

ing the earth connection, and from the end of the secondary coil that is directly connected to the negative A filament terminal a wire is run to the earth terminal, to which no other connection will then be made.

The potentiometer control of the tickler as shown is quite a recognised method that is in use in some circuits for broadcast reception.

A certain amount of careful adjustment will be required to get the adapter working at its highest efficiency.

Constructors are advised to adopt the alternative tuning method as shown, enlarging the baseboard suitably. For reception around 30 metres, at present perhaps the most important, the turns recommended are primary 3, secondary 4, reaction 4 to 6.

A more usual way of tuning a short wave set would be to cut out the resistance on potentiometer, leaving tickler connected to top of choke. Plate of valve would then be connected direct to tickler instead of to potentiometer, and a small variable condenser added to the panel would be connected up in place of the .0001 by-pass condenser.

ABOUT HEADPHONES

HINTS ON THEIR USE

The best way to tell if a pair of 'phones is in good condition is to put the 'phones on and place the end of one of the leads between the teeth. Rub a key or nail upon the other lead, and the weak galvanic currents set up in the body will cause a scraping sound in the earpieces, which will correspond with the rubbing of the key. Such a current is very weak, and is a better test of continuity than the usual dry-cell test.

The headphones can be put to a great variety of uses in connection with the testing of various parts of the set, and really comprise a most efficient and delicate testing instrument. For example, if it is doubtful whether another pair of 'phones or a coil have a break in the windings, it is only necessary to connect them up in series with a battery or dry cell, and with a pair of known good 'phones, when the making and breaking of the circuit (if continuous) will give rise to clicks in the headphones.

Many people think that 'phones will look after themselves without any attention, and this is a great mistake. If they are dropped, the jar will almost certainly knock some of the magnetism out of the magnets, which of course impairs their efficiency. Therefore, when you have finished listening-in, do not throw the 'phones on the table, but hang them on a nail on a dry wall.

When trying to get a station that is only just out of hearing, instead of frantically twisting condenser knobs, or adjusting your crystal or filament current, why not try loosening or tightening the caps of your 'phones? The tension on the diaphragm has a lot to do with signal strength.

For crystal sets the 'phones may be connected without consideration of polarity, but when connecting to any valve circuit, and this includes amplifiers also, the coloured cord should be connected to the 'phone connection on the set that joins the positive of the high tension. If there is a cord marked with red, that will be the positive, or if only one cord is marked with any colour, that will probably be the positive.

If 'phones are continually connected the wrong way round on valve sets, the permanent magnets will be gradually weakened, and loss of volume will result, making distant reception more difficult.

A new transformer exhibited at the radio exposition in Brussels is screened in perforated metal, which, it is claimed, prevents its magnetic field from affecting a radio set. In addition to this, it carries a patented safety device which indicates by a distinct change of colour whenever high voltage is causing its windings to become too hot. The operator and the set are thus protected.

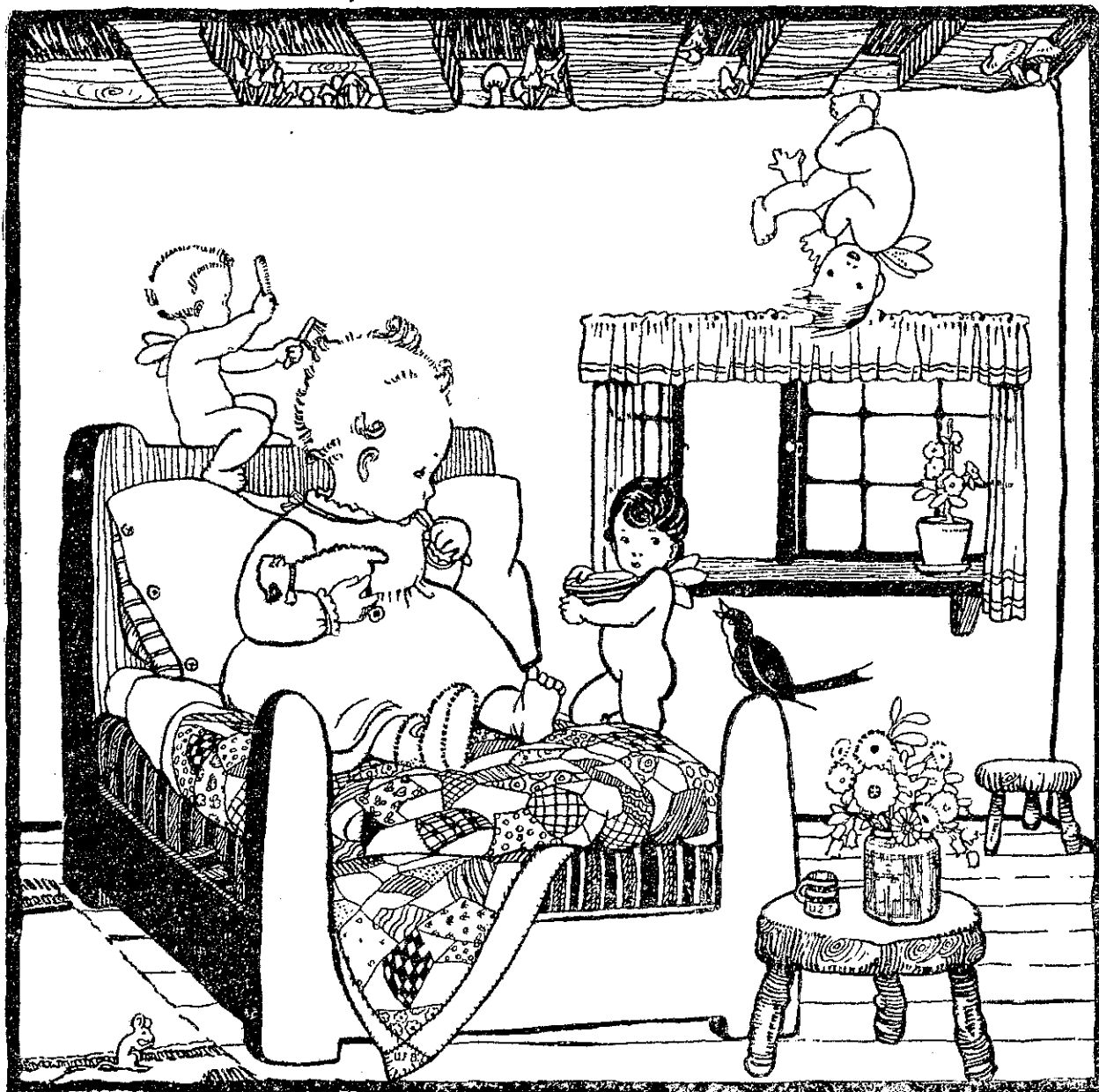
The Children's Corner

By "ARIEL"

Dear Radio Children,—This week I have found another picture for you to paint, as you are all so fond of painting. It is rather a dear wee baby isn't it? There is plenty of scope for your talent too. What a lovely patch-work quilt you will be able to make! Send it in by Sept. 28. In next week's Corner we will have our fourth Zoo animal, the "Faydout." It is beginning to look really like a Zoo now, and I thrill with pride every time my glance falls upon our wonderful collection. When we have duly caught and caged the "Faydout," how would it be to have a "Squealer" for the next animal by October 5? I think you will find him fairly easy to get on to paper. He is a kind of first cousin to the "Howler," and spoils the pleasure of wireless listeners if he is allowed to continue his career unchecked. In England they track him down with a special car which contains a special set for guiding the operator right to the house containing the receiving-set in which the "Squealer" has gone to roost. The guiding-set tells the operator when he is getting hotter or colder in his search. Wouldn't it be great fun to have a car like that and set off at night tracking the "Squealer" to his lair? When he is found, the owner of the set is told how to get rid of him and how to avoid him in the future.

Here is a little true story of a boy and how he made his dream come true through wireless. He was only a small boy, very, very poor, who sold papers in the streets of one of the big towns in England. One terrible day he was taken ill. He had no home, so was taken to one of the large Hospitals, and was so kindly treated that he made a resolve to do something to show his gratitude. He grew to be a man, and from selling newspapers he finally became editor of a big London daily. It was then that he started a fund for putting head-phones at the head of every bed in every hospital in London. It was a big thing to do, wasn't it? Just think of the hundreds and hundreds of patients who were made happier just because one small boy never forgot that someone had been kind to him when he was poor and miserably ill. His name was John Hugh Jones, but hospital patients always call him Dr. Radio. Now get out your paint boxes and drawing pens again, and let us see whether there are any new artists.—Love Ariel.

PAINTING COMPETITION—CLOSING DATE SEPTEMBER 28.



OUR COMPETITIONS

1. Wireless Zoo. "Squealer," closing date October 5. (Prize, 5s.).
2. Painting, closing date September 28. (Prize, a book).
3. The best story, closing date October 12. (Prize, a book).
4. The best poem, closing date October 19. (Prize, a book).

NEW COMPETITIONS.

Here are two lovely new competitions for you—both of them writing ones this time. They need not be sent in until October 12 and October 19, so that gives you a whole month to think about them. So many radio children write such splendid little letters that I'm sure they can write stories, too. Now for No. 1 I want you to take any advertisement picture from any paper you like, and write a story about it. Cut out the advertisement and pin it to the front of your story, so that I will know what it is all about. The following story is an example for you—I thought you would be very interested to read it, as it was written by a little girl who lives away in the country at Mangahoe, Te Kuiti. Her name is Catherine Sale, and she is only 10 years old. She chose the advertisement for Post Toasties, which you must all know quite well, and wrote her story about the five little elves in the maize. Just see whether you can do as well. :-

A POEM ABOUT A PET.

No. 2 is a poetry competition. Lots of you have pets, for you have already told me about them. Write a little poem about your pet lambs or dog, or pussy or anything else. If you haven't a pet, write some verses about some everyday thing that you use, such as a thimble, a comb, or a pen-knife. Think of something for yourselves. Below are two little poems to give you an idea of how to set about them. Prizes of nice books will be given for each of these competitions.

THE LITTLE WRIGGLY DOG.

Kim wasn't very clever, and he wasn't big at all;
He was just a little wriggly dog, who, though he was so small,
Was quite a fierce protector, and when people passed him by
They'd go all carefully to see the look within his eye.
And when he went up close to them, the bravest heart would quail
Until he smelt that they were nice, and wagged his stumpy tail.
We used to go adventure walks—the kind when you explore,
For they said "You musn't go alone, across the great big moor;
But we don't mind a bit if you will always go with Kim,
For though he's just a little dog, you're always safe with him."
But Kim got tired of chasing things, his spirit went, they say,
To other happy hunting grounds another world away.
And we wrote on a little stone (near where the roses grow)
"This was a dear and wriggly dog who's resting here below."

THE PENCIL'S STORY.

(By Florence Hoatsen.)

"I am a little pencil, and my name is H and B,
I lie upon the mantelpiece for everyone to see;
I'm handled forty times a day, it is a weary life;
And when my wits are rather dull I'm sharpened with a knife!
"I scrawl when Tommy has me, and I draw all sorts of things,
From submarines and aeroplanes to cabbages and kings;
I write a lovely letter when Miss Phyllis is about,
And if by chance I make mistakes Miss Phyllis rubs them out.
"And if I slip and tumble down I'm certain to be missed,
For mother wants me badly when she does the washing-list,
And father makes me keep the score when he begins to play—
I'm just a little pencil, but I have a busy day.
"I really never am allowed to grow up as I ought,
I'm getting shorter every day (it's awful to be short),
And when the knife begins on me I ache in every joint,
I put it in that way because you're sure to see the point.
"I'm very glad I'm useful, though my speech is always dark,
But every time they handle me I always make my mark!
But sorrow seems to follow me in spite of many a friend,
For when I'm meditating I am bitten at the end."

A DOUBLE ACROSTIC

Find the correct answers, write them in order: one under the other, and the first and last letters will give you the name of a person we all love.

1. An old-fashioned drink.
2. A man mentioned in the Bible.
3. A girl's name.
4. An Old English pronoun.
5. An exclamation of dismay.

Solution next week.

LIMERICKS

ONLY FANCY.

There was a faith-healer of Deal
Who stated that pain is not real;
If I sit on a pin
And puncture my skin,
I dislike what I fancy I feel.

NO WONDER!

There was a young man of Madrid
Who ate forty eggs for a quid,
When they said "Are you faint?"
He replied "No, I ain't,
But I don't feel as well as I did."

NEXT TO NOTHING.

There was a young lady of Lyn
Who was so exceedingly thin,
When she drank lemonade,
One hot day in the shade,
She slipped through the straw and fell in.

"FALSE" ECONOMY.

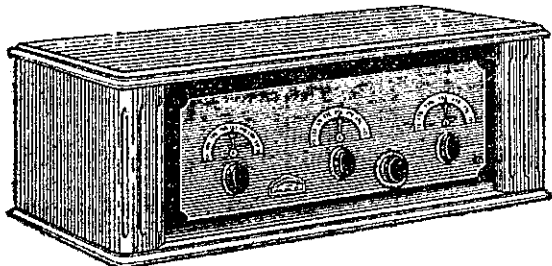
There was an old man of Tarentum
Who gnashed his false teeth till he bent 'em.
When asked what it cost,
And how much he lost,
He replied "I don't know, I just rent 'em!"

SOUND ADVICE.

Be true to your teeth, or your teeth will be false to you.

A mile above the earth, a singer entertained a Times Square crowd in New York recently. The loud-speaker, which carried his voice downwards, operates on the 1000-watt output of a group of power valves.

AMRAD



FINEST OF ALL NEUTRODYNES

SELLS ON ITS OWN EXCEPTIONAL MERITS—SPLENDID PERFORMANCE—RELIABILITY—TONE QUALITY. NEEDS NO OTHER BOOST.

We supply the set complete with the following accessories:—5 Valves, Crosley Vellum Musicone, 80 amp. "A" Battery, 90 volt "B" Battery, "C" Battery, connecting wires and clips, lightning arrester, 100ft. Best Strand Aerial, Lead-in Tube, Lead-in and Ground Wire (insulated), 4 Insulators.

No Set can compare with the AMRAD in actual value.

PRICE £35 complete. Easy Terms Arranged.

ROBERT A. GUMMER, 151 Queen Street, Auckland.

L. V. MARTIN AND CO., LTD., Hamilton.

R. G. ANDREW, Te Awamutu.

I. G. SHAW, Te Puke.

AGENTS WANTED IN UNALLOTTED TERRITORY.

EPITAPHS.

Here lies poor Burton;
He was both hale and stout;
Death-laid him on his bitter bier,
Now in another world he hops about.

Here lies John Bun;
He was killed by a gun;
His name was not Bun, but Wood,
But Wood would not rhyme with gun,
But Bun would.

BREAKFAST.

Now I'm little 'course I have
Porridge (with a spoon)
Sometimes, for a treat, an egg;
I'll be bigger soon.

Then I'll have hot sausages
And bacon (with a knife),
And never eat another scrap
Of porridge all my life!

MOST UNFORTUNATE!

Teacher: "Did you make that face at me?"
Tommy: "No, sir; you just happened to walk in front of it."

TONGUE TWISTING.

Say this quickly six times:
Watch a watch wash!
Watch which watch wash?
Why watch the watch washing that's watching the watch?
Then try this one:
She was a thistle-sifter.
She had six sieves of sifted thistles.
And six sieves of sifted thistles.

A RARE BIRD.

Who is the queerest person you have ever seen?
An author, because his tale (tail) grows out of his head.

"THE MISCHIEVOUS ELVES."

Once upon a time there lived in Fairyland five little elves, whose names were Tip Toe, Romper, Whiz, Pip, and Top. One day Romper said to the other elves, "Let us go to the king's palace to-night and steal the fairy queen." "But where shall we hide her?" said Whiz. "I think a good plan would be to climb up the stem of one of those tall maize plants and lay her in the middle of it," said Pip. "Yes, just the place!" cried Tip Toe, and so the plan was arranged. That night the wicked little elves stole off to the palace and took the fairy queen while she was sleeping, and hid her in the maize. Then they ran away to the forest and hid. Next morning, when the king and the fairies and the elves found that their queen had been stolen in the night, they did not know what to do. They hunted and hunted, and could not find her.

At last the king offered a wonderful wand to the one who found his queen. When the naughty little elves heard the news they at once got out of their hiding places and ran to the maize. They took the fairy queen to the king and said that they had found her in the maize. The king was very pleased, and when he found the whole five had brought her he gave them each a wonderful wand. Everyone was so pleased that the queen was found that they had a great feast, and the naughty little elves were there, too. They brought a beautiful little fairy house. Tip Toe, Romper, Whiz, Pip, and Top had many adventures with their wands.