International Journal of Engineering and Technical Research (IJETR)
ISSN: 2321-0869, Volume-3, Issue-1, January 2015

Electric Shock Proof Houses

C. Prabhakar

***Abstract*— The Building Electric shock proof houses will be a boon.Because, it saves lives. Since the discovery of Electricity, its vast applications keep going on each and every passing day. Many inventions keeps coming based on the electric power supply. In this century Electricity became indispensable. Though it has got enormous applications and use, it has got one drawback, the electric shock due to high voltages. Hence, to overcome and make safe home from electric shock was an attempt by many Engineers. Death due to Electric shock is severe. Generally, two ways of electric shock possible, one due to leakage from House Electric circuit, another from the Equipments which works on Electricity such as Iron box, water heaters, geysers, stoves and Grinders. Here, we will see how we can place simple circuit breaker for both the cases, so that any leakage can trigger circuit Breaker, which will trip the mains.**

***Index Terms*— Electricity, Electric shock and Electric circuit breaker**

I. INTRODUCTION

One of the necessary need of the modern days is Electric power supply. Though it is friend of mankind in assisting him in doing most of his work, thereby reducing his routine burden, it has drawback of Electric shock, which leads to death. Here, by simple circuit, we can totally control Electric shock by any leakage due to Electric circuit or due to any from its Equipments.

II. HISTORY

Electricity was discovered long ago. Due to its wide application, it gained the status of one of the necessary need of the man. One Drawback of Electricity is leakage leading to shock, which results in loss of property and lives. We use simple circuit breaker and add one extra pin in the Electrical appliance switches and in the housing Electric circuits, which acts as an Electric shock tripper.

III. PROPOSED METHOD FOR AVOIDING ELECTRIC SHOCK

Proposed method involves same as existing method, except some changes. we will add one pin in the Electrical appliances, which connects to the Extra socket added in the mains supply and also three skinless wires placed equidistance surrounding the walls and floors leading to the this extra socket. These are placed, while constructing houses itself. That is, while placing wiring ducts and wires. Now, we added one extra circuit, So, instead of usual three pins, it will become four. That is line, neutral, Ground and shock preventer, and instead of two pins, it will become three pins. That is line, neutral, and shock preventer which ultimately connects from all the rooms to main supply board. This extra wire detects any electric current leak either in the circuit leading to the walls of the home or from any appliances

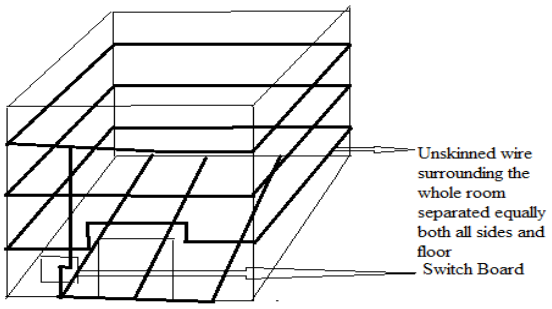

Figure 1 Shock Preventer wire surrounding the room finally connected to the shock preventer socket in the switch board which finally leads to Mains MCB

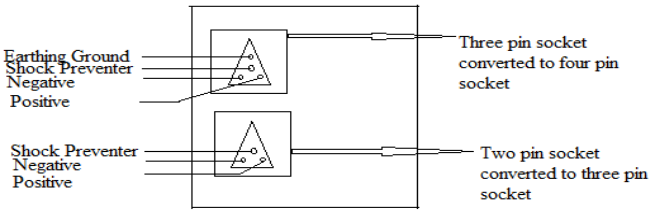

Figure 2 Switch Board showing Extra pin and socket needed for shock preventer

Here, we see in figure 1 that wires are placed in the all sides of the room separated equally and also on the ground and plastered by cement, all of which connects to the extra shock preventer socket. In the switchboard. Similarly, we can connect and lead all the other rooms wire finally to the mains supply, where it is connected to MCB, which acts as a Mains tripper, when it detects Electric leakage at any place of the House.Also, provision should be made in such a way that Electric leakage in one room should not pass on or spread to other rooms during its reach to mains, due to its interconnection with all the other rooms. At last, If not all rooms, at least it should be implemented in the Bathe Rooms and kitchens for safety. Similarly, as Electric appliances have extra pin, which fits in to the shock preventer hole in the socket, detects any leakage of electric supply to the Ground in its equipment, sends the signal to the mains shock preventer MCB, which acts as a Mains tripper.

IV. ADVANTAGES OF NEW BUILDING METHOD

Using the above method to avoid Electric shock will make safe homes and save lives. Though it is simple addition of one pin and socket in the Electric switches of the home appliances and Electric circuits, it will eventually be the life and property saver.

Manuscript received January 14, 2015.
Prabhakar C B.E (Mech) DCA is a Mechanical Engineer.

V. Conclusion

The Electric shock can be prevented by simple addition of one more pin in the Electrical switches, which is connected to the ground of Electrical equipments and fits in to the shock preventer socket in the board for the safety of Equipments just as Ground pin, which trips mains due to any Electric leakage to the Ground .Shock due to leakage of Electric circuit in the house, can also prevented by placing skinless wire on the walls and the ground, which carries any leakage of Electric current on the walls and ground to the main Electric circuit breaker, which gets energised magnetically to disconnect the main supply, thereby making Electric shock proof Homes.

Authors Profile:

Prabhakar C B.E (Mech) DCA is a Mechanical Engineer presently working independently on various topics of science and technology, having work experience of more than 14 Years in Diverse Fields Like CAD, Telecommunication, Fabrication, Assembly, Stores and in Teaching faculty.

INTERESTED ACTIVITIES: To Bring innovative and creative Ideas in All the Branches of Science and Technology.