(No Model.)

C. KNISPEL.

SEWER TRAP.

No. 541,208. Patented June 18, 1895.

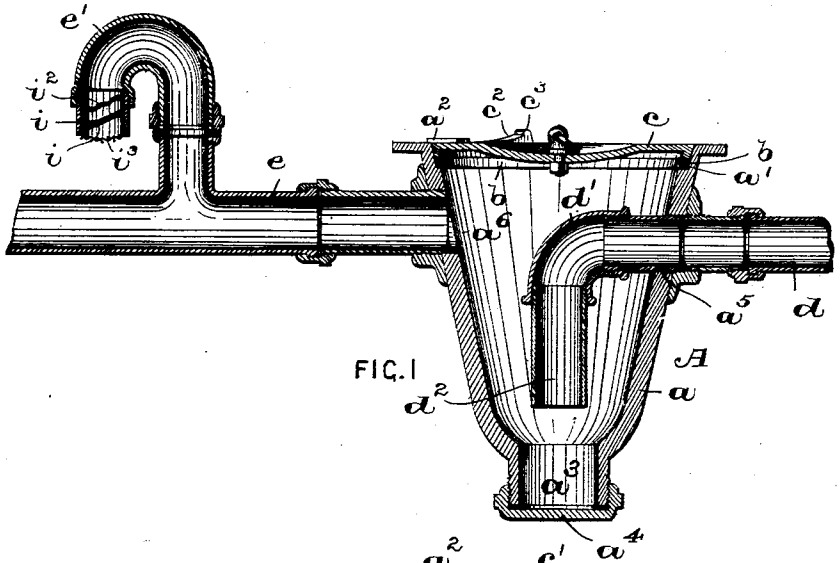

FIG. 1

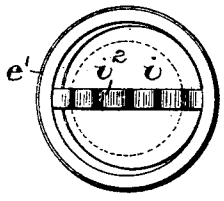

FIG. 4

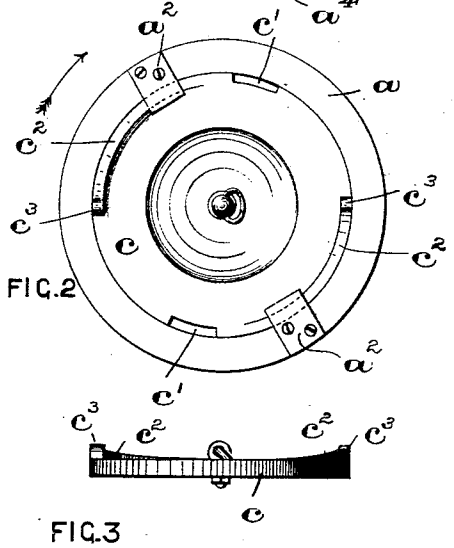

FIG. 2

FIG. 3

WITNESSES:

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UNITED STATES PATENT OFFICE.

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SEWER-TRAP.

SPECIFICATION forming part of Letters Patent No. 541,208, dated June 18, 1895.

Application filed February 5, 1895. Serial No. 537,328. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN KNISPEL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Sewer-Traps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My present invention has for its primary object to provide a cheap and serviceable sewer trap, to be used more especially in waste pipes under the floor, such as the pipes connected with bath tubs, where there is insufficient space between the bottom of the tub and the floor, to place a sewer trap.

The invention therefore consists in the novel construction of trap herein shown, and in the minor arrangements and combinations of parts to be hereinafter fully described and finally embodied in the clauses of the claim.

The invention is illustrated in the accompanying sheet of drawings, in which—

Figure 1 is a sectional view of my novel form of sewer-trap and the piping connected therewith, illustrating, in connection with the outflow from the trap-basin, the arrangement of a check-valve. Fig. 2 is a plan view of the trap-casing and a removable top or cover used in connection with this form of sewer-trap, and Fig. 3 is a side view of said cover. Fig. 4 is a plan view of the check-valve used in connection with the device.

In said drawings, A indicates the sewer trap, which consists, essentially of the trap casing *a*, arranged in the piping underneath the floor in the manner to be more fully described hereinafter. Said casing is provided in its upper portion with an annular recess or shoulder *a'* on which is placed a rubber gasket or packing ring *b*. On the upper edge of said casing *a* are a suitable number of holding lugs or projections a^2. Upon said annular shoulder or recess *a'* is removably arranged a solid cover or plate *c* provided with oppositely placed cut-away portions *c'*, to enable said plate or cover to be placed over the inwardly extending holding lugs or projections a^2 on the trap casing.

When the plate or cover *c* is turned in the direction of the arrow, see Fig. 2, a pair of inclines c^2 provided on their ends with enlargements c^3 forming stops, are firmly brought into sliding and holding engagement with said lugs a^2, thereby securely closing the cover or plate *c* down on the gasket or packing ring *b* and preventing the escape of any foul gases from the trap.

Should the trap, for some reason, require cleaning out, all that is necessary is to turn the plate or cover *c* in the direction opposite from that indicated by the arrow in Fig. 2, on its seat in the trap casing *a*, and the parts can be easily cleaned. As an extra precaution, the said casing *a* may be provided in the bottom with a throat a^3 which is closed by means of a removable cap or cover a^4.

As will be seen from Fig. 1, the casing *a* is provided in the side with an opening a^5 through which passes, and is suitably secured therein to prevent leakage, an inlet or waste pipe *d* which brings the waste water from the bath tub or other fixture into the trap basin. This pipe *d* is provided within said casing *a* with an elbow *d'* which terminates in the discharge outlet d^2 near the bottom of the casing.

In any other suitable part of the casing *a*, near the top thereof, is a second opening a^6 in which is secured the end of any suitable form of overflow pipe *d* connected with the main sewer pipe leading from the building, as will be clearly understood. Said pipe *e* is preferably provided with a suitable elbow *e'*, which is open at its free end and is provided with a suitable check valve therein, operating to permit the entrance of a supply of fresh air into the pipe and into the trap A, but closes automatically when there is an excess of water in the trap and the pipe *e*. The admission of air into the trap also prevents the siphoning of the casing *a*, as will be clearly evident. The construction of this form of ventilating valve consists essentially in the arrangement of a plate *i* resting on a suitable cross bar *i'* which is inclined across the pipe, as shown. When said plate *i* lifts to permit the entrance of the air into the pipe *e*, it strikes a corrugated bar

i^2, which, owing to said corrugations, prevents the sticking of said plate against the bar when the parts are wet and hence the plate i drops back into its former and closed position, as will be understood.

The advantages derived from my novel form of sewer trap will be evident from the above description.

The sanitary condition is greatly improved, and in case of a stoppage in the pipes, the cover of the trap casing can be quickly removed and a force pump entered without removing bolts, &c.

The trap can be readily cleaned by servants without the aid of a plumber, as will be evident.

Having thus described my invention, what I claim is—

1. The herein described sewer trap A, comprising therein, a casing a, having a removably arranged cover or plate in the top, an opening a^5 in one side of said casing, an inlet pipe, as d, extending into said casing an elbow d' and a downwardly extending pipe d^2 terminating near the bottom of said casing, and an outlet pipe e, extending from an opening a^6 in said casing, substantially as and for the purposes set forth.

2. The herein described sewer trap A, comprising therein, a casing a, having a removably arranged cover or plate in the top, an opening a^5 in one side of said casing, an inlet pipe, as d, extending into said casing an elbow d' and a downwardly extending pipe d^2 terminating near the bottom of said casing, an outlet pipe e, extending from an opening a^6 in said casing, and an elbow in said pipe e having a check valve therein, substantially as and for the purposes set forth.

3. The herein described sewer trap A, consisting essentially, of a casing a, having an annular recess or shoulder a', a packing ring on said shoulder, a cover on said ring, means for causing the locked engagement of said cover with said casing, consisting of cut-away portions in said cover and inclines thereon, and holding portions or lugs on the casing a with which said inclines are to be engaged, an opening a^5 in one side of said casing, an inlet pipe, as d, extending into said casing an elbow d' and a downwardly extending pipe d^2 terminating near the bottom of said casing, and an outlet pipe e extending from an opening a^6 in said casing, substantially as and for the purposes set forth.

4. The herein described sewer trap A, consisting essentially, of a casing a, having a throat in the bottom and a removable cap or cover over the same, an annular shoulder or recess a' in said casing, a packed ring on said shoulder, a cover on said ring, means for causing the locked engagement of said cover with said casing, consisting of cut-away portions in said cover and inclines thereon, and holding portions or lugs on the casing a, with which said inclines are to be engaged, an opening a^5, in one side of said casing, an inlet pipe, as d, extending into said casing an elbow d' and a downwardly extending pipe d^2 terminating near the bottom of said casing, and an outlet pipe e extending from an opening a^6 in said casing, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 18th day of January, 1895.

CHRISTIAN KNISPEL.

Witnesses:
FREDK. C. FRAENTZEL,
WM. H. CAMFIELD, Jr.