To all whom it may concern:

Be it known that we, ALEXANDER PATTENDEN and ANNIE B. PATTENDEN, citizens of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Disinfecting Devices for Sink-Drains, of which the following is a specification.

Our invention relates to a disinfecting device for sinks or drains, its object being the production of a simple and durable device which can be conveniently and quickly affixed to the drain-plate of a sink and as readily detached therefrom.

Further objects of our invention are to provide a suitable closure having inwardly-swinging gates which are adapted to be opened by the water in the sink to permit the discharge of the same, while serving at other times to prevent the escape of obnoxious gases from the sink-drain, to provide a device which is adjustable to any position on a fixed support, to permit of quickly discharging large quantities of water, and to otherwise improve on disinfectant devices for sink-drains.

The invention consists in the construction, arrangement, and combination of parts to be hereinafter described, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a central vertical section of the device, showing the same in its lowered position. Fig. 2 is a similar view, the adjustable parts being elevated. Fig. 3 is an enlarged horizontal section on line 3-3, Fig. 2. Fig. 4 is a broken top plan view of the device, one-half of the hood being broken away. Fig. 5 is a sectional elevation of a portion of the hood, the gate shown being closed. Fig. 6 is a similar view, the gate shown being open.

Referring to the drawings in detail, similar letters of reference refer to similar parts in the several figures.

The reference-letter A designates the sink, having the drain B, and strainer-plate C, closing the upper end of said drain.

Our improved device is supported on a screw-threaded support or stem D, whose lower end is reduced to pass through one of the perforations of the strainer-plate and bent at a right angle, as at d, to bear against the under side of said plate. When inserting the support or stem, it is inclined to permit the right-angle portion to be passed through the strainer-plate and then swung perpendicular to permit the angle to pass through the perforation. A lock-nut E, previously threaded on the stem, is screwed against the strainer-plate and serves to hold said stem securely to said plate. A nut F is threaded onto the stem D and is adjustable between the upper end of the latter and the lock-nut E. A disk-like disinfectant-receptacle G is held loosely on the stem to permit its sliding thereon and is supported by the nut F. Said receptacle is provided centrally with a hub g, through which the stem is passed and which bears against the nut F to support the disinfectant-receptacle, and with suitable perforations h, which expose the disinfectant in said receptacle to the obnoxious gases rising from the drain. By reason of this receptacle being loosely held on the stem it may be quickly applied or removed.

H designates an inclosing and deflecting hood which is bell-shaped and open at the bottom. This hood is provided centrally with an opening h, which is of sufficient size to permit the hood to slide freely on the stem. The hood is supported on the edges of the disinfectant-receptacle, and the two are clamped together and secured against movement on the stem by a securing-nut I, which is provided with a threaded socket i of considerable depth to permit adjustment of the parts, while under all conditions of adjustment being capable of securing the parts together. It is apparent, therefore, that by screwing the nut F up or down on the stem the hood and disinfectant-receptacle are raised and lowered on the same and the parts locked by the securing-nut I.

Under ordinary conditions of usage, the device is adjusted to the position shown in Fig. 1, with the lower edge of the bell-shaped hood bearing against the strainer-plate or sink-bottom. We therefore provide the lower or marginal portion of the hood with a series of openings or notches J, which are preferably curved, and with gates K, hinged centrally over said openings and normally held closed. These gates are not intended to be air-tight, but simply to prevent the direct escape of gases arising from the drain-pipe. It is therefore provided by the use of said gates that the rising gases shall first be brought in
contact with the disinfectant and then deflected downward to find escape through the crevices between the gates and the hood and between the bottom of the hood and the sink. By reason of the gates being curved the weight of the same is such as to hold them normally closed, and to prevent their swinging out beyond the outer face of the hood each gate is provided at opposite sides with offset flanges L which bear against the inner side of the hood, and thus serve as stops. The hood is constructed of light material, and the weight of the gates is such as to be readily opened by water poured into the sink and flowing to the drain-pipe. At times when considerable water is discharged through the drain the device may be elevated, as shown in Fig. 2. By this arrangement a space is provided between the edge of the hood and the sink-bottom and practically all obstruction to the flow of water removed.

Having thus described our invention, what we claim is—

1. In a disinfecting device for sink-drains, the combination with a strainer-plate, of a support affixed to said strainer-plate, a receptacle for disinfectant adjustable held on said support, and a hood adapted to cover the strainer-plate and inclose said receptacle.

2. In a disinfecting device for sink-drains, the combination with the strainer-plate, of a support affixed to said strainer-plate, a receptacle for disinfectant adjustable held on said support, and a bell-shaped hood adapted to cover the strainer-plate and having its edge notched and provided with inwardly-swinging gates.

3. In a disinfecting device for sink-drains, the combination with the strainer-plate, of a support detachably connected to said strainer-plate, a receptacle for disinfectant adjustable held on said support, a bell-shaped hood adapted to cover the strainer-plate and having a series of openings at its lower end, and inwardly-opening gates pivotally affixed to said hood to normally close said openings.

4. In a disinfecting device for sink-drains, the combination with the strainer-plate, of a screw-threaded stem affixed to said strainer-plate, a nut adjustable on said stem, a receptacle for disinfectant fitting loosely on said stem and receiving support from said nut, a bell-shaped hood fitting loosely on said stem and being supported on said receptacle, and a nut at the upper end of said stem for securely holding the parts together.

5. In a disinfecting device for sink-drains, the combination with the strainer-plate, of a screw-threaded stem having its lower end reduced and bent, and passed through one of the openings of said strainer-plate to bear against the under side of the same, a nut on said stem bearing against the upper side of the strainer-plate, and a hood adapted to cover the strainer-plate.

6. In a disinfecting device for sink-drains, the combination with the strainer-plate, of a screw-threaded stem having its lower end reduced and bent at a right angle, said bent end being passed through one of the openings of said strainer-plate to bear against the under side of the same, and a hood supported on said stem and adapted to cover the strainer-plate.

7. In a disinfecting device for sink-outlets, the combination with the strainer-plate, of a screw-threaded stem having its lower end reduced and bent at a right angle, said bent end being passed through one of the openings of said strainer-plate to bear against the under side of the same, a nut on said stem bearing against the upper side of the strainer-plate, a receptacle adjustable on said stem, and a hood inclosing said receptacle and adapted to cover the strainer-plate.

8. In a disinfecting device for sink-drains, the combination with the strainer-plate, of a screw-threaded stem having its lower end reduced and bent at a right angle, said bent end being passed through a perforation in said strainer-plate to bear against the under side of the same, a nut on said stem bearing against the upper side of the strainer-plate, a nut adjustable on said stem, a receptacle for disinfectant fitting said stem loosely and receiving support from the last-mentioned nut, a hood adapted to receive support from said receptacle and having an opening through which said stem projects, and a nut threaded onto the projecting end of said stem.

9. In a disinfecting device for sink-drains, the combination with the strainer-plate, of a screw-threaded stem having its lower end reduced and bent at a right angle, said bent end being passed through a perforation in said strainer-plate to bear against the under side of the same, a nut on said stem bearing against the upper end of the strainer-plate, a second nut adjustable on said stem, a perforated receptacle for disinfectant fitting said stem loosely and receiving support from the last-mentioned nut, a hood adapted to cover the strainer and to receive support from the disinfectant-receptacle, said hood having its lower edge notched, inwardly-opening gates normally fitting said notches and having flanges at opposite sides that bear against the hood to limit outward movement of the same, and means for clamping the disinfectant-receptacle and the hood together.

In testimony whereof we have affixed our signatures in the presence of two subscribing witnesses.

ALEXANDER PATTENDEN.
ANNIE B. PATTENDEN.

Witnesses:
EMIL NEUHART,
CHAS. F. BURKHART.