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Anti Suicide kit

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Abstract: Suicide prevention is a significant societal challenge, and hanging from ceiling fans has been a common method in such tragic events. This project presents an innovative approach to mitigating this issue by designing a ceiling fan equipped with a spring-loaded rod that extends when it detects the weight of a person attempting to hang. The extension of the rod prevents suffocation by reducing pressure on the person's neck, while an integrated alarm system immediately alerts family members or nearby individuals, enabling swift intervention. This system is designed to be non-intrusive and easy to install in households, offering a low cost, life-saving solution that enhances safety and protection. By combining mechanical design with automated alert technology, this project exemplifies a practical and effective method to reduce suicides and provide timely help in crisis situations.

I. INTRODUCTION

Introducing an innovative solution to a critical issue, this project addresses the rising concern of suicide by hanging from ceiling fans. By incorporating a spring-loaded rod into the fan, this system prevents suffocation when someone attempts to hang themselves, while simultaneously activating an alarm to alert nearby family members. This proactive approach not only protects lives but also offers peace of mind, demonstrating how technology can be harnessed for impactful problem solving in sensitive situations.

II. LITERATURE SURVEY

[1]. Suicide Prevention Techniques: Research in suicide prevention primarily revolves around mental health care, crisis intervention strategies, and therapy. Organizations like the World Health Organization (WHO) have emphasized the importance of psychological support systems, suicide helplines, and community-based mental health initiatives. However, these strategies focus more on emotional well-being and less on physically preventing suicide attempts. Studies show that methods of intervention often happen too late, highlighting the need for early detection and physical prevention systems.

[2]. Methods of Suicide and Physical Deterrents: According to numerous reports, hanging is one of the most common suicide methods due to the ease of access to tools like ceiling fans in households. Various attempts have been made to mitigate the risks associated with hanging. These include breakaway hooks, collapsible ceiling structures, and systems that detect abnormal pressure or motion in potential hanging points. For example, collapse-proof fans and tamper-resistant fittings have been suggested but lack widespread practical adoption due to complexity, high costs, and the need for specialized installation. These solutions are often impractical in everyday home settings.

[3]. Sensor-Based Intervention Technologies: Advances in sensor-based technologies have been utilized in several fields for harm prevention, such as fall detection systems for the elderly and motion triggered alarms. Systems that use pressure, motion, or weight sensors have proven effective in alerting caregivers and family members to hazardous situations, allowing for timely intervention. For instance, wearable devices for health monitoring and environmental sensors in smart homes offer real-time tracking and notifications in emergencies. However, their applications are more common in medical and elderly care, with limited research directed toward their use in preventing suicide by hanging.

[4]. Emergency Alert Systems: Emergency alert systems, often used in the fields of personal security and safety, can quickly notify others during critical events. The use of alarms in homes has been expanded to cover various areas such as fire, intrusion, and personal health emergencies. Studies highlight the effectiveness of real-time alerts in mitigating risks and saving lives when immediate action is possible. Despite their success in other domains, there is a gap in integrating these alert systems into everyday household items like ceiling fans, where the potential for harm exists.

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[5].Mechanical Intervention Devices: Mechanical devices designed to prevent injuries and fatalities have been explored in various industrial and household applications. For example, automatic shutdown mechanisms in machinery are used to protect workers, while anti-fall devices are incorporated into home designs for the elderly. These solutions emphasize the importance of both preventing an incident from occurring and ensuring an immediate response when necessary. However, similar preventive measures for suicide by hanging remain underdeveloped.

III.METHODOLOGY

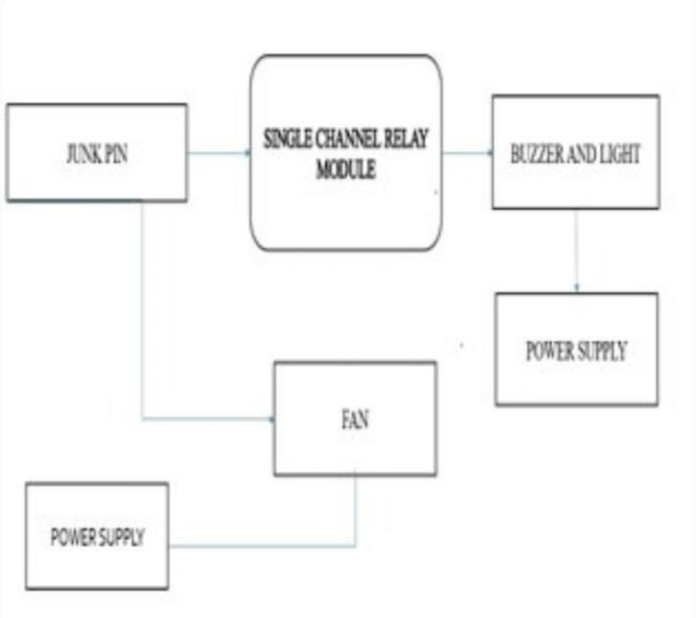

Figure 1: Block Diagram

A. BLOCK DIAGRAM Figure 1 represent the block diagram represents the block diagram of Anti-Suicide kit we have used the components like Single Relay Channel Module, PCB, 9V battery, Pipe, DC Motor.

B. WORKING The proposed ceiling fan system with a spring-loaded rod and integrated alarm is an innovative solution aimed at preventing suicides by hanging. It offers a practical, cost-effective, and easy-to-install method for mitigating one of the most common methods of suicide, ensuring that swift intervention can take place before suffocation occurs. By preventing pressure on the neck and alerting nearby individuals through an audible alarm, the system adds a crucial layer of safety to an often-overlooked household hazard. While the system addresses a specific method of suicide, it represents a significant step forward in physical suicide prevention measures, complementing existing psychological and medical interventions. The balance between mechanical design and sensor-based alert systems offers an immediate and practical solution that could potentially save lives.

IV. CONCLUSION

The proposed ceiling fan system with a spring-loaded rod and integrated alarm is an innovative solution aimed at preventing suicides by hanging. It offers a practical, cost-effective, and easy-to-install method for mitigating one of the most common methods of suicide, ensuring that swift intervention can take place before suffocation occurs. By preventing pressure on the neck and alerting nearby individuals through an audible alarm, the system adds a crucial layer of safety to an often-overlooked household hazard. While the system addresses a specific method of suicide, it represents a significant step forward in physical suicide prevention measures, complementing existing psychological and medical interventions. The balance between mechanical design and sensor-based alert systems offers an immediate and practical solution that could potentially save lives.

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V. FUTURE SCOPE

The proposed ceiling fan system with a spring-loaded rod and integrated alarm is an innovative solution aimed at preventing suicides by hanging. It offers a practical, cost-effective, and easy-to-install method for mitigating one of the most common methods of suicide, ensuring that swift intervention can take place before suffocation occurs. By preventing pressure on the neck and alerting nearby individuals through an audible alarm, the system adds a crucial layer of safety to an often-overlooked household hazard While the system addresses a specific method of suicide, it representssignificant step forward in physical suicide prevention measures, complementing existing psychological and medical interventions. The balance between mechanical design and sensor-based alert systems offers an immediate and practical solution that could potentially save lives.

VI. RESULT

Figure 1:System of the project with complete connections

Figure2:Finaloutput

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REFERENCES

Mann, J. J., et al. (2005). "Suicide Prevention Strategies: A Systematic Review." JAMA, 294(16), 20642074. This article provides an in-depth review of various suicide prevention strategies, highlighting the effectiveness of both clinical and environmental interventions in reducing suicide rates.

Watson, D. P., et al. (2016). "Preventing Suicide by Hanging: Case Studies and Emerging Solutions." Crisis: The Journal of Crisis Intervention and Suicide Prevention, 37(1), 1-9. This study explores hanging as a suicide method and examines current prevention technologies, including physical deterrents and sensor-based systems, offering insights into solutions like the one proposed in this project.

Gunnell, D., et al. (2005). "Methods of Suicide: International Differences and Implications for Prevention." International Journal of Epidemiology, 34(2), 433-442. This research focuses on the variation in suicide methods worldwide and the impact of restricting access to specific means, underscoring the importance of developing targeted physical interventions such as ceiling fan modifications.

Freeman, A., & Ainsworth, N. (2016). "Engineering Suicide Prevention: The Role of Mechanical Safety Systems." Journal of Safety Research, 59, 21-28. This paper discusses the role of engineering and design in preventing suicides, reviewing existing mechanical systems aimed at reducing suicide rates by removing or modifying access to common methods. Maris, R. W., et al. (2000). Comprehensive Textbook of Suicidology. Guilford Press. A thorough academic resource on suicide, including psychological, social, and environmental factors, with discussions on both preventive counseling methods and physical intervention tools