

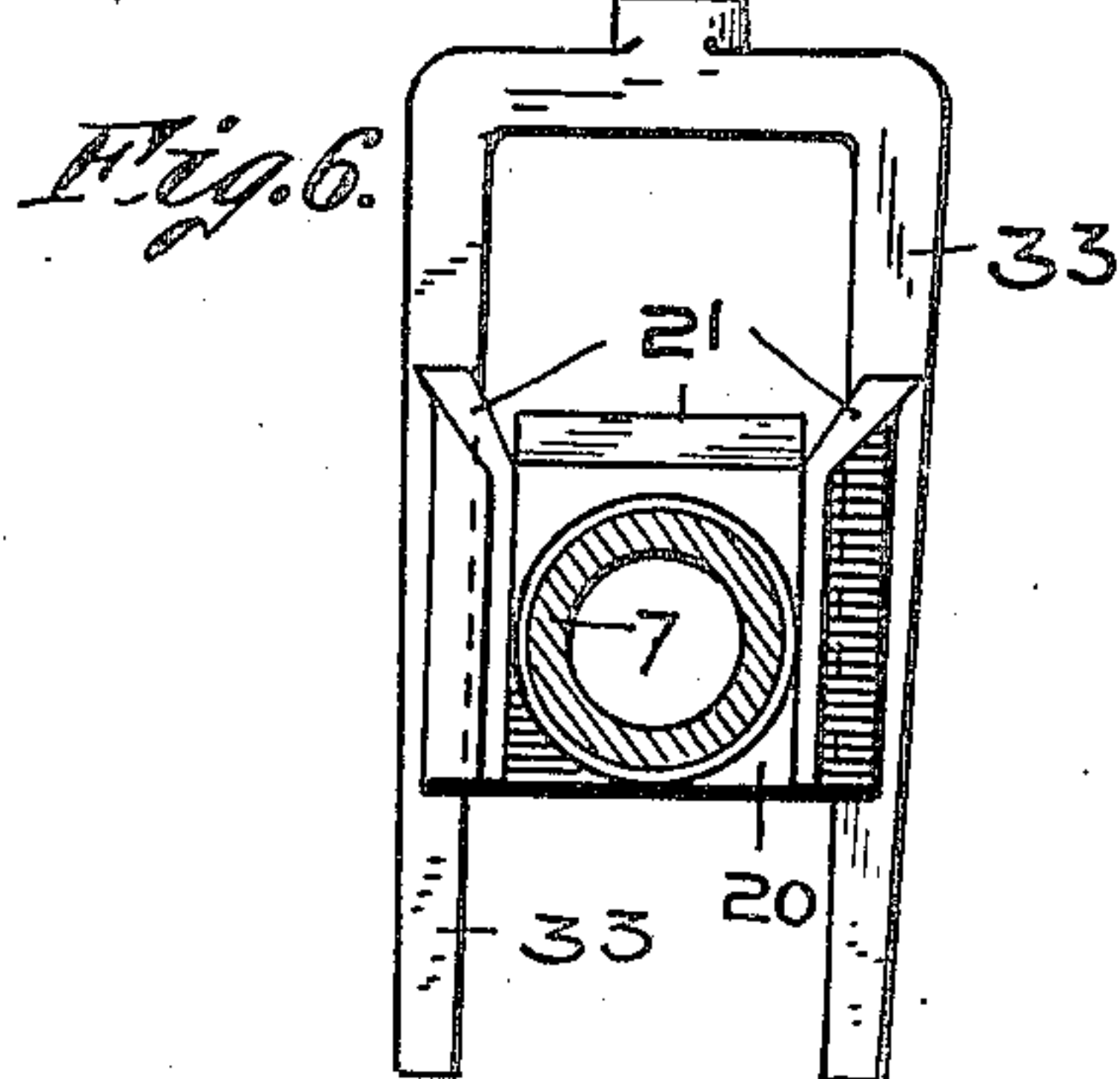
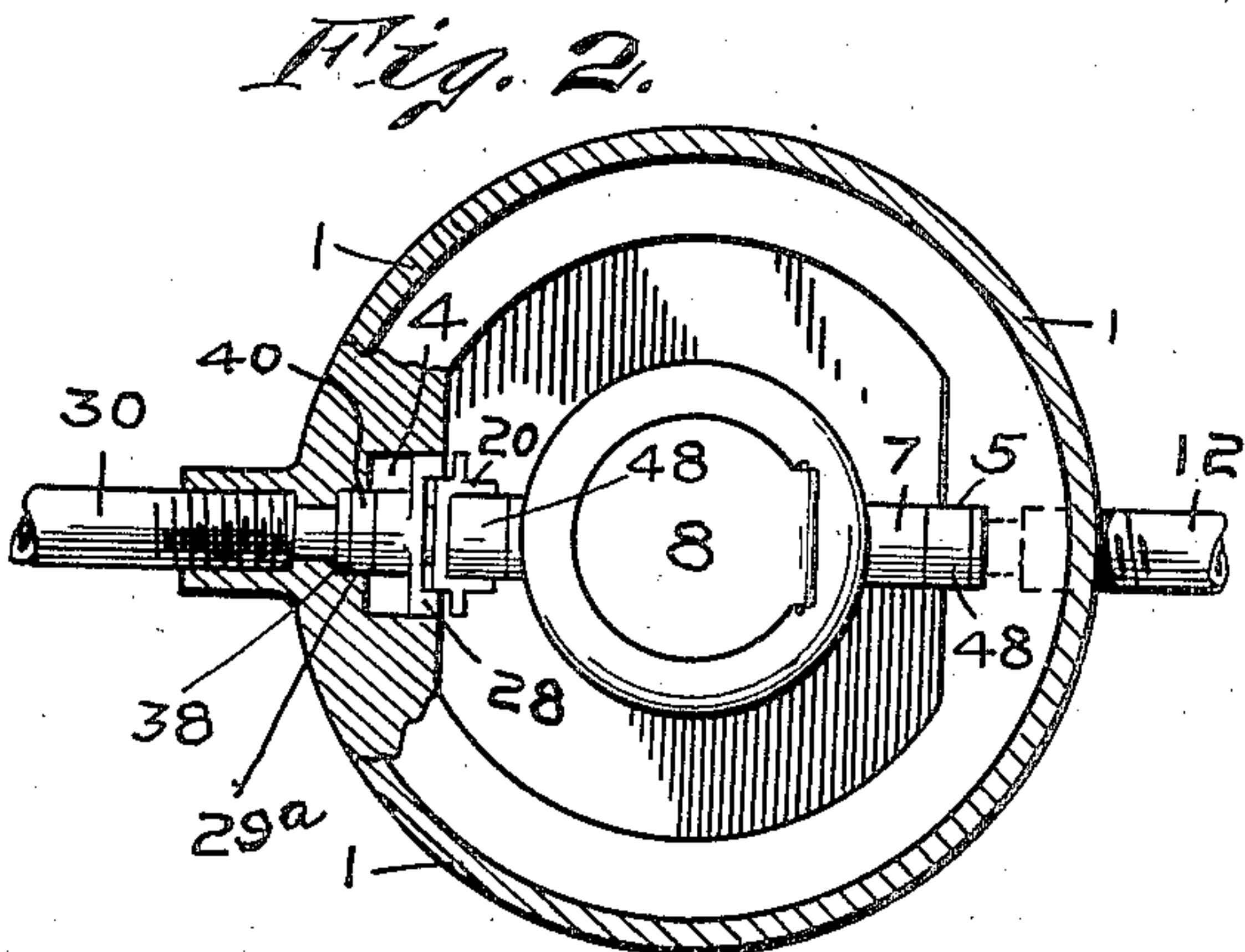
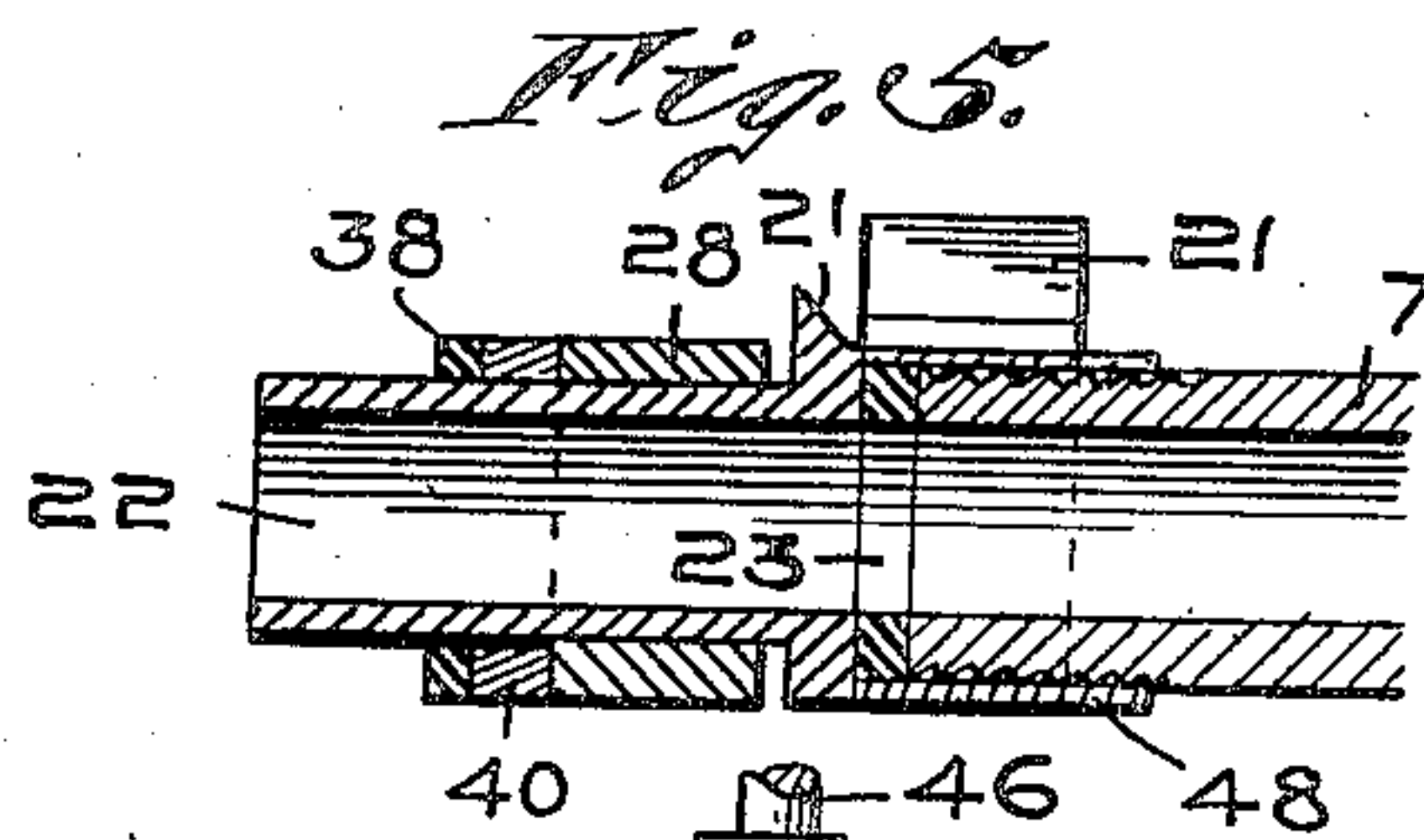
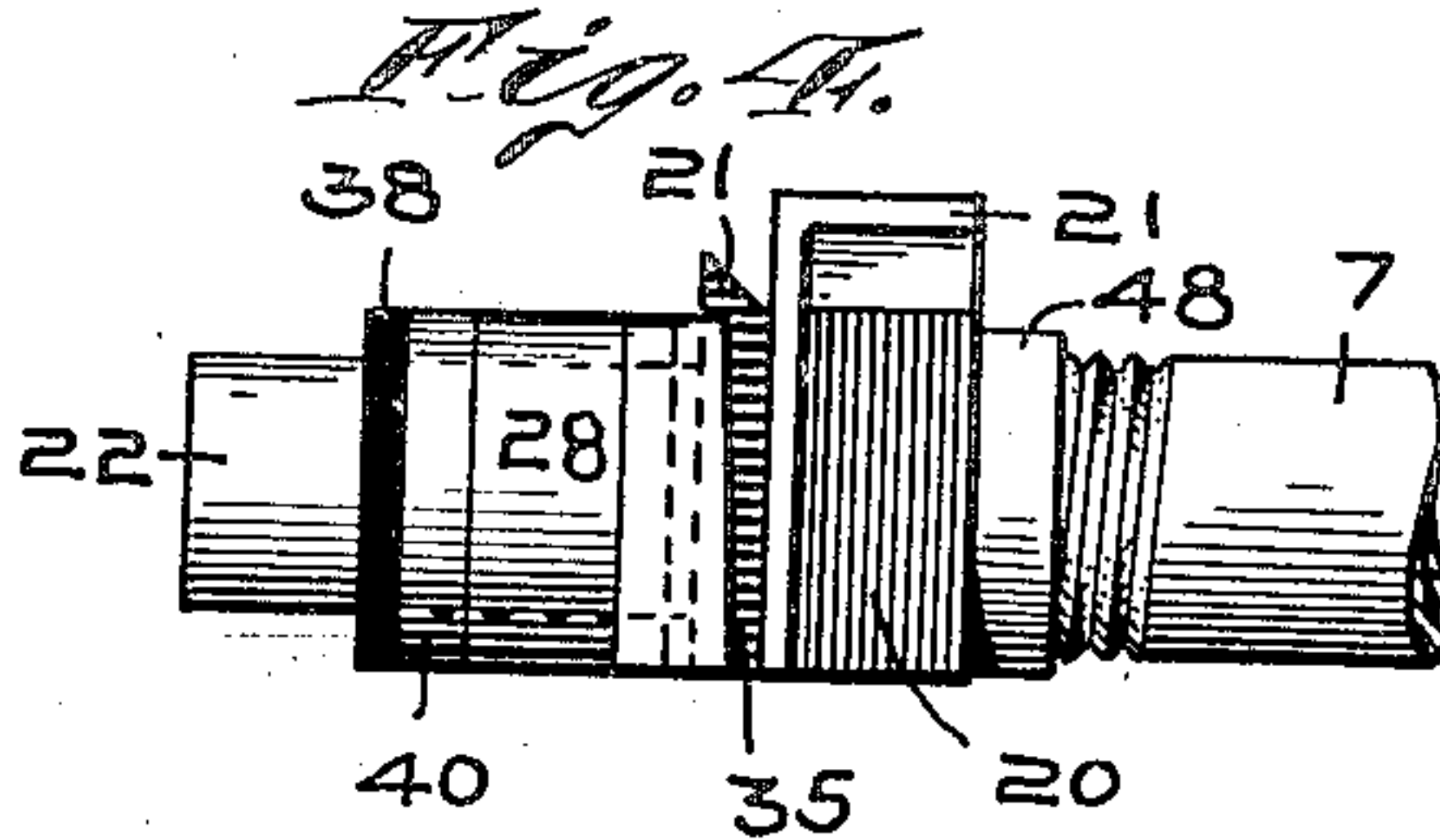
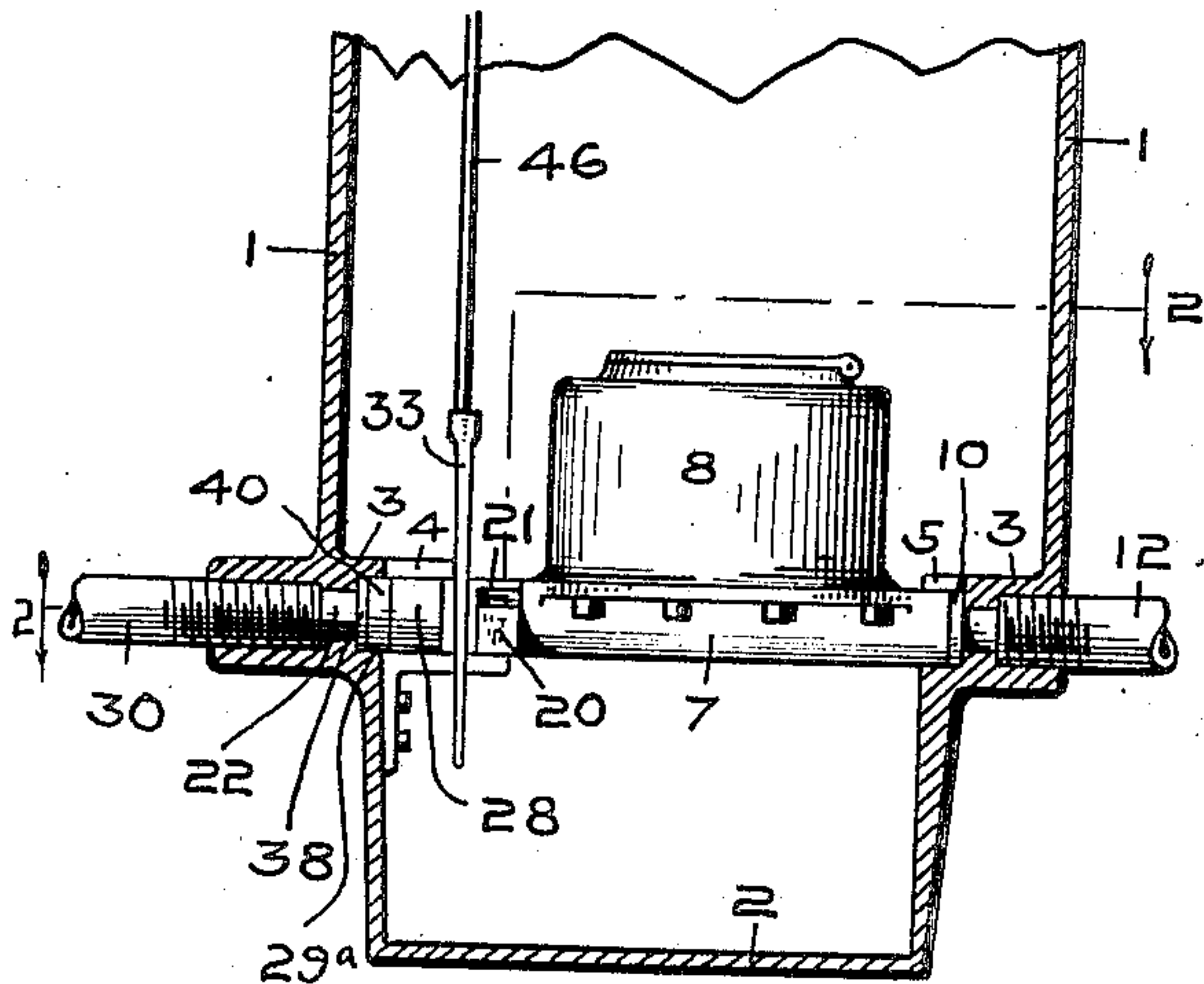
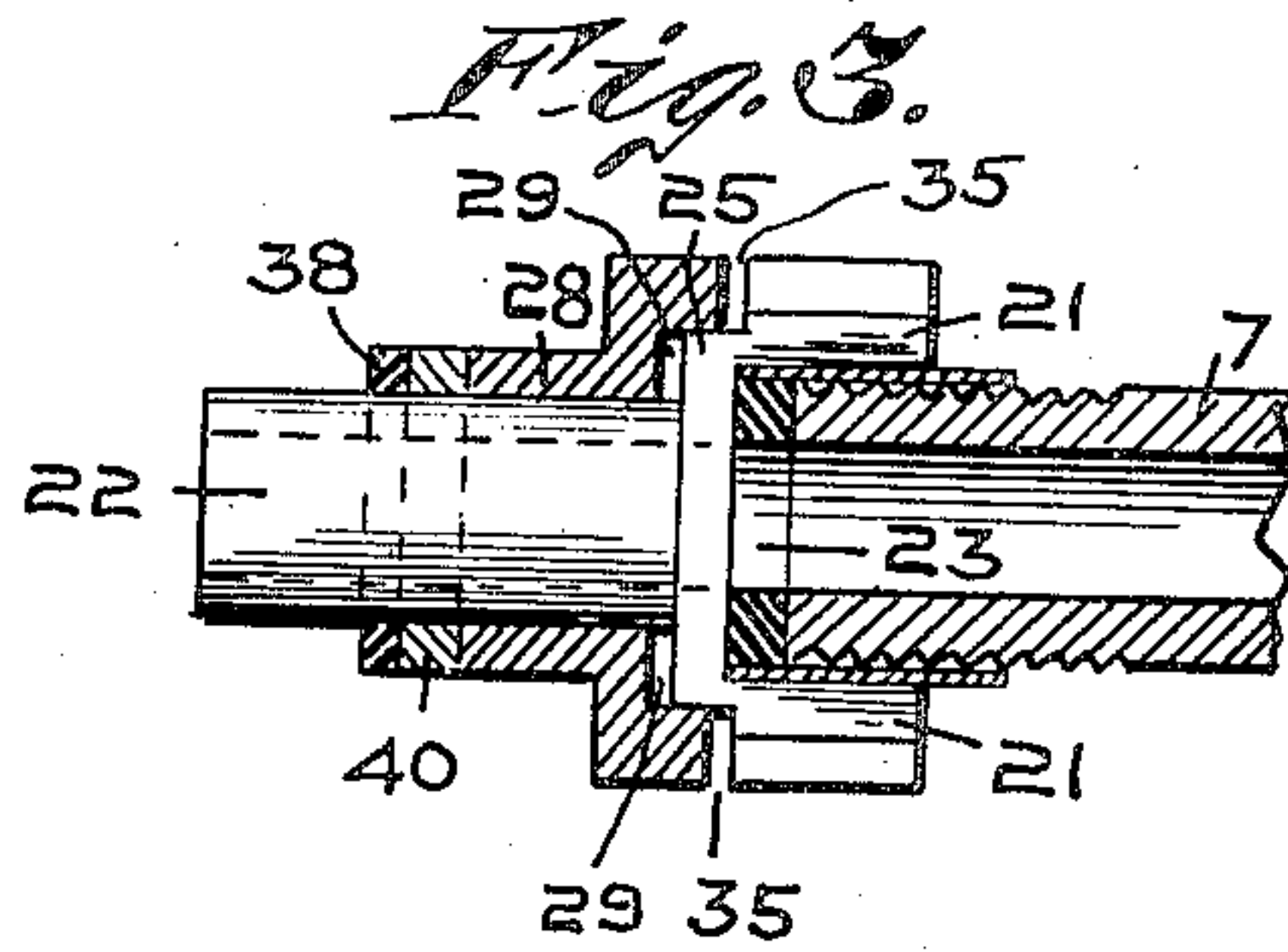
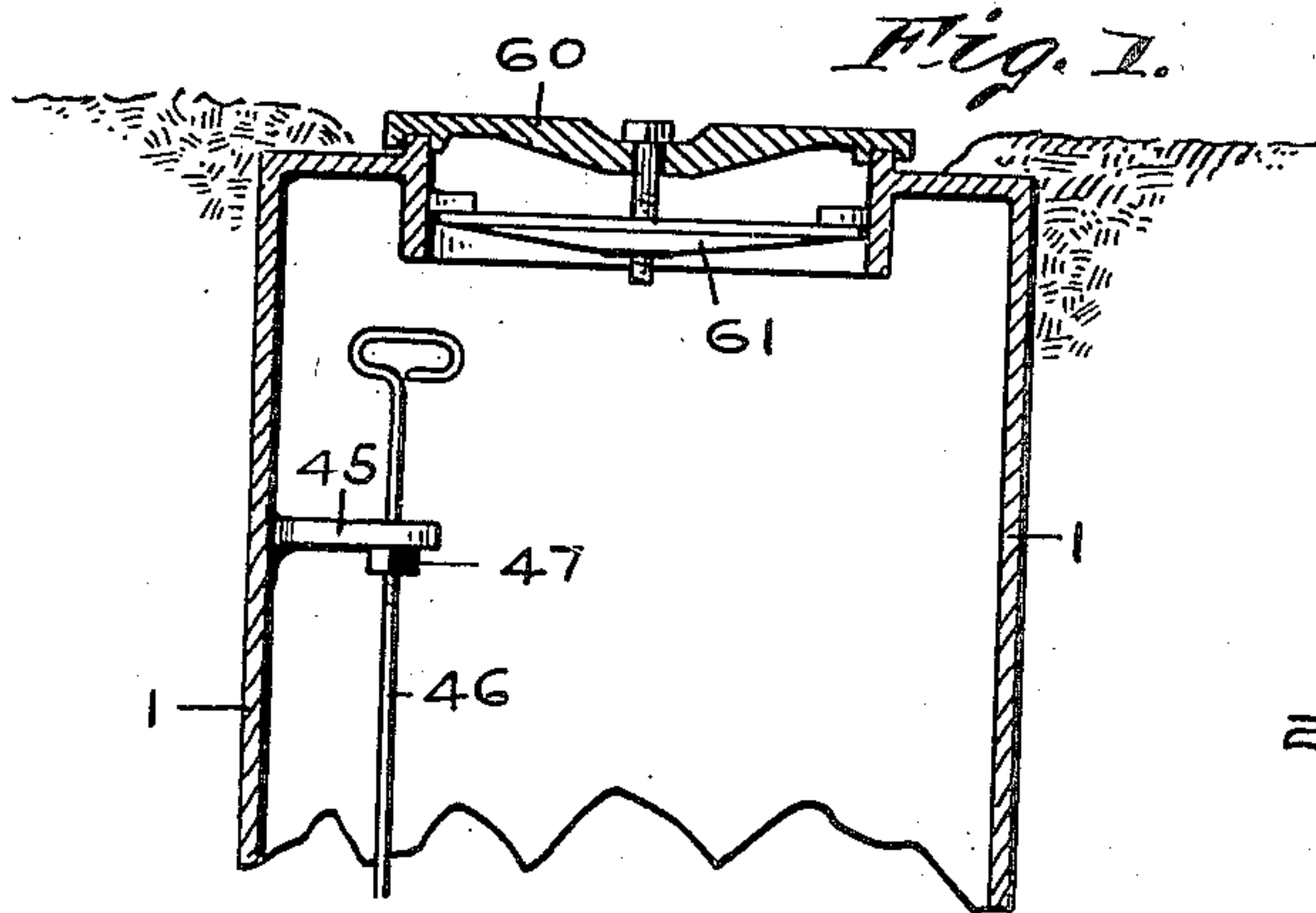
No. 845,226.

PATENTED FEB. 26, 1907.

E. H. FORD.
METER BOX.

APPLICATION FILED AUG. 3, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

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INVENTOR

Edwin H. Ford,
By Minton & Koerner
ATTYS.

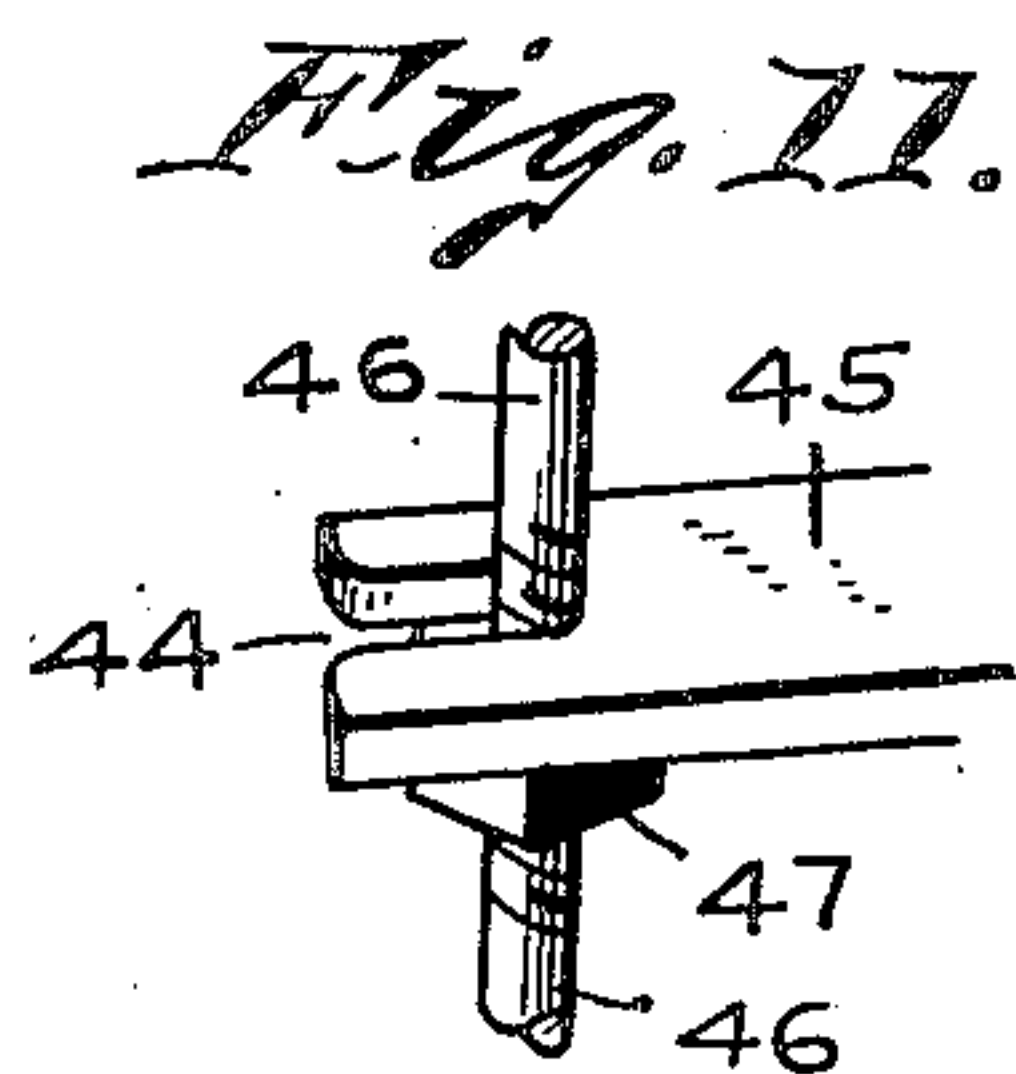
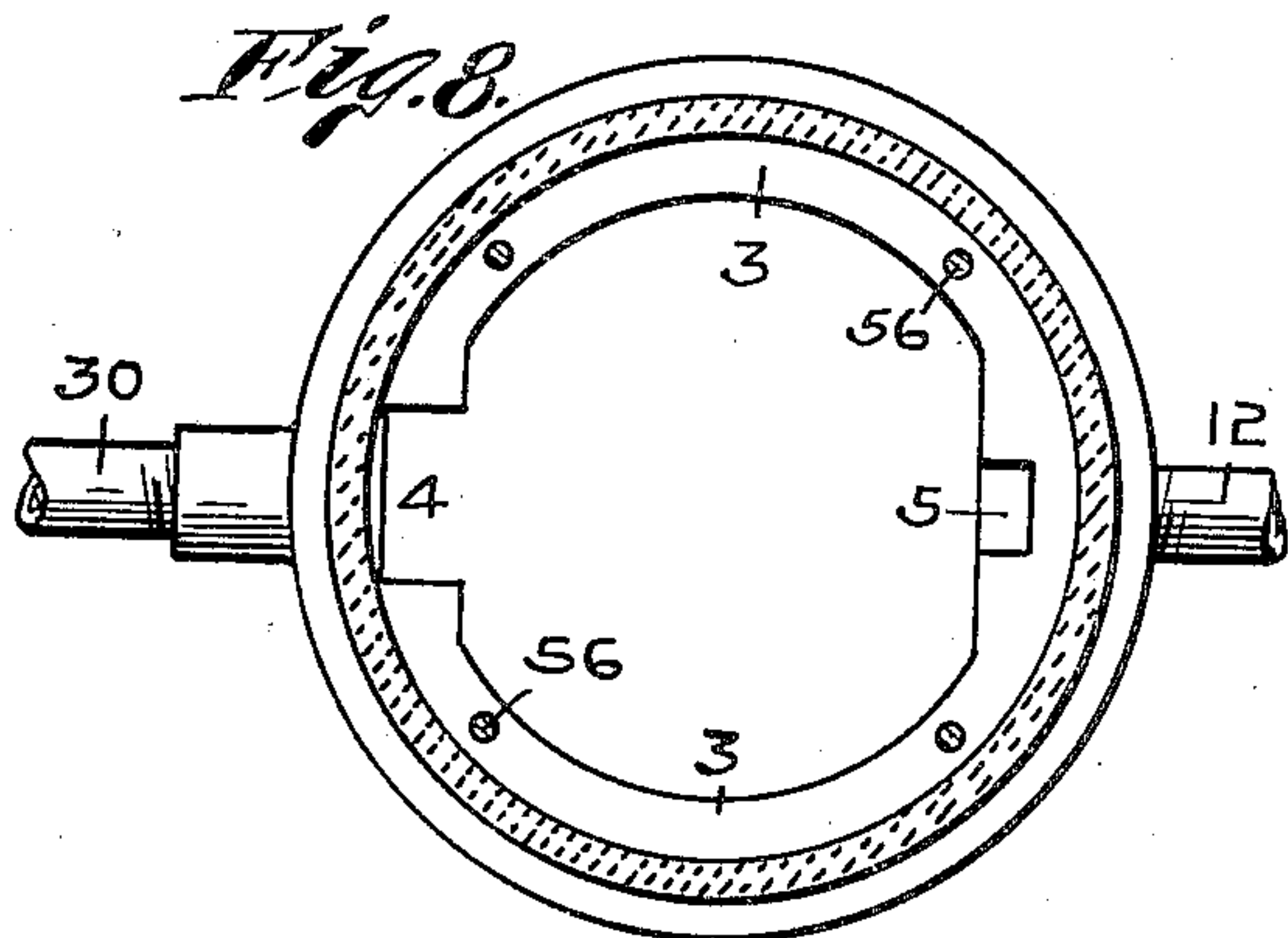
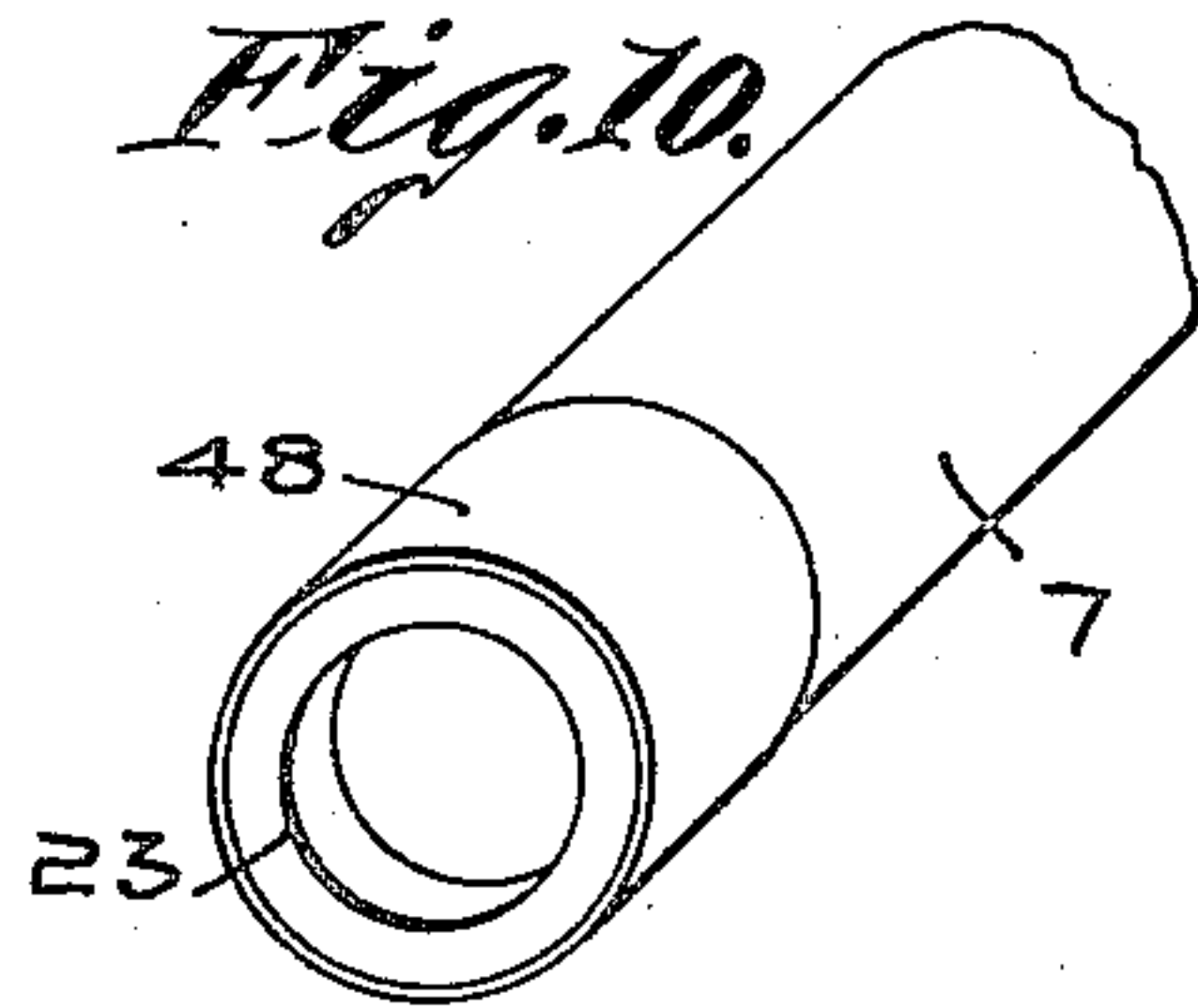
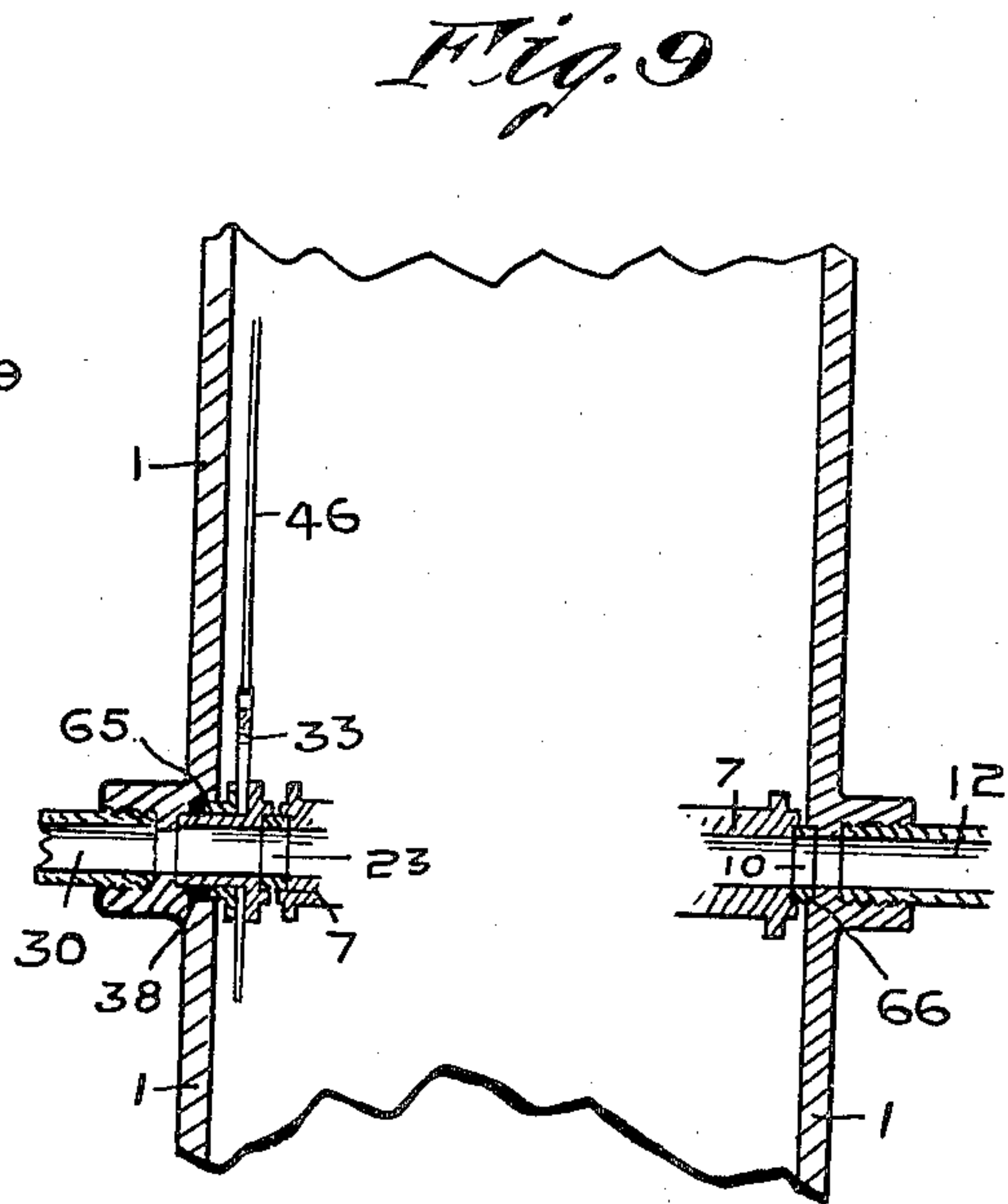
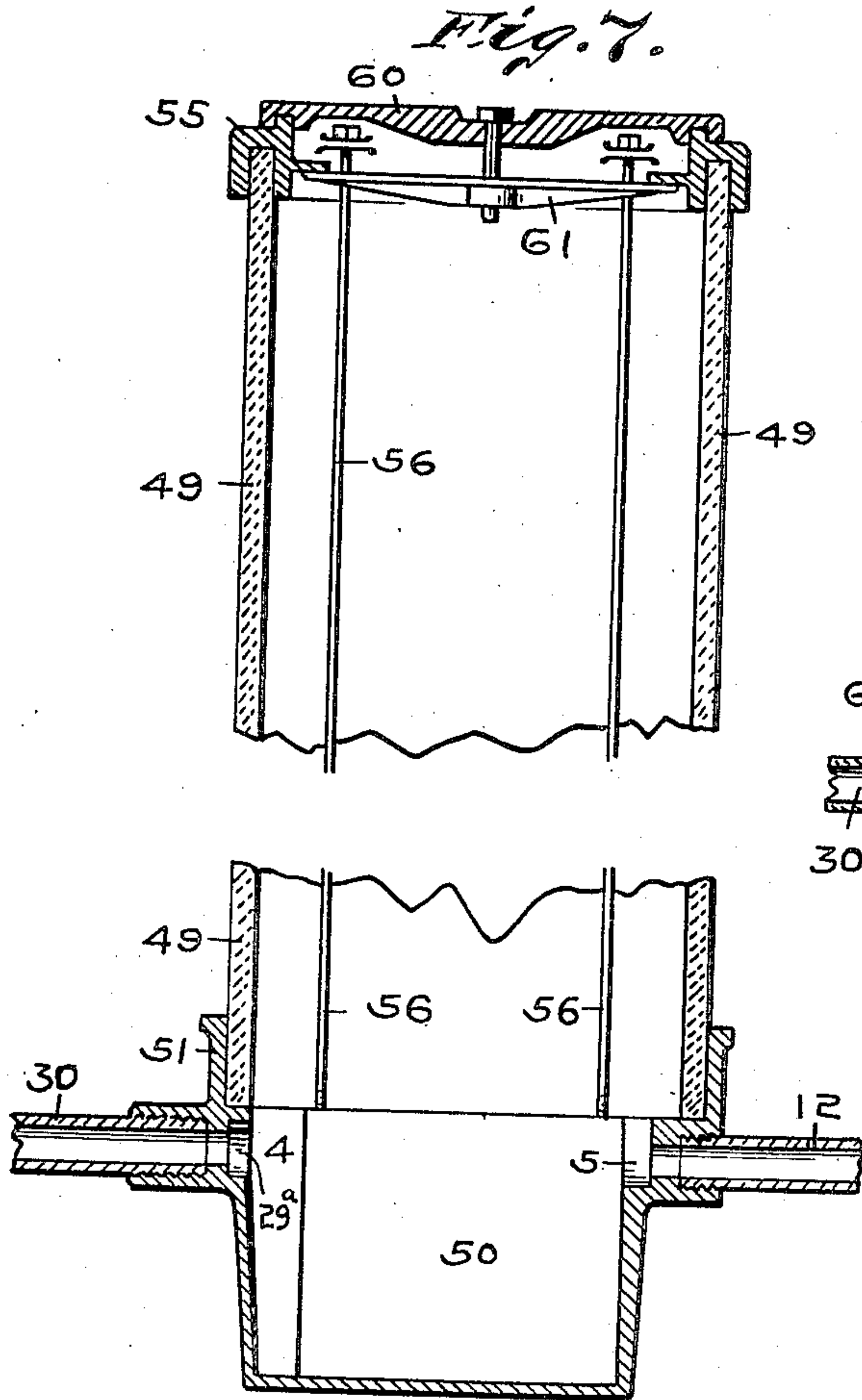
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E. H. FORD.
METER BOX.

APPLICATION FILED AUG. 3, 1906.

2 SHEETS—SHEET 2.



WITNESSES:

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UNITED STATES PATENT OFFICE

EDWIN H. FORD, OF HARTFORD CITY, INDIANA.

METER-BOX.

No. 845,226.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed August 3, 1906. Serial No. 329,104.

To all whom it may concern:

Be it known that I, EDWIN H. FORD, a citizen of the United States, residing at Hartford City, in the county of Blackford and State of Indiana, have invented certain new and useful Improvements in Meter-Boxes, of which the following is a specification.

This invention relates to a meter-box for both water or gas; and the object of the invention is to provide a box having means so arranged that any standard meter can be placed into or removed from operating position without removing the box.

The object consists, further, in a meter-box having the bottom end closed, so as to exclude all foreign matter.

The object consists, further, in a meter-box provided with means to permit the meter to be securely locked into operating position from the top of the box.

The object consists, further, in a meter-box so arranged to permit the water or gas to pass through the box and meter on the same horizontal plane line, thereby obviating any bends in the pipes in reaching the meter, and thus reducing the back pressure arising in pipes having irregular or sharp bends.

The object consists, further, in providing a meter-box in which the parts are closely nested and in which a meter without an extending dial may be employed.

I accomplish the objects of my invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical sectional view of a meter-box, showing my invention in operating position, the intermediate portion of the box being broken away. Fig. 2 is a cross-section of the box on the dotted line 2 2 in Fig. 1. Fig. 3 is a horizontal sectional view of one of the coupling-joints employed at one end of the meter. Fig. 4 is a side elevation of the construction shown in Fig. 3. Fig. 5 is a central vertical sectional view of the construction shown in Fig. 3. Fig. 6 is a cross-section of the construction shown in Fig. 3. Fig. 7 is a modified construction of my meter-box whereby I employ a vitrified tile for the casing. Fig. 8 is a cross-section of the construction shown in Fig. 7, showing the stay-rods for securing the base and upper collar together. Fig. 9 is a fragmentary detail view, in vertical section, of a meter-box, showing a modified construction for securing the meter within the casing. Fig. 10 is a perspective view of one end of the meter-pipe, showing

the thin metal sleeve for holding the rubber gaskets. Fig. 11 is a perspective view of the notched boss for securing the locking-key.

In the drawings, 1 is a meter-box comprising a hollow cylinder with a closed bottom 2. The casing 1 has an offset on its inner surface near the bottom which forms an annular shoulder 3. The shoulder provides a means for locating the couplings between the meter and the casing. The annular shoulder 3 is provided at each side with the recesses 4 and 5 to receive the ends of the pipe 7, which leads into and out of the meter 8. A rubber gasket 10 is inserted between the end of the pipe 7 and the end of the recess 5. An inlet-pipe 12 is screwed into the wall of the casing 1 and communicates with the end of the pipe 7. The opposite end of the pipe 7 engages a truing-yoke 20, which is provided with upward-flaring edges 21, so that the end of the pipe 7 will seat itself, and the truing-yoke is also provided with an integrally-extended sleeve 22. A gasket 23 is inserted between the end of the pipe 7 and the inner wall of the truing-yoke 20, so that leakage at that point is prevented. The rear surface of the truing-yoke 20 is offset to form the shoulder or extended portion 25, as shown in Fig. 3, and the extended sleeve 22 engages a longitudinal aperture in a secondary yoke 28. A secondary yoke 28 is recessed at 29, which recess engages the extended portion 25 of the truing-yoke 20. The secondary yoke 28 is prevented from turning by means of the sliding connection between the recess 29 and the shoulder 25. The yoke 28 has a slight longitudinal movement on the truing-yoke 20, so that the parts may be pressed together when the locking-key is depressed, as will be hereinafter described. The truing-yoke 20 and the secondary yoke 28 are first assembled, and a gasket 38 is then slipped upon the end of the sleeve 22 and against the end of the yoke 28, so that when the parts are placed in operating position the possibility of leakage between the casing-wall and the secondary yoke is prevented. The meter 8 is then dropped into operating position. When the yoke 20 and 28 have been assembled, the ends thereof are then placed into a snugly-fitting aperture 29^a, that extends horizontally into the casing-wall 1 from the recess 4 in the annular shoulder 3.

In order to bring pressure to bear upon the parts, and thus compress the gaskets to seal the joints at the several connections, I pass a

U-shaped key 33, having a wedge formation, into the vertical spaces 35, existing between the truing-yoke 20 and the secondary yoke 28. (See Fig. 3.) The key 33 is provided with an operating-rod 46, which extends upward toward the top of the casing 1 to be accessible to the operator.

In order to compensate for any variation in length of the meters of different manufacture, I provide a collar 40, which is slipped over the end of the sleeve 22 and against the secondary yoke 28 before the gasket 38 is placed on said sleeve. The collar 40 may be made into different widths, so that slight differences existing in meters of different manufacture may be overcome, and thereby securing sufficient pressure against the gaskets to seal the abutting connection when the key 33 is depressed. The casing 1 is provided at its upper end with an internally-located boss 45, which has a notch 44 cut in its front edge to form a seat for the stem 46 of the key 33, and by means of a nut 47 the key may be held in a depressed position.

In order to prevent the gaskets from falling away from ends of the pipe, and thus cause annoyance when placing the meter into the casing 1, I provide the ends of the pipes which receive the gaskets with a thin sleeve or band 48. The gaskets are held by the snugly-fitting walls of the sleeves; but the sleeves are permitted to move longitudinally on the pipes, so as not to interfere with the movements of the parts when the gaskets are compressed by means of the key 33.

Figs. 7 and 8 illustrate my invention when employing a vitrified tile 49 for the casing. This style of a box can be constructed more cheaply and in some ways is as desirable as a box cast wholly of metal. In this latter construction the box is formed of a closed bottom pot 50, in which the meter connections are made. The pot 50 is formed similarly as the closed end of the box shown in Fig. 1 and is provided with the upper annular flange 51, that rests against the outer surface of the tile 49. A collar 55 is placed upon the upper end of the tile, and the parts are held together by means of the tie-bolts 56, which may be located at convenient points around and adjacent to the interior wall of the tile 49 of the meter-box. The meter-box is provided with a suitable cover 60, and by means of a lock-bar 61 the top may be securely held into position.

Fig. 9 illustrates a means of placing meters in casings or cylinders having straight side walls. In this instance the internal walls of the casing at points diametrically opposite are provided with recesses 65 and 66 to receive the gaskets. After placing the gasket 10 into the recess 66 the truing-yoke 20, carrying the secondary yoke 28, and the gaskets 23 and 38 are inserted into the horizontal apertures 29^a, when the key 33 is employed

for locking the parts in the same manner as has been previously described.

Having thus fully described my said invention, what I desire to secure by Letters Patent of the United States is—

1. A meter-box comprising a closed bottom hollow casing provided with diametrically oppositely located recesses, a meter provided with an inlet and an outlet pipe, the ends of said pipe engaging with the recesses, and a locking means for locking the meter longitudinally in operating position.

2. A meter-box comprising a closed bottom hollow casing provided with diametrically oppositely located recesses, a meter provided with an inlet and an outlet pipe, the ends of said pipe engaging with the recesses, a locking means for locking the meter longitudinally in operating position, and a removable cover for the casing.

3. A meter-box comprising a closed bottom hollow casing provided with diametrically oppositely located recesses, a meter provided with an inlet and an outlet pipe, the ends of said pipe engaging the recesses, and a wedge-shaped key for locking the meter longitudinally in operating position.

4. A meter-box comprising a closed bottom hollow casing, an annular shoulder formed within said casing and provided with diametrically oppositely located recesses lying in the same horizontal plane, a meter provided with an inlet and an outlet pipe, the ends of said pipe engaging the recesses in the annular shoulder, and a locking means for locking the meter longitudinally within said casing.

5. A meter-box comprising a closed bottom hollow casing and provided with an inner annular shoulder, the said shoulder being provided with diametrically oppositely located recesses, a meter provided with an inlet and an outlet pipe; one end of said pipe engaging one of the recesses in the annular shoulder, a truing-yoke adapted to engage the opposite end of the meter-pipe, a secondary yoke to receive and hold the truing-yoke in operating position, gaskets inserted between the ends of the meter-pipe and the adjacent end wall of the recesses, the secondary yoke and casing and a locking means for locking and tightening the meter in operating position.

6. A meter-box comprising a closed bottom hollow casing provided with diametrically oppositely located recesses, a meter provided with an inlet and an outlet pipe, the ends of said pipe engaging the recesses, gaskets inserted between the ends of the meter-pipe and the recesses, means surrounding the ends of the meter-pipe and the gaskets to hold the latter in position, and a locking means for locking the meter longitudinally in operating position.

7. A meter-box comprising a closed bot-

tom hollow casing provided with diametrically oppositely located recesses, a meter provided with an inlet and an outlet pipe; the ends of said pipe engaging the recesses, a locking means for locking the meter longitudinally in operating position, and means for holding the locking means in position.

8. A meter-box comprising a closed bottom hollow casing provided with diametrically oppositely located recesses, a meter having an inlet and an outlet pipe in which one end of said pipe engages one of said recesses, a gasket adapted to be inserted between the said pipe and recess, a truing-yoke to receive the opposite end of the meter-pipe, a gasket adapted to be inserted between the truing-yoke and the pipe, a secondary yoke to slide on the truing-yoke, a gasket adapted to be inserted between the end of the secondary yoke and the casing, and a wedge-shaped

key adapted to be passed between the yokes for locking the meter into operating position.

9. A meter-box comprising a separatable base and top and having its body composed of a separable member of different material, means for holding the top and the base together, the base being provided with diametrically oppositely located recesses, a meter provided with an inlet and an outlet pipe, the ends of said pipe engaging the recesses, and a locking means for locking the meter longitudinally in operating position.

In testimony whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 17th day of July, A. D. 1906.

EDWIN H. FORD. [L. S.]

Witnesses:

E. W. WOERNER,
FRANK C. DYNES.