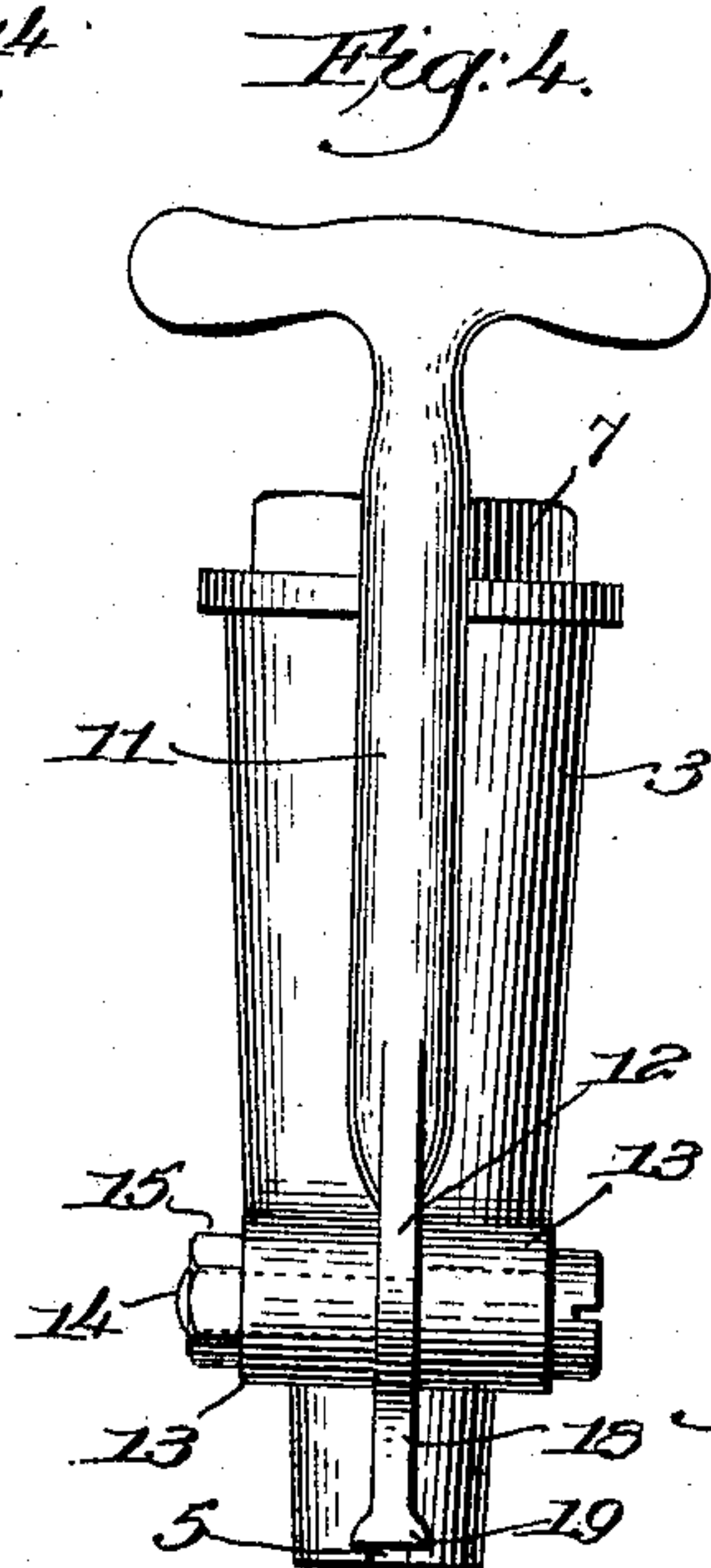
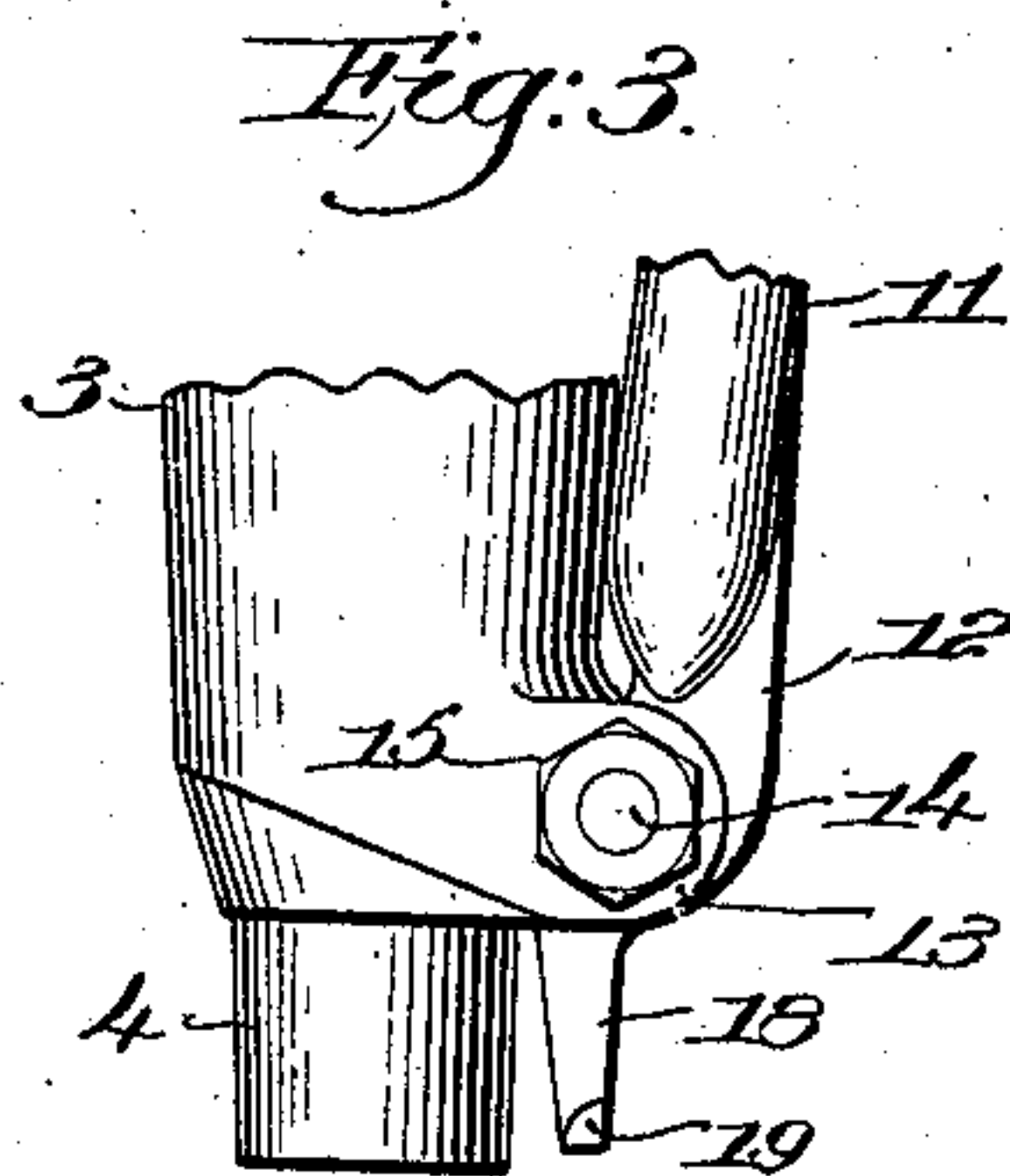
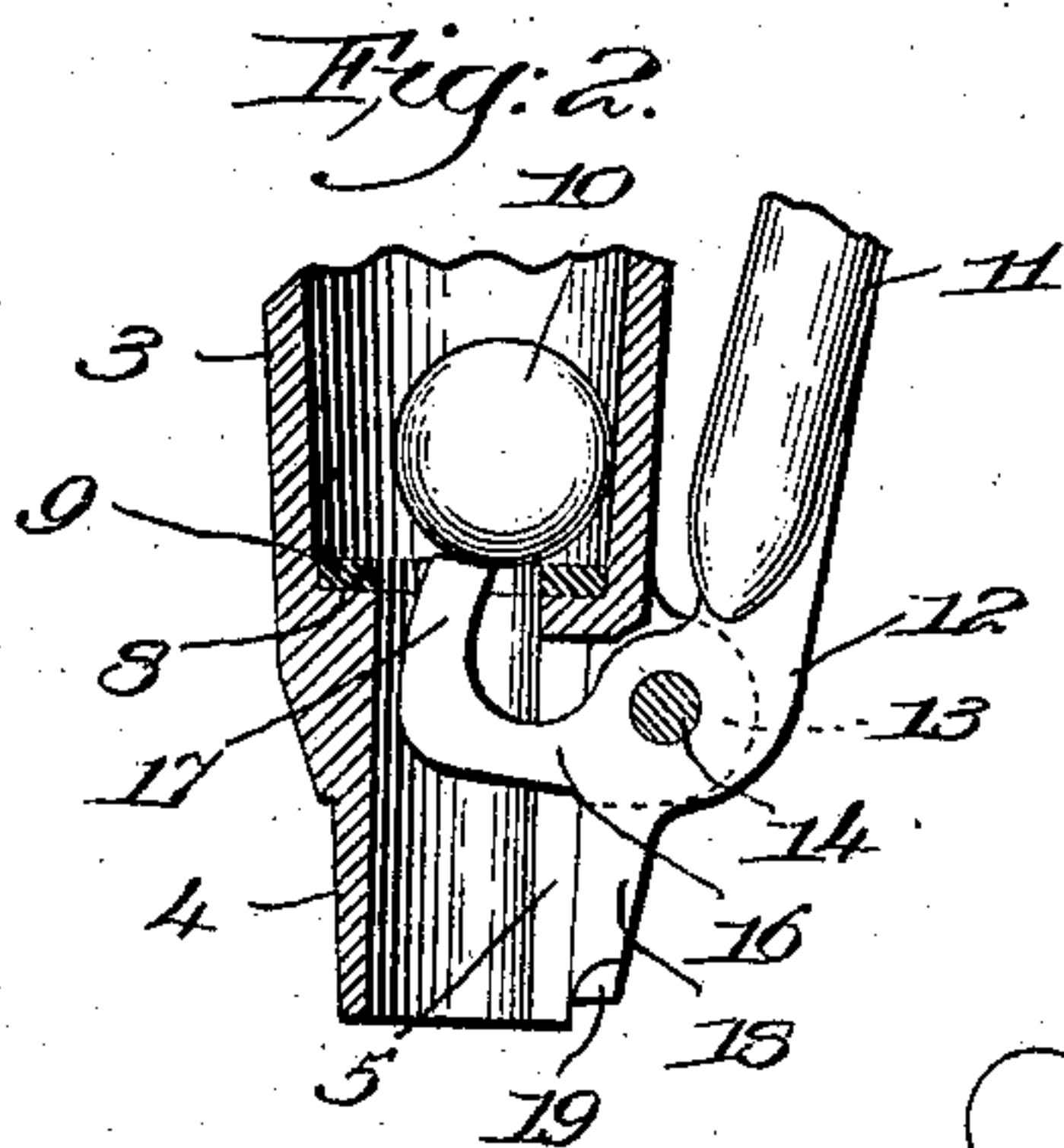
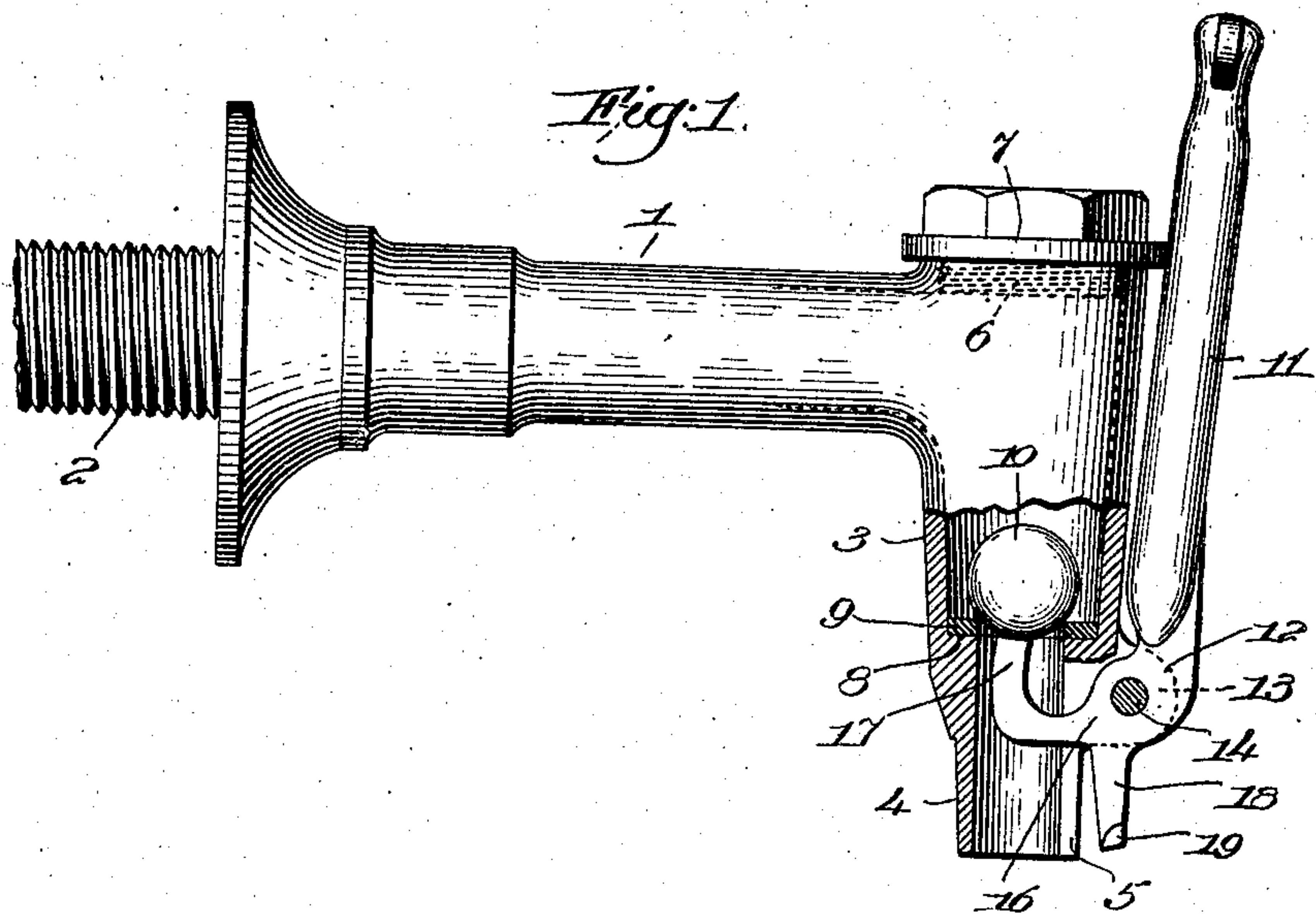


No. 881,208.

PATENTED MAR. 10, 1908.

T. G. STRATER.
FLUID DRAWER.
APPLICATION FILED MAY 2, 1907.



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UNITED STATES PATENT OFFICE.

THEODORE G. STRATER, OF BOSTON, MASSACHUSETTS.

FLUID-DRAWER.

No. 881,208.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed May 2, 1907. Serial No. 371,376.

To all whom it may concern:

Be it known that I, THEODORE G. STRATER, a citizen of the United States, residing in Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Fluid-Drawers, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

10 This invention has for its object the production of a novel, simple and efficient device for drawing beer, ale, or other liquids, dispensing with expensive valves and valve seats and wholly obviating grinding of the latter, 15 the construction being such that by a very slight change the fluid-drawer may be made self-closing.

I have so arranged the valve that it is self-seating and when seated will effectually and 20 completely close the apparatus, preventing any leakage or drip.

The construction is simple and cheap, and the working parts are few in number and easily made and assembled.

25 The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a side elevation and partial section of a fluid-drawer embodying my invention, the valve being shown closed; Fig. 2 is a similar view of the lower portion of the nozzle, showing the valve open; Fig. 3 is a side elevation of the lower portion of the 35 nozzle; and Fig. 4 is a front elevation of the fluid-drawer.

Referring to the drawings, Fig. 1, the tubular shank 1 is threaded at one end, as at 2, for insertion into the barrel, cask or other 40 vessel from which fluid is to be drawn, the opposite end of the shank being downturned and slightly tapered, constituting a depending nozzle 3, having a reduced extremity 4 having at its front a longitudinal slot 5, Figs. 45 1, 2 and 4. At the upper end of the nozzle an internally threaded opening 6 is formed, see dotted lines Fig. 1, closed by a correspondingly threaded plug 7, whereby access may be had to the interior of the nozzle. Within 50 the latter, somewhat above the upper end of the slotted end 4, the nozzle walls are thickened to form an annular shoulder 8, on which I mount a circular washer 9 constituting a valve-seat, Figs. 1 and 2, the opening of 55 which is co-equal with the internal diameter of the part 4 of the nozzle. A ball 10, pref-

erably made of non-corrodible metal, constitutes a gravity valve to cooperate with the valve seat, the diameters of the valve and the adjacent part of the nozzle being such 60 that if unseated the valve cannot roll to one side far enough to remain unseated. This is shown in Fig. 2, it being manifest that the center of gravity of the spherical valve 10 is so positioned as to cause it to seat itself 65 automatically the instant it is permitted so to do.

The valve when seated will absolutely and tightly close the opening in the valve-seat, so that there can be no leakage whatever, 70 and without requiring any expensive grinding of parts or nice and careful fitting.

I have provided a simple and convenient valve actuator, herein shown as an upturned operating handle 11 located at the front of 75 the nozzle and flattened at its lower end at 12 to pass easily between two ears 13 formed on the nozzle at each side of the slot 5.

A headed fulcrum-pin 14 is extended through the ears and through a hole in the 80 flattened part 12 of the handle, one end of the pin being threaded to receive a retaining nut 15. A flat prolongation 16 from the lower end of the handle is shaped to present an upturned finger 17, the prolongation pass- 85 ing through the upper end of the slot 5 into the nozzle, positioning the finger with its tip in engagement with the lower part of the valve 10, as in Fig. 1. The handle 11 at such time is held in inoperative position against 90 the front of the nozzle, and it is held there by the pressure of the fluid upon the valve, retaining the latter seated.

When it is desired to draw fluid the handle is pulled forward into the position 95 shown in Fig. 2, thereby swinging the finger 17 upward and lifting the valve from its seat. At such time the finger is within the valve-opening and hence the rush of the fluid through the seat cannot force the valve 100 thereonto.

In order to prevent the issuing fluid from splattering or splashing out through the slot 5 below the prolongation 16 I make a de- 105 pending extension 18 on the handle, said extension moving up to and closing the slot when the handle is moved to unseat the valve, as shown in Fig. 2. Said extension is laterally widened at its lower end, at 19, such widened portion bearing against the ex- 110 tremity 4 of the nozzle to limit the operative swing of the handle and the rise of the finger

17 when the valve is unseated. By this arrangement the handle is prevented from dropping down toward the horizontal, and improper displacement of the valve cannot occur.

If the fluid is under high pressure its action upon the valve, when the latter is unseated, has some tendency to close or seat the valve as soon as the handle is released, but by making the ball valve heavy enough to overbalance the handle the device is made self-closing whether the fluid pressure be large or small.

By using a spherical valve different portions are presented to contact with the valve-seat, thereby equalizing the wear and greatly prolonging the usefulness of the device.

In constructing the fluid-drawer the shank and nozzle are made as a casting, and the slot 5 is made with a saw or suitable slotting tool, the plug-seat 6 and the end 2 of the shank being threaded by proper tools. So, too, the handle and its finger, and the extension 18, are made as a single casting, and it will be seen that the finishing of the device reduces machining and fitting to a minimum. After the handle has been mounted on its pivot and a washer forced into the nozzle and onto the shoulder 8 the ball valve is dropped in through the opening or plug-seat 6, and the plug 7 is screwed up tightly, after which the fluid-drawer is ready for use.

The construction and arrangement is very simple, the cost of production is small, and the parts are few in number, with no liability to get out of order.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. The combination, in a fluid-drawer, of a slotted discharge nozzle having an annular valve-seat therein, a spherical valve to seat thereupon, an operating handle fulcrumed on the nozzle, an upturned finger rigidly connected with the handle and extended through the slot into the nozzle below the valve, to lift the latter from its seat by movement of the handle, and a combined stop and slot-closer on the handle, to limit opening movement thereof and simultaneously close the slot in the nozzle.

2. The combination, in a fluid-drawer, of a downturned discharge nozzle having an an-

nular valve-seat therein, and slotted below the valve-seat, a gravity valve to cooperate with the latter, ears on the exterior of the nozzle at opposite sides of the slot, a fulcrum-pin mounted in the ears, an operating handle flattened to pass between the ears and fulcrumed on the pin, an upturned finger extended through the slot in the nozzle from the base of the handle, the tip of the finger being adapted to engage and unseat the valve when the handle is swung outward, and a depending extension on the handle below the fulcrum, to abut against the nozzle and close the slot when the handle is operated to unseat the valve.

3. The combination, in a fluid drawer, of a downturned discharge nozzle having an annular valve-seat therein, and slotted longitudinally below the valve seat, a gravity valve to cooperate with the latter, a handle fulcrumed externally on the nozzle, an upturned finger integral with the handle and extended through the slot in the nozzle, the tip of the finger engaging the valve, to lift the same from its seat when the handle is swung outward, the valve being of sufficient weight to act upon the finger and swing the handle upward automatically to normal or inoperative position when released, the valve at such time seating upon the valve-seat, and a device on the handle to close the slot when the handle is operated to unseat the valve.

4. The combination, in a fluid-drawer, of a downturned discharge nozzle having an annular valve-seat therein and longitudinally slotted below the seat, a gravity valve to cooperate with the latter, an operating handle externally fulcrumed on the nozzle, adjacent the slot, a valve-operating finger fixedly connected with the handle and extending through the slot into the nozzle, and a device on the handle to close the slot and limit operative movement of the handle when the latter is moved to unseat the valve.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

THEODORE G. STRATER.

Witnesses:

JOHN C. EDWARDS,
ELIZABETH R. MORRISON.