

G. J. DEHN.  
FLOOR DRAIN.  
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935,000.

Patented Sept. 28, 1909.

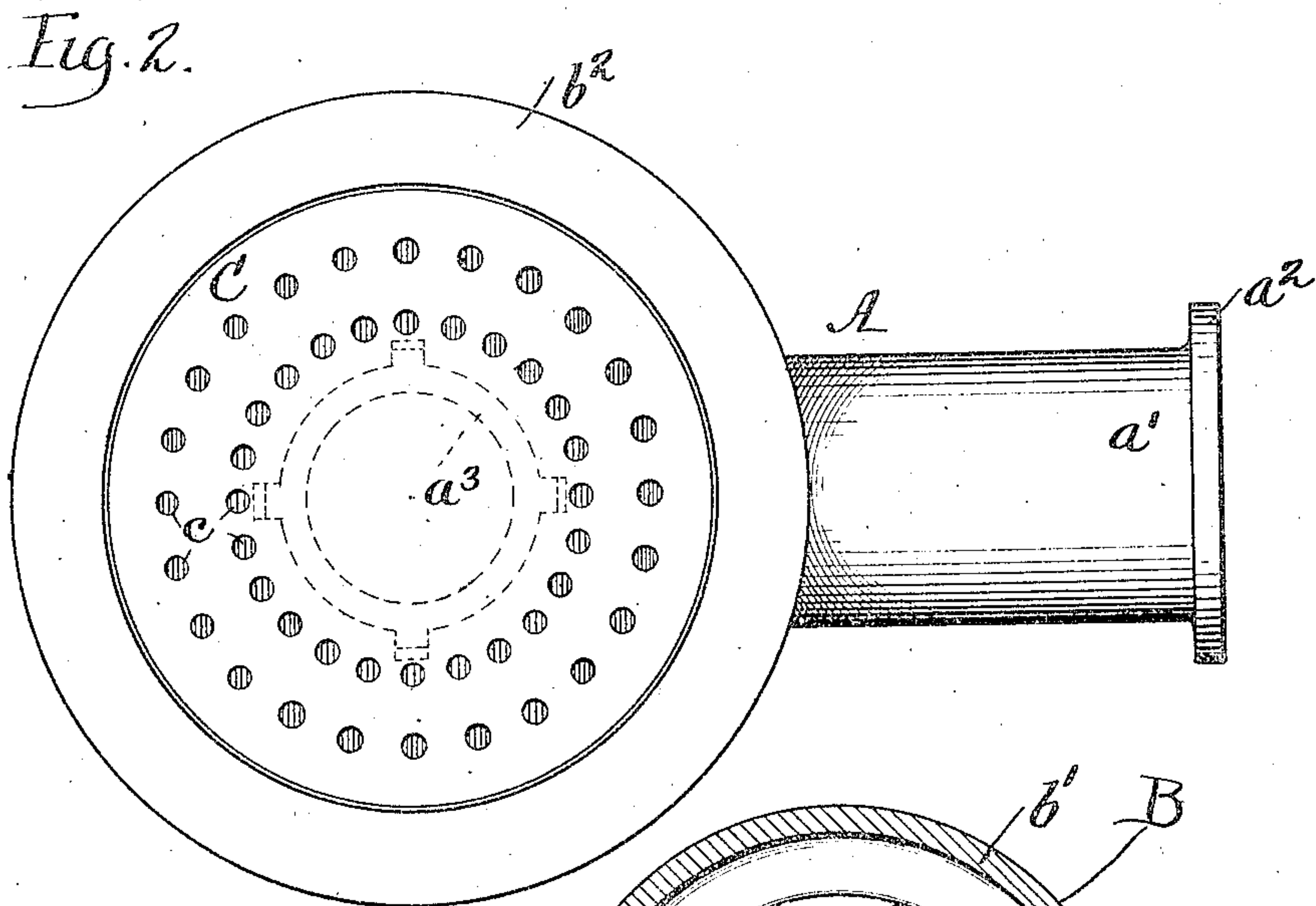
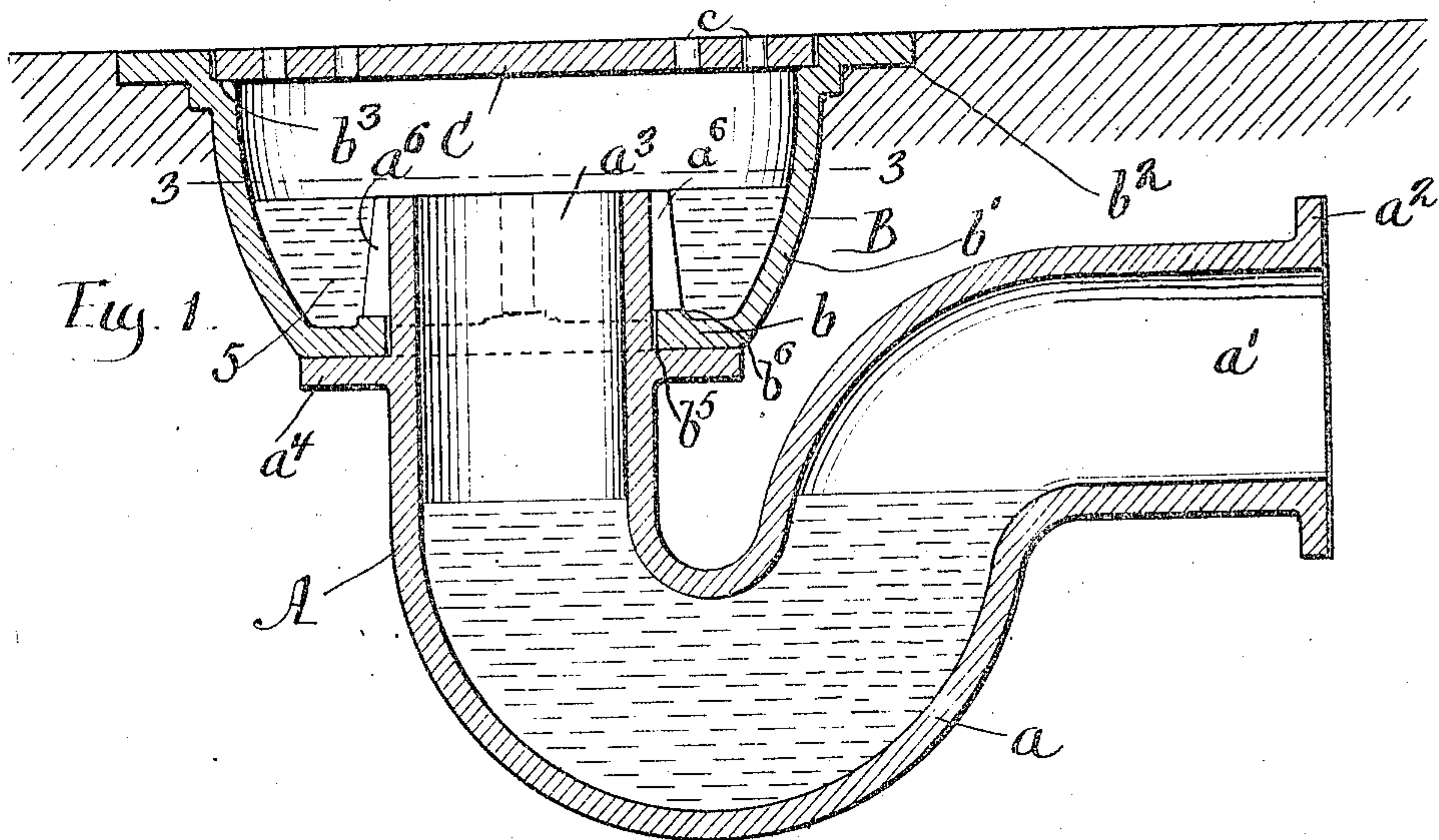
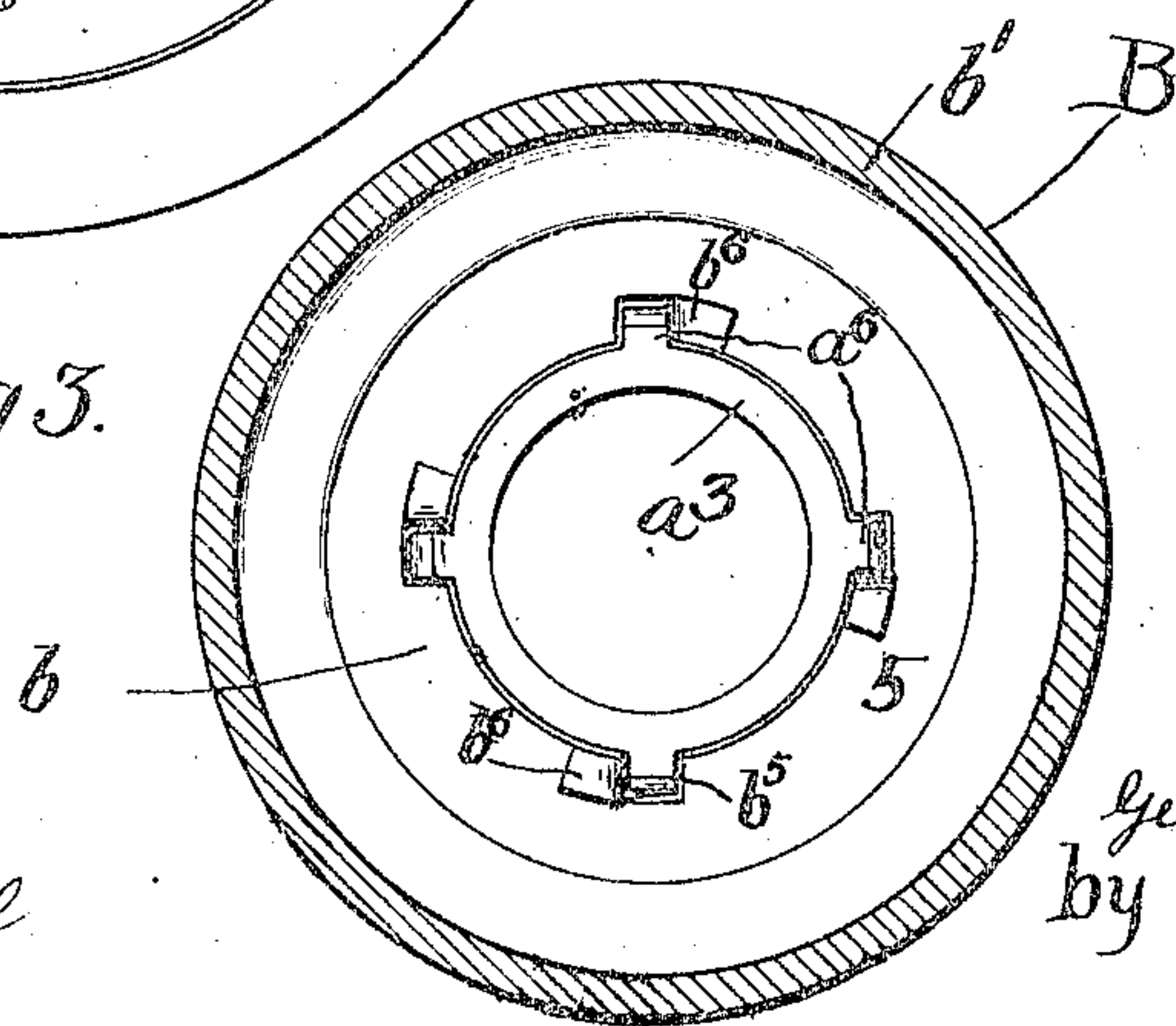


Fig. 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## FLOOR-DRAIN.

935,000.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed November 11, 1907. Serial No. 401,584.

To all whom it may concern:

Be it known that I, GEORGE J. DEHN, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Floor-Drains, of which the following is a full, clear, and exact description.

The invention relates to drains and traps which are usually arranged in or beneath the floor of a building to afford egress for water from the floor or the like and which prevents the passage of sewer-gases through the drain.

The invention designs to provide a device embodying a floor-drain and trap which may be readily installed or set into desired position before the floor, sidewalk or the like, has been laid, and which when connected to the drain-pipe cannot be displaced while the floor is being laid.

The invention further designs to provide a combined drain and trap of improved construction in which a body of water supplemental to that in the trap-pipe, is retained to prevent the seal in the trap-pipe from becoming ineffective from evaporation of the liquid therein.

The invention still further designs to provide a drain and trap of improved and simple construction, the several members whereof can be quickly and easily connected against displacement and which can be produced at a low cost.

The invention consists in the several novel features hereinafter set forth and more particularly defined by claim at the conclusion hereof.

In the drawings: Figure 1 is a vertical section of a device embodying the invention. Fig. 2 is a plan. Fig. 3 is a horizontal section on line 3—3 of Fig. 1, the drain-pipe and basin being shown in relative position assumed before the latter has been turned to secure or lock it to said pipe.

A trap-pipe A is formed with the usual bend  $a$  disposed below the lowest portion of the orifice in the return-bend or horizontal portion  $a'$  of said pipe to form a chamber for a body of water which forms a seal to prevent objectionable gases from the pipe or sewer to which it may be connected, from escaping through the inlet-terminal of the trap-pipe. The outlet-terminal of the trap-pipe is provided with a flange  $a^2$ , whereby it may be secured to a section of pipe leading to the sewer or discharge.

The inlet terminal  $a^3$  of the trap extends vertically and is provided with an integral annulus or flange  $a^4$ , adapted to form a seat or wall for the base-rim  $b$  of a drain-receiver B. The outer wall  $b'$  of the receiver is flared upwardly or extends outwardly and upwardly from its base-rim to form a receiving-basin and is provided with a top-flange or rim  $b^2$ . An annular recess or shoulder  $b^3$  is formed in the receiver to retain a perforated strainer-cover C which usually is disposed so it will be flush with the top of the basin and removably held therein, to provide access, when desired, to the trap and basin.

A lock or connection is provided between the trap-pipe and the receiver whereby the basin will be secured against displacement with the pipe and a water-tight joint is provided between the pipe and the basin. This connection comprises a series of ribs or lugs  $a^5$ , integrally formed on the trap-pipe, and a corresponding series of notches  $b^5$  in the base of the receiver. The lower ends of said lugs are disposed so the inner edge of said rim will pass between said lugs and the flange  $a^4$  and adjacent each of the notches  $b^5$  is an inclined or wedge-surface  $b^6$  which is adapted to be driven beneath the lower ends of lugs  $a^5$  and constitute a wedge-connection whereby the receiver-basin is securely held so its base will be tightly held against the pipe-flange  $a^4$  to form a tight connection therebetween. Usually a coating of suitable material, such as white-lead is placed on the top of the flange or the bottom of the basin to make the connection water-tight. To connect the basin to the drain-pipe A it is only necessary to slip the receiver over the upper end of the pipe, with the notches  $b^5$  in registry with the ribs  $a^5$ . When the basin rests on the flange  $a^4$ , a slight turn of the basin will cause the wedge-surfaces  $b^6$  to pass beneath said ribs and then the basin will be securely connected to the drain-pipe and against displacement.

It is customary, in practice, to install the drain-pipe and receiver before the floor or sidewalk are laid. This improvement provides a device which can be easily and quickly installed and which avoids all likelihood of being displaced or disconnected when the floor, usually of concrete and cement is being laid.

The inlet-terminal  $a^3$  extends above the base of receiver-basin B and resultantly an



annular-chamber or trap 5 is provided to collect dirt and such other solid matter as may pass through the strainer, and prevent the dirt from passing into the trap in pipe

5 A. The perforations *c* in the strainer are disposed above the chamber 5 to direct the solid matter into said chamber. Furthermore, the chamber 5 remains filled with water to the level of the upper end of the terminal *a*<sup>3</sup> of the drain-pipe, and thus a supplemental body of water is provided in the basin, which tends to lower the temperature of, and in, the device, and prevent undue evaporation of the water in the trap in the

10 drain-pipe.  
The invention has several important advantages. It provides a drain and trap which may be quickly and easily connected and secured together so displacement is avoided. It provides a device which is exceedingly simple in construction and efficient in operation, and one in which a supplemental body of water is provided to prevent evaporation of that in the trap.

25 The invention is not to be understood as restricted to the precise details shown and described since these may be modified within the scope of the claims, without departing from the spirit and scope of the invention.

30 Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a floor-drain, the combination of a drain-pipe having a trap-bend therein and an upwardly extending inlet-terminal, a receiver-basin having a strainer-top, a slip and interlocking wedge connection between the basin and the upwardly extending terminal of said pipe for securing the basin around the pipe so that a water-tight joint will be formed between the pipe and the basin.

2. In a floor-drain, the combination of a drain-pipe having a trap-bend therein and an upwardly extending inlet-terminal, a receiver-basin having a strainer top and a slip and interlocking wedge connection between the basin and the upwardly extending terminal of said pipe, the interlocking parts of said pipe being on the outer side thereof and in the basin.

3. In a floor-drain, the combination of a drain-pipe having a trap-bend therein, an upwardly extending inlet-terminal, a receiver-basin having a strainer-top, an annulus on the outer side of said pipe, terminal, and a slip and interlocking connection between the basin and the upwardly extending terminal of said pipe for securing the basin so a water-tight joint will be formed between the annulus and the basin.

4. In a floor-drain, the combination of a drain-pipe having a trap-bend therein, an upwardly extending inlet-terminal, a receiver-basin having a strainer-top, an annulus on the outer side of said pipe-terminal

and below the upper end thereof and a slip and interlocking connection between the basin and the upwardly extending terminal of said pipe, for securing the basin so a water-tight joint will be formed between the annulus and the basin.

5. In a floor-drain, the combination of a drain-pipe having a trap-bend therein and an upwardly extending inlet-terminal, a receiver-basin having a strainer-top, an integral flange on said pipe-terminal, and a slip and interlocking connection between the basin and the upwardly extending terminal of said pipe, for securing the base of said basin against said flange to form a water-tight connection.

6. In a floor-drain, the combination of a drain-pipe having a trap-bend therein and an upwardly extending inlet-terminal, a receiver basin having a strainer top and an opening in its bottom through which said terminal extends, and a slip and interlocking wedge connection between the basin and the upwardly extending terminal of said pipe to form a water-tight joint between the bottom of the basin and the pipe terminal.

7. In a floor-drain, the combination of a drain-pipe having a trap-bend therein and an upwardly extending inlet-terminal, a receiver-basin having a strainer-top and an opening in its base through which said terminal extends, an annulus on the outer side of said pipe-terminal, and a slip and interlocking connection between the basin and the upwardly extending terminal of said pipe for holding the basin against said flange to form a water-tight connection.

8. In a floor-drain, the combination of a drain-pipe having a trap-bend therein and an upwardly extending inlet-terminal, a receiver-basin having a strainer-top and an opening through its base through which said terminal extends, interlocking parts on the outer side of said pipe-terminal, and the base of said basin respectively, and a flange below the upper end of said terminal and on the outer side thereof and against which the base of the basin will be held by said interlocking parts.

9. In a floor-drain, the combination of a drain-pipe having a trap-bend therein and an upwardly extending inlet terminal, a drain-receiver having a strainer-top and a base having an opening therein through which said terminal extends, outwardly projecting lugs on the outer side of said pipe-terminal, and an annulus on said pipe-terminal and below the upper end thereof and beneath said lugs, the base of said basin being provided with notches adapted to receive said lugs and having parts adapted to pass between said lugs and said annulus to secure the basin to the pipe.

10. In a floor-drain, the combination of a drain-pipe having a trap-bend therein and



an upwardly extending inlet-terminal, a receiver-basin having a strainer-top and an opening through which said terminal extends, the base of said receiver being below  
5 the upper end of said pipe to provide a water-chamber around the upper portion of said terminal, and a slip and interlocking

connection between said basin and said terminal for securing them together.

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