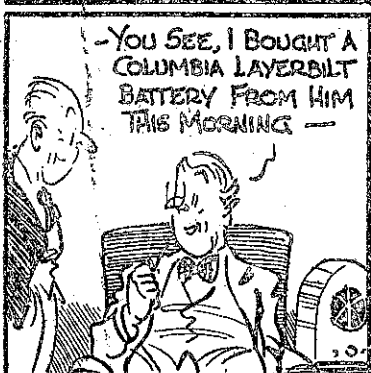




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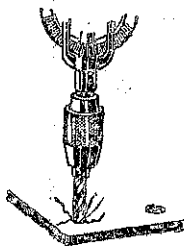
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HINTS FOR BEGINNERS

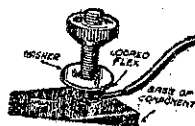
Countersinking Holes: A Drilling Tip: "Topping Up" Accumulators: Testing Headphones for Sensitivity: Choosing "B" Batteries: Eliminating Straggling Leads.

IF the screws attaching a panel to a base-board are neatly countersunk, the appearance of the set is greatly improved. A special tool is not absolutely necessary, for the operation can be carried out very successfully with an ordinary drill several sizes larger than the screw hole. An old drill is much better than a sharp one, which tends to dig into the ebonite.

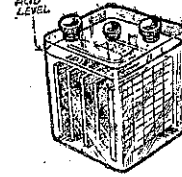


MANY beginners find it difficult when drilling holes to keep the drill perpendicular, so that the axis of the hole is at right angles to the surface of the material. A punch mark on the surface of your panel ensures that the point of the drill will not wander in starting the hole, but when the terminal is fixed in position you may find that it leans to one side or the other. The only cure then is to enlarge the hole so that the terminal can stand upright, and this is a poor makeshift at best, and not by any means a workmanlike job. Until the knack of keeping the drill upright is acquired, it will be found that a small box such as a wooden matchbox placed upright on the panel near the drill is an excellent guide to ensure straight drilling. You will then find it quite easy to look down over the top of the drill brace and to keep the drill parallel with the nearest side of the upright box. If you tilt the drill out of the perpendicular in any direction you will at once detect your error.

MANY constructors use several lengths of ordinary flex as an alternative to a battery cable, and it sometimes happens that when attaching the flex to a terminal, one of the strands becomes twisted round in such a manner that difficulty is experienced in tightening down the nut. If, however, a metal washer is first placed over the loosed flex, as shown in the sketch, very little trouble in this respect will be encountered. This idea can also be employed with advantage when two or more wires are to be attached to one terminal. The terminal nut can be locked down much more satisfactorily if a metal washer is slipped over after each connection.



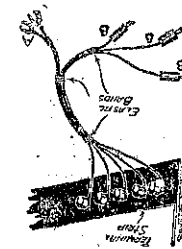
THE life of an accumulator is greatly prolonged if careful attention is regularly paid to "topping up" each cell from time to time. Owing to evaporation, the level of the electrolyte sinks slowly, and if it is allowed to remain below the top of the plate there is a danger that the battery will be spoilt. To avoid this the accumulator should be examined from time to time, and a little distilled water added periodically to make up the deficiency caused by evaporation.



AN excellent test for sensitivity for headphones is to put them on in the ordinary way, holding one of the tags between the lips. Now rub the other tag with a key, file, or other piece of metal. If a rubbing noise corresponding with the movement of the key is heard, you can be sure that the phones are sensitive.

WHEN buying a "B" battery, remember that the rated voltage and its size are not the only matters calling for attention. Important as these are, the question of "internal resistance" must not be neglected. A battery having a high resistance fault will spoil the reproduction of the best set, by setting up coupling effects between the various stages. This usually results in distortion. In addition, the resistance may be variable, and then there are present also all sorts of crackling and frying noises, making the battery practically useless. It is impossible to settle the question of "resistance" when buying the battery, and so only those of high quality should be considered when purchasing. Finally, beware of batteries that show any signs of dampness or of coloured patches.

SEPARATED and straggling battery leads do not improve the appearance of any battery set. It is certainly not necessary that this should be so, for they can be kept tidy simply by slipping several elastic bands around the leads before they are attached to the battery, as shown in this sketch.



WITHIN a few months' time aerial insulators will gather a film of soot that will lower their efficiency. This is true of any type of insulator, and the lowered insulating value is quickly noticed in amateur transmitting installations. The effect in standard broadcast receivers is noted by the increasing difficulty in tuning in distant stations. It is a good plan to lower the aerial at least once every six months and wash the insulators with warm water, after which they should be polished with a soft rag. At this time, the aerial should be inspected for bad connections, and the guy wires and lead-in checked.

THE famous mosque of Aghia Sofia, for many years the orthodox church of St. Sophia at Setanbul will shortly be converted into a broadcasting studio for the purpose of Mohammedan propaganda.