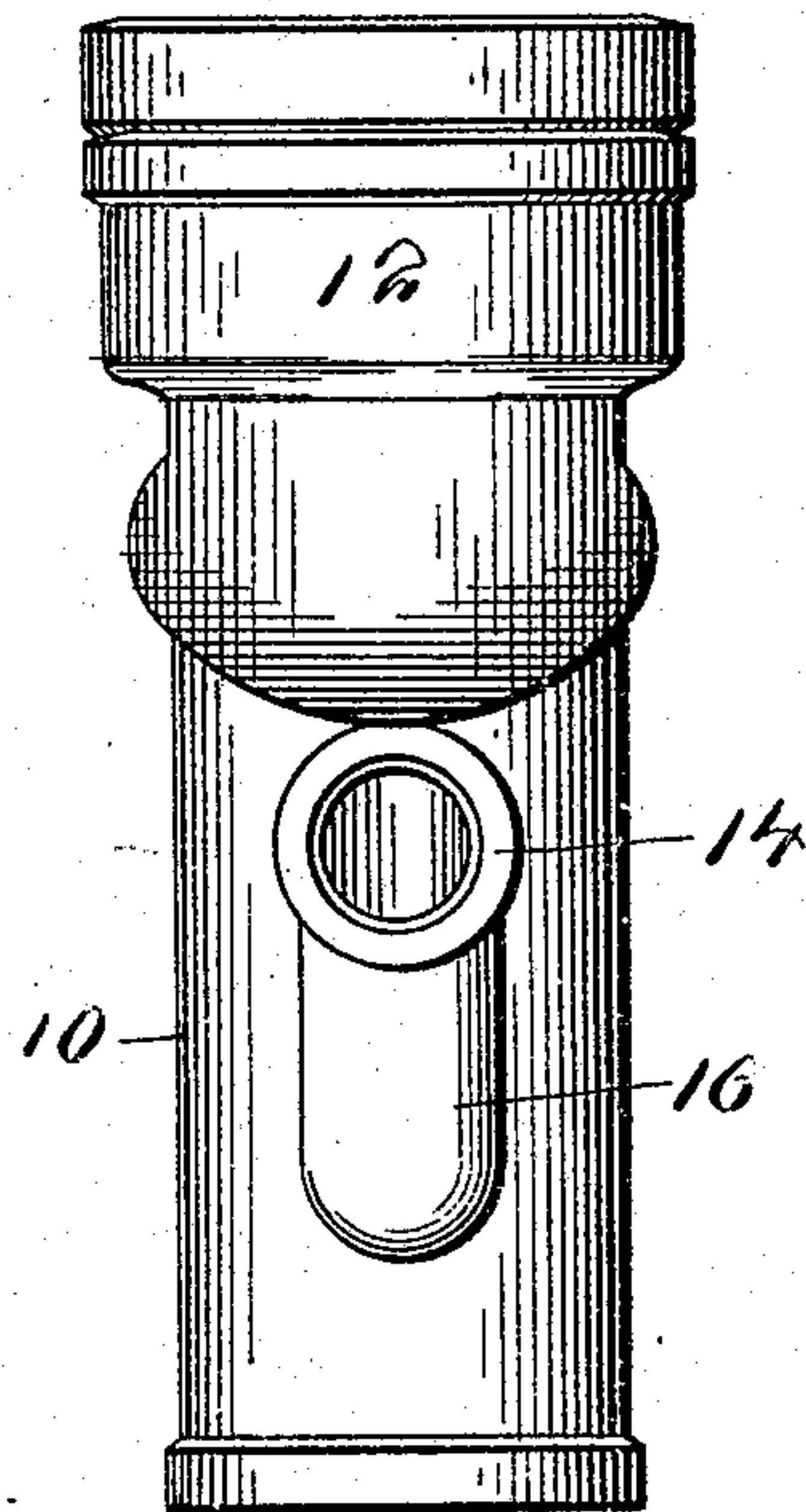
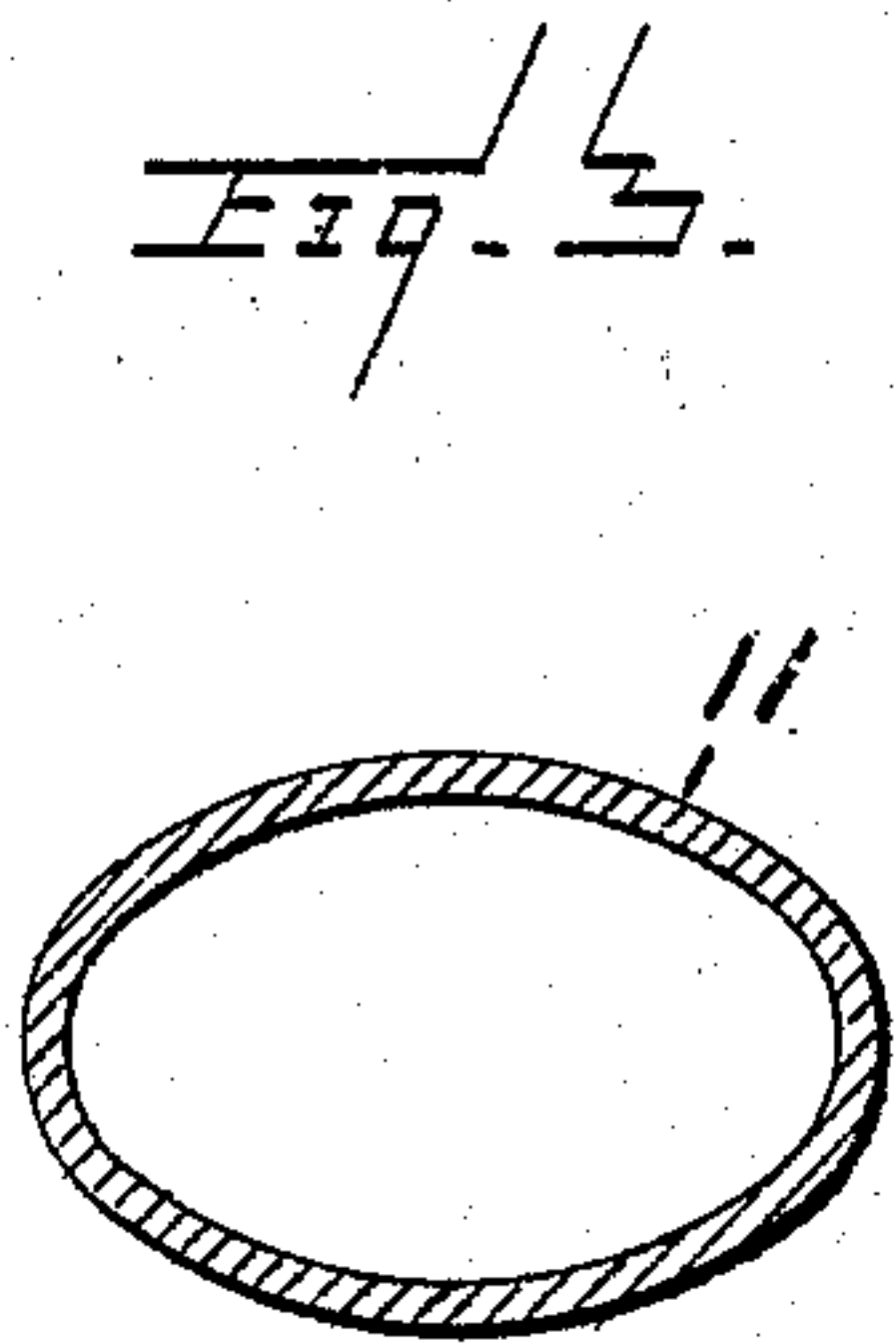
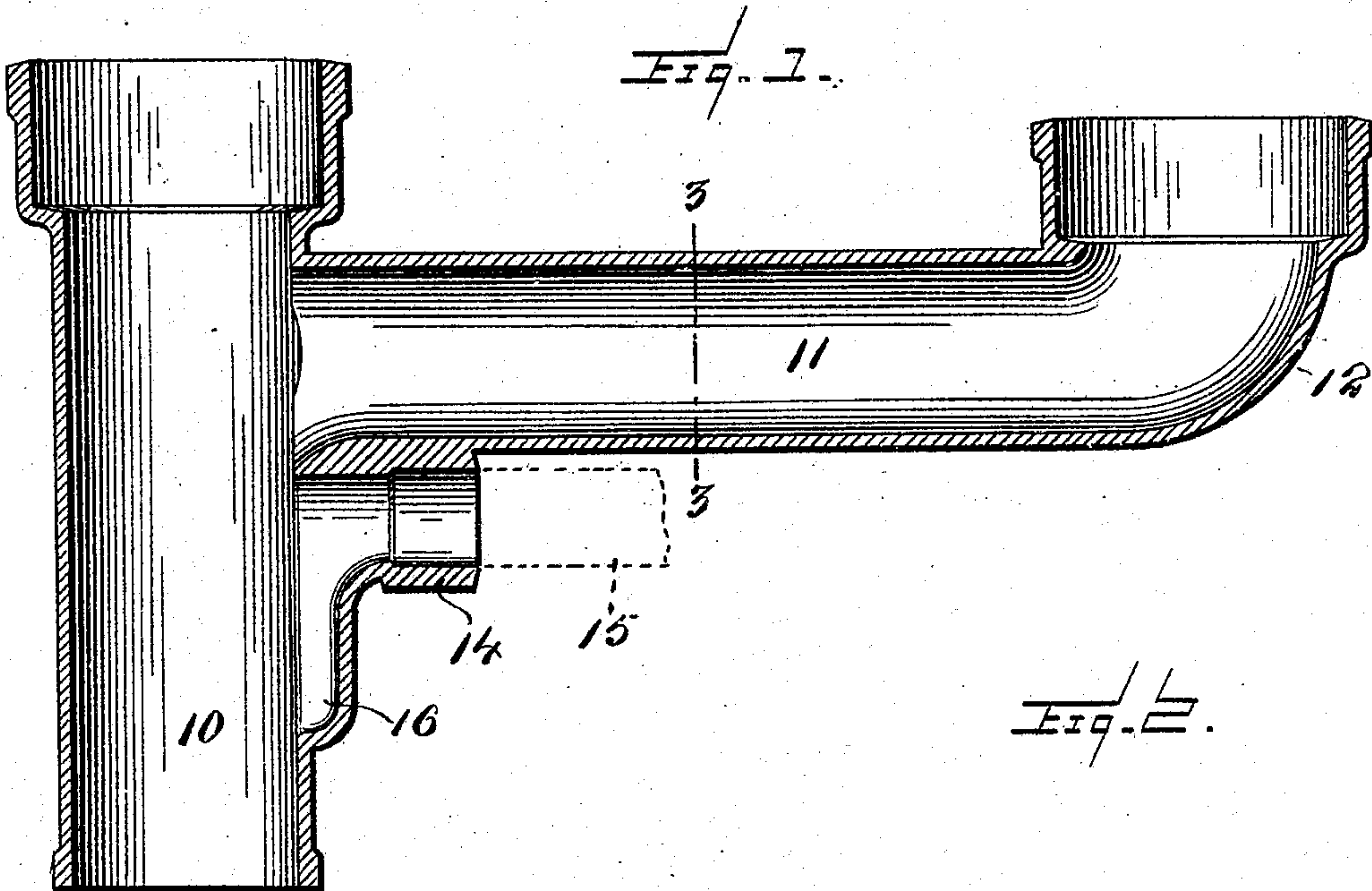


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COMBINATION AND BATH FITTING.  
APPLICATION FILED APR. 20, 1909.

936,791.

Patented Oct. 12, 1909.  
2 SHEETS—SHEET 1.



WITNESSES

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INVENTORS  
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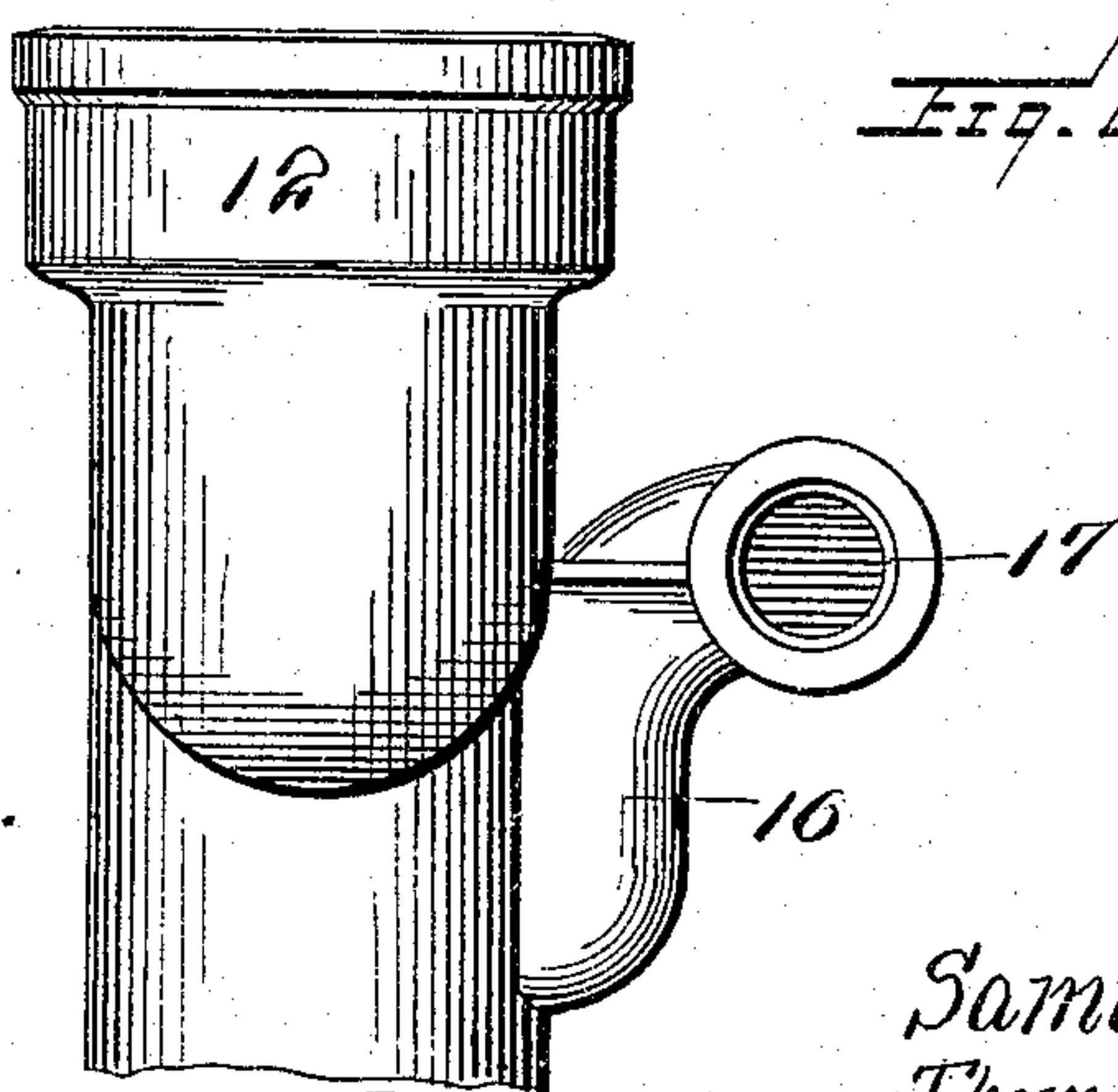
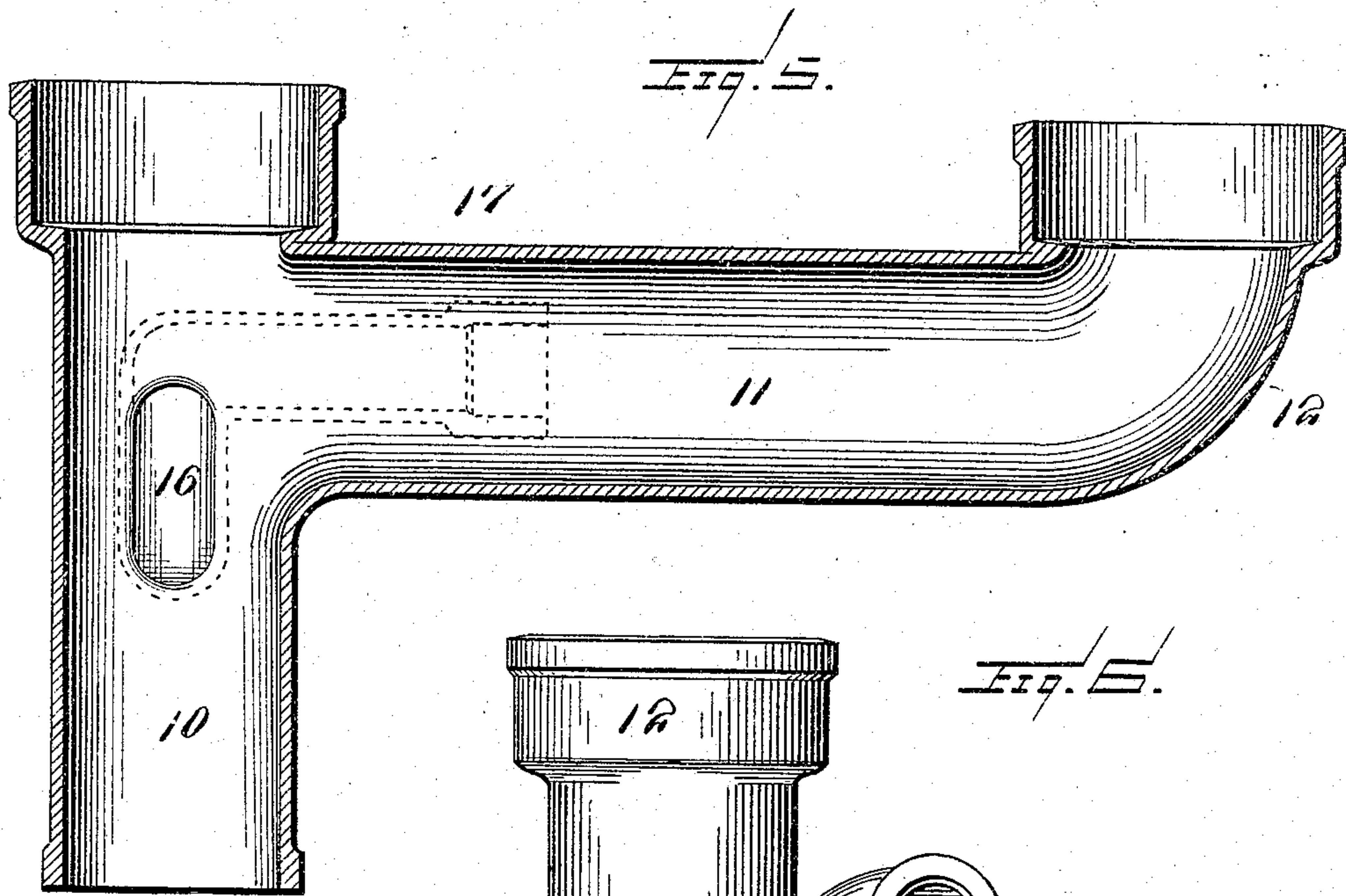
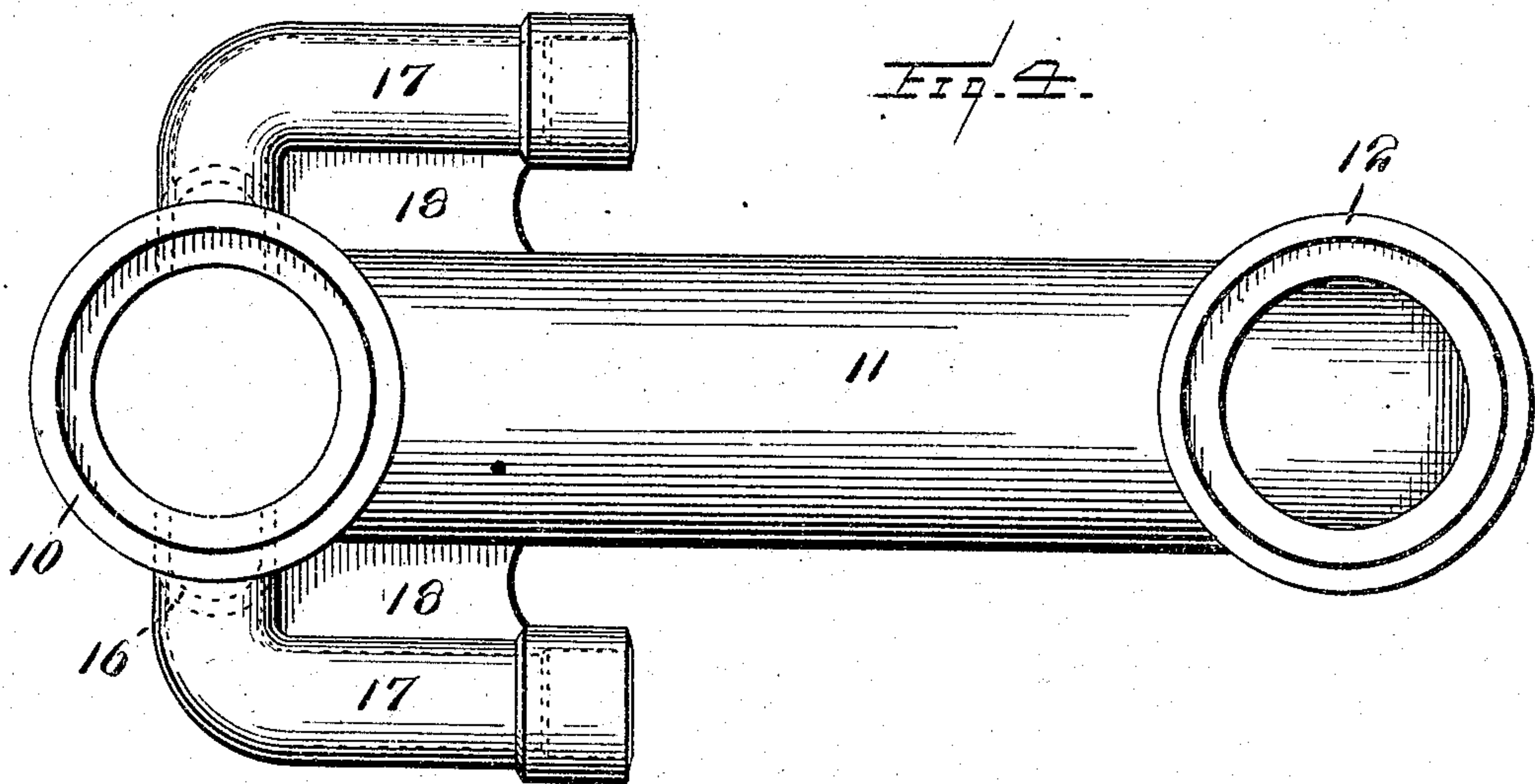
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# UNITED STATES PATENT OFFICE.

THOMAS A. MARTIN AND SAMUEL BRAMS, OF CHEBOYGAN, MICHIGAN; SAID BRAMS  
ASSIGNOR TO SAID MARTIN.

## COMBINATION AND BATH FITTING.

936,791.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed April 20, 1909. Serial No. 491,139.

*To all whom it may concern:*

Be it known that we, THOMAS A. MARTIN and SAMUEL BRAMS, citizens of the United States of America, residing at Cheboygan, in the county of Cheboygan and State of Michigan, have invented certain new and useful Improvements in Combination and Bath Fittings, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to an improvement in pipe-fittings, and relates more specifically to a combination and bath fitting, especially designed for use in making connection from the various bath room accessories to the vent stack.

The main object of the invention is to provide a fitting by means of which the connections with the washstand, the bath tub and the water closet bowl of bath rooms are connected direct with the vent stack and thereby render it an easy matter to comply with the sanitary regulations and requirements in force in most municipalities at the present time.

Another object of our invention is to provide a fitting with means whereby the water flowing thereinto from a drain pipe connected to the fitting will not be interfered with by a descending column of water flowing into the fitting from a higher elevation.

A still further object of our invention is to provide a fitting which may be advantageously used in places where a comparatively small amount of space is provided between the floor and ceiling for the connection with the fitting of the drain pipe from the washstand or bath tub, or both, as the case may be.

With the above and other objects in view, which will more fully appear hereinafter as the invention is further described in detail, the invention consists in the construction fully shown in the accompanying drawings and to which reference will be had during the description, and wherein like numerals of reference will be employed for indicating like parts throughout the different views, in which:—

Figure 1 is a central vertical sectional view of a fitting constructed in accordance with one form of our invention, Fig. 2 is a front elevation thereof, Fig. 3 is a cross sectional view of the laterally-extending pipe arm of the fitting in the form of construc-

tion shown in Figs. 1 and 2, Fig. 4 is a top plan view of a modified form of fitting, Fig. 5 is a central vertical sectional view of a further modification, and Fig. 6 is a side view thereof.

In many municipalities, the regulations regarding the drain connections with the water closet bowl, washstand, and bath tub, require that such drain connections be direct with the vent and stack and prohibit the connecting of one drain into another drain leading to the vent stack. In order to meet the requirements as outlined above, and lead each drain directly into the stack is the primary object of our invention, and to accomplish the same, we have devised a fitting, preferable embodiments of which are shown in the accompanying drawings, and will now be described in detail.

In the plumbing trade, those fittings which are interposed in the vent stack for the purpose of making connection with the various accessories of the bath room, are of two general types, viz: that known as an ordinary T fitting, and that known in the trade as the T Y fitting. Our invention appertains particularly to the latter type, without however being restricted to use in connection with this type of fitting alone.

In general construction, the fitting comprises a vertical pipe-section 10, of a suitable size to form the soil pipe, and which pipe section is interposed in the vent stack (not shown) in a manner well known to those skilled in the art. This vertical pipe-section 10 is provided with a laterally-extending pipe-arm 11, which, is preferably formed integral with the pipe-section 10, and is provided at its outer end with an upturned elbow 12, adapted for direct connection with the closet.

As shown in Fig. 1, the laterally-extending pipe-arm, 11, is made oval in cross-section, and while we prefer to form this pipe-arm of this shape in this particular form of construction, yet this particular shape shown and described is not essential to the operation of the device. However, we obtain certain advantages in using this particular shape of pipe-arm under certain conditions, as it affords a greater clearance below the pipe-arm for the connections that are made with the pipe section 10, for the washstand and bath tub, which latter connections are independent of the pipe-arm 11. As an instance,



it frequently occurs that the depth of the space between two joists does not exceed eight inches, and ordinarily, such space does not exceed twelve inches, and, as the top of the elbow 12 and the lower wall of the pipe arm 11 must not project respectively above or below the two joists or beams between which the pipe-arm extends, there is insufficient room, say where the space is but eight inches, to admit of independent connections being made with the pipe-section 10 and the washstand and bath tub. By making the pipe-arm oval in cross-section, it is evident that the distance from the top of the elbow 12 to the lower edge of the pipe-section 11 is considerably lessened, and there is thereby afforded sufficient clearance below the pipe-arm (without exceeding the depth of the space between the joists) to permit of independent connections being made between the pipe-section and the washstand and bath tub.

In order that the independent connection as above stated may be made, we provide the wall of the pipe section 10 intermediate the ends thereof, with a laterally extending integral nipple 14. In the construction shown in Fig. 1, this nipple is provided in the front of the pipe-section 10, and directly beneath the inner end of the pipe-arm 11. In this construction, a single pipe connection 15 leads from the pipe-section 10, to the bath room, where connection is made with a T or other form of fitting to both the washstand and the bath tub; the connection 15 constituting a direct connection with the pipe-section 10, for both the washstand and the bath tub, such connection being entirely independent of the connection with the closet bowl made through the medium of the pipe-arm 11.

Immediately below the nipple 14, the wall of the pipe section 10 is laterally off-set to provide an elongated vertically extending air chamber 16 having the top thereof opening into the inner portion of the nipple as clearly shown in Fig. 1, the nipple 14 being of greater length than the width of the chamber 16 whereby the said nipple will project from and at right angles with respect to the top of the said chamber 16, the purpose and function of which is to prevent a column of water in the vent stack from interfering with the drain from any connection below the point from which the water is falling. It is well known, that a quantity of water discharged into a soil pipe or vent stack forms into a hollow column and creates a vacuum in the center thereof, and that if the wall of the soil pipe be unbroken or uninterrupted throughout, such column of falling water will retard any water flowing from the drains on a lower floor by reason of the aforesaid vacuum, thereby preventing the discharge from the lower drain or drains until the column of water has passed the lower drains. This is effectually obviated

however by the provision of the air-chamber 16, as should a column of water be falling in the pipe-section 10, and at the same time water should be discharged into the drain connection 15 at a point below that where the water in the pipe-section 10 entered the soil pipe, it will be evident that the vacuum in the soil-pipe is broken the instant that such column of water reaches the air-chamber 16, and the simultaneous drain of the connection 15 is not therefore interfered with.

In Fig. 4 of the drawings we have shown a modification of the invention, wherein a fitting involving the same principles as that shown in Fig. 1, and above described is disclosed. In this construction, the pipe-section 10, laterally extending arm 11, and elbow 12 are substantially the same as in the construction shown in Fig. 1, the exceptions being that the pipe section is made circular in cross-section instead of oval as shown in Fig. 1 and the air chamber projects a greater distance exteriorly of the pipe section chamber. In this construction, the nipple for the independent drain or drains from the washstand and the bath tub are led into the pipe-section from the sides thereof, instead of in the front as shown in Fig. 1. Two nipples or pipe-extensions 17 are shown, one at each side, and these lead into the pipe-section through the air chamber 16 exterior of the pipe-section at a point below the inner end of the pipe-section 10. These nipples or pipe-sections are preferably braced by webs 18 as shown, in cases where the nipples are extended any distance along the pipe-arm 11, though it will be evident that if the nipples or pipe extensions 17 are made comparatively short, these webs may be dispensed with. With the fitting as shown in this construction, separate and independent connection with the washstand and the bath tub are provided for, one on one side of the pipe-section, and the other on the opposite side of the pipe-section, both communicating direct with the vent stack. It is evident that in this form of construction, by dispensing with one or the other of the nipples or pipe-extensions 17, we provide either a left hand or a right hand fitting, the single nipple in such instance acting as the drain for both the washstand and the bath tub.

The object of providing the webs 18 where the nipples or pipe-extensions lie a distance away from the pipe-arm as shown in Fig. 4, is to strengthen and support these pipe extensions, the latter being spaced from the pipe-arm so as to afford sufficient clearance for the turning of an elbow or T into engagement with the nipple or nipples without striking the pipe-arm 11.

In the construction shown in Fig. 5, the manner in which the nipple or pipe-exten-



sion 17 leads into the air chamber 16 exterior of the pipe-section 10, is more fully shown, the construction herein shown being identical with the construction shown in Fig. 4, excepting that a single nipple or pipe extension is shown instead of two independent nipples or connections as described above for Fig. 4. This fitting of course may be made either right or left handed, as may be desired.

With each of the constructions shown and described as above, it is to be noted that the underlying principle involved therein is to provide a drain connection for the bath tub and washstand that is wholly independent of the drain connection for the closet bowl, and which connection or connections is or are direct with the vent stack, and while we have herein shown and described in detail certain embodiments of the invention as it is practiced by us, yet it will be evident that alterations and changes may be made therein without departing from the general spirit of the invention as outlined above, and as defined by the scope of the appended claims.

Having fully described our invention, what we claim is:

1. A pipe fitting comprising a vertical pipe section constituting a main waste conduit and adapted to be interposed in a vent pipe, a laterally extending arm constituting a branch waste conduit formed integral with the wall of and opening directly into said section and discharging waste in the line of the passage of the waste discharged from other sources passing through said section, said pipe section having its wall off-set laterally to provide an air chamber, said pipe arm and air chamber wholly independent of each other and both opening into the pipe section in direct alinement therewith, and a lateral nipple formed integral with said pipe section and opening into said air chamber for discharging waste therein, said nipple constituting means wholly independent of said pipe arm for discharging waste into said air chamber, said air chamber constituting means for breaking up the descending column of waste through the pipe section whereby the discharge of waste from the air chamber into the pipe section can be had simultaneously with the discharge of waste into the pipe section from a source above the air chamber.

2. A pipe fitting comprising a vertical pipe section constituting a main waste con-

duit and adapted to be interposed in a vent pipe, a laterally extending pipe arm constituting a branch waste conduit formed integral with the wall of and opening directly into said section, for discharging waste in the line of the passage of the waste discharged from other sources passing through said section, said pipe section having its wall off-set laterally and wholly independent of said pipe arm and forming a vertically extending air chamber opening directly into said pipe section and depending below the bottom of the pipe arm, and a lateral nipple formed integral at its upper portion with the wall of the pipe section above the off-set and formed integral at its lower portion with the top of the off-set and opening directly into the upper portion of said air chamber, said nipple constituting means wholly independent of said pipe arm for discharging waste into said air chamber, said air chamber constituting means for breaking up the descending column of waste through the pipe section whereby the discharge of waste from the air chamber into the pipe section can be had simultaneously with the discharge of waste into the pipe section from a source above the air chamber.

3. A pipe fitting comprising a vertical section constituting a main conduit, and adapted to be interposed in a vent pipe and off-set laterally intermediate its ends to provide an air chamber opening directly into said pipe section, a laterally extending pipe arm constituting a branch waste conduit formed integral with the wall of and opening directly into said pipe section and discharging waste in the line of passage of the waste discharged from other sources, passing through said section, and a nipple communicating directly with said air chamber for discharging waste therein and wholly independent of said pipe arm, said air chamber constituting means for breaking up the descending column of waste through the pipe section whereby the discharge of waste from the air chamber into the pipe section can be had simultaneously with the discharge of waste into the pipe section from a source above the air chamber.

In testimony whereof we affix our signatures in the presence of two witnesses.

THOMAS A. MARTIN.  
SAMUEL BRAMS.

Witnesses:

ARTHUR HILLIAR,  
LILLIAN A. SHOEMAKER.