

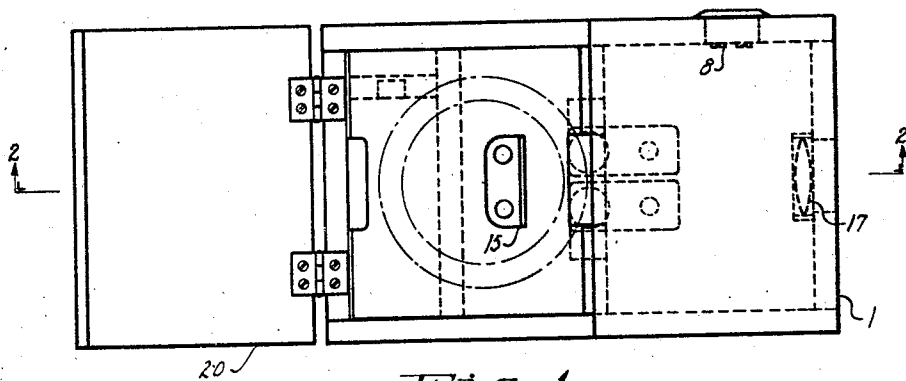
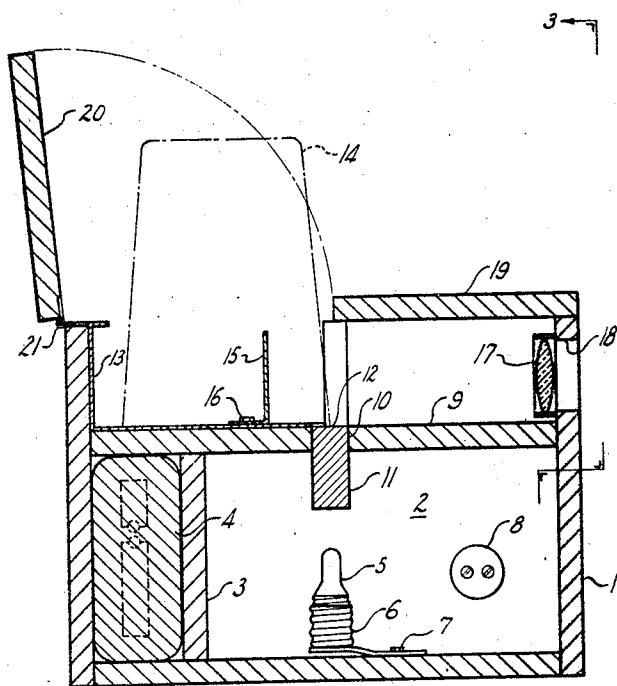
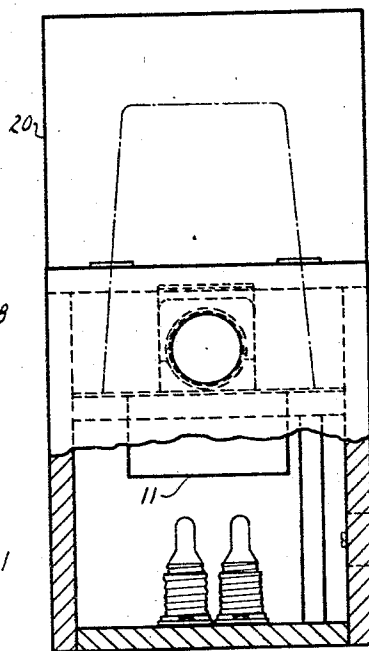
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APPARATUS FOR INSPECTION OF CONTAMINATED GLASS ARTICLES

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APPARATUS FOR INSPECTION OF CONTAMINATED GLASS ARTICLES

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1 Claim. (Cl. 88—14)

This invention relates to new and useful improvements in apparatus for inspecting hollow glassware or similar articles for grease spots or other uncleanly surface conditions.

It is among the objects of the invention to provide apparatus adapted to direct a light ray in such relation to the surface of a glass tumbler or the like that any surface contamination will be at once apparent to the observer.

A further object of the invention is the provision of an apparatus for the purpose described, which shall be of simple, compact construction and which shall be a self-contained unit usable anywhere by simply removing the cover of a support upon which the article to be inspected is placed.

These and other objects of the invention will become more apparent from a consideration of the accompanying drawing constituting a part hereof in which like reference characters designate like parts and in which:

Fig. 1 is a top plan view of an inspection apparatus embodying the principles of this invention with the cover in open position;

Fig. 2 a vertical cross-sectional view thereof taken along the line 2—2;

Fig. 3 a front elevational view partially in cross-section taken along the line 3—3, Fig. 2.

In the drawing numeral 1 designates a rectangular box having a lower compartment 2 partitioned at 3 to house a dry cell battery 4 which furnishes energy for one or more light bulbs 5 mounted in a socket 6 attached to the base by a screw 7, the light bulbs being connected and disconnected with battery 4 by a slide switch generally designated by the numeral 8. An upper horizontal wall 9 of the apparatus is slotted at 10 to receive a light conductor 11 which is preferably of a non-shatterable material such as "Amphenol," which particularly has the characteristic of transmitting light rays through the end 12 of the member.

Above the horizontal wall 9 is a metal liner 13 for supporting an article to be inspected such as the glass tumbler 14. Mounted on the liner 13 is a baffle 15 which is secured by screws 16, the baffle being opaque, preferably of a black color to avoid reflection of light.

It will be seen from Fig. 2 that the edge of the tumbler 14 extends to about the mid-section of the conductor 11 so that light from the bulbs 5 passes vertically through the conductor and upwardly on both the inner and outer walls of the tumbler 14.

A viewing lens 17 is provided adjacent an opening 18 in the front of the box, the lens being housed by a fixed top or cover 19, which is complementary to a movable cover 20 hinged at 21

and which, when in the closed position, is flush with the outer surface of the fixed cover 19.

The operation of the above-described device is briefly as follows:

The cover 20 is opened to expose the tumbler support as shown in Fig. 2. The tumbler 14 is placed on the support with its edge so located with respect to the light conductor 11 that the light rays will straddle the wall of the tumbler, and by viewing the tumbler through lens 17, any grease, dirt or other impurities on either the inner or outer surface of the tumbler becomes very readily visible.

The tumbler 14 is then revolved by hand while retaining its seat on the supporting liner 13, so that the entire periphery of the tumbler may be inspected almost instantly. When not in use, the cover 20 is closed and switch 8 is turned off. While it is the purpose of the invention to provide apparatus for inspecting glasses in restaurants and public places for sanitation, it will be evident that the invention may also be useful in testing imperfections in the glass, resulting from defects in the fabricating process.

I am aware that other devices have been heretofore proposed for testing imperfections in glass articles, but these devices utilize a different principle of light reflection and defects are thereby detected by refraction of the light, which is a principle not herein employed.

In the instant case, by the use of the conductor, the light is reflected upwardly only, substantially parallel with the surface of the glass article, which renders surface impurities plainly visible.

Although one embodiment of the invention has been herein illustrated and described, it will be evident to those skilled in the art that modifications may be made in the details of construction without departing from the principles herein set forth.

I claim:

Apparatus for inspecting the surface of glass articles comprising a horizontal supporting surface for the article to be inspected, having an abutment for engaging one edge of the article, a light conductor adjacent and below said abutment to direct light rays along the surface of the article when its edge engages the abutment and a source of light below the conductor, a baffle plate of an opaque and non reflecting substance extending vertically from said article support and behind the surface of the glass to be inspected, and a viewing lens in front of the abutment having its focusing axis at right angles to the baffle plate and to the direction of the light rays for inspecting the surface of the glass above the light conductor.

DAVE MERCUR.