

## Talking Films by Television

**A** NUMBER of letters have of late been received from Japanese listeners. One by the last mail was an excellent specimen of handwriting. Clearly and intelligibly set out, though the English used differed in some particulars from that taught in the best New Zealand schools. Christchurch was spelled "Christchania," and New Zealand "Newziland." "Soprano" is dignified by the name of "sopulano." A "diphthong violin" is also mentioned; probably that means a violoncello, due to a misconception as to the meaning of a diphthong and an apostrophe, in "cello." Another Japanese letter received by Mr. A. E. McMahan, who has given talks at IYA on gardening, asked for a copy of a catalogue referred to by Mr. McMahan.

### Useful Hints

**W**HEN purchasing a soldering-iron get one with a good heavy head and not one of the very light models, as these will not keep hot long enough for satisfactory use.

**B**ETWEEN .0002 or .0003 mfd. is a good average capacity for an ordinary outdoor aerial, which, together with the lead-in and earth wire, does not exceed 100ft. in length.

SO great has been the advance in audio-frequency transformer design in the last two years or so that if you are using an old audio-frequency transformer on the score of economy you are missing a great deal of realism and volume which you might be enjoying.

**I**F a pair of head-phones has no indication as to which is the positive and which the negative tag, the polarity can be determined in the following manner. Carefully unscrew one of the ear caps and remove the diaphragm, leaving the magnets exposed to view. Then suspend the telephones in some convenient position where they are perfectly rigid and load up one of the magnets with small pins, gramophone needles or similar objects, until its magnetism is supporting the full load it can hold. Now arrange a dry cell so that it sends a small current through the telephone cords, first in one direction, and then in the other. If the loading of the magnet has been very carefully done, it is possible to tell when the current of the cell is flowing in the right direction because it will then tend to hold the load of pins more firmly. If, on the other hand, the cell connections are reversed so that the current opposes the magnetism of the telephones, the load will fall off as soon as the current starts to flow. When the battery is placed so that it assists the magnetism to hold the load, that end of the lead which goes to the positive of the battery should be marked positive and the other marked negative, when using the 'phones with a valve set the positive terminal of the 'phones should always be connected towards the loudspeaker terminal which is joined to the B battery positive, and the negative side of the 'phones to that loudspeaker terminal which goes to the plate of the valve.

## An Invention with Important Possibilities

**M**R. J. L. BAIRD, the British television inventor, recently gave the first public demonstration of the transmission by television of talking films.

Mr. Baird himself, experimented successfully with the transmission of ordinary silent films some years ago, and since then one or two foreign experimenters notably C. F. Jenkins, in America, have conducted successful experimental transmissions of specially made silhouette films. In the recent Baird experiments ordinary standard talking films were used.

The Baird Company found that the transmissions of kinematograph films, although simpler than television, had very little interest, and concentrated their attention upon television proper, but lately a new advance has been made in the Baird laboratories, which has brought tele-kinema into the position where it will form a valuable adjunct to television. By using a speaking film, and combining the broadcasting of the sound with the broadcasting of the film image, the Baird Company have been able to broadcast speaking films.

The public demonstration was in every way a success. The film shown was a head and shoulders view of George Robey giving a monologue. It was not a silhouette film; normal shading and detail were clearly visible, and one got the impression of looking at a small amateur film on a miniature screen. The reproduction of the voice was excellent.

The tele-talking film, or to give it the name which has been coined for it by Baird, "Tele-talkie," has an interest value of its own. By this means films such as are used by the big speaking film corporations can be sent out over the ether in the same way as television, and received on the standard "televisor," so that programmes may be alternated—the actual person being seen and heard for one turn, and a "tele-talkie" for another turn.

The importance of sending speech

### *Using Drills*

**D**ESPITE the rapidity with which it wears away steel tools, ebonite is a soft material and threads cut in it are very liable to strip if any force is used, especially in holes of small size, such as those required for 4 B.A. and 6 B.A. screws. When a component has been fixed to a panel or some other piece of ebonite by means of screws it is distinctly annoying to find that one or more of these will not hold firmly. One way of dealing with the matter is to rethread the holes with a larger tap. Thus, if a 6 B.A. hole contains a stripped thread a No. 33 drill may be passed through it, followed by a 4 B.A. tap, in which case, of course, a screw of appropriate size must be used. In some cases it is impossible, or, at least, undesirable, to use a screw of larger size. In such circumstances the following "botching"

with vision is immensely accentuated where "tele-talkies" are concerned, because, owing to the fact that only a 9-kilocycle broadcast waveband can be used, both television and tele-talkies are at present limited to somewhat restricted scenes (if fine detail is to be given) such as one or two persons speaking or singing and such subjects when seen only, without their accompanying sounds, have very little interest compared with a combination of vision and sound, as shown by the "tele-

*All by Wireless*

(By Touchstone in the "Morning Post.")

If everyone lived wireless lives,  
Parents and children, husbands, wives,  
Right from the cradle to the grave,  
Think how much trouble it would save!  
Right on the hour a wave would warn  
The sleeper to arise at morn,  
Turn on his bath upon the spot,  
And make his shaving water hot,  
And while he bathed and dressed prepare  
His breakfast with punctilious care.  
When, having fed, he would depart,  
Wireless would tell him when to start,  
Remarking, "Fog out Croydon way,  
Eight-five ten minutes late to-day,"  
And so through all his day of toil  
By potent valve and thoughtful coil  
He would be shepherded till he  
Returned to domesticity.  
And as the hour of rest drew nigh  
Wireless would sing him lullaby,  
And when his earthly course was finished  
Wireless, with ardour undiminished,  
Would speak the last appropriate word,  
By sympathetic listeners heard,  
"Ashes to ashes, dust to dust."  
Well, if such things must be, they must.

talkie." The sound helps the vision, and vision helps the sound, and the combination is infinitely superior to one or the other separately.

method is very useful. Warm the screw a little and smear its threads with Chatterton's compound. Now drive it in, using just sufficient force to get it reasonably tight. In an hour or two's time, when the compound is hard, the screw will be found tight.

**T**HE Australian stations, like the recent weather, have been exceedingly fickle of late. Some evenings they have exhibited symptoms of resuming their normal audibility, only to lapse again the following evening. It has been "Switch's" experience to find 2BL, Sydney, the loudest of all the trans-Tasman stations, with 2FC, Sydney, generally a poor second. Of the minor Australian stations, 3DB, Melbourne, has been persistently the best. A few nights ago the Japanese station on a slightly higher frequency (shorter wave-length) than that of 4QG, Brisbane, was back again with about half of its maximum volume. Beginners must be patient, for the Australian stations will be back again when atmospheric conditions resume normality.

## Power Supply

ONCE the "B" battery voltage has dropped below 20 or 25 per cent. of its rated voltage it is best to discard it altogether. A "dry" battery consists of certain chemical constituents such as sal-ammoniac, manganese dioxide, zinc, etc. The sal-ammoniac paste dries up and the zinc container is usually partly "eaten away." It is really a waste of time to try and give new life to the cells, and it is more economical and generally satisfactory to purchase a new battery. A partially run-down battery produces all kinds of troubles in the set.

**A** POWERFUL mains unit in which heavy currents are dealt with should be built on a teak, baseboard, and provided with a bakelite or paxolin panel. When heavy currents and high voltages are handled, considerable warmth will be generated, unless the resistances employed are of an extremely substantial character. Teak is one of the less inflammable woods, and the panel materials mentioned do not easily burn or warp. It is always worth while remembering that oak, unless it is extremely well seasoned, has a very bad reputation for warping. If your set has to be used in a room where there is often a fire, choose mahogany instead of oak for wireless cabinets. Brass screws are better than steel screws for radio sets. Steel and iron have magnetic qualities which to some very small extent may interfere with the operation of a receiving set. The effect, even when a large number of screws are used, will be a slight one, but, nevertheless, it is best avoided.

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