

[54] AUTOMATIC BOTTLE SEALING MECHANISM FOR LIQUID SAMPLING APPARATUS

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[57] ABSTRACT

An automatic bottle sealing mechanism is provided for use with an automatic liquid sampling apparatus of the type having a plurality of sample receiving bottles and a movable sample distributing spout for sequentially filling the bottles with liquid samples. The bottle sealing mechanism includes a cap body adapted to be fitted over the mouth of a sample bottle in place of the usual screw cap or other type of closure. The cap body includes an open throat for allowing liquids to be poured into the sample bottle, a movable closure member for opening and closing the cap body throat, and a spring loaded latch mechanism for automatically moving the closure member to a closed position in response to the movement of the sample distributing spout. The invention promptly and automatically seals the sample receiving bottles after they are filled with a liquid sample, thereby preventing the evaporative loss of volatile substances contained in the liquid samples while obviating the need for subsequent manual sealing of the bottles. In one embodiment, the closure member carries a sharpened lance or spike for puncturing a preservative container housed in the cap body, which allows a preservative liquid to be automatically added to the liquid sample immediately after the sample receiving bottle is sealed.

15 Claims, 11 Drawing Figures

