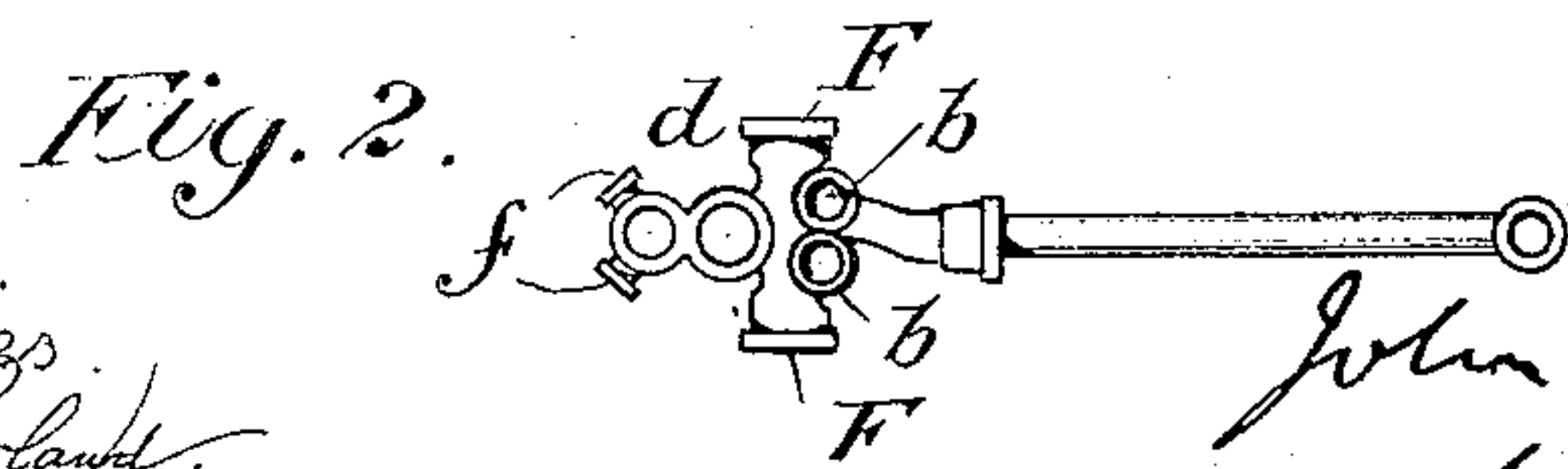
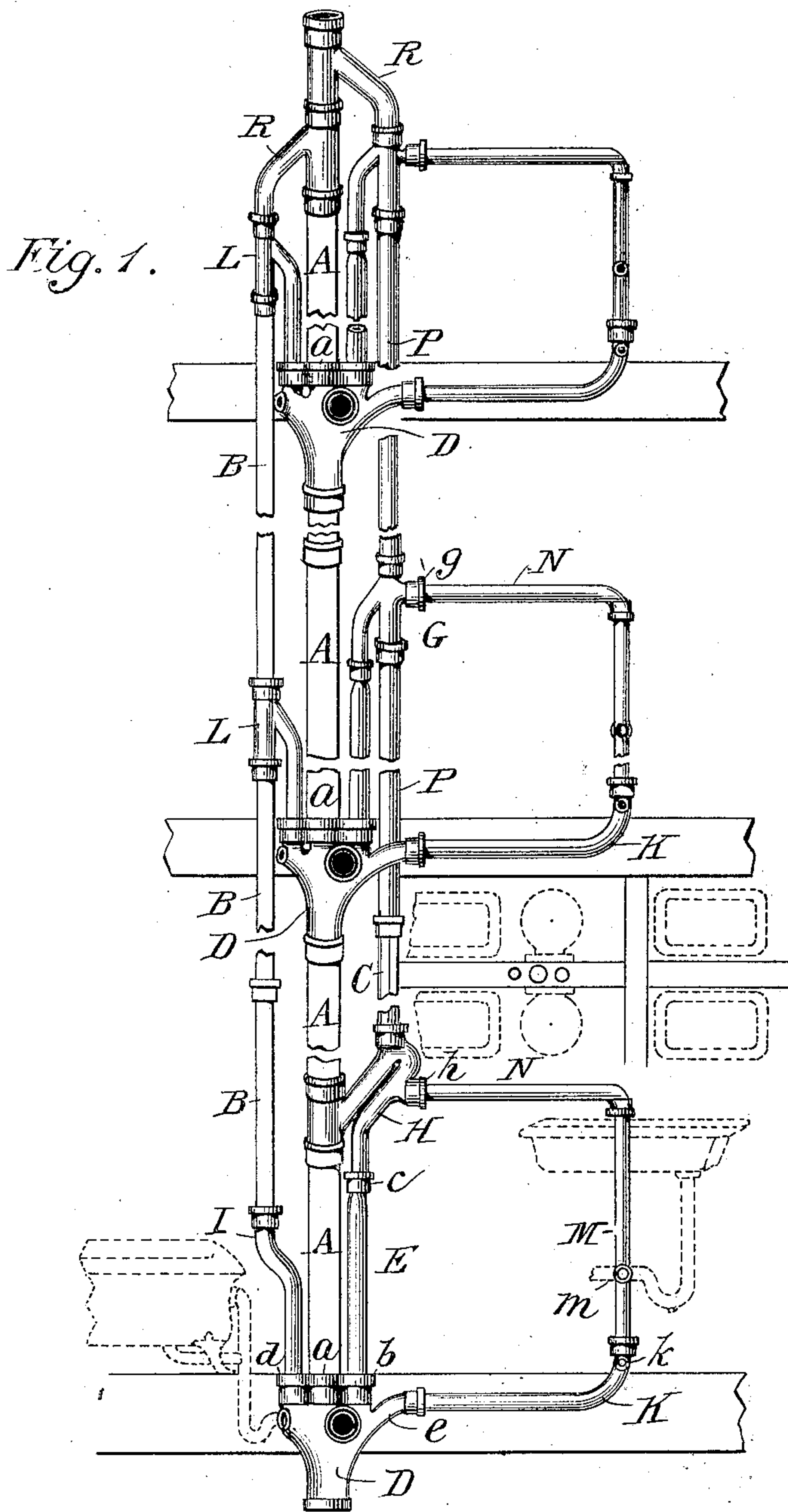


No. 897,283.

PATENTED SEPT. 1, 1908.

J. L. FRUIN.  
PLUMBING SYSTEM.  
APPLICATION FILED OCT. 16, 1907.



Witnesses  
Edward Dowland  
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# UNITED STATES PATENT OFFICE.

JOHN L. FRUIN, OF NEW YORK, N. Y.

## PLUMBING SYSTEM.

No. 897,283.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed October 16, 1907. Serial No. 397,597.

*To all whom it may concern:*

Be it known that I, JOHN L. FRUIN, a citizen of the United States of America, and a resident of Brooklyn borough, New York city, and State of New York, have invented certain new and useful Improvements in Plumbing Systems, of which the following is a specification.

The object of my invention is to provide an improved plumbing system in which a single main waste pipe or line is provided with suitable tees and other fittings so that a double system of closets, baths and sinks can be taken care of, and two independent main vent pipes are used so that each of the two systems is vented independently of the other, while both systems discharge through a common waste.

In arranging this system I have had in mind the employment of as small a number of special fittings as possible so that the system can be set up with least complications and with least liability to breakage or leakage. The main fitting is a triple vent sanitary cross which is specially designed for this particular system. The other special fittings are a cross intersection, a short pattern revent, a long pattern revent, a revent U, a jump-over, a revent F, and a waste sweep with special clean-out, some of which special fittings are subjects of other applications by me.

In the accompanying drawing Figure 1 is a front view of the system showing the special pipes and fittings in elevation; the main waste and vent pipe in full lines and the various fixtures which are to connect with the system in dotted lines. Fig. 2 is a top view of the sanitary cross with triple vent.

Same letters indicate similar parts in the different figures.

A indicates the lengths of straight pipe constituting the main waste pipe which leads, as is well understood, from the sewer or cellar to the roof of the building in which the system is set up.

B indicates the straight lengths of pipe of what for convenience may be called the left hand main vent pipe.

C represents a piece of straight pipe of which such part of the other main vent pipe is constituted as is not composed of jump-overs and other special fittings.

The number and length of the straight

pipes A, B, C, will vary with the stud of the building or distance between floors.

At each floor is located the special sanitary cross D, which, as before stated, is provided with a triple vent. The middle hub *a*, connects with the main waste pipe and receives the flow therefrom. The right-hand vents *b, b*, connect with the U vent E, which enables the closet inlets F, F, to be vented independently for the necessary distance before, by the going together of the U at the top, the vents merge together in one at the hub *c*, whence they connect by the short pattern revent G, to the main vent pipe on that side of the system. This construction is for all the floors except the lower in which case the revent U becomes a part of the main vent and is connected with the cross intersection H.

The third vent *d*, of the sanitary cross connects with the revent pipe I, which connects with the main vent pipe of the other part of the system. In addition to the two closet inlets F, F, the sanitary tee D, has an off-set hub *e*, which connects with the waste sweep K, on one side of the system and it has two tapped inlets *f, f*, which connect with the discharge pipes of bath tubs or sinks on the other side of the system both of which inlets are vented through the hub *d*, and revent I. This applies to the lower floor, and on the other floors the connection from the hub *d*, to the main vent pipe is by means of the long pattern revent L.

The waste sweep K, has a clean-out opening *k*, which terminates in a hub to which is connected the double sink waste and vent M, provided with the tapped side inlets *m*, adapted to receive the discharge pipe of two sinks, one on each side of the pipe. This pipe is connected by the revent N, to the hub *h*, of the cross intersection on the lower floor, or to the hub *g*, of the short pattern revent G, on the other floors.

The change in construction from the first to the second floors arises from the fact that the main vents for both sides of the system start on the lower floor and have to be continued to the roof, while the venting of each sanitary tee has to be brought out of line into these main vent pipes, and therefore revent fittings are required. As the line of the main vent at each floor except the first would interfere with the off-set inlet *e*, of the sanitary tee if a straight pipe length were used, there-



fore, instead of a straight pipe, I employ a jump-over P, which curves out of the way of said inlet returning to the vertical line above it.

At the top of the system two short revents R, R, are used one above the other to bring the two main vent pipes into the main waste pipe which passes to the roof of the building as a common vent for the entire system; not having received any flow above the lowest sanitary tee.

It is obvious that the employment of this improved system accommodates a very large number of fixtures such as closets, sinks and bath tubs, which may be arranged either in single or double sets, and that each fixture is so far independently discharged and vented that the operation of one fixture does not interfere in the way of clogging, siphoning or back-drafting with any other fixture, while the entire system is concentrated to make eventually one discharge to the sewer and one vent to the roof.

The great advantages of this simplicity of

construction with multiplicity of results will, I think, be obvious to architects, builders and plumbers without further description.

I claim:

A plumbing system which consists of a main waste pipe and two main vent pipes provided at each floor with a triple vent sanitary tee and suitable vent and waste fittings whereby at each of said sanitary tees an independent single or double system of fixtures may be discharged through a common waste pipe and vented through each of said main vent pipes without interfering with each other, and having all the vent pipes brought together to the common vent at the venting end of said system.

Signed at New York city this 11th day of September, 1907.

JOHN L. FRUIN.

Witnesses:

MICHAEL FARRELL,  
W. P. PREBLE, Jr.