

Boys and Girls...

This corner, all you young folks, is for you and your interests. This is where we tell you, week by week, about what is being put over the air for you, just as the grown-ups have their own pages with their own programmes. So make sure that you, too, "Look Before You Listen"

HOW TO MAKE ELECTRIC MOTORS Mostly from odds and ends (II)

By "Modelmaker"

THE following is the conclusion of a brief summary of the discussions broadcast from IYA on the 5th and 12th September and 3rd October on the building of electric motors. The plans and specifications of these motors were published in "The Listener" of 25th August, 1st September, and 29th September.

Commutator

The commutator is made from the piece of copper tubing. This is divided into three equal parts along the length of the tubing. These segments when mounted on the quarter-inch washers must NOT touch one another. The five-sixteenth inch washers are mounted on each end over the copper segments. The quarter-inch washers are first pushed on to the axle to, say, within an inch of the armature. The copper segments are then put into place and the outside washers pushed nearly into place. The little twists from the armature are soldered into place, one twist to each segment in rotation. The five-sixteenth washers are then pushed into place one on either end of the commutator. The little clearances between the seg-

ments of the commutator must be in line with the little points near the middle of the armature.

Brushes, Bearings, Etc.

The brushes, which press against either side of the commutator, explain themselves, as do the bearings, in the diagrams. You will have to hollow out the baseboard to take the armature. The armature must be exactly in the middle between the legs of the magnet. To connect up the motor, wires from the battery come to the terminals of either brush. To make the motor run in the opposite direction, just reverse the wires from the battery to the terminals. Six volts drives this motor.

Field Magnet

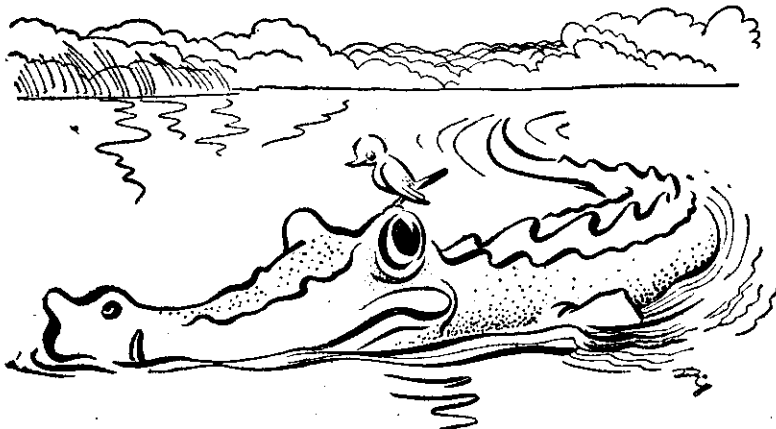
This is made from tin the same as the armature. Cut sufficient of these to make a pile three-eighths of an inch thick when clamped tightly together. Below the pattern are shown some dotted lines. Cut six or eight of your stampings to this size, and put an equal number of them on either side of your magnet. Drill holes where the small holes are shown on the pattern. Rivet the stamp-

(Continued in next column)

ALGIE ALLIGATOR

(By Mary C. Hall)

Another poem from "Pizie Path." This, too, has appeared in the "Sydney Morning Herald."



Algie was an alligator, very young and greedy,
He had a strong and scaly tail, his eyes were bright and beady.
His home was in a river somewhere south of the Equator,
And very fond of eating things was Algie Alligator.
A-basking in the sunshine upon the sand he'd lie,
And look just like a hollow log while watching with one eye.
Then suddenly he'd twitch his tail, his mouth would open wide,
And any passing article would disappear inside.
Until one day he found a keg—a thing he'd never seen.
He slid along and swallowed it—'twas nitro-glycerine!
And there beside the river somewhere south of the Equator
Was only left the scaly tail of Algie Alligator.



Sand Snake (left) and Jumping Frog (right) with their mother, Pumpkin Blossom. They are Hopi Indians who won the prize as the "Best-looking brother and sister" in the twins competition at the New York World's Fair. They look like Plunket babies, don't they?

ings together with pieces of small nails, but not the holes that are in the long, or dotted line portions. These are bent at right angles to the magnet frame to form the feet for screwing the frame to the baseboard. File off all the rough edges. Stick some tissues or thick brown paper around where coil is to be wound (marked on pattern), and some thin cardboard to either end of this space. Now wind on ten layers of the 24 enamelled copper wire with a layer of tissue paper between each layer. The ten layers are one continuous piece of wire. When the ten layers have been wound on, anchor with some cotton tied around the coil. Test this winding with a battery the same as the armature windings were tested. Give the winding a liberal coating of shellac and allow to dry thoroughly. Mount the magnet on the baseboard and make bearings so that the armature turns inside the tunnel of the magnet without touching the sides of the magnet. It must be exactly in the middle.

To connect up this motor, one wire from the battery comes to one wire from the field magnet. The other wire from the field magnet goes to one of the brushes and a wire from the other brush goes back to the battery. This motor also requires six volts to drive it. That is four dry cell units (torch cells).

For Your Entertainment

MONDAY

2YA: 5 p.m. Ebor begins new series on Romance of Useful Plants.
Hutt Valley High School Band

3ZR: 5 p.m. Legends of Umbohu
4YZ: 5.30 p.m. Toyshop Tales, "The Old Rug"

TUESDAY

2YA: 5 p.m. Description of Tramway Workshops by Jumbo
4YZ and 2YH: 5.30 p.m. David and Dawn and the Sea Fairies

WEDNESDAY

2YA: 5 p.m. Programme by Salvation Army Home children
4YA: 5 p.m. Travel Man
4YZ: 5.30 p.m. Robin Hood

THURSDAY

2YA: 5 p.m. Games night
2YH: 5.45 p.m. "Coral Cave"
3ZR: 5 p.m. "David and Dawn in Fairyland"
4YZ: 5.30 p.m. "David and Dawn and the Sea Fairies"

FRIDAY

2YA: 5 p.m. Mr. Jackson the Whale and Andy Man
3ZR: 5 p.m. Richard the Lion-Heart
4YA: 5 p.m. Botany Club
4YZ: 5.30 p.m. Toyshop Tales—"The Canary"

SATURDAY

2YA: 5 p.m. Evelyn Goldsmith & Co. with Uncle Jasper
2YH: 5.45 Westward Hol
All ZB Stations: The Air Adventures of Jimmy Allen. Mondays, Wednesdays and Thursdays at 6.15 p.m.