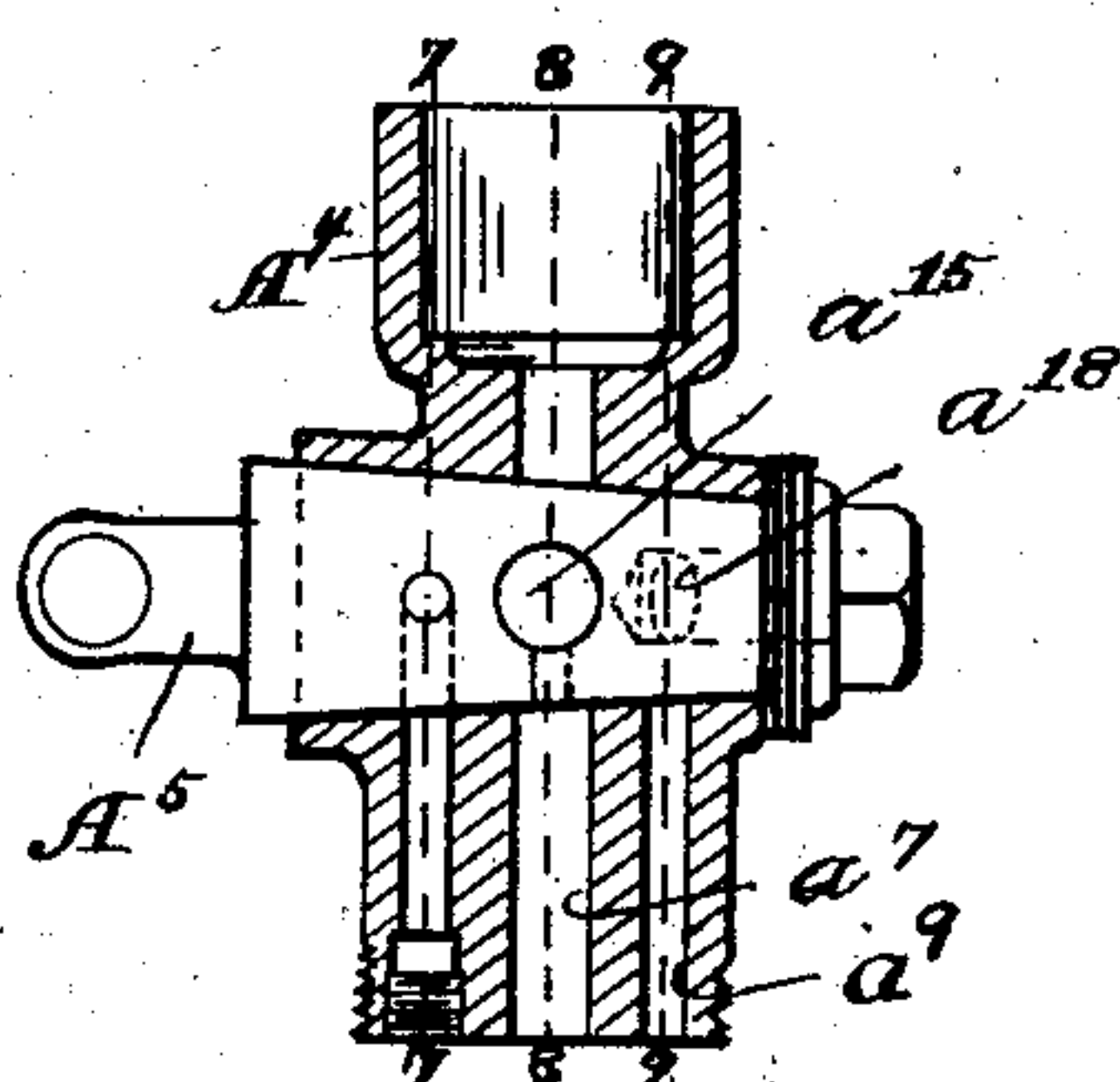
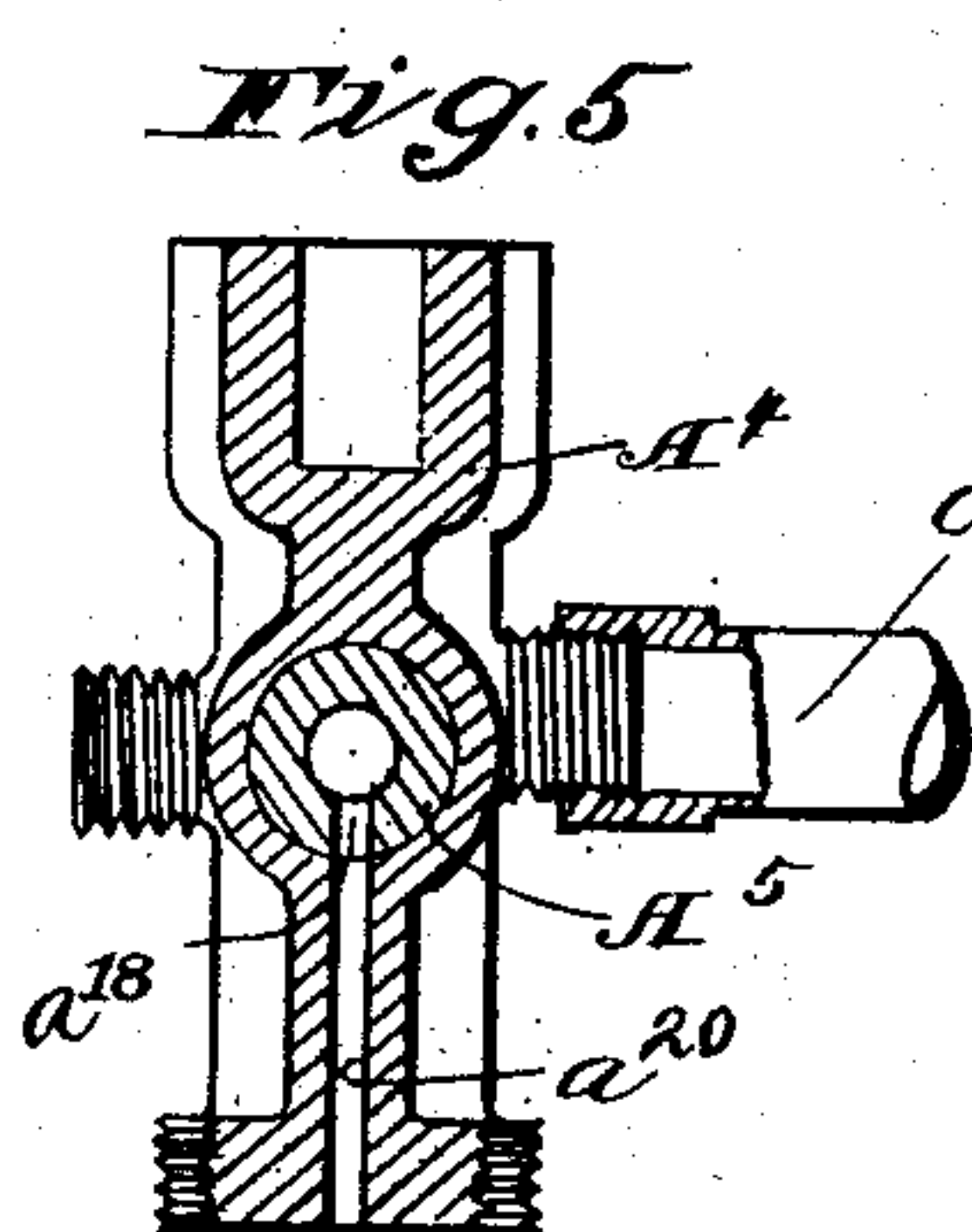
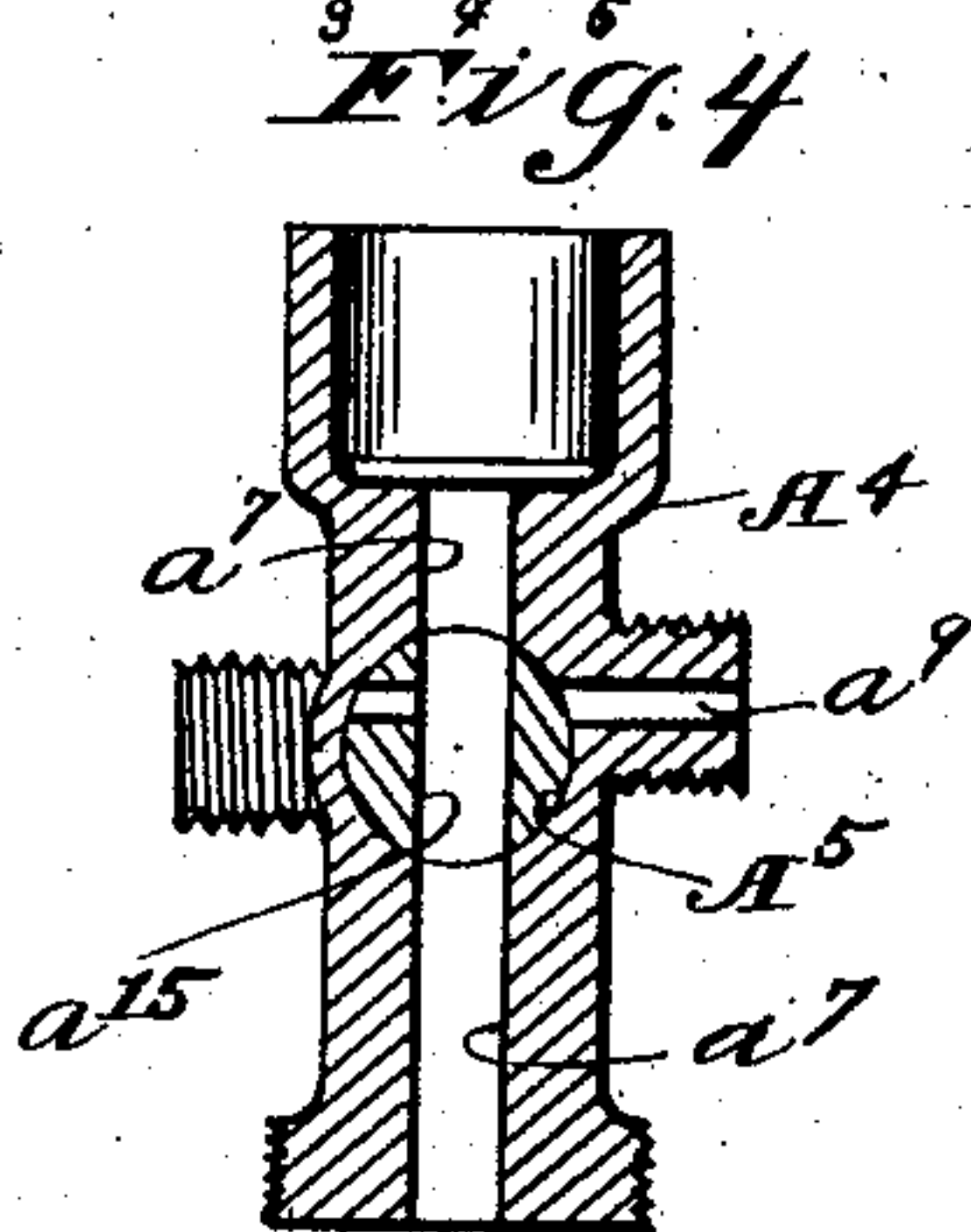
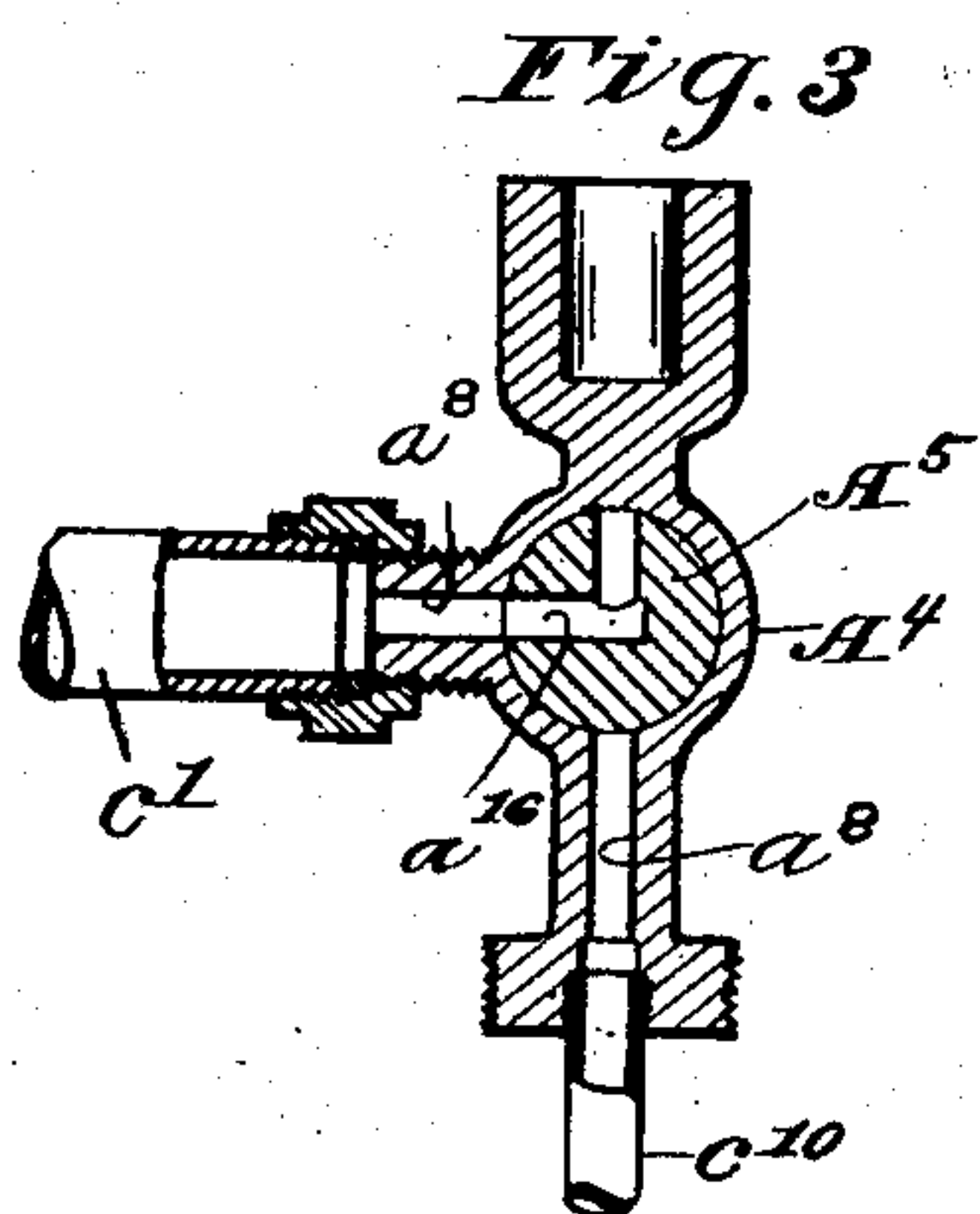
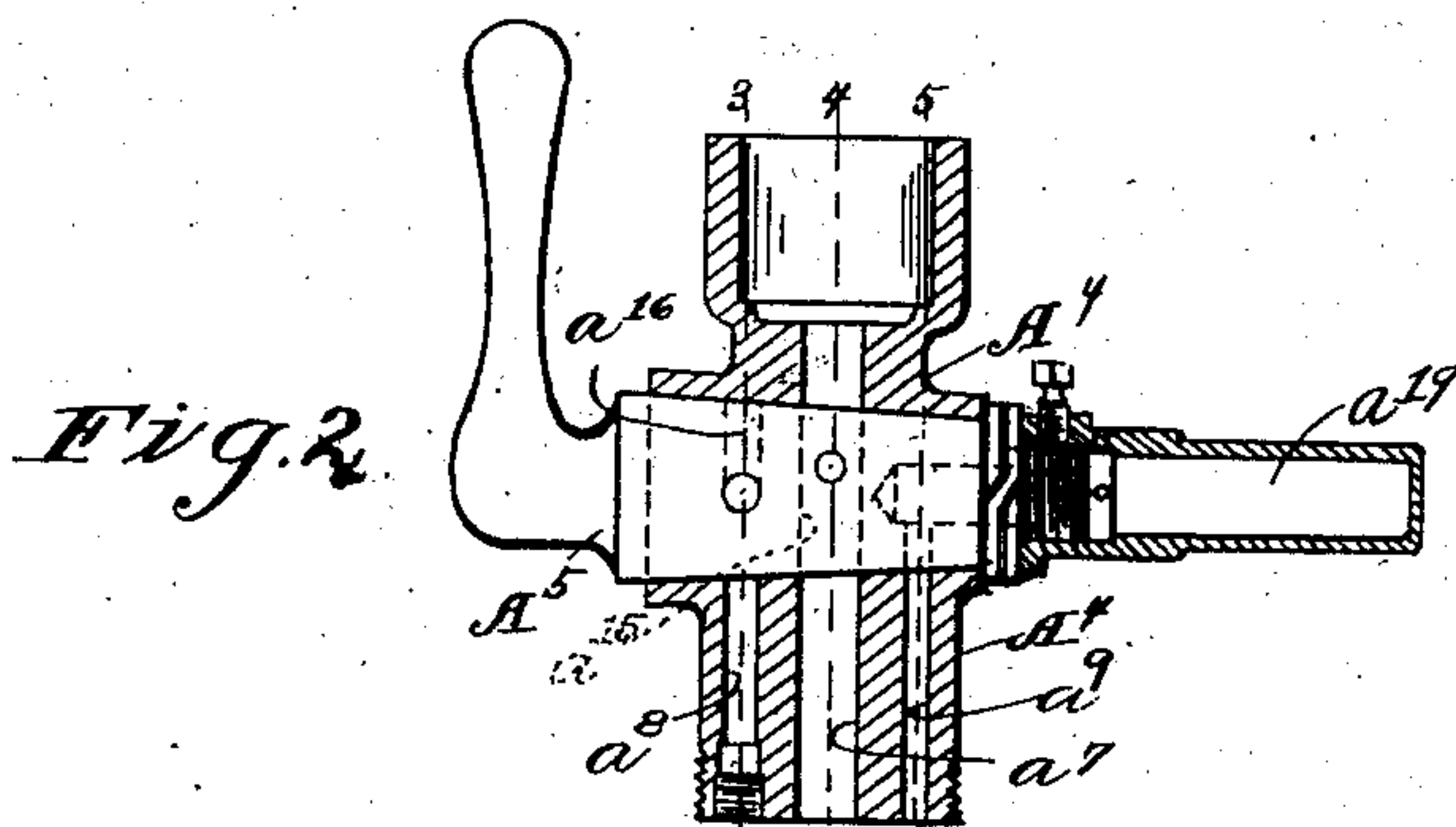
Inventor  
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2 SHEETS—SHEET 2.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOSEPH H. CHAMP, OF CLEVELAND, OHIO.

BEER-RECLAIMER.

973,757.

Specification of Letters Patent.

Patented Oct. 25, 1910.

Application filed March 25, 1908. Serial No. 423,110.

*To all whom it may concern:*

Be it known that I, JOSEPH H. CHAMP, citizen of the United States, resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Beer-Reclaimers, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The present invention relates to liquid packaging apparatus and is particularly designed for use in connection with machines for bottling beer or other "live," or carbonated, liquids.

The object of the present apparatus is to provide means for re-claiming the contents of bottles that become broken, or that, by reason of overflowing or improper filling, cannot properly be corked or otherwise closed for use.

To the accomplishment of this and related ends said invention then consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings: Figure 1 is a side elevation, with parts broken away and shown in section, of a reclaiming apparatus embodying my several improvements; Fig. 2 is a longitudinal sectional view of a three-way cock in open position forming a feature of such apparatus; Figs. 3, 4, and 5 are transverse sectional views of such cock in like open position taken on lines 3—3, 4—4 and 5—5, respectively, of Fig. 2; Fig. 6 is a transverse view corresponding to Fig. 2, but showing the cock in closed position, but differing from Fig. 2 in the optional omission of a cap; and Figs. 7, 8 and 9 are transverse views of the same in like closed position, taken on the lines 7—7, 8—8 and 9—9, Fig. 6.

Inasmuch as it is immaterial what particular type of bottling machine be employed the only parts of such machine illustrated herewith are the top air inlet C and liquid inlet C' thereto. These are both connected with the filling tank of the machine and respectively with a supply of compressed air and

of the liquid being packaged, in the usual manner; hence further description thereof is deemed unnecessary.

The reclaiming apparatus proper, which, for obvious reasons of utility and convenience, will require to be stationed closely adjacent to the filling machine, comprises essentially a receptacle A suitably supported upon a pedestal or base B. Such receptacle A is made of various capacities depending upon the size of filling machine in conjunction with which it is designed that it should be employed. In form it is conveniently of the upright cylindrical shape shown, and, that the level of its liquid contents may be more readily observed, a sight glass A' of usual construction is desirably adjoined thereto. Receptacle A is provided with a cover A<sup>2</sup> that in turn supports a funnel A<sup>3</sup>, removably seated in a cap or head A<sup>4</sup> that surmounts cover A<sup>2</sup>. Cover A<sup>2</sup> is preferably secured to receptacle A by means of winged nuts a<sup>6</sup>, permitting it to be detached if found necessary to gain access to the interior of the receptacle. In conjunction with this cover and head are provided the several operative parts of the apparatus presently to be more particularly described. The construction, however, of the funnel may be first noted. This, as stated, is removably seated in the head A<sup>4</sup> and is preferably of a general cylindrical form terminating in a conical bottom as shown. Resting on a ledge a formed at the junction of such conical bottom with the cylindrical body is loosely mounted a strainer a' adapted to intercept broken glass and other foreign substances that might interfere with the work of the operative parts of the device, or the carrying of which over to the filling machine would occasion trouble there; a knob a<sup>2</sup> centrally attached to such strainer facilitates removal of the same. A second strainer a<sup>3</sup> supported below such strainer a' adds still further security against the passage through the funnel of substances of the kind noted.

Connected with head A<sup>4</sup> are ducts c c' respectively leading to the air and liquid inlets C C' of the bottling machine, the usual fixtures c<sup>2</sup> c<sup>3</sup> being provided in connection with such inlets for attachment of the ducts thereto, and valves, or cocks c<sup>4</sup> c<sup>5</sup>, being interposed whereby connection may be cut off if desired.

Connection between receptacle A and



funnel A<sup>3</sup>, forming the source from which liquid is supplied to the receptacle, as also connection between such receptacle and the two ducts *c c'* leading to the air and liquid inlets of the bottling machine, are all controlled by a valve plug or three-way cock A<sup>5</sup>, the particular construction of which is fully exhibited in Figs. 2 to 9, inclusive. In the normal open position of this valve or cock as illustrated in Figs. 2 to 5 inclusive, it will be seen that a central passage or opening *a<sup>7</sup>* in the head is freely connected with funnel A<sup>3</sup> by means of an opening *a<sup>15</sup>* in the valve plug, so that any liquid poured into such funnel will readily find its way into the interior of the receptacle. The upper portion of this opening *a<sup>7</sup>* is purposely enlarged to receive and suitably support the funnel, see Fig. 1. At the same time that passage *a<sup>7</sup>* is thus opened a vent passage *a<sup>18</sup>* is turned so as to communicate with a passage *a<sup>20</sup>* in the head. This passage *a<sup>18</sup>* opens at the end of the valve plug directly into the external atmosphere and may be provided, if desired, with means as a perforated cap *a<sup>19</sup>*, Fig. 2, for regulating the rate of escape of air therethrough, as such air is forced out of the receptacle by the entrance of liquid through the funnel and opening *a<sup>7</sup>* in the head, and for muffling the noise when the air pressure is relieved. Fig. 6 illustrates the valve without such cap, it being optional which arrangement be employed. Two other sets of openings *a<sup>8</sup>* *a<sup>9</sup>* in the head, communicating respectively with the two ducts *c' c*, are on the contrary closed in the position of the cock to which reference has just been made. Of such openings *a<sup>8</sup>* *a<sup>9</sup>* it should be noted that a tube *a<sup>10</sup>* is fitted into the one *a<sup>8</sup>* that is connected with the duct *c'* leading to the liquid inlet of the bottling machine, such tube depending downwardly to near the bottom of the receptacle A. The lower end of this tube is provided with a casing *a<sup>11</sup>*, Fig. 1, the opening *a<sup>12</sup>* of which is directed upwardly and is formed to provide a valve seat for a ball valve *a<sup>14</sup>*. Complete dislodgment of such valve is prevented by means of a cage *a<sup>13</sup>*, which by constraining movement of the valve to a vertical line always insures its proper reseating. This ball valve *a<sup>14</sup>* is made of a specific gravity such that the liquid with which the machine is being used will suffice to lift it off the seat of the casing until the level of such liquid sinks below the level in the casing.

In the closed position of the three-way cock A<sup>5</sup>, the condition as to the several openings therein is reversed from that just described above, as is indicated in Figs. 6 to 9, inclusive. In other words, the central opening *a<sup>7</sup>* leading from the funnel is now closed by reason of rotation of the valve plug, as is also vent passage *a<sup>18</sup>*; at the same time the openings *a<sup>8</sup>* *a<sup>9</sup>* in the head that con-

nect respectively with the air and liquid inlets of the filling machine are opened, the former by the alinement therewith of passage *a<sup>16</sup>* in the valve plug, the latter by alinement therewith of passage *a<sup>15</sup>* in such plug, a branch *a<sup>17</sup>* of the last-named passage simultaneously communicating with the lower section of passage *a<sup>7</sup>*. The air pressure thus admitted into the upper portion of the receptacle A will obviously be effective to force any liquid contained in such receptacle out through the tube *a<sup>10</sup>* and duct *c'* and thence into the liquid inlet C' of the bottling machine until the level of the liquid in the receptacle sinks, as before indicated, to a point where ball valve *a<sup>14</sup>* automatically closes off the discharge.

The operation of the apparatus should be readily apparent from the foregoing description of its structure, since in such structural description certain details of the operation have of necessity been introduced. By way, then, of brief summary it will be seen that with the three-way cock in its open position the waste from the filling machine arising from broken bottles, and like sources, is poured from time to time in the funnel A<sup>3</sup> until the liquid accumulating in the receptacle A is seen from sight glass A' to nearly fill such receptacle. In order to empty the receptacle, three-way cock A<sup>5</sup> is thereupon given a quarter turn to its closed position with the effect already noted.

By the foregoing apparatus very simple and convenient provision is made for the salvage of much liquid that would otherwise go to waste in connection with bottling machines in practical operation; this is true in the automatically operating type of bottling machine in which there is apt to be, especially when in charge of unskilled or careless operators, a larger percentage of breakage and improper filling of the bottles, than where the machine is under direct manual control.

The operation of the reclaiming apparatus is very simple, as has been explained, and involves no further attention than the occasional turning of the controlling valve or three-way cock, since even in the emptying of the receptacle provision is made against derangement of the filling apparatus by admission of air into the liquid inlet.

It will be evident that other uses, than that above described in order to illustrate the manner of operation of my reclaiming apparatus, might be suggested. Concerning these other uses it will, however, suffice to say that the terms "top air inlet" and "liquid inlet," herein referred to as parts of a bottling machine, are to be understood as connoting equivalent parts of any machine or apparatus in connection with which my reclaiming apparatus may find employment. Particularly it should be noted that com-



pressed air for the operation of the reclaiming apparatus may be derived from any source of pressure supply.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. The combination with the top air inlet and liquid inlet of a bottling machine; of reclaiming apparatus comprising a receptacle having an exteriorly opening liquid inlet and an air vent, and a fluid pressure inlet and liquid outlet respectively connected with the top air inlet and the liquid inlet of said machine; and means adapted to simultaneously control the inlets, outlet, and vent of said reclaiming apparatus.

2. The combination with the top air inlet and liquid inlet of a bottling machine; of reclaiming apparatus comprising a receptacle having an exteriorly opening liquid inlet and an air vent, and a fluid pressure inlet and liquid outlet respectively connected with the top air inlet and the liquid inlet of said machine; and a cock controlling the inlets, outlet, and vent, respectively, of said reclaiming apparatus, said cock being adapted to simultaneously open the liquid inlet and vent and close the fluid pressure inlet and liquid outlet of said apparatus, and vice versa.

3. The combination with the top air inlet and liquid inlet of a bottling machine; of reclaiming apparatus comprising a receptacle; a head surmounting said receptacle and having an exteriorly opening liquid inlet, and a fluid pressure inlet and liquid outlet respectively connected with the top air inlet and the liquid inlet of said machine; a funnel, provided with a strainer, removably fitted to the exterior opening of the liquid inlet of said head; and a cock controlling the inlets and the outlet, respectively, of said head, said cock being adapted to simultaneously open the liquid inlet and

close the fluid pressure inlet and liquid outlet of said apparatus, and vice versa.

4. The combination with the top air inlet and liquid inlet of a bottling machine; of reclaiming apparatus comprising a receptacle; a head surmounting said receptacle and having an exteriorly opening liquid inlet, a fluid pressure inlet and aligned outlet passage, such fluid pressure inlet and liquid outlet being respectively connected with the top air inlet and the liquid inlet of said machine; a tube connected with such outlet passage and depending to near the bottom of said receptacle; a funnel, provided with a strainer, removably fitted to the exterior opening of the liquid inlet of said head; manually operable means adapted to control the inlets and the outlet to said head, respectively; and other means adapted automatically to control said outlet.

5. The combination with the top air inlet and liquid inlet of a bottling machine; of reclaiming apparatus comprising a receptacle; a head surmounting said receptacle and having an exteriorly opening liquid inlet, a fluid pressure inlet and a liquid outlet passage, such fluid pressure inlet and liquid outlet being respectively connected with the top air inlet and the liquid inlet of said machine; a tube connected with such outlet passage and depending to near the bottom of said receptacle; a funnel, provided with a strainer, removably fitted to the exterior opening of the liquid inlet of said head; a cock controlling the inlets and the outlet, respectively, of said reclaiming apparatus, said cock being adapted to simultaneously open the liquid inlet and close the fluid pressure inlet and liquid outlet of said head, and vice versa, a cage inclosing the lower end of said depending tube; and a ball valve within said cage adapted to close such opening, the liquid in said receptacle serving to normally raise said valve from its seat.

Signed by me this 21st day of March, 1908.

JOSEPH H. CHAMP.

Attested by—

E. R. RODD,

JNO. F. OBERLIN.