A NOVEL HAND SANITIZER DISPENSER WITH ALARM BUZZER

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Abstract: An automatic hand sanitizer dispensing machine is an automatic, noncontact, alcohol-based hand sanitizer dispenser, used in hospitals, worksites, offices, schools, etc. Alcohol is a solvent and is a much better disinfectant than liquid soap or solid soap, plus it does not require water to wash because it is volatile and evaporates immediately after application on hands. It has also been proven that 70% of alcohol can kill the coronavirus taken in hand. Here, an ultrasonic sensor senses the handheld near it, the Arduino UNO is used as a microcontroller, which senses the distance and the result when the pump hand is running to pump the sanitize.
Keywords. hand sanitizer, COVID-19, public, microcontroller

1. INTRODUCTION

Sanitizers are often found to be used at many public places (and especially recently, given the COVID-19 pandemic). However, each press of the cap leaves behind several styles of germs thereon. some way to avoid this might be to automate the bottle so users never must touch the cap to receive the sanitizer. The idea is simple: whenever a user places his or her hand beneath the sanitizer bottle, a tiny low amount of liquid sanitizer is automatically dispensed. This might be like public hand dryers. Whenever we place our hands under it, hot air is triggered to dry. them.

2. LITERATURE SURVEY

Indeed, sanitizing hands phenomenon for COVID-19 patients published in which 17 papers accomplish the criteria of hand sanitizing out of total 22 papers like soap and water dispenser, SARS-CoV-2), reducing transmission diseases, MRSA bacteria-killing, ESBL killing, PPE using ethanol techniques touchless we have hand sanitizer available for the people around the world, as we know peoples are trying to maintain "Social distancing" due to this pandemic Covid-19, we all made it so effective for even poor to rich people with WHO recommended formulation. In all these, we didn't found the making of the pre-examining system of dispenser bottles' state we make it easier by using an LED technique with alarm buzzer system using ARDUINO IDE code, as it blinks and within microseconds the alarm rings. Initiation of sanitizer filling. Not only this we made our sanitizer using WHO formulae that is -Ethyl Alcohol(417mL, pure as 98-99%) & Hydrogen peroxide(21mL) & Glycerine(8mL), and Distilled water(56mL). Convenient and cost-efficient as well as personal satisfaction made our project different as more handwork by our team is there for progression of touchless hand sanitizer and code of IDE makes everyone aware about the state of the dispenser. As in this critical situation, there is no limitation of time, so we tried to make it easier to use as well as self satisfactory, which is eventually a necessary part of life in this time of widespread disease.

3. PROBLEM STATEMENT

We have made an automatic hand sanitizer "project". With an automatic sanitizer dispenser, people are likely to stay their hands clean. This can be unattainable with an operated by hand dispenser; because many consider it to be tedious and thus tend to avoid it. A touch-free sanitizer dispenser encourages use and increases the quality of individual who clean their hands, and this can reduce the number of transmissions of infections **.**

4. RESULT AND DISCUSSION

Demand for hand sanitizers has surged since the coronavirus broke out and spread around the world. Hand sanitizers are usually applied by squirting the sanitizer liquid when one presses a pump with one's hand. This causes many of us to return into contact with the pump handle, which increases the danger of viral transmission. Some hand sanitizers on the market are automatically pumped. However, because sanitizer containers and pump devices are designed to be compatible only between products produced by the identical manufacturer, consumers must also repurchase the container for the liquid if they replace the hand sanitizer. Therefore, this paper suggests the planning of an automatic hand sanitizer system compatible with various sanitizer containers.
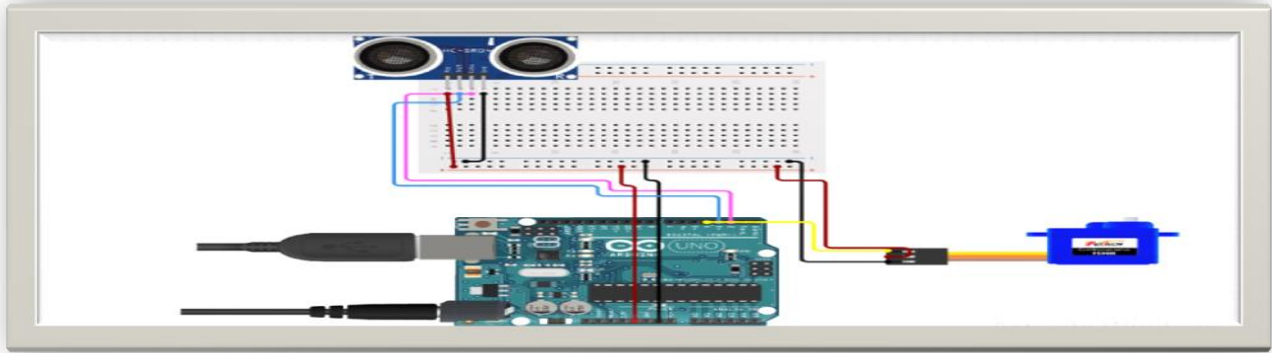
5. LIMITATIONS

There is doubt that an automatic dispenser is a high maintenance. As the sanitizer dispenses automatically, it turns off automatically in places, which require timely cleaning. This also makes the place dirty and unhygienic.

6. CONCLUSION

The automatic hand sanitizer device proposed in this paper is expected to contribute to many hand disinfection and virus infection prevention in public places. Moreover, it is economical and environmentally friendly by reducing waste emissions.

7. FUTURE SCOPE

An automatic hand sanitizer dispensing machine can be a handwashing unit that will self-standing or be in conjunction with other sanitation stations . Hand sanitizer dispensing machines are available in numerous sizes, price ranges, operation modes, and capacities They are installed in public and commercial washrooms. These automatic hand sanitizer machines easy to use and at a reasonable price with minimal maintenance costs. these features are expected to contribute to the expansion of the hand sanitizer dispensing machine market shortly. A rise in health care expenditure and high investments by companies in R&D to introduce new products are driving the worldwide hand sanitizer dispensing machine market. The adoption of hand sanitizer dispensing machines is on the increase among end-users like schools & universities.

8. ACKNOWLEDGEMENT

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