

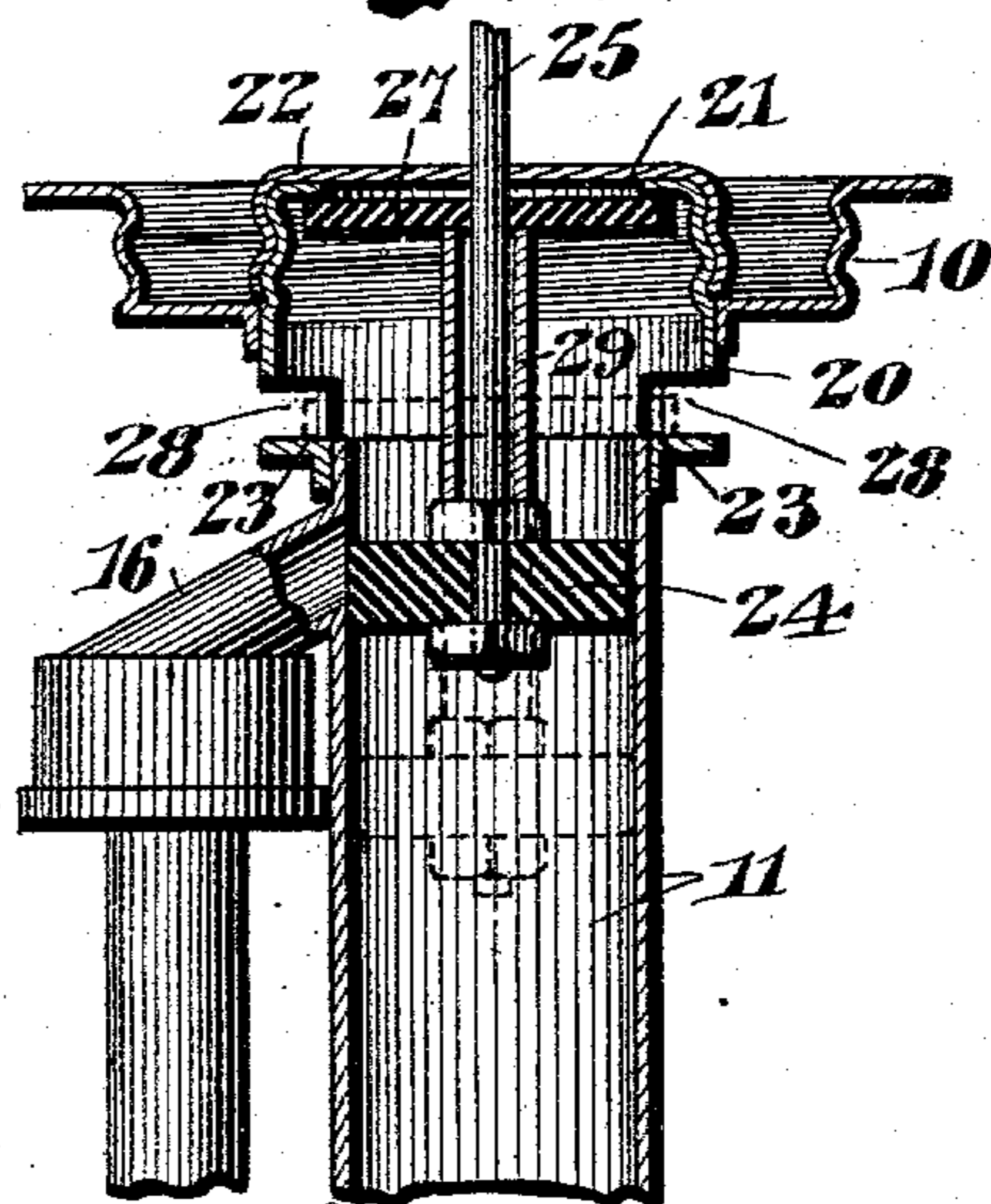
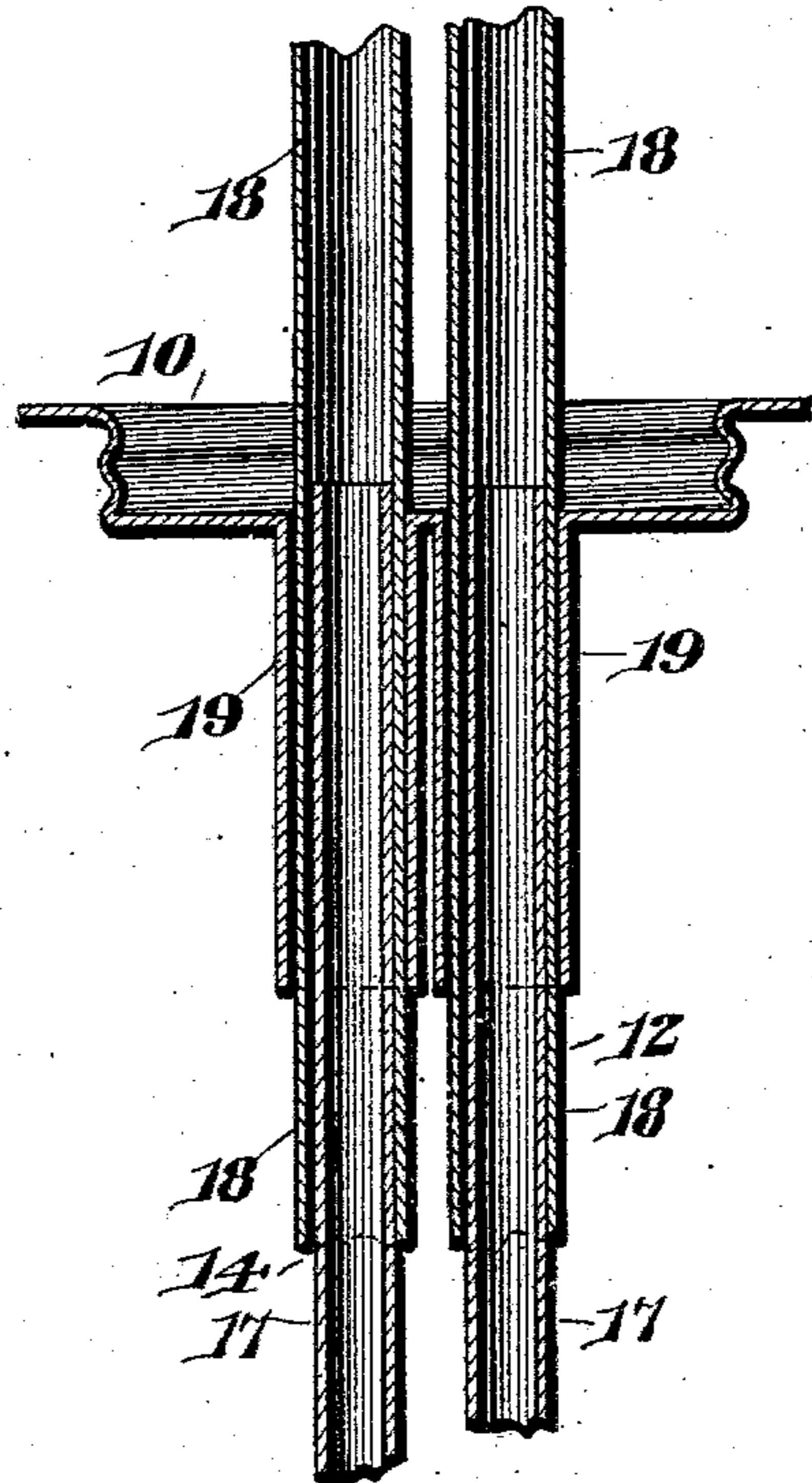
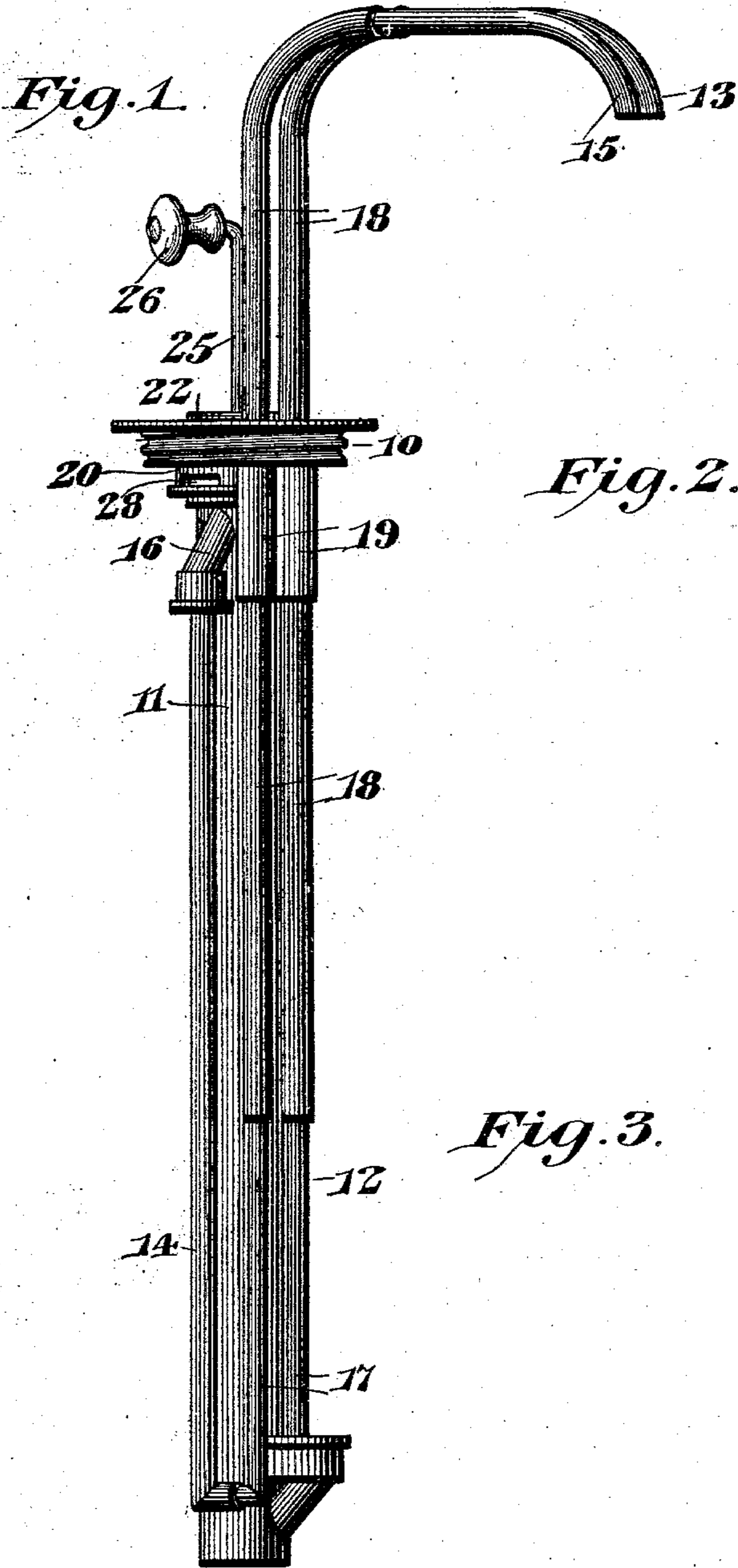
No. 740,738.

PATENTED OCT. 6, 1903.

J. T. BRADFORD & A. R. GORDON.
OIL PUMP.

APPLICATION FILED FEB. 14, 1903.

NO MODEL.



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UNITED STATES PATENT OFFICE.

JOHN TOMPSON BRADFORD AND ARTHUR ROSCOE GORDON, OF TOLEDO,
OHIO.

OIL-PUMP.

SPECIFICATION forming part of Letters Patent No. 740,738, dated October 6, 1903.

Application filed February 14, 1903. Serial No. 143,382. (No model.)

To all whom it may concern:

Be it known that we, JOHN TOMPSON BRADFORD and ARTHUR ROSCOE GORDON, citizens of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Oil-Pump, of which the following is a specification.

The present invention relates to improvements in oil-dispensing pumps of that character described in a patent granted to us on November 27, 1900, No. 662,617.

One of the features of this invention relates to certain changes in the construction of the pump whereby said pump is greatly simplified and the parts are readily accessible for the purpose of repair or renewal.

Difficulty has heretofore been experienced in preventing leakage at the points where the conduits pass through the cover, and another feature relates to simple means for preventing the egress of oil at these points.

The preferred form of construction is illustrated in the accompanying drawings, wherein—

Figure 1 is a view in elevation of the improved structure. Fig. 2 is a vertical sectional view through the plug-cover, showing the conduits extending therethrough; and Fig. 3 is a vertical sectional view, on an enlarged scale, through the upper end of the pump.

Similar reference-numerals indicate corresponding parts in all the figures of the drawings.

The pump herewith illustrated is arranged to be suspended within an oil can or receptacle, and to this end a screw cover or plug 10 is employed, from which is hung a pump-barrel 11. A discharge-conduit 12 leads from the lower end of the pump-barrel through the plug and is provided with a downturned nozzle 13. A return-conduit 14, having its inlet 15 located alongside the nozzle 13, extends through the plug and has its discharge end communicating with the upper portion of the pump-barrel, as shown at 16. The conduits comprise lower and upper sections 17 and 18, the lower section extending through suitable openings formed in the cover-plug 10. These openings are surrounded by sleeves 19, which depend from the cover-plug, and

also surround the lower conduit-sections; though spaced from the same. The upper sections 18 fit over the lower sections and pass through the sleeves, between the same and the lower sections, as illustrated in Fig. 2. Thus the conduit-sections have overlapping portions that are located within the sleeves. By this arrangement there is little danger of any oil that may be splashed to the top of the receptacle finding egress through the passage-ways for the conduits, and, furthermore, the sleeves serve as braces to strengthen said conduits.

The pump-barrel 11, which is cylindrical in form, is provided with an enlarged upper portion 20, that extends through the plug, and has an opening 21 in its upper exposed end. This open end is normally closed by a removable cap 22, screwed upon the said projecting end. The lower end of the enlarged portion constitutes an annular shoulder or valve-seat 23. Slidably mounted in the barrel is the usual plunger 24, to which is connected a stem 25, that extends through the enlarged portion of the cap 21, the upper end of this stem having a suitable handle 26. A valve 27, formed of leather or other flexible material, is fitted snugly upon the stem 25 and is located within the enlarged chamber 20, being movable from end to end therein upon the movement of the plunger-stem because of its frictional engagement therewith. Thus when the stem is moved downwardly the valve will seat itself upon the annular shoulder 23 and when raised will extend across the opening in the upper end of the barrel, as illustrated in Fig. 3. The enlarged portion is provided with outlet-openings 28, which afford communication between the upper end of the pump-barrel and the receptacle. As a result when the plunger is forced downwardly the valve will cut off communication between the interior of the pump-valve and the outlet-openings 28. There is also employed upon the stem 25 a stop, which is in the form of a sleeve 29, loosely fitted upon said stem and arranged between the valve 27 and the plunger 24. This sleeve is of sufficient length to abut against the valve when the plunger is raised before said plunger passes into the enlarged chamber 20, and this

is an important feature, as it prevents the plunger becoming displaced, while serving to hold the stem from wobbling when elevated.

At the same time to gain access to the interior of the plunger it is only necessary to unscrew the cap 21, whereupon the valve 27, the stop-sleeve 29, and the plunger 24 can be readily removed through said open end. It will be apparent that this structure is much more simple than the one disclosed in our prior patent and at the same time is entirely efficient and satisfactory.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a pump of the class described, the combination with a barrel having an outlet located contiguous to one end, of a plunger slidably mounted in the barrel, a stem attached to the plunger and extending through the end having the outlet, a valve movably fitted on the stem and movable to positions on opposite sides of the outlet, and a stop-sleeve loosely fitted on the stem between the plunger and valve, said sleeve being freely movable longitudinally upon the stem and arranged to abut against both the valve and plunger to prevent movement of the latter across the outlet.

2. In a pump of the class described, a barrel having an enlarged upper portion, the upper end of said enlarged portion being open and

the lower end thereof constituting a valve-seat, a plunger slidable within the barrel and removable through the open end of the enlarged portion, a removable cap closing said open end, a stem connected to the plunger and passing through the enlarged portion and the cap, a valve located in the enlarged portion and movably arranged upon the stem, said valve coacting with the valve-seat, and a stop detachably located upon and carried by the stem between the valve and plunger, said stop being arranged to contact with the valve to prevent the plunger moving into the enlarged portion.

3. In a pump of the class described, a barrel having an enlarged upper portion, the upper end of said enlarged portion being open and the lower end thereof constituting a valve-seat, a plunger slidable within the barrel and removable through the open end of the enlarged portion, a removable cap closing said open end, a stem detachably connected to the plunger and passing through the enlarged portion of the cap, a valve located in the enlarged portion and movably arranged upon the stem, said valve coacting with the valve-seat, and a sleeve loosely fitted upon the stem, between the valve and plunger, said sleeve being movable with the stem and arranged to abut against the valve to prevent the plunger moving into the enlarged portion when the cap is in place.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOHN TOMPSON BRADFORD.
ARTHUR ROSCOE GORDON.

Witnesses:

B. D. MILLS,
W. E. DITTENHAVER.