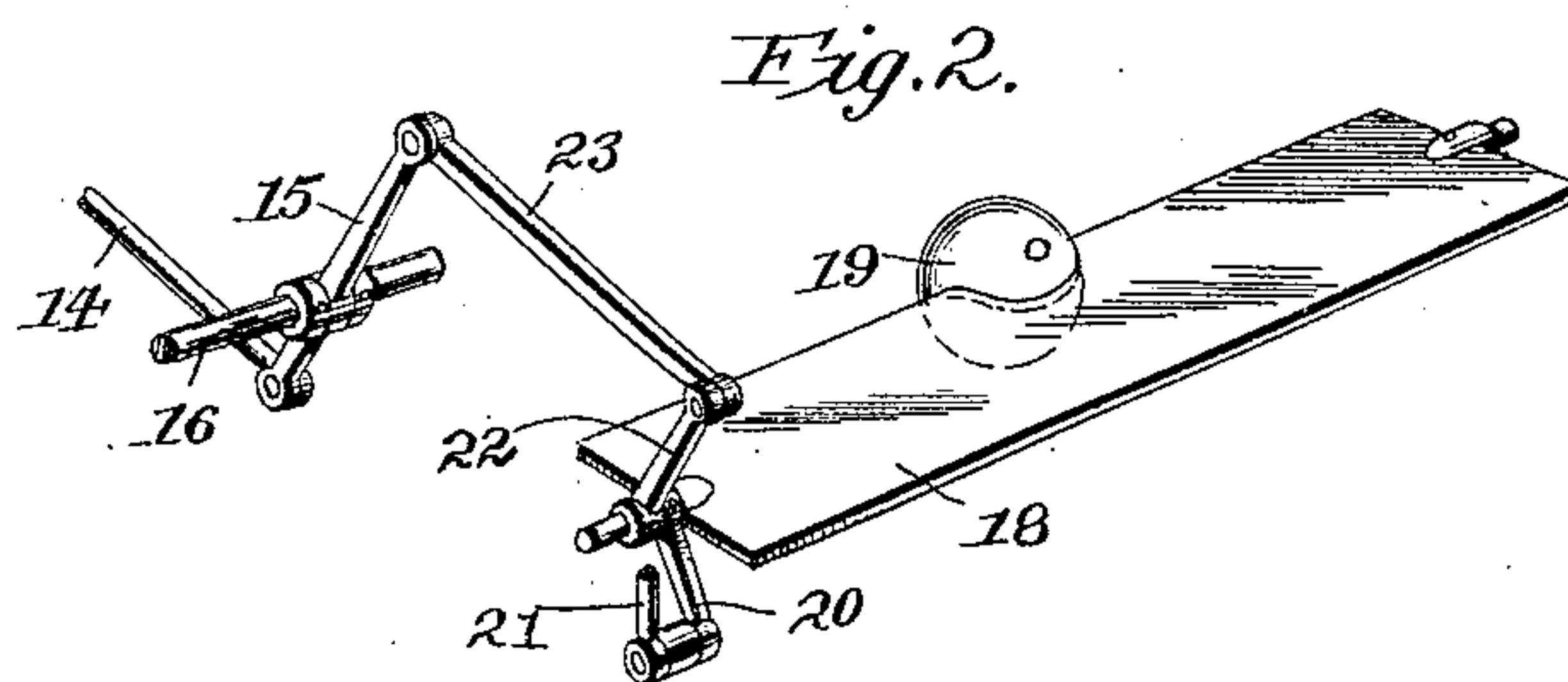
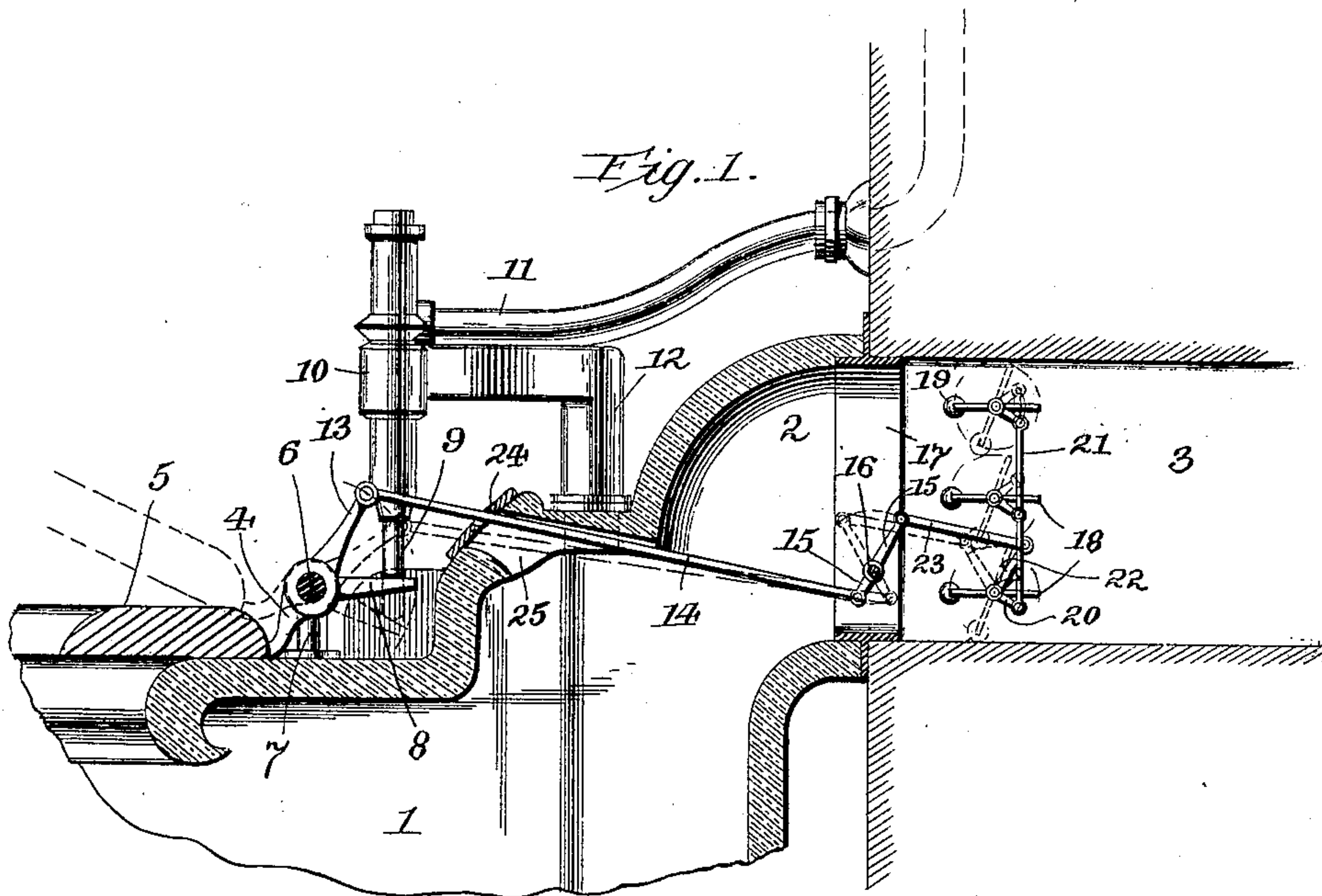


F. H. HENNING.
WATER CLOSET.
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UNITED STATES PATENT OFFICE.

FRANK H. HENNING, OF CHICAGO, ILLINOIS.

WATER-CLOSET.

No. 924,988.

Specification of Letters Patent.

Patented June 15, 1909.

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To all whom it may concern:

Be it known that I, FRANK H. HENNING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Water-Closets, of which the following is a specification.

My present invention pertains to improvements in water closets, the construction and advantages of which will be hereinafter set forth, reference being had to the annexed drawings, wherein:

Figure 1 is a sectional elevation showing a portion of a closet bowl, the automatically-operated water-supply valve, and the automatically-positioned damper which is located in the vent flue or stack; and Fig. 2 a perspective view of one of the louvers or slats of the damper and the actuating mechanism therefor.

The invention may be said to comprise the combination of a closet or bowl, which is vented to a stack or flue, a flush valve which will be opened by a downward movement of the seat, and a damper which will likewise be automatically opened when the seat is depressed to establish full communication between the closet and the vent stack.

The arrangement is such that the seat will be normally held up off the bowl to a slight extent by the valve-stem, which is projected downwardly by spring pressure or otherwise, and acts upon an arm or lever secured to the hinge rod of the seat. Operative means are interposed between said parts and the damper located in the vent flue or passage for opening said damper when the water-supply valve is opened, and for closing said damper when the valve is closed and the seat elevated.

Preferably the construction will be such that the damper will be slightly open at all times, thereby causing a current to be drawn through the bowl, but when the seat is not depressed the opening will be so small as not to interfere with the suction through any other bowl (or bowls) whose damper may be wide open to the flue or stack common to such closet or series of closets.

The invention is shown in its preferred form, and as will be readily appreciated by those skilled in the art may be varied in detail without departing from the spirit thereof.

In the drawings, 1 denotes the bowl, provided with a vent opening or passage 2 leading to a stack or exhaust flue 3, said passage

and flue being preferably located above the rim of the bowl.

The hinge arms 4 of the seat 5 are made fast to a hinge-rod 6, fulcrumed in standards 7 (one of which is shown) extending upwardly from the bowl 1.

An arm 8, fast to the hinge rod 6, extends outwardly therefrom, beneath the stem or plunger 9 of a valve 10 which controls the supply of water to the closet, the supply pipe being designated by 11 and the discharge pipe by 12. The valve may be automatically closed by a spring or by water pressure, or both, as desired, but as this forms no portion of my invention and is well understood in the art the valve is not illustrated in detail.

A second arm 13 is secured to the hinge rod 6, and a rod 14 is pivotally connected thereto and to the lower end of a lever 15, fulcrumed upon a rod 16, carried by a collar 17 which is employed to form the connection between the passage 2 and the flue 3.

A series of pivoted louvers or blades 18 (comprising the damper) is mounted in the flue 3, each blade being preferably weighted, as at 19. An arm 20 extends outwardly from the pivot-pin or pintle of each blade, said arms being connected to each other by a rod 21, so that the blades will open and close in unison. An arm 22 is secured to the pintle of one of the blades and in turn is pivotally connected by a link 23 to the upper end of lever 15.

The parts are so proportioned that when the seat 5 is depressed the damper is fully opened, and when the seat is elevated the damper will be nearly closed, sufficient opening being left to maintain a constant draft through the closet. The closing down of the damper will, however, permit the stack or flue to exert its greatest suction through the vent openings of any other closet or closets which may then or thereafter be in use.

A sliding cover plate 24 may be placed over the opening 25 in the closet through which rod 14 passes, in order to cut off the passage of air through such opening.

Having thus described my invention, what I claim is:

1. In combination with a bowl communicating with a ventilating stack or flue; a damper controlling the passage of air from the bowl to the stack; a valve for flushing the closet; and means for automatically

opening the valve and damper when the bowl is to be used.

2. In combination with a bowl communicating with a ventilating stack or flue; a damper normally checking the passage of air from the bowl to the stack; a normally closed flush valve; a hinged seat; and connections between said seat and valve, and said seat and damper for opening the valve and damper when the seat is depressed.

3. In combination with a bowl communicating with a vent stack or flue; a seat hinged above the bowl; a normally closed valve having its stem projecting toward the seat and cooperating therewith to hold the seat in a normally elevated position, and to be opened by the seat when the latter is depressed; a damper controlling the passage of air from the bowl to the flue, said valve being approximately closed when the seat is elevated; and connections between the seat and the damper for opening the latter when the seat is depressed.

4. In combination with a bowl communicating with a vent stack or flue; a seat hinged above the bowl; a normally closed valve having its stem projecting toward

the seat and cooperating therewith to hold the seat in a normally elevated position and to be opened by the seat when the latter is depressed; a damper, comprising a series of weighted louvers, for controlling the passage of air from the bowl to the flue, said louvers being approximately closed when the seat is elevated; and connections between the seat and the damper for opening the latter when the seat is depressed.

5. In combination with a bowl communicating with a ventilating stack or flue; a damper controlling the passage of air from the bowl to the stack and normally permitting the passage of a small current of air therethrough; a valve for flushing the closet; and means for automatically opening the valve and fully opening the damper when the bowl is to be used.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK H. HENNING.

Witnesses:

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