M. S. HUFSCHMIDT.

SINK STOPPLE.

APPLICATION FILED NOV. 16, 1909.

962,570. Patented June 28, 1910.

FIG. 1

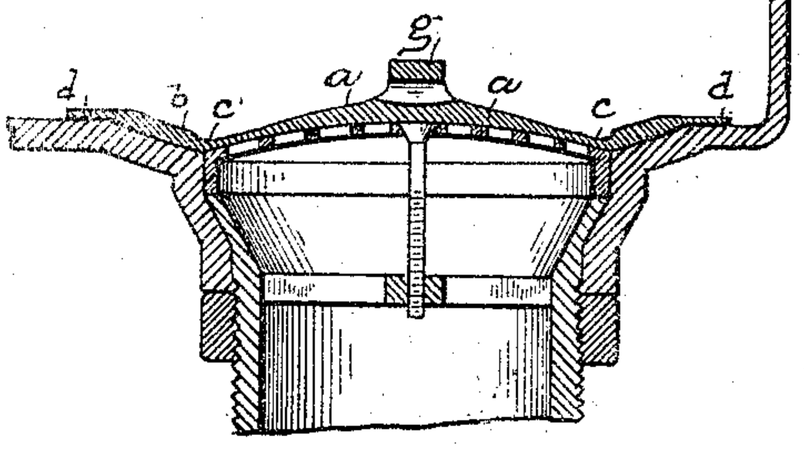


FIG. 2

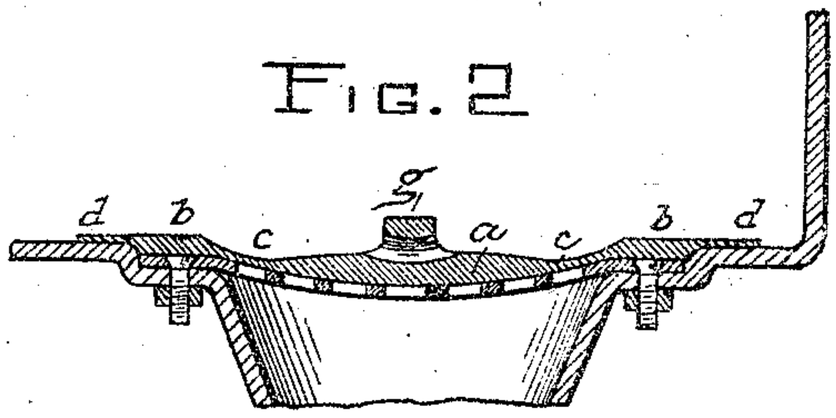


FIG. 4

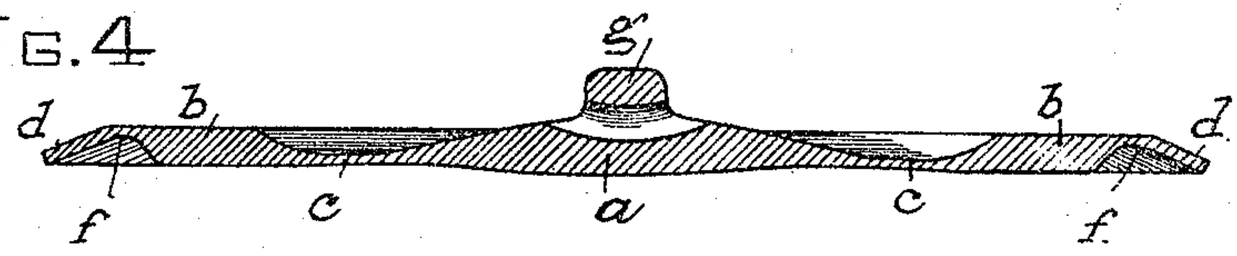
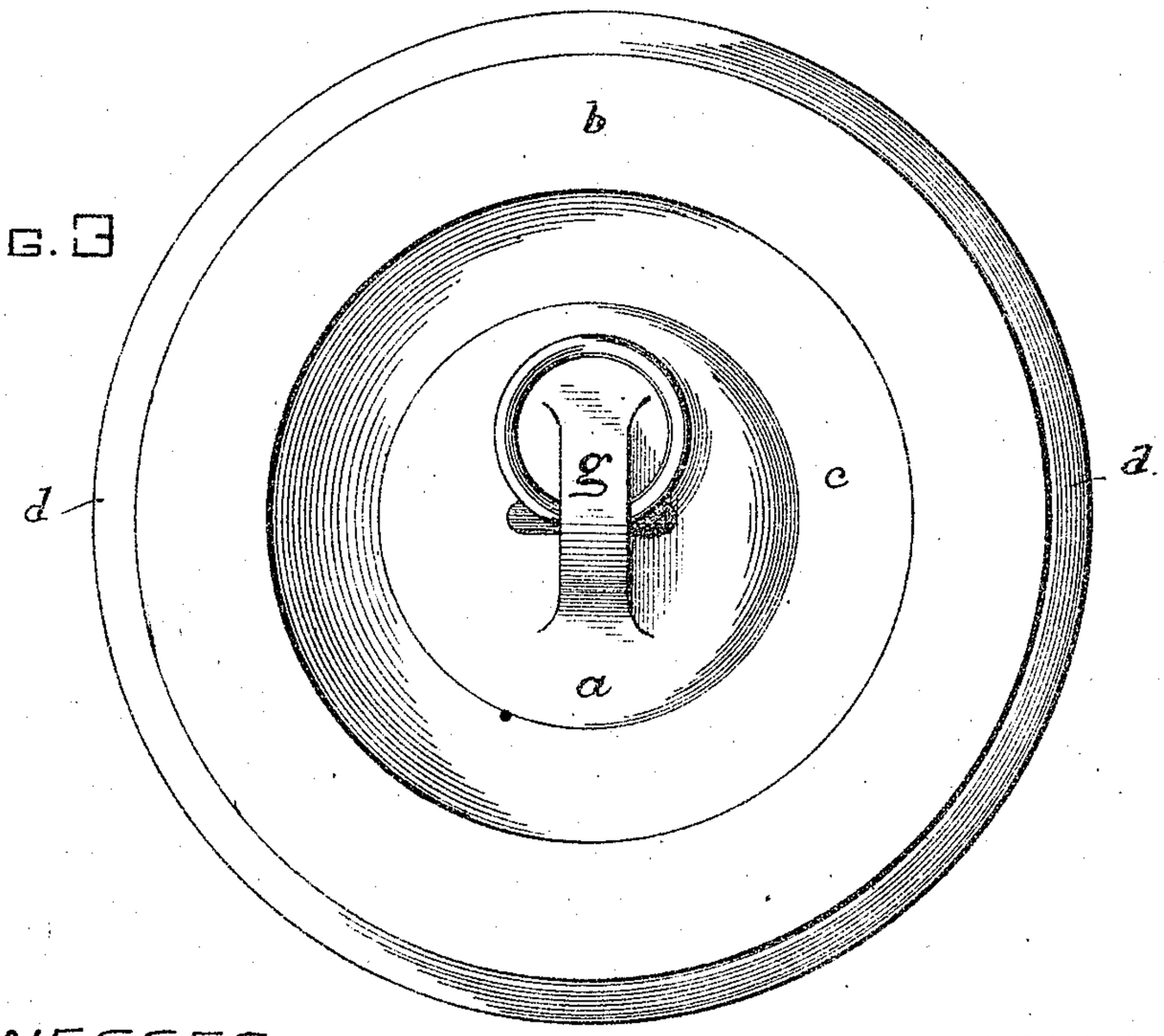


FIG. 3



WITNESSES:

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SINK-STOPPLE.

962,570. Specification of Letters Patent. Patented June 28, 1910.

Application filed November 16, 1909. Serial No. 528,403.

To all whom it may concern:

Be it known that I, MILTON S. HUFSCHMIDT, a citizen of the United States, and a resident of the city and county of San Francisco, State of California, have invented new and useful Improvements in Sink-Stopples, of which the following is a specification.

This invention relates to a device for temporarily sealing the waste outlet of a kitchen sink for the purpose of converting the sink into a wash tray in which dishes and other articles may be washed. Devices for that purpose as now provided are held in place over the sink outlet by the pressure of the atmosphere, being so formed or produced that by virtue of their elastic quality and flexibility they will be pressed against the strainer, with the effect to expel the air from beneath and thereby seat the device closely upon the strainer with which a sink outlet is generally provided.

The object of the present invention is chiefly to provide a sink stopple, or device for temporarily sealing the waste outlet of a sink, that will fit and act on strainer plates or waste outlet guards of the different kinds or styles now in use, and especially with equal effectiveness upon a convex or rounded strainer that stands above the bottom of the sink, and upon one of the concave or depressed style in which the perforated plate composing the strainer is sunk below the level of the surface at the waste outlet; the stopple or device of my invention being so formed or constructed that it can be used and will act equally effectively on strainers of either of the types or styles above mentioned, without requiring special adjustment or change to adapt it to either character of outlet strainer.

A sink stopple of my invention consists of the novel parts or members formed and arranged as hereinafter described and pointed out in the claim.

The accompanying drawing illustrates the device of my invention applied to a sink-outlet having a convex or standing strainer plate, and also to one having a concave or sunken strainer.

Figure 1 is a vertical sectional-view of the part of the bottom of a sink at the waste outlet having a convex strainer, with a sink-stopple of my invention in position closing the outlet. Fig. 2 is a similar sectional view of a sink outlet having a depressed strainer, with the stopple in position. Fig. 3 is a top-view of the device. Fig. 4 is a transverse section taken diametrically through Fig. 3.

The improved stopple of my invention comprises a generally flat disk preferably formed of rubber by molding and vulcanizing in the usual manner of producing similar articles of rubber, but also peculiarly formed of varying thickness at different parts so as to produce a central pad *a* of circular contour, a relatively inflexible annular stiffening plate *b* surrounding the central pad and from which it is separated by a relatively thin and more flexible hinge-like portion *c*, and a thin rim or marginal portion *d* on the marginal edge of the part *b* having greater flexibility than that part. The parts *a*—*b*—*c*—*d* comprising the stopple are integral, being readily formed by giving the upper and lower faces of the disk the proper contour to produce the central pad and the annular plate, and the intermediate hinge-like portion joining those parts of sufficiently less thickness to secure the necessary movement of those parts whereby the central pad can be elevated above the plane of the surrounding stiff portion *c*, or depressed below that plane, according as the device is placed on a convex or a concave strainer. The rubber is therefore reduced in thickness over the parts *a*—*b* at the parts *c* to secure sufficient expansibility or distension in the web or intermediate portion; whereas the parts joined by the web are given only such degree of elasticity or flexibility as will allow them to accommodate themselves to any irregularity or inequality in the contour or the plane of the surfaces against which they are pressed. By virtue of this construction the central pad, which is of suitable size to cover the perforated portion of the strainer, will conform to the shape and lie against that part, whether the latter stand above the surface on which the stiff marginal part of the disk rests, or whether the strainer be depressed to a greater or less extent below the plane of the sink bottom; resulting in the effective displacement of the air beneath when pressure of the hand is applied to the disk, and a close fitting of the device upon the strainer as long as it is left undisturbed. The disk thus formed is provided further with a thin rim *d* on the outer or marginal edge of the thick annular member which is integral with that part of the disk, being united or joined

thereto by a web or intermediate portion *f* of less thickness or of such greater flexibility than either the rim portion *d* or the part *b* that the rim being more flexible at its junction with the thicker body will bend and accommodate itself more closely to the change and variation in the surface and thus insure a tight joint all around the edge of the stopple. The thin part *d* forming the rim is preferably reduced in thickness at its junction with the body of the disk, as seen at *f*.

For greater convenience of handling the stopple of my invention it is usually provided with a lug *g* on the top side, in which a ring or loop can be fixed to serve for a handle, the same loosely fitting an eye in the lug, and being arranged to turn in the lug so as to lie flat on the top of the disk when not used.

A stopple of this character will fit different kinds or styles of sink outlets, and is especially adapted by its form or construction to cover and close either a convex or a concave or depressed strainer with equal facility, sealing the outlet and retaining the water in the sink until the stopple is loosened by admitting the air beneath it.

By holding down the stopple around the rim while the pad or central portion *a* is moved quickly up and down, the device can be operated to advantage like a suction pump, to dislodge or start an obstruction in the waste below and thus clean the pipe.

I claim:—

A sink-stopple comprising a rubber disk having a concentrically arranged and thin annular portion alternating with a central portion and a marginal portion of less elasticity, and a relatively thin rim united to the said marginal portion of the body by a web.

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Witnesses:

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