

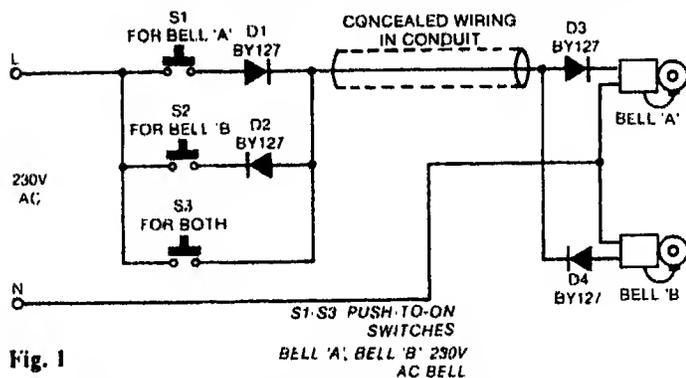
## **Two-Way Remote Call Bell**

People living on the first floor and above in apartment houses find it convenient to install an extra bell-push on the ground floor so that they can be called by vendors, community telephone attendants and others from the ground floor without having to climb all the stairs. Usually this is done simply by extending a pair of wires from the terminals of the bell-push provided on the switchboard just outside the main entrance to the flat and providing another pushbutton switch in parallel at some convenient location on the ground floor.

Though simple to install, this has a disadvantage that the same bell rings from either bell-push and from the sound it is not possible to tell which switch was operated. Thus when the bell rings one cannot know whether to go to the balcony to speak to the caller or to open the door for the visitor.

Bells or buzzers with different tones are quite inexpensive and many a people wouldn't mind installing two bells for two pushbuttons, but this involves an extra wiring in the house for the second bell-push and bell. In most modern flats the wiring is concealed, a bell-push is provided outside the main door and a ceiling rose at some central place in the house where the bell is connected. Extra pair of wiring for the second bell has to run on wooden battens fixed on the wall and this makes an eye-sore. Hence most people avoid use of a second bell.

Using the circuit given here it is possible to ring two bells independently from two pushbuttons yet using the single-circuit concealed wiring provided at the construction time. As shown in Fig. 1, diode BY127 is introduced in series in



each switch but in different directions. Both the bells are connected in parallel from the common ceiling rose and another diode is connected in series in each bell. When any bell-push is pressed, only that bell rings for which both the diodes are biased in the same direction.

Even three-point signalling is possible by adding a third bell-push without any diode which, when pressed, will ring both the bells together. If necessity of a third point is not expected then you can save the cost of two diodes by using the circuit given in Fig. 2. In this case, when S1 is pressed only bell B rings while a push on S2 rings both the bells

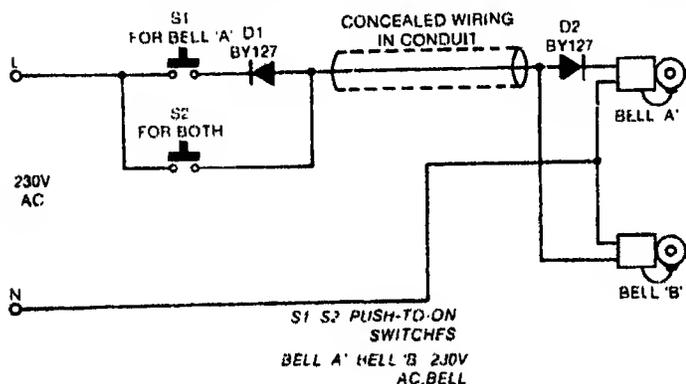


Fig. 2

together.

The circuits should be used only with the bells or buzzers which operate directly on 230V AC. It should not be used with electronic novelties which operate on low voltage DC through a step-down transformer, because a diode in series in the primary of the transformer will result in a very low RMS voltage on secondary side.

(MRS) MADHURI C. PANDIT

## Have You Any Idea?

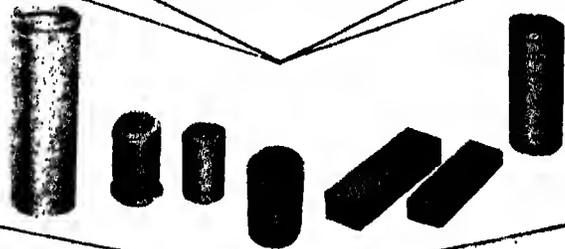
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A token honorarium (minimum Rs 50) will be paid for the ideas found acceptable for publication. But please see that your contribution fulfils the following two conditions;

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2. The circuit has been tried by you and was found to work satisfactorily.

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