

No. 762,980.

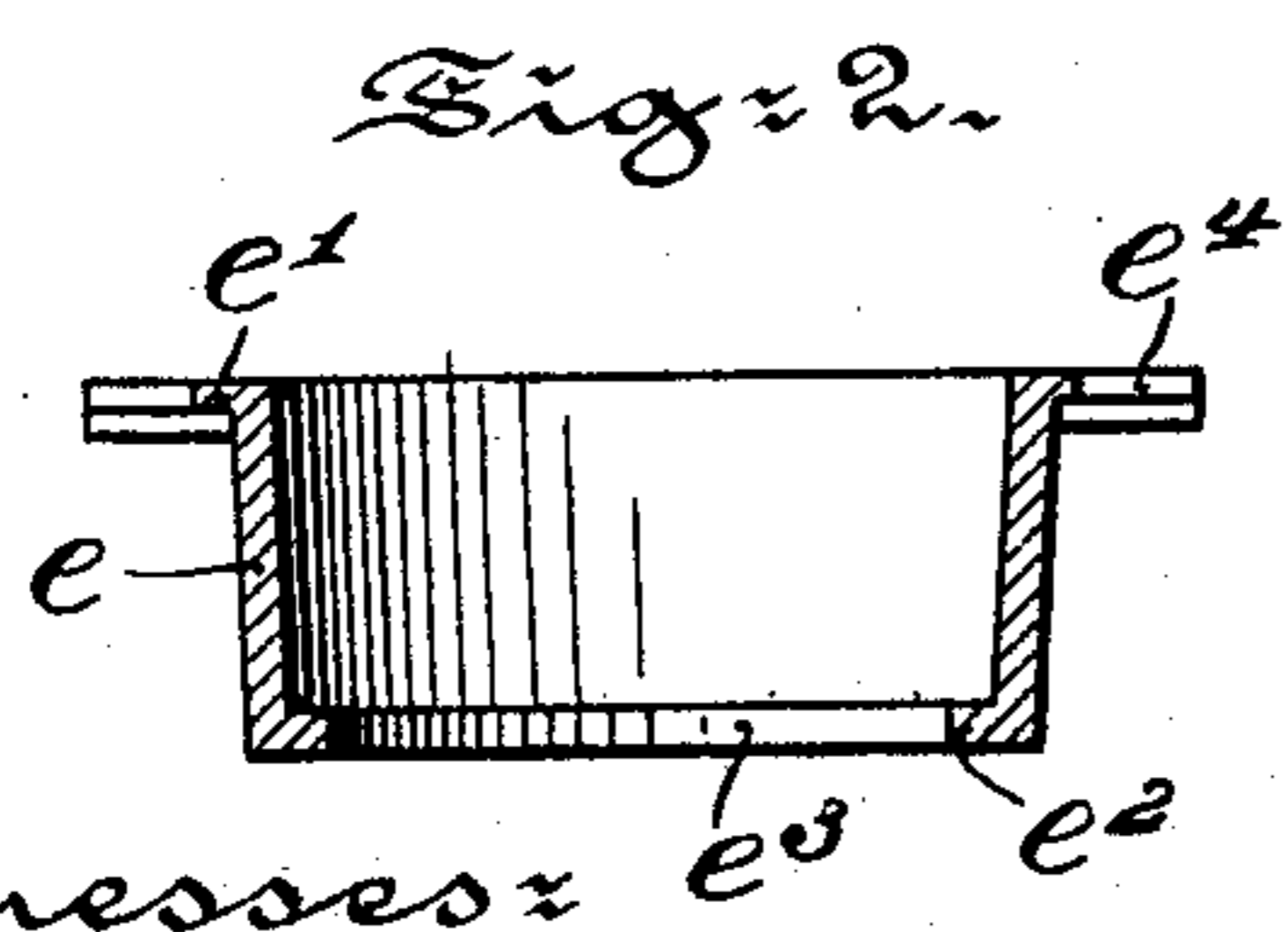
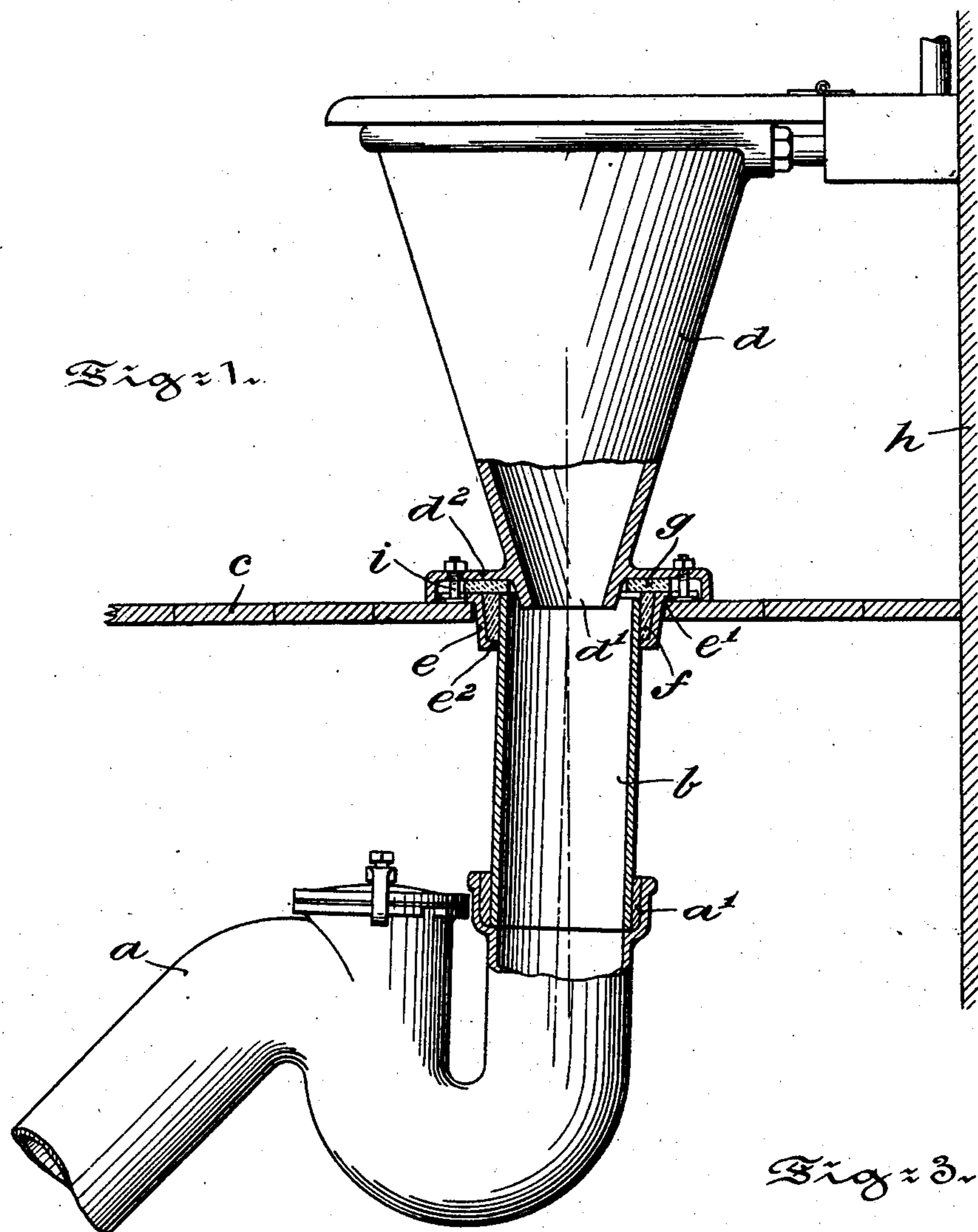
PATENTED JUNE 21, 1904.

A. F. H. BODE.

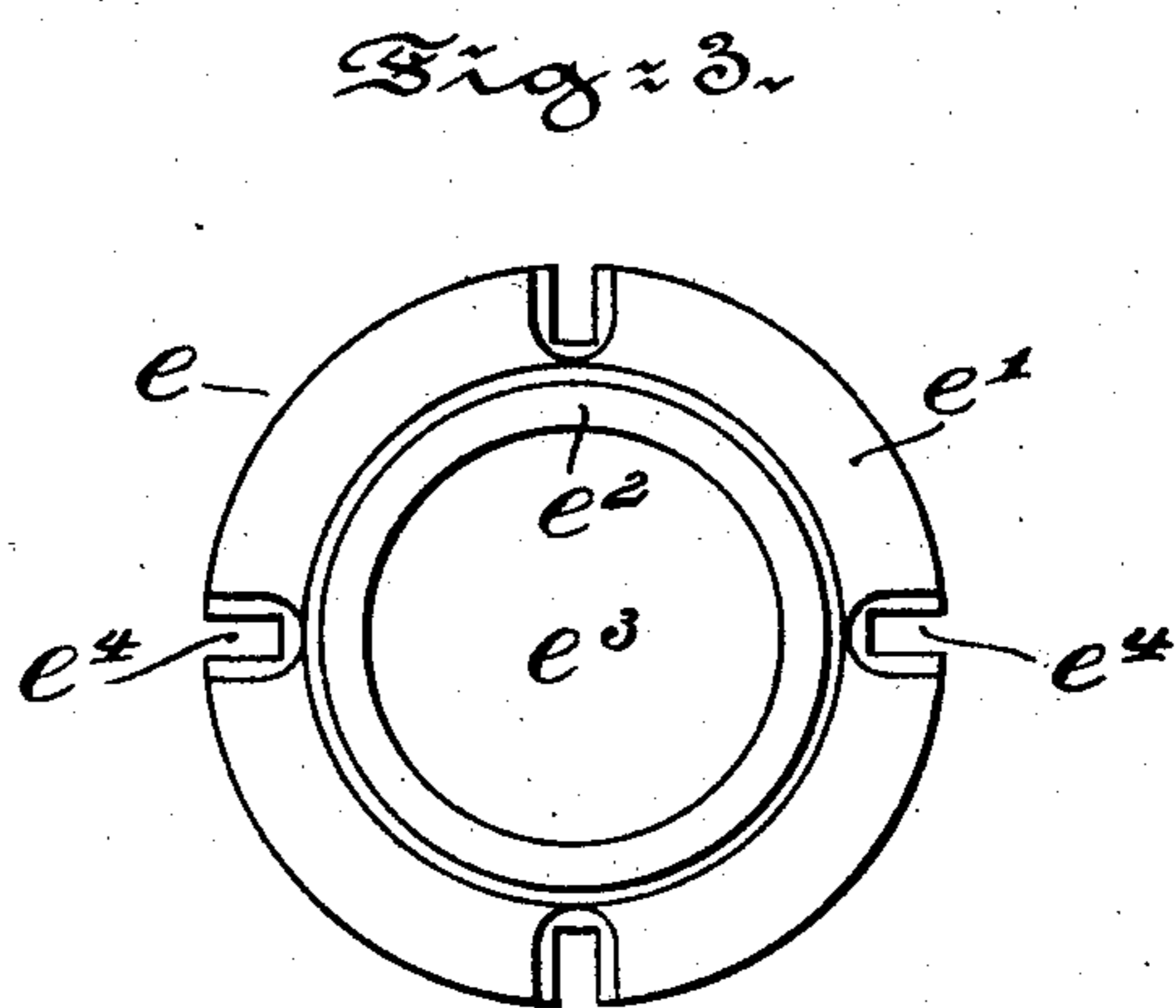
SOIL PIPE CONNECTION FOR WATER CLOSET HOPPERS.

APPLICATION FILED SEPT. 26, 1903.

NO MODEL.



Witnesses:
Jas. C. Woburnsmith.
Wilhelm Vogt



Inventor:
Adolf F. H. Bode,
By J. Walter Dwyer
Attorneys

UNITED STATES PATENT OFFICE.

ADOLF F. H. BODE, OF PHILADELPHIA, PENNSYLVANIA.

SOIL-PIPE CONNECTION FOR WATER-CLOSET HOPPERS.

SPECIFICATION forming part of Letters Patent No. 762,980, dated June 21, 1904.

Application filed September 26, 1903. Serial No. 174,689. (No model.)

To all whom it may concern:

Be it known that I, ADOLF F. H. BODE, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Soil-Pipe Connections for Water-Closet Hoppers, of which the following is a specification.

My invention has relation to soil-pipe connections for water-closet hoppers, and in such connection it relates to the construction and arrangement of such a soil-pipe connection.

The principal objects of my invention are, first, to provide a simple, efficient, and durable soil-pipe connection for water-closet hoppers; second, to provide a soil-pipe connection which permits of a speedy and convenient connection of the soil-pipe with the hopper, especially in instances where the pipe is out of plumb or out of the proper vertical position, and, third, to shape said connection in such manner as that the same will be permitted to always occupy a position parallel to the floor of the closet independent of the position of the soil-pipe, which position also permits of the proper vertical installation of said water-closet hopper with respect to the walls of the closet.

Hitherto the upper joint of the soil-pipe was provided with a flange serving to cover an opening made in the floor and also serving to support the hopper of the water-closet. As the soil-pipe, however, seldom occupies the proper vertical position with respect to the floor and walls of the closet, the upper joint of the soil-pipe passing through the floor of the water-closet was naturally also held out of the proper vertical position, and the laterally-extending flange thereof occupied a position not parallel to the floor of the closet, as required, but at an angle thereto. The hopper, bolted to the flange of the soil-pipe, occupied, therefore, an angular position in the closet, often causing a break or leak at the point of juncture between the hopper and the flange. Considerable time and labor were also required to adjust the irregular position of the soil-pipe and in the making of the connection between the same and the hopper.

By my present invention are overcome the disadvantages incident to present soil-pipe connections, and the labor connected with the installations of such connections is reduced to a minimum.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a view, partly in section and partly in elevation, of a water-closet hopper with its soil-pipe connection embodying main features of my invention; and Figs. 2 and 3 are detail views illustrating, respectively in vertical section and end elevation, a cup adapted to form the connection between the water-closet hopper and the soil-pipe.

Referring to the drawings, *a* represents a soil-pipe, which is provided with the usual extension or joint *b*, extending through and terminating slightly above the upper face of the floor *c*, as shown in Fig. 1. The joint-pipe *b* in the present instance consists of a common pipe-section and is securely connected with the soil-pipe *a* by a lead packing *a'*. In the drawings the soil-pipe *a* and its extension *b* are shown as being out of plumb or occupying an angular position with respect to the floor *c* and wall *h* of the closet. This angular position of the pipe, however, does not in the least interfere with its proper connection with the water-closet hopper *d*, owing to the following preferred connecting means. The end of the soil-pipe *b* is surrounded by a cup *e*, which is slipped over the same as soon as the soil-pipes *b* and *a* are connected with each other. The cup *e* is provided at its upper end with a flange *e'*, adapted to rest upon the floor *c*, and at its lower end with a flange *e''*, forming an opening *e'''*, through which the pipe *b* is inserted. The cup *e* is of inverted frusto-conical form to permit the pipe-section *b* to assume, as may be required, any angular position with respect to the wall of the cup without contacting therewith. This affords at all times sufficient space between the soil-pipe *b* and cup *e* to introduce a soft fluid packing *f* to firmly secure the pipe in the cup whatever the angular position of the soil-pipe

may be with respect to the position of the cup *e*, and thus to render the same water and gas tight. The inverted frusto-conical cup *e* extends below the floor *c* of the structure to permit of the introduction of a packing *f* between the pipe and internal wall of said cup and also in order that the lower flange *d*² of the hopper *d* in its vertical position may be parallel with the flange *e*' of the cup *e*, so that a disk-like washer *g* may be introduced between the flange *d*² of the hopper *d* and the flange *e*' of the cup *e*, as well as the packing *f* in the said cup *e*. Due to such arrangement of the hopper with the soil-pipe having the interposed cup *e* not only is a water-tight connection established and maintained, but escaping sewer-gases are prevented without regard to what the angular position of the soil-pipe and its extension may be with respect to that of the hopper *d*. Bolts *i*, arranged in the recesses *e*⁴ of the flange *e*' of the cup *e* serve to connect the cup *e* with the water-closet hopper *d* by engaging the flange *d*² thereof, as shown. Owing to the proper position of the cup *e* upon the floor *c*, the hopper *d*, connected with the same, will naturally be held in proper position with respect to the floor *c* and wall *h* of the closet, which position, as hereinbefore explained, whatever it may be, is independent of the position of the soil-pipe.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character described, a cup having a flange resting upon the floor and an inverted frusto-conical body projecting below said floor, in combination with a hopper having an outlet entering the flanged upper portion of the cup, and a soil-pipe entering the lower body of said cup.

2. In a device of the character described, an inverted frusto-conical cup *e*, provided with the flange *e*', at its upper end arranged to rest upon the floor, the body of said cup projecting through said floor, a hopper supported upon said floor and having its outlet *d*', entering the upper end of said cup, a soil-pipe *b*,

entering the lower end of said cup, and a packing *f*, uniting the end of the pipe *b*, to the body of said cup *e*.

3. In a device of the character described, the hopper *d*, having a flange *d*², supporting the hopper above the floor, and an outlet *d*', a cup *e*, of inverted frusto-conical shape, having a flange *e*', on its upper end resting upon the floor within the flange *d*², of the hopper, and encircling the outlet *d*', of said hopper, the flange of said cup being slotted as at *e*⁴, a bolt arranged to traverse loosely the slot *e*⁴, of the flange, and to be clamped down upon the flange *d*², of the hopper, and a soil-pipe connection *b*, entering the body of the cup *e*, and united thereto by a packing.

4. In a device of the character described, the hopper *d*, having a flange *d*², supporting the hopper above the floor, and an outlet *d*', extending into said floor, a cup *e*, of inverted frusto-conical shape projecting below said outlet and disconnected therefrom, a flange *e*', on the upper end of said cup, resting upon the floor, bolts arranged to loosely traverse said flange and to be clamped to the hopper-flange *d*², a packing arranged between the hopper-flange *d*², and the cup-flange *e*', a soil-pipe connection *b*, entering the cup *e*, below the outlet *d*', from the hopper, and a packing *f*, securing the connection *b*, to said cup *e*.

5. In a device of the character described, a hopper and its outlet supported above a flooring, and a soil-pipe and connections supported below the flooring, in combination with a cup connecting the pipe with the hopper, said cup supported upon the floor and extending there-through and below the same, and said cup rigidly connected with the pipe and adjustably connected with the hopper.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

ADOLF F. H. BODE.

Witnesses:

J. WALTER DOUGLASS,
THOMAS M. SMITH.