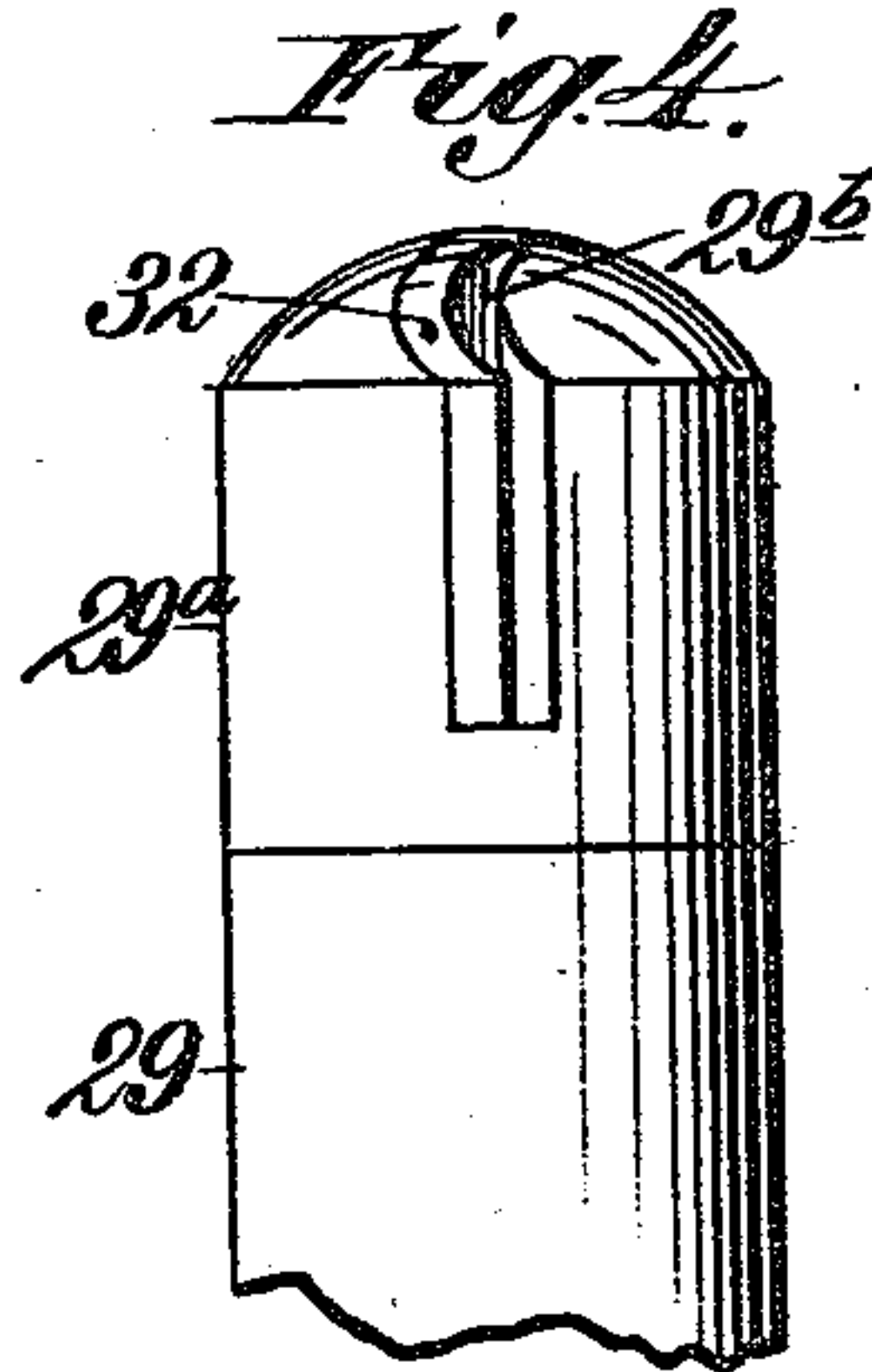
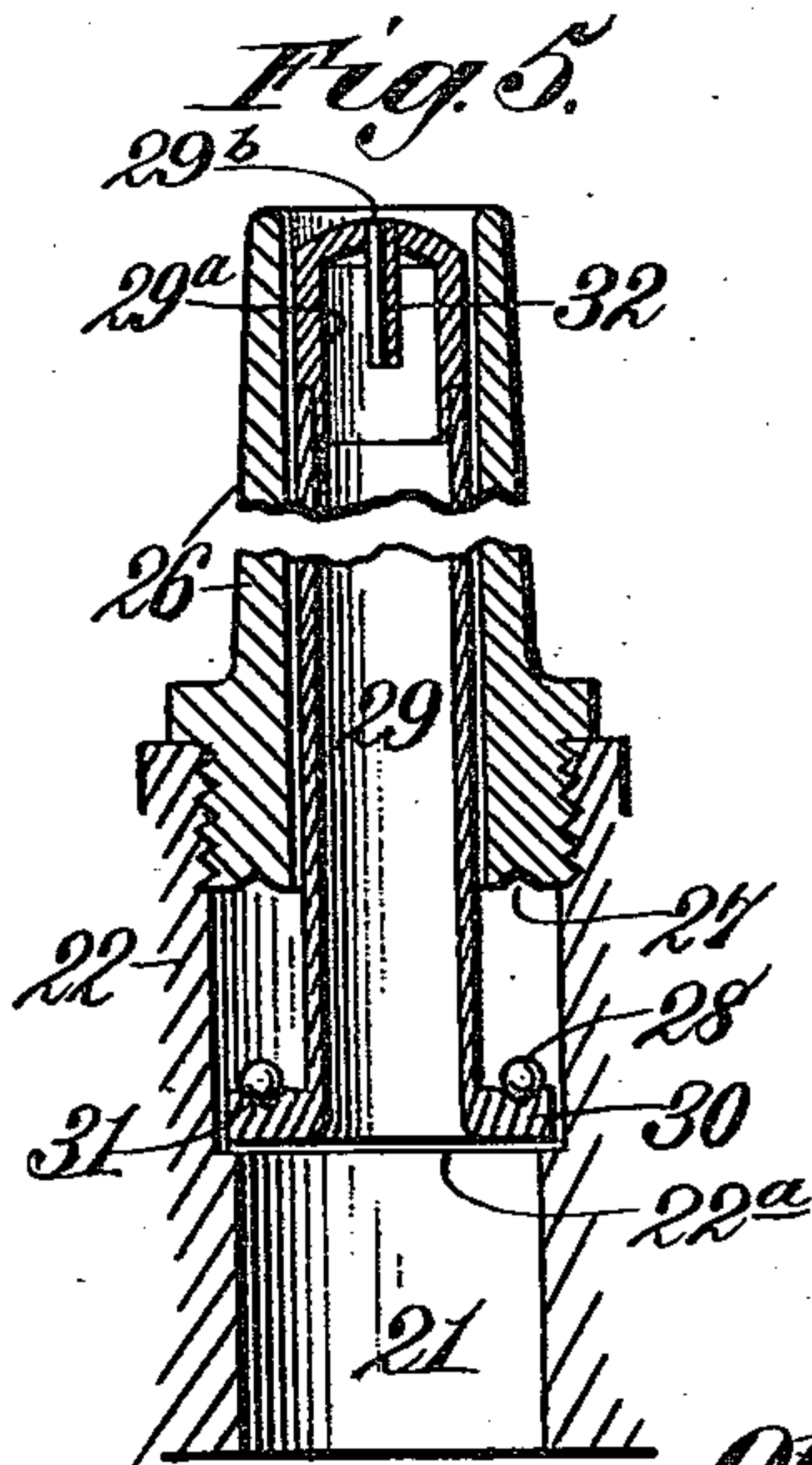
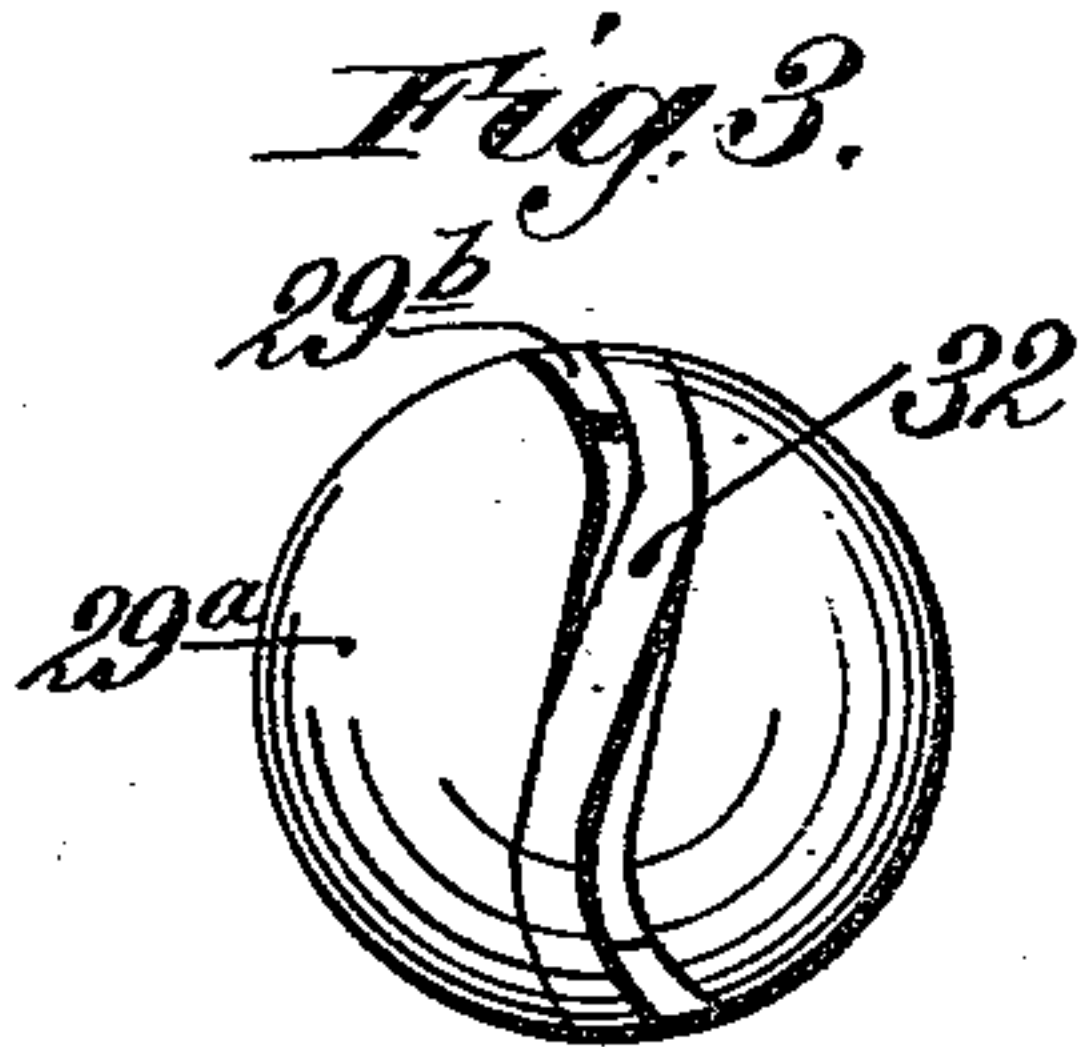
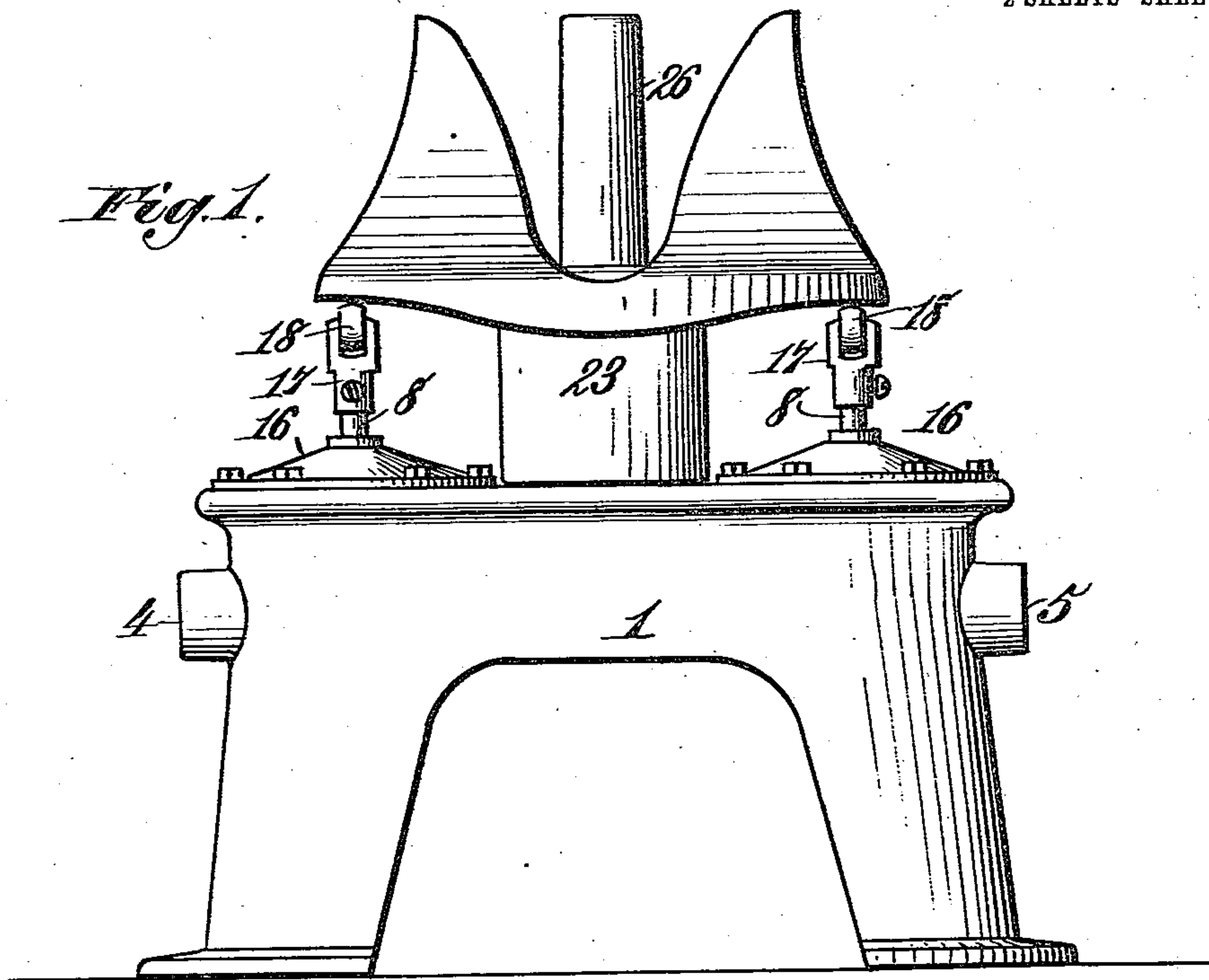


No. 864,560.

PATENTED AUG. 27, 1907.

O. L. R. RITTER.  
KEG SPRINKLING MACHINE.  
APPLICATION FILED APR. 21, 1906.

2 SHEETS—SHEET 1.



Witnesses:  
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*E. V. Weaver.*

Inventor:  
*Otto L. R. Ritter.*  
By *James L. Norrie*  
Att'y.

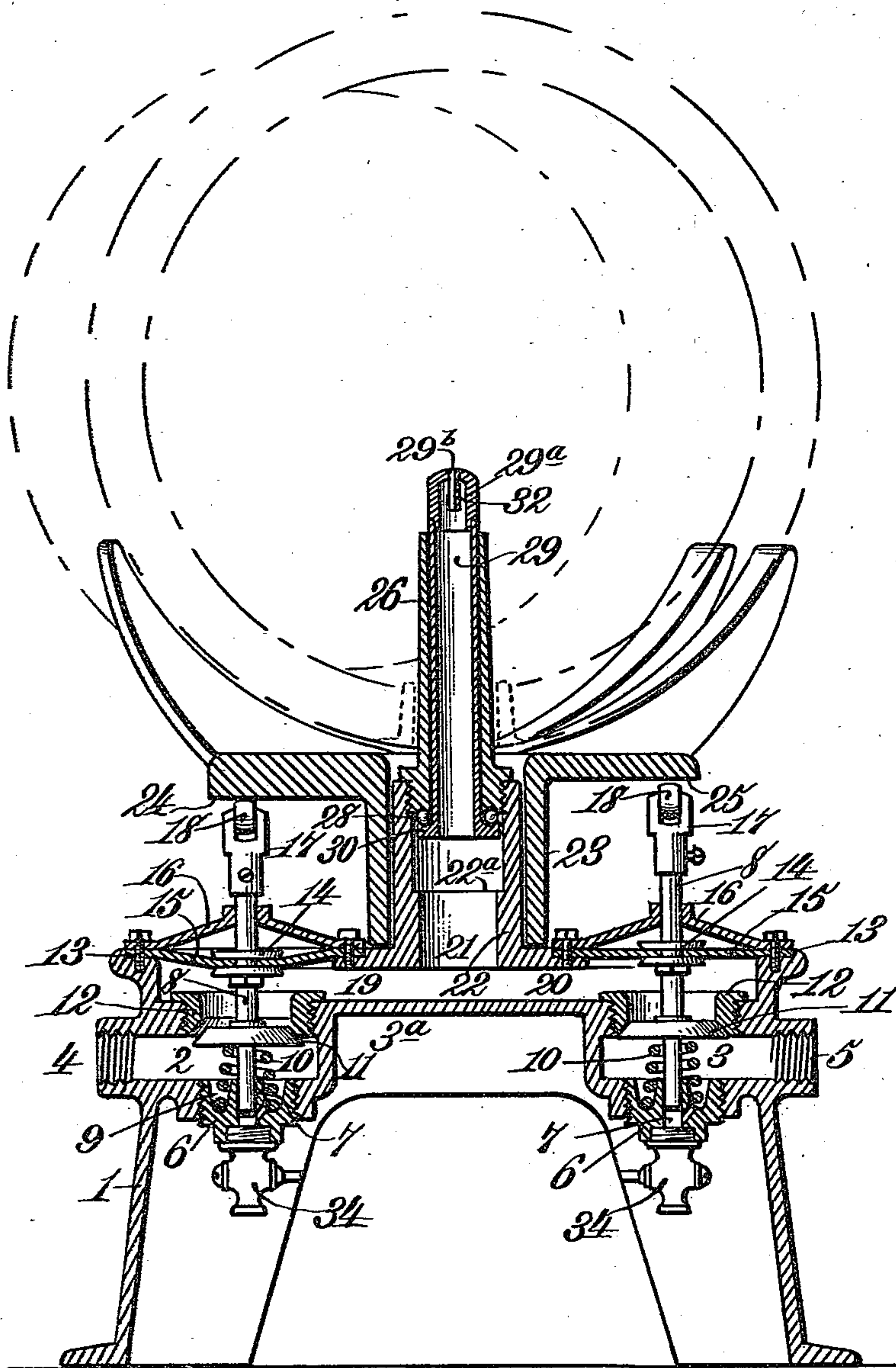
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2 SHEETS—SHEET 2.

Fig. 2.



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# UNITED STATES PATENT OFFICE.

OTTO L. R. RITTER, OF ST. LOUIS, MISSOURI.

## KEG-SPRINKLING MACHINE.

No. 864,560.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed April 21, 1906. Serial No. 313,034.

*To all whom it may concern:*

Be it known that I, OTTO L. R. RITTER, a citizen of the United States, residing at St. Louis, in the county of St. Louis City and State of Missouri, have invented 5 new and useful Improvements in Keg-Sprinkling Machines, of which the following is a specification.

This invention relates to sprinkling machines for sprinkling kegs, barrels, bottles, jars and analogous articles.

10 The invention primarily contemplates a machine provided with a rotatable and disappearing nozzle for applying the cleansing medium, the latter actuating the nozzle when supplied to wash or rinse an article treated. The nozzle is so arranged as to disappear by 15 gravity when the cleansing medium supply is cut off, thereby permitting the article to be readily removed after it has been washed or rinsed without in the least damaging the nozzle.

The invention further contemplates a machine provided with a support for the article to be washed or 20 rinsed, said support being capable of rotation upon a vertical axis, and provided with means for opening a hot or cold cleansing medium supply. The nozzle by its rotation projects the cleansing medium outwardly in all directions, and it is thus rendered more 25 effective in treating a greater surface area of the article cleansed. The movement of the nozzle is rendered easy and without obstruction when rotated by providing a ball bearing therefor, all of which will be more 30 fully hereinafter set forth.

In the drawings, Figure 1 is a side elevation of a machine embodying the features of the invention. Fig. 2 is a longitudinal vertical section of the machine showing the nozzle projected. Fig. 3 is a top plan view of 35 the nozzle. Fig. 4 is a detail side elevation of a portion of the nozzle. Fig. 5 is a sectional view showing the nozzle depressed or in its inoperative position.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

40 The numeral 1 designates a frame or support having suitable legs and provided with a pair of valve chambers 2 and 3 located at and depending from opposite extremities of a bed 3<sup>a</sup>, the valve chamber 2 having an inlet 4 for communication with a cleansing medium 45 supply. The valve chamber 3 is also provided with an inlet 5 for communication with a cleansing medium supply, the inlet 4, in the present instance, being adapted to receive a cold cleansing medium and the inlet 5 a hot cleansing medium.

50 As the construction of that portion of the support which forms the valve chambers 2 and 3 is the same, and as the valve mechanism cooperating with each valve chamber is also similar, it is unnecessary to

describe but one chamber and valve mechanism, and reference numerals designating corresponding parts 55 apply to both valve chambers and valve mechanisms.

Each valve chamber has a lower closing screw plug 6, recessed at 7, to form a seat for the reception of the lower extremity of a valve stem 8. The plug 6 is also concentrically recessed, as at 9, to form a seat for the 60 lower extremity of a spiral compression spring 10, which is adapted to bear against a valve 11 fixed to the stem 8 to normally retain the said valve against its seat. The valve seat is formed by a hollow plug 12, inserted or secured in the upper outlet end of the 65 valve chamber, said plug not only forming a seat for the valve 11, but also acting as an outlet for the cleansing medium, owing to its tubular construction. At an elevation above the plug 12, and fixed to the support 1, as at 13, and also secured to the valve stem 8, as at 70 14, is a yielding diaphragm 15, operating to assist in closing the valve 11 when pressure is relieved from the valve stem but more particularly intended to operate as a sealing means to prevent the escape of liquid through the top portion of the structure over 75 the valve. Over this diaphragm a conical cap 16 is applied, and therethrough projects the valve stem 8, the latter having an upper bifurcated head 17 fitted thereon in which is mounted a roller 18.

The support 1 has a pair of feed passages 19 and 20 80 which communicate at their outer extremities with the chambers 2 and 3, or with the plugs 12, and at their inner extremities communicate with a common vertically disposed tubular outlet 21 which, as shown, is located in the center of the machine, but, as obvious, 85 it may be disposed at any other point and the two passages 19 and 20 may be varied in length, all of which would require a simple modification in the proportions. The outlet 21 with which the passages 19 and 20 have communication is formed by an upwardly 90 extending collar 22, which is interiorly screw-threaded for a portion of its length and has mounted thereon a rotatable holder 23, shaped to receive a barrel, keg or other article. This holder 23 is provided with diametrically opposed convex or cam surfaces 24 and 25 95 on its under face, and these cam surfaces are adapted to bear on the rollers 18 and depress the valve stems 8 to open the valves 11 through the medium of the weight of the barrel, keg or other device applied to the holder 23, and thus automatically control the 100 supply of the cleansing medium to the barrel, keg or other device.

Secured in the upper screw threaded portion of the collar 22 is the lower end of an upwardly extending guard tube or sleeve 26, which will be preferably constructed of hard steel and forms a socket for a nozzle, 105



which will be hereinafter more fully referred to. The guard sleeve 26 is shouldered, as shown, to rest on the upper end of the collar, and is of such shape and diametrical extent as to readily enter the bung 5 hole or other opening of a barrel, keg or analogous device placed on the holder 23 for cleansing purposes. The lower extremity of the sleeve 26 depends some distance into the upper extremity of the collar 22 and is formed with an inverted V-shaped runway, as at 27, see Fig. 5.

Within the sleeve 26 a tubular nozzle supporting member 29 is movably mounted and has its lower end, provided with an annular flange 30 formed in its upper surface with a runway 31 to receive and carry bearing 15 balls 28, the latter cooperating with both the runways 27 and 31 when the nozzle supporting member 29 is projected upwardly through one sleeve 26. A nozzle tip 29<sup>a</sup> is secured on the nozzle supporting member 29 and has a slot 29<sup>b</sup> therein, in which a spiral deflector 20 plate 32 is fitted, the nozzle tip being projected above the upper terminal of the sleeve 26 by the pressure of the cleansing medium when the valves 11 are opened through the depression of the valve stems 8.

The collar 22 has an inner annular shoulder 22<sup>a</sup> with 25 which the lower end of the member 29 has contact to limit the downward movement of said member. This shoulder serves as a stop for limiting the gravitating movement of the member when relieved of the pressure of the cleansing medium, or during the time when 30 the cleansing medium supply is cut off. The deflecting plate 32 forces the cleansing medium to outlet from the nozzle tip eccentrically with relation to the latter and causes a rotation of the nozzle, thereby throwing the cleansing medium in all directions. When the 35 cleansing medium is admitted to the machine or enters the outlet 21, the force thereof elevates the member 29 and the nozzle tip upwardly through the sleeve, but when the holder 23 is disposed as to be inactive with respect to the valve stems 8, and the valves 11 automatically close, the member 29 and the nozzle tip 40 carried thereby are automatically depressed or fall and disappear within the sleeve 26 to enable the removal of the article which has been undergoing the cleansing operation from the holder 23, without in the least 45 damaging the nozzle tip. The cam surfaces 24 and 25 are so arranged that the holder or stand, if moved slightly in one direction, will cause the opening of one of the cleansing medium supply controlling valves 11, and when given a similar movement or turn in an opposite 50 direction the said holder will cause the opening of the other cleansing medium supply valve, in view of the fact that the rollers 18 held on the upper extremities of the valve stems will be alternately engaged by the said cam surfaces. The heads carrying the 55 rollers 18 and disposed on the upper extremities of the valve stems 8 act as abutting shoulders to contact with the upper terminals of the conical caps 16 to limit the downward movement of the valve stems 8 and also the depression of the valves 11 from their seats. The 60 moment the rollers 18 are disengaged from the cam surfaces 24 and 25, the springs 10 come into play and automatically close the valves 11.

By operating the holder 23 in opposite directions, as

hereinbefore stated, either a cold or hot cleansing medium may be delivered to the barrel, keg or other 65 device to be cleaned, and all under the control of the operator manipulating the barrel or keg.

To obviate freezing the valves 11, any water or other liquid cleansing medium that may remain in the valve chambers may be liberated through the medium 70 of drain cocks 34 secured to the bottom of each valve chamber.

Having thus fully described the invention, what is claimed, is:

1. A machine of the class described, comprising a vertically movable tube having a nozzle, independent valve-controlled fluid supply conduits communicating with the tube, and a movable holder for actuating successively the valves to alternately open and close the conduits to introduce a supply of fluid into the nozzle to cause the latter 80 to move in a position projecting through the holder for discharging its fluid.

2. A machine of the class described, comprising a holder, a bed for rotatably supporting the holder and having separate fluid supply conduits, independent valves for controlling each of the conduits and actuated successively by the holder to alternately open and close the conduits, and movable means having a nozzle actuated by the fluid to bring the same in a position projecting above the holder 90 to discharge the fluid through said nozzle.

3. A machine of the class described, comprising fluid supply means, a normally closed valve for the fluid supply means, a resilient device acting upon the valve to hold the same in its normal closed position, a revoluble holder having means for actuating the valve to alternately open 95 and close the supply means, and a movable supporting member having a nozzle cooperative with the holder and actuated by the fluid to cause said nozzle to extend above the holder to discharge said fluid when the valve is opened. 100

4. A machine of the class described, comprising a base having a plurality of fluid supply conduits, valves for opening and closing the conduits, resilient devices cooperative with the valves to hold the same normally in a position for closing the conduits, said base having a discharge opening, and a rotatable holder having cam surfaces for actuating the valves to alternately open and close the conduits. 105

5. A machine of the class described, comprising a base having a plurality of fluid supply conduits, independently operable valves for alternately opening and closing the conduits, resilient devices cooperative with the valves to hold the same normally in a position for closing the conduits, said base having a discharge opening, a rotatable holder having cam surfaces for actuating the valves to alternately open and close the conduits, and a shiftable supporting member having a nozzle movable by the fluid from inoperative to operative position. 110

6. A machine of the class described, comprising a plurality of normally closed fluid supply chambers, independently movable valves forming closures for the chambers, a nozzle having communication with the chambers, a nozzle supporting member for said nozzle, and rotatable holding means cooperative with the movable closure means for alternately opening and closing the chambers to supply 120 a fluid to the nozzle.

7. A machine of the class described, comprising a bed having a plurality of supply chambers for introducing a hot and cold supply medium into the machine, independently movable valves normally closing the chambers respectively, a rotatable holder having an irregular surface cooperative with the movable valves to alternately actuate the same for opening and closing the chambers, and a movable support having a discharge nozzle in communication with the chambers and actuated by the fluid supply to project the support through the holder to bring said nozzle 130 in operative position. 135

8. A machine of the class specified having a vertically



disposed sleeve, a nozzle supporting member freely slidable in the sleeve, a nozzle secured to the upper terminal of the supporting member and provided with means for rotating the same and the supporting member, and ball-bearing means carried in part by the lower extremity of the supporting member and in part by the lower terminal of the sleeve.

9. In a machine of the class described, a frame having legs and provided with valve chambers forming fluid supply means, a collar having communication with the valve chambers, a tube carried by said collar, a shiftable support having a nozzle mounted in the tube and collar, independently movable valves arranged in the chambers and normally closing communication with the collar, resilient

means for holding each valve in a normal closed position, valve stems on the valves and having at their free ends rollers, a revoluble, vertical, supporting holder mounted on the collar and having cam faces adapted to alternately operate the same for opening and closing communication between the chambers and the nozzle, and cut-off drain devices for the chambers. 15 20

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

OTTO L. R. RITTER.

Witnesses:

WM. H. PROETZ,  
ORLANDO F. KAMP.