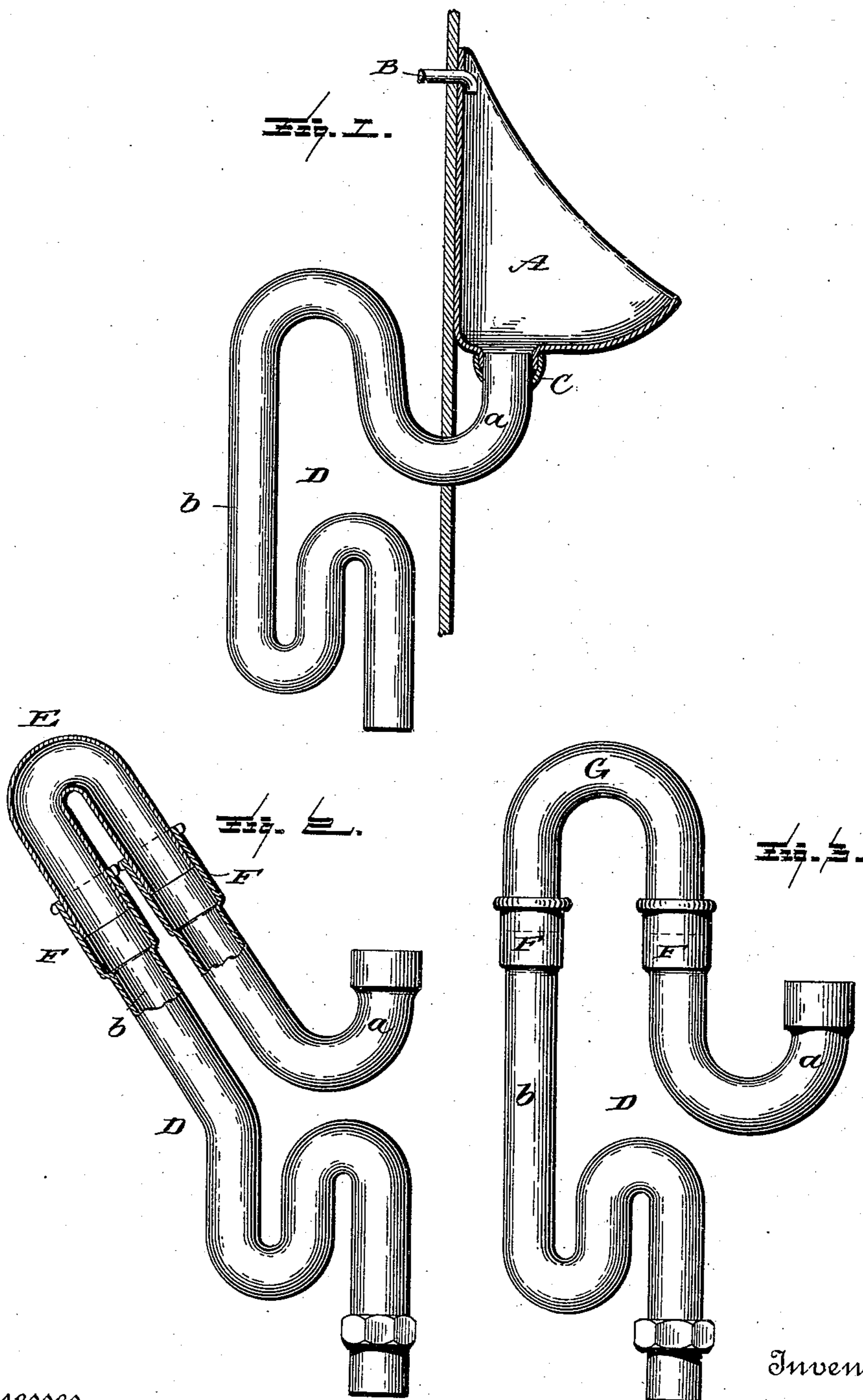


(No Model.)

L. J. GRIFFIN.
DISCHARGE PIPE FOR URINALS.

No. 446,345.

Patented Feb. 10, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

LAWRENCE J. GRIFFIN, OF BARRE, VERMONT.

DISCHARGE-PIPE FOR URINALS.

SPECIFICATION forming part of Letters Patent No. 446,345, dated February 10, 1891.

Application filed November 20, 1890. Serial No. 372,009. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE J. GRIFFIN, a citizen of the United States, residing at Barre, in the county of Washington, State of Vermont, have invented certain new and useful Improvements in Discharge-Pipes for Urinals, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in discharge-pipes for urinals, water-closets, and analogous uses; and it has for its object, among others, to provide a simple, cheap, and efficient attachment to
15 any pattern of urinal, or closet, slop-hopper, or school-closet. No special make or pattern is necessary, the attachment being such as to admit of its ready application to any and all urinals or closets in use. I do not ordinarily
20 employ a tank, using direct pressure, although tank-pressure may be provided, if desired or more convenient. By my construction closets or urinals are automatically flushed and will flush themselves without any pull-handle attachment. They will flush regularly, and by
25 increasing or diminishing the supply will flush as often as desired. I dispense with complicated valves and other accessories which are liable to get out of order.

30 Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

35 The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

40 Figure 1 is a vertical section through a urinal with the discharge-pipe thereof in side elevation. Fig. 2 is a side elevation of a modified form of discharge-pipe with parts broken away and parts in section to better illustrate the construction. Fig. 3 is a side elevation of the form of pipe shown in Fig. 1
45 with an adjustable member.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates a urinal of any
50 of the known constructions, and B is the water-supply, which may be from any suitable source—from a tank, if desired.

C is a coupling of any suitable construction for connecting the discharge-pipe to the urinal. The urinal is supported on the wall 55 by any desired means.

D is the discharge-pipe, which, as shown in Fig. 1, comprises a double siphon, the short leg *a* of the upper siphon being connected with the urinal, and an air space or chamber 60 *b* being formed between the two siphons. Two traps are thus formed, one at the urinal and the other at the lower end of the attachment, the said air space or chamber being formed between the water-level in the two 65 traps. When first starting, the lower trap fills with water, and compression of the air between the two waters forces the water over the lower trap and creates a vacuum on the upper water and siphons it out, and it then 70 fills up, as before, and will siphon out. The time of discharge is regulated by the flow of water into the fixture.

This attachment may be formed of any suitable material—such as lead, brass, copper, 75 iron, glass, earthenware, or other substance suited to the purpose—and may be made in various forms without departing from the spirit of the invention. In Fig. 2 I have shown one such modified form, wherein a substantially U-shaped piece E is provided, which is adjustable, connected to the other portions of the attachment in any suitable manner, one way being shown in said Fig. 2, wherein the upper ends of the other portions are formed 80 with enlargements or cups F, in which the legs of the U-shaped piece are adjustable and wherein they may be secured in their adjusted positions in any suitable manner—such, for instance, by soldering, frictional con- 85 tact of the parts, a set-screw, or by any other desirable means. This adjustable portion gives the required depth of water in the bowl and also allows the lower part of the attachment to be turned around sidewise to fit drain- 90 pipes or for other purposes.

In Fig. 3 I have shown substantially the same form of pipe as that shown in Fig. 1, but provided with an adjustable U-shaped portion G, adjustable similar to that of Fig. 2 100 and for a like purpose.

The forms of the attachment may be varied to accommodate it to the position in which it is to be used for urinals where the piping is

back of the partition or on the face-wall where the piping is in sight. Such changes will come within the skill of the mechanic.

What I claim as new is—

- 5 1. A discharge-pipe for urinals and the like, provided with a siphon near each end and an adjustable substantially U-shaped piece between the ends and forming a part of the upper siphon, substantially as specified.
- 10 2. A discharge-pipe for urinals and the like, consisting of two portions, each formed with a trap or siphon and parallel inclined portions,

and a third member substantially U-shaped and adjustably connected with the parallel upper inclined ends of the two first-mentioned portions, substantially as shown and described. 15

In testimony whereof I affix my signature in presence of two witnesses.

LAWRENCE J. GRIFFIN.

Witnesses:

DEAN P. YAWN,
GEO. F. BADGER.