

HOBBIES

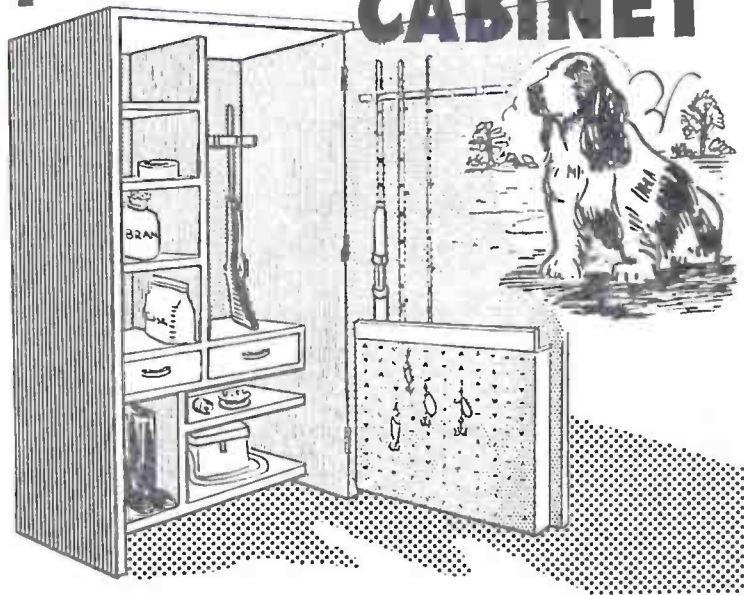
weekly

9th OCTOBER 1963

VOL. 137

NUMBER 3539

The SPORTSMAN'S CABINET



FOR CRAFTSMEN OF ALL AGES

6^p





HOW many readers of *Hobbies Weekly* could now take a pencil and paper and draw the ordinary obliteration which is used on the normal letter passing through the post and which is made by a stamp cancelling machine?

Try it and see how near you are. Notice the round name die giving the town of origin and the county. Inside that is the time of the day, the date and the year. Then there are seven wavy lines having two breaks in them. Some of the smaller offices simply use a hand stamp with no wavy lines.

Now the information given by this postmark is very important. For instance you sometimes see on a letter or postcard the phrase 'date as postmark', so there is one use. Again, the information given by that postmark is accepted as evidence that the packet was in fact posted before the time shown on the letter.

Here then is a subject that is well

is 'Post early for Christmas'. Then there have been a number of pieces of advice. During the last war, for example, we had 'Grow more food — Dig for Victory' and 'Don't waste bread — others need it'.

Later, we had 'Civil defence — Join now' and 'Blood donors are still urgently needed'. In an attempt to cut down the number of road accidents

BRITISH CANCELLATIONS

By L. P. V. Veale

letters bore the words 'Road users please mind the children' or else 'Mind how you go on the roads'. Reminders are also given, such as — 'Are you on the new voters list? — check now'.

This slogan method proved also to be an excellent way of giving out important information. For instance when the postal charges were changed we had the 'Postage on letters for Europe 4d.'

and some sort of filing system should be used from the start — don't wait until you have a few hundred before you put them in order. The usual fate of material like this is that it is put into a drawer and forgotten and only found when the next spring clean comes round.

Sometimes we find that certain functions are advertised by postal slogans. For example, in May 1948, from the 3rd to the 14th, there was the British Industries Fair. This was a very big effort and for some time before the fair opened we could read on our letters 'British Industries Fair May 3rd — 14th 1948 London and Birmingham.'

Among the latest ideas on the subject we have certain seaside resorts and large inland towns with their own letter slogans. The first to adopt this kind of advertising was Hastings. Since 1st April 1963 the major part of this town's mail has been cancelled with a device showing a picture of a Saxon Warrior and the words 'We're ready for your invasion at Hastings'.

On July 1st Bath produced a picture of a man and woman in 18th Century dress with the words 'Visit Bath's Famous Assembly Rooms including the museum of costume.' This device is unusual in that it is the first to have the slogan on the left and the name die on the right. Bournemouth has the same idea. The word Bournemouth is in large type and below this a picture of the bay and cliffs and on the sea appears 'The resort for sun, sea, sands and glorious gardens'. Then to the right is

ranges are in constant use for a considerable period before the Saturday shoot for the Queen's Prize. First come the Service shoots, then the shoot off for the honour of competing in the Queen's Hundred. The ranges are some little distance from the nearest town — Woking — and those who are encamped there need the postal services. So for a period of roughly 8th to 20th July a post office is opened in the camp and letters sent off in that time are hand stamped 'Bisley Camp, Woking, Surrey' round the edge with the time, date, and year in the centre (see third illustration). For the rest of the year the office is closed.

Very frequently a special cancellation is issued for such events as a Philatelic Congress. The society which arranges this may have special souvenir envelopes printed. The 44th Philatelic Congress of Gt. Britain was held at Worthing from 12th to 15th June 1962 and the special envelope issued is illustrated. Note also the special postmark.

Another rather unusual postmark is shown, and this was in use for one day only. It was sponsored by the Bournemouth Philatelic Society in conjunction with the Dorset Naturalist Society. Brownsea Island has recently been taken over by the National Trust and this stamp marks the date of the opening

of the Warden's villa there. Notice that the date (May 16th) coincides with the issue of the National Nature Week commemorative stamps. Brownsea Island is situated in Poole Harbour and it was there that Lord Baden Powell in 1907 had his first camp, from which the Boy Scout movement arose.

We have mentioned some of the very many interesting marks that can be found on the present day envelopes. Search out those you have and see what you can find. They may not be worth a fortune but they may nevertheless be very interesting.

ANNIVERSARY ISSUES FROM CZECHOSLOVAKIA



Czech 'Airlines' issue

Czechoslovakia has recently issued commemorative stamps on the occasion of 40th anniversaries. Details are:

40th Anniversary of Czechoslovak Radio (18th May)

30 h Studio of a transmitting station with a wireless set. Colours: brown-green.

1 Kcs Globe with map and an aerial mast; four doves; inscription: '40 Years of Czechoslovak Radio — Radio Prague — the voice of peace'.

PEACE (in German, Russian, English, French, Polish and Spanish). Colours: light green-mauve.

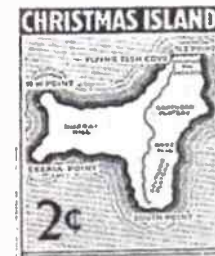
40th Anniversary of Czechoslovak Airlines (25th May).

80 h blue-violet and blue
1,80 Kcs dark blue and light green
Both stamps depict the latest types of jet planes operated by Czechoslovak airlines.

CHRISTMAS ISLAND

Details of the new set of definitives from Christmas Island are:

- 2 cents, Map of Island
- 4 cents, Moonflower
- 5 cents, Robber Crab
- 6 cents, Island Scene
- 8 cents, Phosphate Train
- 10 cents, Raising Phosphate
- 12 cents, Flying Fish Cove
- 20 cents, Loading Cantilever
- 50 cents, Frigate Bird
- \$1, Golden Bo'sun Bird



★ ★ ★

NATIONAL SKI CHAMPIONSHIP



This sporting stamp was issued by France on the occasion of the National Ski Championships.



1. Worthing — in use 4 days. 2. Brownsea — in use 1 day. 3. Bisley Post Office open each year for about a fortnight

worth studying. There are so many different kinds of postmark and the authorities are always willing to cooperate with any organisation which wants to commemorate a special event and which is willing to meet the cost. One usual method is the use of a slogan. Some are official and may be used to give instructions, such as 'Post early in the day'. Another very well known one

Those are some of the slogans that you may find on letters. There are a great many more and to make a collection you should retain the complete envelope, and remember to get good specimens. Some people, in order to save space, cut out the slogan and throw away the rest of the envelope. This should not be done. For the usual size of envelope a boot box holds a very large number

the circular date stamp bearing 'Bournemouth-Poole' round the edge, and in the centre the time, the date, and the year.

In addition to slogans the post office authorities are prepared to produce a special type of cancelling stamp to be used on certain occasions. One such occasion is the Bisley week, or rather fortnight, because these famous rifle



Czech 'Radio' Stamps

CHEMISTRY AT HOME

STRONTIUM, Sr, is not a metal with notable everyday connections. Its sister metal calcium, Ca, on the other hand, is met with frequently and is even an essential part of our bones and teeth. Strontium behaves with marked similarity to calcium and as it is non-poisonous it can even replace calcium in our bodies without detriment to us.

EXPERIMENTS WITH STRONTIUM COMPOUNDS

There is a radioactive form of strontium however, which is lethal. Namely, strontium 90, a product of atomic explosions and occurring in 'fall-out'. This, too, can replace calcium in bone and there set up cancer. Fortunately, it is produced only by nuclear fission and the strontium compounds of the laboratory are free from the cancer hazard.

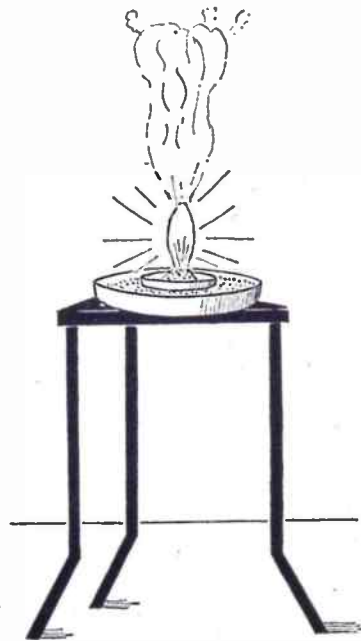
Autumn produces our only real everyday contact with strontium, for the red colour of the flame of some fireworks is caused by strontium compounds, usually strontium nitrate, $\text{Sr}(\text{NO}_3)_2$. Although the making of fireworks may only be done under licence, it is permissible to prepare small amounts of pyrotechnic mixtures for experimental purposes. Red fire composition may be made by first powdering separately 1.3 grams of potassium chlorate, 1.7 grams of strontium nitrate and 0.5 gram of shellac. Put the components on to a sheet of paper and mix them intimately by rolling them about on the paper. They must NOT be mixed by grinding them together. When the mixture has a uniform colour make it into a little heap on a tin lid resting on a sand bath and tripod (see diagram). Light it with a long spill. The mixture burns furiously with a brilliant red flame. This red flame is an important test for strontium, as we shall see later.

Like calcium, strontium forms an insoluble carbonate, SrCO_3 . It occurs naturally at Strontian in Scotland, the mineral being called strontianite. From this associate we derive the name strontium.

To prepare strontium carbonate dissolve 10.55 grams of strontium nitrate in 100 c.c. of water, and in another 100 c.c. of water 14.3 grams of sodium carbonate (washing soda), $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$. Stir one solution into the other. A white precipitate of strontium carbonate forms and sodium nitrate, NaNO_3 , remains in solution:

$$\text{Sr}(\text{NO}_3)_2 + \text{Na}_2\text{CO}_3 = \text{SrCO}_3 + 2\text{NaNO}_3$$

Wash the precipitate several times by decantation with either distilled or rain water to free it from sodium nitrate. Elimination of sodium nitrate may be ascertained by letting the precipitate settle and evaporating a drop of the clear upper liquid on a glass slip. When no solid residue is obtained the washing may be ended and the strontium carbonate filtered off and dried.



Red fire from strontium nitrate.

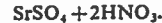
20

Put a little of the white powder on a watch glass and dissolve it in a drop or two of dilute hydrochloric acid, HCl . Carbon dioxide, CO_2 , is given off and strontium chloride, SrCl_2 , and water, H_2O , are left behind: $\text{SrCO}_3 + 2\text{HCl} = \text{SrCl}_2 + \text{CO}_2 + \text{H}_2\text{O}$.

This solution of strontium chloride is ideal for the flame test. Heat a thin iron wire (or the usual laboratory platinum wire) in a flame until it is red hot and gives no colour to the flame. Dip the wire in the solution and again heat it. The flame will be coloured a brilliant crimson. Though strontium compounds behave so similarly to calcium compounds this coloration affords one means of differentiating them. Repeat the test using a solution of calcium chloride, CaCl_2 . The calcium flame colour will be found to be dull brick-red.

The crimson strontium flame colour can be useful in amateur dramatics where such a flame effect is desired. In this case a solution of strontium chloride in methylated spirit is used and burnt on a tin lid with suitable fire precautions. To prepare a supply of strontium chloride for the purpose dissolve about 5 grams of strontium carbonate in just sufficient dilute hydrochloric acid and then evaporate the solution to dryness. Bottle it while still warm, for it is deliquescent. A screw capped bottle fitted with a rubber disc within the cap will effectively keep out atmospheric moisture.

Another strontium compound which occurs naturally is strontium sulphate, SrSO_4 . The mineral celestine consists of it. Like calcium sulphate, $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$, it is insoluble in water and so may be made by precipitation. Dissolve 10.55 grams of strontium nitrate in 200 c.c. of water and add 49 c.c. of dilute (10 per cent) sulphuric acid, H_2SO_4 . A white precipitate of strontium sulphate appears. Nitric acid, HNO_3 , remains in solution: $\text{Sr}(\text{NO}_3)_2 + \text{H}_2\text{SO}_4 =$



Filter off the precipitate and wash it on the filter until a drop of one wash water does not redden blue litmus paper, thus indicating that all the nitric acid has been washed out. The strontium sulphate may then be dried for stock.

Strontium sulphate is another means of differentiating strontium and calcium, for it is less soluble in water than calcium sulphate. That a precipitate can be soluble in water may sound strange, but all have some solubility, however slight.

To try out the test shake a pinch of calcium sulphate with half a test tube of water, let it stand overnight and shake again. Filter the solution. Divide it into two portions. To one add a little

Continued on page 21

CONTAINERS FOR POT PLANTS



The plant pot stand

HERE are two ideas for improving the appearance of plant pot used for interior decoration. Both are quick to put into operation, cheap and entirely effective and pleasing to the eye.

Small pots look better when raised off the table or ledge by a matter of a few inches, but simple stands are virtually unobtainable in the florists' shops or in chain stores. The more elaborate wire hanging or standing holders are often far too complex to suit a plant in a 3 or 4 in. pot, and there is no alternative but to make a stand.

You need a plastic or push-on, enamelled metal lid slightly larger than

the base of the flowerpot. So many commodities come packed this way nowadays that you should have little difficulty in finding a suitable lid. The one shown in the pot stand is the top of a moulded plastic container which originally held a typewriter ribbon.

Cut three pieces of $\frac{1}{4}$ in. diameter wood dowel for the legs. Take care not to make these over-long, or the stand

By A. E. Bensusan

will look too spindly. A length of 2 or 3 in. will be adequate. Round the lower ends with fine glasspaper, and cut the upper ones at the required angle of splay. Be sure that all the legs are the same length, and that the angle at the top is the same.

Drill three small, equally spaced holes around the bottom edge of the plastic or metal dish and attach the legs with countersunk head screws. Seal the holes around the screwheads with waterproof adhesive, and run a fillet around the joints between the legs and the dish.

Since the dish will already be coloured, it is only necessary to paint the legs to contrast. The flowerpot, either with or without a decorative cover, is stood in the dish, which will retain any moisture filtering through after watering. This surplus moisture can then be poured away.

The second idea utilizes a pottery mug. These can be bought quite cheaply, although most households probably have one or two hidden away in a junk



Attractive setting for an ageratum in an old mug

cupboard. Plants not requiring complete drainage can be planted directly into the mug without making any alterations, but those which must remain fairly free of moisture will necessitate two or three holes being drilled in the base of the mug with a $\frac{1}{4}$ in. tile drill.

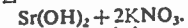
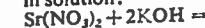
A few broken crocks or pebbles should be placed in the bottom, and then the plants put in on top. The effect can be seen in the second photograph.

crystals of the hydroxide separate on cooling and standing. This easy solubility in hot water differentiates it from calcium hydroxide, $\text{Ca}(\text{OH})_2$, whose solubility decreases with rising temperature.

Filter off the crystals. Since in the damp state they absorb atmospheric carbon dioxide to form strontium carbonate and water:

$\text{Sr}(\text{OH})_2 + \text{CO}_2 = \text{SrCO}_3 + \text{H}_2\text{O}$, quick drying is advisable. This may be achieved by removing the adhering water by running some methylated spirit through the precipitate. Open out the filter paper on to a porous tile, when the meths. will soon evaporate off, especially if the tile is put in a warm but flame-free place.

of water and add a solution of 11 grams of potassium hydroxide, KOH , in 20 c.c. of water. A beautiful pearly white precipitate of strontium hydroxide appears and potassium nitrate, KNO_3 , remains in solution:



Filter off the precipitate, wash it two or three times on the filter and then boil it up with 50 c.c. of water. Filter the hot solution and let it cool. Splendid

Continued from page 20

EXPERIMENTS WITH STRONTIUM COMPOUNDS

calcium chloride solution, CaCl_2 . No change will occur. To the other portion add some strontium nitrate solution; after standing awhile a white precipitate of strontium sulphate appears, calcium nitrate remaining in solution: $\text{CaSO}_4 + \text{Sr}(\text{NO}_3)_2 =$



Strontium hydroxide, $\text{Sr}(\text{OH})_2 \cdot 8\text{H}_2\text{O}$, is not found in many home laboratories, but it is easy to prepare. Dissolve 21 grams of strontium nitrate in 100 c.c.

21



USING YOUR TAPE RECORDER

EXPERIMENTING WITH SPEEDS

PEOPLE who have tape recorders often complain that they get bored with them. Bored! Too often it is because they have just dabbled on the edges, and not really explored this vast subject of magnetic sound recording. For vast it is!

Even if we dismiss any idea of venturing onto stereophonic sound, within our confines the scope for development is limitless. The truth is that often these people get bored not so much with tape recording itself but rather with their single speed machines (which they naturally start with) and even more by the narrow confines to which they are restricted by their own lack of imagination.

Few of these people will be tempted to progress on to two or more speed tape recorders because the advantages are seldom adequately advertised or explained. Yet they are many. Higher speeds mean more accurate recording, and complete elimination of drag. This, with a low speed of 3½ i.p.s. can be caused by any trivial inconstancy, such as different sized spools, a slightly warped spool, or even a deck screw that is not quite flush.

Apart from such considerations, even just an extra speed, say 7½ i.p.s. revolutionizes the creating of sound effects. For example, a ship's siren can be created by blowing across the top of an empty bottle at 7½ i.p.s., to be played back at 3½ i.p.s. The same action with a car's exhaust can produce the sound of a motor boat.

Next only to the tape recorder and cable themselves, the most important piece of equipment is a mixer. This gadget enables recording from several mikes and cables, even from different rooms. The recordist can select the

sounds he wants (at the volume he wants) by twiddling the knobs on the mixer.

The mixer, incidentally, although a simple gadget, stands at the very fringe of more complex audio engineering. Ultimately post-mixer exploration (I mean at a domestic rather than a laboratory level) will lead to a consideration of such things as sound-boxes and echo-chambers, etc.

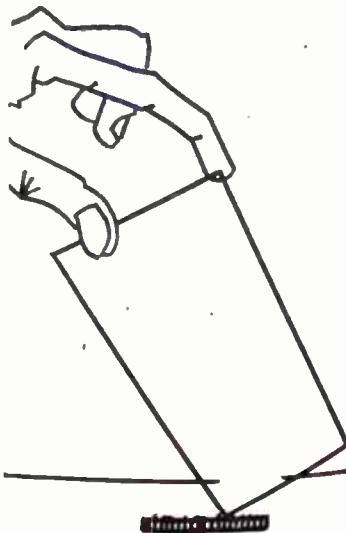
FUN WITH COIN TRICKS

IMAGINATION and memory can play curious tricks that may lead to errors of judgment. To illustrate this point can you guess how many pennies could be stood upon end inside a pop bottle top? Make your guess, find a metal cap, and experiment with pennies to discover the solution. You may be surprised to find that up to fourteen pennies can be thus accommodated.

Another interesting problem of a different sort is to balance a drinking glass on its edge upon a half-crown. To do this, you will need a steady hand; but the feat can be accomplished if you rest the tumbler in a deep groove of the engraving on the 'tails' side of the coin.

And finally, when you have amused your friends with these problems, put a penny in the palm of your hand, and challenge someone to try and remove the coin, using a clothes brush. He should be asked to sweep the brush towards your fingers. Oddly enough the task may be impossible, because the penny will settle in the shallow of your palm.

(A.E.W.)

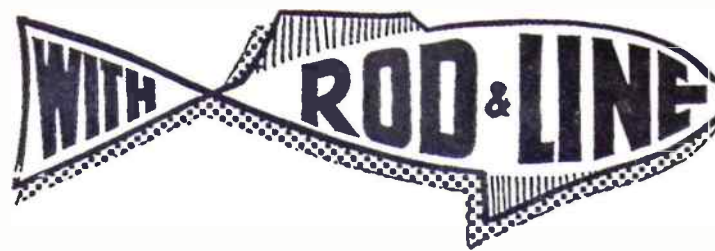


When we have a tape recorder, a cable, a mixer, a record player (that goes without saying) it is then essential to have a second tape recorder. I have written exhaustively on sound effects, but it is always worth remembering that one can buy already recorded effects, not only on disc, but also on tape. The latter has the advantage of making it possible, by means of the numerator, to locate the required sounds instantly.

By now my readers may have glimpsed something of the vast range of activities that they could embark on from a basic interest in tape recording. However, it should be remembered that the tape recorder can be harnessed for the service of other hobbies. For instance, with the aid of parabolic reflectors ornithologists can record bird calls; or train spotters can fill their homes with the sounds of steam.

Even if you feel that to indulge to the full all your tape recording ambitions would be beyond your means, it is always worth while knowing the full hi-fi and allied amenities can always be obtained by joining a tape club. No one in the United Kingdom is very far from one; and the fees, judging from those clubs I have been invited to visit, are ridiculously low. Also, if you wish to keep 'with-it' on the hi-fi front, there are three publications exclusively devoted to tape recording.

(G.E.G.)



IT surprises me to note how few anglers have confidence in sliding float tackle and how they also seem to have no idea how to make it up or the purpose for which it is intended to be used.

To explain, if you are fishing in water deeper than the length of your rod and with a fixed float it is obvious that you can't get your fish near enough to the bank to slip the landing net under it. Hence sliding float tackle was evolved.

HOW TO USE FLOAT TACKLE By 'Kingfisher'

There are, however, many types of sliding float, some good and some bad, and which don't surface as they should — if they surface at all.

Fishing a very deep lake regularly I tried to devise a tackle in which the float would come to the surface each time, which would give me a line almost going in a direct line to the bait and in which the fish would feel practically no resistance when it picked up the baited hook.

After much trial and error I finally made up a tackle which is so sensitive that if the fish breathes near it the float will answer.

The set-up is as follows. The kind of float you use is immaterial as any will do, quill, cork-bodied peacock quill or anything you have in your float box.

Now we are aware that when the fish takes the bait it should feel no resistance from the weight so the first thing is a very small ledger weight which has a swivel cast into it. Now take about 4 inches of about 5 lbs. b.s. nylon line and tie one end to the swivel on your lead. Then tie another swivel at the other end of your short piece of nylon. Next get a similar length of nylon and tie this to the bottom loop of your float and to the other end attach a small swivel as before. Now both your

float and weight are attached to swivels.

Whether you use a cast or tie your hook direct to the line doesn't matter in the least. If you tie direct to your line, say, an eyed hook, you first of all put the line through the swivel attached to your float and then through the one on your lead. Now nip on a small split shot about a foot above your hook, which is to prevent the lead slipping down on to the latter.

Next you have to nip a shot on the line at a distance high enough to prevent the float slipping down on to the weight, and assuming you use a float about, say, nine inches in length then the shot should be put on the line about a foot above the lead. This, then, is the set-up of the actual sliding float tackle.

Now many lakes have very rugged beds and your tackle may fish at eleven feet one minute whilst a foot to either side the depth can be 25 feet. It is in the lake I fish often. To prevent the

float coming too far up the line when casting I tie in a bit of 5 lb. b.s. nylon to act as a stop and this it does when the swivel on the float reaches it. If under that depth the float lies flat on the surface, by slowly reeling-in some line the float will gradually cock and remain cocked until there's a bite.

With the line free-running through the two swivels the fish can pick up the bait and the bite is immediately registered by the float. A further thing you can do if you wish is to put a bit of cork near the top swivel on your weight and this will lift the line clear off the bottom. Since the season opened I've converted scores to fishing this particular lake with this kind of tackle and with success, too.

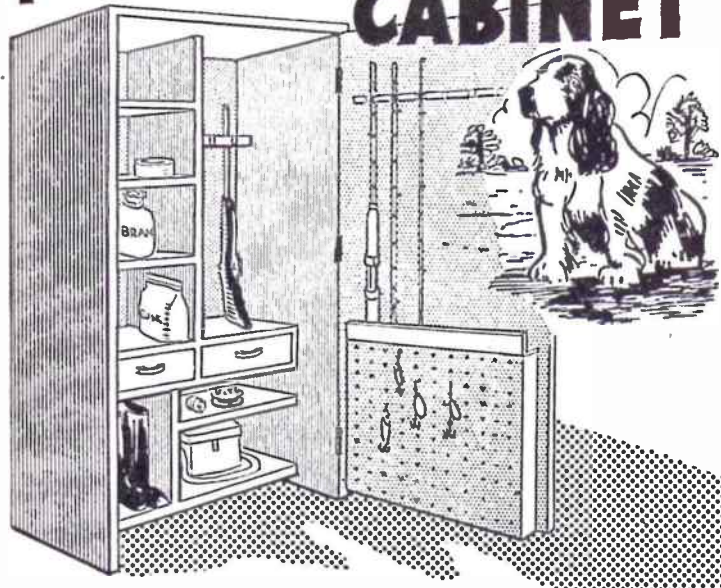
I also use a catapult to get ground-bait and maggots out to the float which in this water is often thirty yards away. The tissues sold as paper handkerchiefs are ideal for the purpose. Tear a bit of the tissue and put a dozen maggots in or a knob of groundbait as big as a walnut, and lightly screw it up. When it is in the water it will open and the groundbait or maggots will sink to the bottom around where your baited hook is lying.

Combination of the sliding float and the catapult have brought me a lot more fish from this most difficult lake. I suggest you try the two out in combination and you'll be surprised at the increase in your catch.



"I ALWAYS THOUGHT THEY'D GET A PICTURE OF OUR WINDOW CLEANER AMONGST THE STILL LIFE'S."

The SPORTSMAN'S CABINET



WITH such a variety of articles in his kit, the sportsman's gear is often mislaid and sometimes even damaged. Hooks and cartriges are a potential danger if left lying around, especially if there are small children in the family. This large cabinet is designed with the needs of the sportsman in view and there is plenty of room for fishing rods, reels, baits, guns, boots, cricket

bats, golf clubs etc. It can be finished with high gloss paint and may be situated in hall or kitchen. The main parts of the cabinet are made from $\frac{3}{4}$ in. or $\frac{1}{2}$ in. plywood or $\frac{3}{4}$ in. hardwood. If the latter is used it will be necessary to join the boards to make sufficient width. This can be done with dowels and battens. The back of the cabinet and the drawer bottoms can be

methods. For the man who has visions of making spare cash from this hobby, the author's advice in the chapter headed 'Commercial Possibilities' will be most welcome. We quite agree with the writer of the introduction to this book, who says 'There is still a great demand for the traditional toys . . . which, seemingly, will never die'. Children will always appreciate the play value of dolls' houses, forts, garages, and farms. 'Designing and Making Toy Buildings' by William Turley, Stanley Paul & Co., Price 12s. 6d.

of $\frac{1}{4}$ in. hardboard, and peg board can be utilized for accommodating angling accessories.

Essential dimensions are shown in the side and front views in Fig. 1. The overall height is 78 in. and the various shelves and partitions are spaced as indicated, taking into account the thickness of wood used. The positions of shelves and partitions can be adapted to suit your own particular needs.

Make a start by constructing the main parts of the cabinet as shown in Fig. 2. The plywood back is nailed and glued flush to the sides and is slightly chamfered after fixing. If hardboard is used

ALL DIAGRAMS ON FACING PAGE

instead of plywood it will be necessary to insert battens on each side below the top and bottom, with an additional one halfway up.

Continue by adding shelves and partitions as required. These can be strengthened with battens and corner fillets if necessary. The diagram in Fig. 3 shows the completion of the shelves.

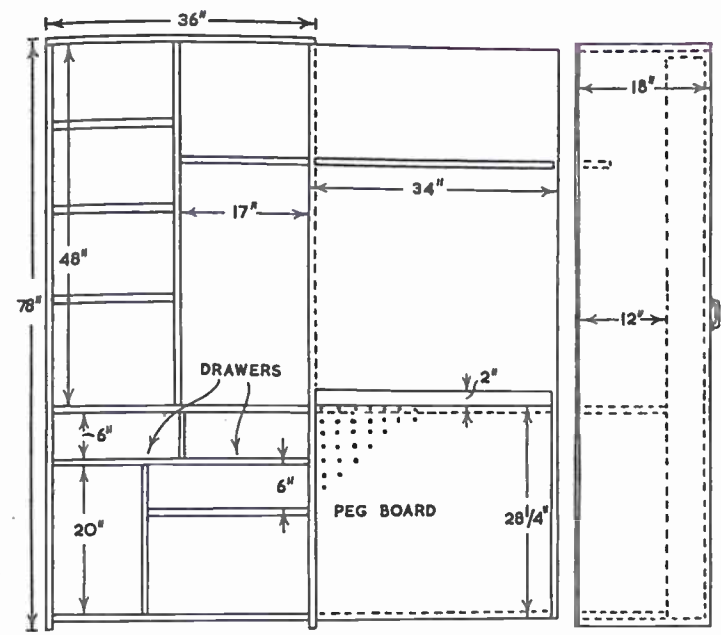
The shelves are all set back about 6 in. so that the door may be used as suggested in Fig. 4. Peg board can be framed and mounted on the lower half of the door and used for hanging spoons, minnows and plugs whilst a slotted and padded rail on the top of the door takes an assortment of rod sections. The door is hinged in place with three or four 2 in. heavy brass butts.

Drawers are made up as detailed in Fig. 5. Each side consists of two pieces spaced about $\frac{3}{4}$ in. apart forming slots or guides. A piece of $\frac{3}{4}$ in. square strip is fixed to each side of the drawer compartment, level with the guides, and runs in the slots of the drawer, guiding it in position.

The slotted and padded rails in the cabinet and on the door are made up as in Fig. 6. The slots will be cut to suit the items to be held in place. Pads of polyether foam are glued in the slots and will both grip and prevent damage. Fix the rails with glue, strengthening with screws through the back of the slots.

Clean up all parts with glasspaper and give one or two undercoats. Rub down lightly with garnet paper and then give a top coat of high gloss paint. Add drawer handles and catches where required.

(M.h.)



FRONT VIEW - DOOR OPEN

SIDE VIEW

Fig. 1

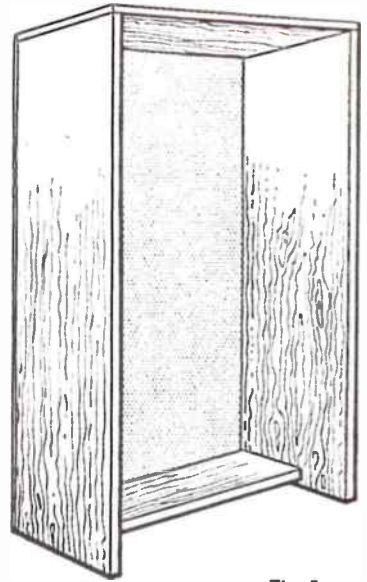


Fig. 2

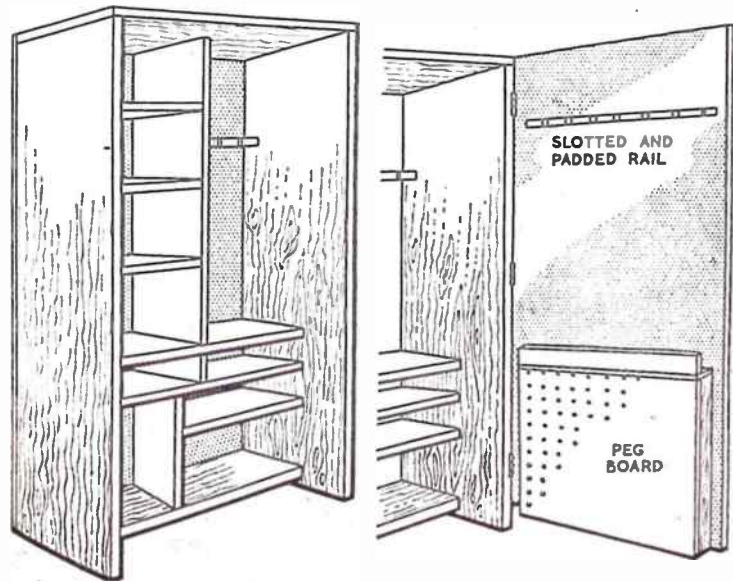


Fig. 3

Fig. 4

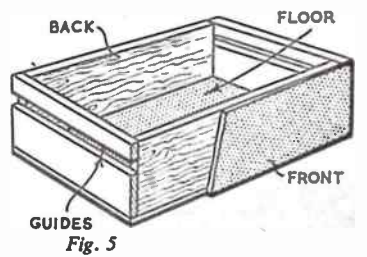


Fig. 5

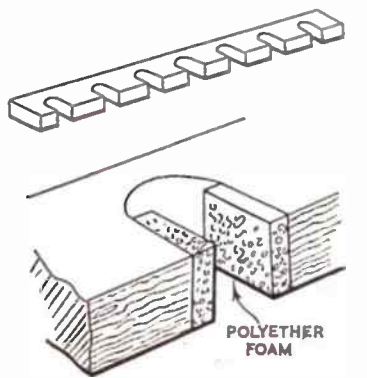


Fig. 6

A BOOK ON MAKING TOY BUILDINGS

THIS book deals very comprehensively with a subject which should interest all readers of Hobbies Weekly — that of making buildings in the category of dolls' houses, forts, etc. to your own specific design. We are glad to note that the use of the fretsaw is emphasised throughout — it is difficult to conceive how intricate cutting can otherwise be successfully accomplished.

The author has many good tips to pass on to readers in the way of decorating and adding accessories such as lighting. There is also some very helpful information on time-saving production



PART I OF A NEW SERIES WHICH SHOULD BE KEPT FOR FUTURE REFERENCE

MODEL boats, planes, and vehicles to run on the ground can be controlled by radio. Simple equipment, such as may be used for steering, is not very difficult to construct. In large, elaborate models many other items can be controlled, such as lights, motor speed, rotating turrets on model tanks or gunboats, etc.

A licence is required before radio may be used to control a model, and the fee for this licence is £1 for 5 years. An application form may be obtained from Radio Services Department of GPO, Headquarters Building, St. Martin's-le-Grand, London, E.C.1.

No particular difficulty arises in obtaining the licence, and it gives the conditions under which the radio equipment must be used. Two frequency bands are available. One is from 26.96 to 27.28 megacycles, commonly termed the 27mc band. The other frequency band is from 458.5 to 459.5 mc. As rather special radio equipment is needed for the latter band, most equipment works in the 27mc band. In this band, maximum effective radiated power must not exceed 1.5 watts. The transmitting equipment may only be used to control a model vehicle, vessel, or aircraft, and

not for speech or similar signalling purposes.

These regulations are intended to avoid interference to TV and other programmes and transmissions. Equipment to be described in later articles will not be capable of radiating a stronger signal than permitted, so this requirement is easily met. Correct tuning will make sure that the signal is in the permitted band.

The regulations are primarily to avoid the model control transmitter causing interference, and the receiver, and model itself, can be of any type chosen.

Power and range

The radio equipment used will depend on the maximum distance between transmitter and model. A small 1-valve transmitter, and 1-valve or transistor receiver, will have sufficient range for a vessel on a boating pond, or a vehicle up to some 50 yds. to 100 yds. range. Such equipment is very suitable for general use.

For planes, greater range is generally wanted, so that the transmitter will usually have two or more valves, and the receiver will probably be more sensitive.

If a model moves out of range of the

transmitter, control is lost. This can readily happen with a plane, but is very unlikely to arise with a vessel on a model sailing pond, or other confined stretch of water. With mobile cars, tanks, or other models in the house or garden, only short range will be wanted.

All equipment is usually battery operated, so that it can be carried about. For use in the house or garden, mains supplies may be employed with the transmitter, to avoid batteries. A transmitter can also be run from a 6V or 12V accumulator, with a vibrator or rotary generator to provide HT.

Types of model

Almost any kind of model can be controlled. The type selected depends on the builder's personal choice, and what opportunity there will be for using the model.

A boat of some kind is easy to control, and will not be damaged or lost, even if equipment fails, if sailed on a pond. Vessels of all kinds are very popular with radio control enthusiasts.

Diesel engine planes are also often controlled by radio, and are very interesting. For these, a large clear space is needed, and also some operating skill, if the model is to be flown properly, and risks of crashes reduced. A fault in equipment or working can easily cause considerable damage to the model.

Sailing enthusiasts have frequently used radio to control model sailing boats, both for amusement and competition sailing.

Land models are, in general, more difficult to build, but can be used anywhere in the house or garden. Many different models have been used, such as tanks, gun-carriers, radio cars, and so on.

With motor boats and vehicles, an electric motor is often used for driving, because it can so easily be reversed, or have its speed controlled. There is, however, no reason why radio control should not be used in a model with other means of propulsion.

Radio link

The radio link between owner and model consists of the transmitter, with its aerial, and the receiver, also with aerial. Quite short rod aeriels can generally be used on boats and vehicles.

The transmitter may consist of a 1-valve or 2-valve oscillator, which is switched on and off, to control the model. Such a transmitter radiates a single carrier wave. The CW transmitter can give control up to $\frac{1}{2}$ mile or so, if wanted. It is much used, because of its simplicity.

For more elaborate control of the model, the transmitter carrier wave is modulated by audio tones. This type of equipment is very good, but more complicated.

Transistor transmitting equipment is also used, and is of small size and weight, but costs much more than equivalent

to the magnet then released the wheel rotates a quarter turn, halting with the next tooth against the catch. The connecting link, which may be of stout wire, thus pushes on the crank, turning the axle to which the rudder is fixed, so that the boat turns to port (left). To obtain straight sailing again, the escapement wheel is allowed to turn a further 90 degrees. A further quarter turn will cause the rudder to be moved so that the boat sails to starboard (right).

It will be seen that the boat can be sailed straight, or turned either way, by switching the transmitter on and off, as the relay controlled by the receiver

the same way. It is thus possible to mark the control box with Starboard, Ahead, and Port positions.

With the device in Fig. 1, two positions of the escapement wheel will give straight sailing. Usually, advantage would be taken of this by having one unwanted position control some other circuit. If the escapement wheel axle carried a small cam, this cam can open a pair of contacts, when the rudder is in one 'ahead' position. If these contacts are wired in series with the driving motor, the model can then be halted. The unwanted 'ahead' setting thus provides 'stop' as in Fig. 2.

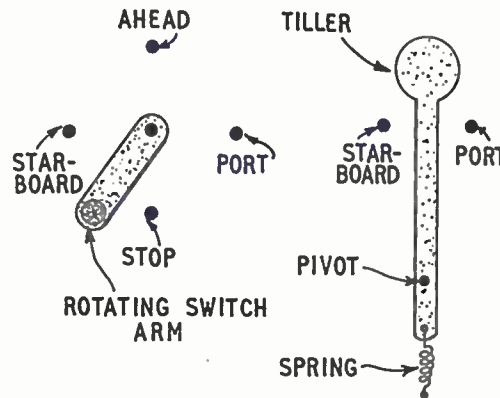


Fig. 2—Two control box devices

lent valve equipment. As a little extra size is not very important for the transmitter, valve transmitters are popular.

Receivers may use one or more valves, or employ transistors. With CW equipment, matters are so arranged that when a switch at the transmitter is closed, a relay in the model closes. The opening and closing of this relay is changed into rudder movements, etc., by an actuator or control device, in the model.

Actuators

These may give smooth control of a rudder or other item, or may work in definite steps. A step actuator is satisfactory for most reasonably simple models, and especially for small boats. The way in which such a mechanism may operate will become clear from Fig. 1. Here, the escapement wheel has 4 teeth, and tries to rotate in the direction of the arrow. This turning motion is often obtained from a small clockwork motor, though twisted elastic is also used. Normally, the wheel is held as shown by the catch, and the boat rudder is then straight, so that the model sails ahead.

If the catch is momentarily attracted

completes the circuit to the magnet in Fig. 1.

The escapement wheel always turns the same way, so it may be necessary to pass through an unwanted rudder position, to reach the required position. This is not very important with a boat, because the unwanted positions can be passed in a second or so, before the model responds.

Many actuator devices can be controlled well by a simple on-off push-button switch at the transmitter. It is, however, necessary that the person operating the model should know the sequence in which control is exercised. With Fig. 1, this would be:

1. Sail straight ahead.
2. Sail to port.
3. Sail straight ahead.
4. Sail to starboard.

To simplify working, or obtain more realistic control at the transmitter, various switching devices may be used. One suitable for a 4-position actuator is shown in Fig. 2, and has a fairly large rotating arm, with handle, which passes over four contact studs. If the arm is turned clockwise by hand, the escapement wheel in the model will move in

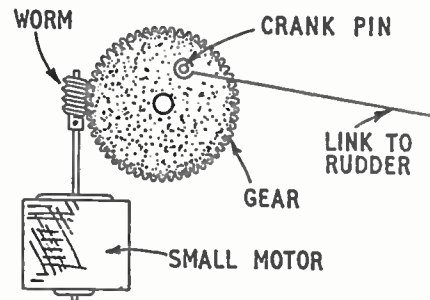


Fig. 3—Steering gear driven by motor

The 4-position actuator can thus give straight sailing, or allow the boat to be turned either way, or stopped. This is a popular method of control. It is also possible to reverse the motor, or adjust its speed (for half-speed sailing), etc.

Actuators which provide variable control are also used. One of this type is shown in Fig. 3. A small motor drives a gear through a high reduction ratio, so that the gear turns slowly. A link connects the rudder, as in Fig. 1.

If the motor can be started, stopped, and reversed, the rudder can be made to take up any required position. This allows fine control over sailing, and is very suitable for large models, and land vehicles. The control circuits to which the motor will be connected have to be more complicated, than with the 4-step actuator.

With a steering device such as that in Fig. 3, the tiller control in Fig. 2 could be used. The tiller is held in a central position by the spring. When it is moved to the left, the tiller completes the circuit to the 'starboard' contact, so that the motor in the model runs in an appropriate direction, turning the boat to the

Continued on page 28

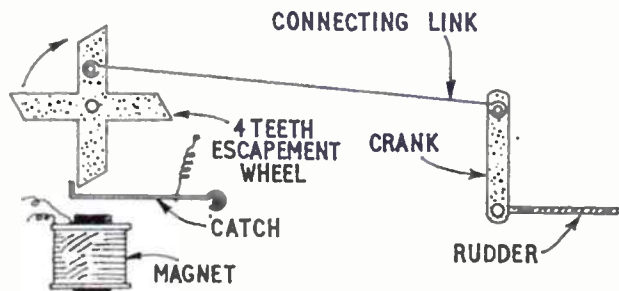
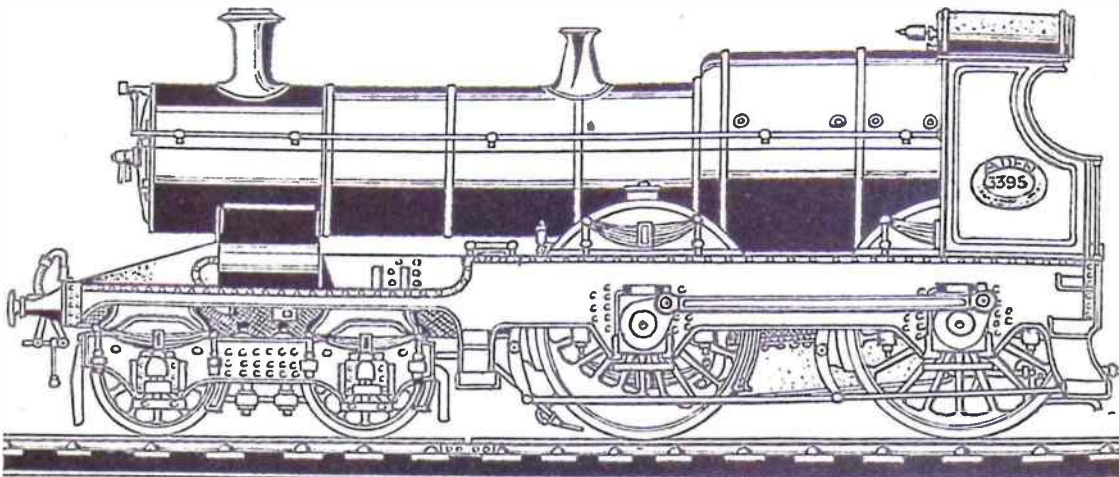


Fig. 1—4-position steering mechanism

THE G.W.R. 'ATBARA' CLASS



G.W.Rly. William Dean's 4-4-0 'Atbara' class engine No. 3395 'Aden', (later No. 4141). Built 1901, Swindon

THE 4-4-0 express engines of the 'Atbara' class were designed by William Dean the Locomotive Superintendent for the G.W.R. The class comprised 40 engines, the first 20 being built between April and September 1900 and the second 20 between June and October 1901, all at Swindon.

By A. J. Richards

They were originally numbered from 3373 onwards the class engine 'Atbara' carrying that number, but when rebuilt with new tapered boilers they were renumbered from 4120 'Atbara' onwards. The provision of the No. 2 taper boiler with superheater brought them in line with the Churchward *Auricula* class of 1908.

In September 1902, No. 3405 *Mauritius* was provided with a No. 4 superheater taper boiler, becoming the prototype of the well known 'City' class of 1903. In 1907-8, nine more of the class were similarly altered, these being *Durban*, *Gibraltar*, *Halfax*, *Hobart*, *Lytelton*, *Melbourne*, *Malta*, *Ophir*

(later renamed *Killarney*) and *Quebec*. These were all built in 1901 and, including 'Mauritius', were originally numbered 3400-09, but when rebuilt to the 'City' class they later became Nos. 3700-09, all in the same order.

The leading details of the 'Atbara's' as first built were: Cylinders, 18 in. diameter and 26 in. stroke, incline 1 in 10. The parallel boiler barrel was 11 ft. long, being made in two rings of 4 ft. 5½ in. and 4 ft. 6½ in. diameter respectively and containing 277 tubes of 1½ in. diameter having a distance between tubeplates of 11 ft. 3½ in. The high Belpaire firebox outer casing was 7 ft. long, whilst the inner copper box was 6 ft. 3½ in. long and 4 ft. 3½ in. wide at the boiler centre line. The heating surface was: tubes 1540. 18 sq. ft., firebox 124.1 sq. ft., giving a total of 1664.28 sq. ft. The grate area was 21.28 sq. ft. and working pressure 195 lb. per sq. in. Wheel diameters were: bogie 3 ft. 8 in., coupled 6 ft. 8½ in. Wheelbase 6 ft. 6 in. + 7 ft. 6 in. + 8 ft. 6 in., total 22 ft. 6 in. Engine weight in working order: on bogie 18 tons, on driving wheels 17 tons 8 cwt, on trailing coupled wheels 16 tons 4 cwt, giving a total of 51 tons 12 cwt. Stephenson valve gear was provided, the reversal being effected by steam power.

When first built, the tenders provided had a tank capacity of 3,000 gallons, but these were later replaced by the larger

3,500 gallon type; but all were fitted with water pick-up gear.

Although the 'Atbaras' were somewhat austere in appearance they were nevertheless swift running engines and it can be said that they originally set up the standard of high speed running on the G.W.R. when they created some very fast runs with the Ocean Mails Specials from Plymouth to London in 1901-02. After several years service on main line express work they afterwards became relegated to secondary duties, and local passenger work. Withdrawal began in the late 1920's, and by April 1931 the class finally became extinct.

Continued from page 27

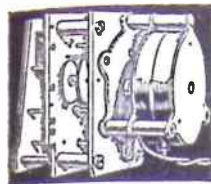
RADIO CONTROL

right. Moving the tiller to the right, completes the port circuit, reversing the motor, so that the rudder is moved to the other position.

A steering wheel could be used instead of the tiller, and would be suitable for a land model. If preferred, most systems can be controlled by suitable marked switches, instead.

The next article describes a 2-valve battery operated transmitter.

SYNCHRONOUS MOTORS



OUR PRICE 10/-
1000 TO CLEAR!!

A REAL BARGAIN

Perfect self starting Synchronous motors. 200/250 volt. 50 cycle with valuable gear train. Ideal for clock or model making. Catalogue price of 30/- slashed to 10/- each, post free to clear.

JAMES S. GRAHAM & CO. LTD. (Dept. S.M.2)
73 ACRE ROAD, KINGSTON-ON-THAMES, SURREY
Callers welcome Open all day Saturday Phone KINGSTON 0075

KITS for OLD TIME SHIPS

Hobbies range of Ship Models includes Elizabeth Jonas, Cutty Sark, Victory, Mayflower, etc. Complete kits of wood, sail material, guns, pulleys, cord, etc., with full-size patterns of parts and planed wood ready to cut out, shape and construct. A fascinating pastime.

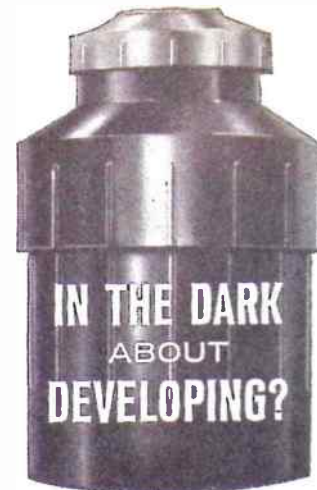
Ask for free illustrated list at Hobbies Branches or from Hobbies Limited Dept. 99, Dereham, Norfolk



'NEWFOOTY' TABLE SOCCER

ALL THE THRILLS OF THE BIG GAME!
Stanley Matthews plays NEWFOOTY! Start a 'league' with friends and be a team manager!
Miniature players, goals, etc. PRICES: 12/6;

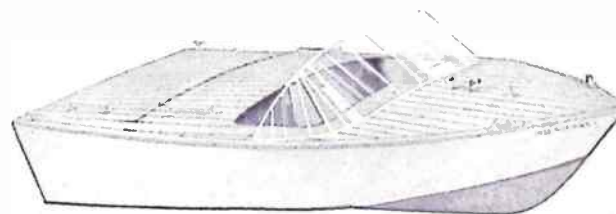
21/-; 25/11; 49/6. From leading toy stores or write:—
CRESTLIN LIMITED, LONGMOOR LANE, LIVERPOOL 9



It is much easier than you think to develop your own films and this new UNIVERSAL tank from JOHNSONS makes it easier still. You only have to load the film in the dark, the rest of the job—developing, fixing and washing—is carried out in the light. Everything has been designed for ease of manipulation and the tank is adjustable for several widths of film—120/620, 127, 35 mm./828 or 16 mm. (5 feet.) With fully illustrated instruction book. At your dealers' now, 32/6.

JOHNSONS
OF HENDON LTD

Motor Launch MISS NORFOLK I



Length 22", beam 8½"

READY-TO-ASSEMBLE

No cutting—all parts pre-cut and shaped ready for gluing together. Kit R.T.A.18 contains everything necessary to complete this fine launch, including assembly instructions.

PRICE 35/6

Postage 2/-

Designed to take a Diesel motor up to 1.5 c.c., or an inboard Electric Motor. Details of suitable motors available upon request.

Just the job for Radio Control working.

To HOBBIES LTD. Dept. 991, Dereham, Norfolk

Please send me Kit R.T.A.18, for which I enclose cheque/ P.O. for 37/6. (including postage)

Name

Address



GRAHAM JAMES



Between the age of 17 and 18 Graham decided to 'give it all up' for a time and worked behind the bar in his father's pub in Camberwell, London.

"Then completely out of the blue, I got a 'phone call from the Corona School, asking me if I would like to audition for the role of Marcel in the touring production of 'The Boyfriend'."

Graham got the part and for twenty months toured the British Isles with the Company. After that came a varied selection of work including modelling for a television advert, appearing as the principal dancer in a Blackpool pantomime, a five week season at The Pigalle with Betty Hutton and a television play with Alfred Marks.

Then came a series of six television shows in Milan with Caterina Valento, and four English television shows with Charlie Chester.

It was while he was appearing in this series that he was asked to understudy in *Not To Worry* at London's Garrick Theatre. The show flopped in two weeks, but Graham got the break he was waiting for.

Blitz opened at the Adelphi Theatre on May 8th, 1962, and Graham has been with the cast since then.

"It has been a wonderful experience for me", he says. "I remember on the first night I was so nervous that I let go of a beer bottle I was throwing about in a drunk scene. It crashed into the wings and splintered glass was everywhere. Ever since then I've used a rubber beer bottle!"

And it was whilst appearing in *Blitz* recently that Graham got his first chance to record.

Robert Stigwood, manager of Grazina Frame (Graham's leading lady) had come along to see Grazina in her final night with the show. He was impressed with Graham's performance and after

the show asked him if he would like to make a record. Graham said he would.

The result can be heard on Columbia DB 7048 as Graham sings (*If You Would Only Say You Care* coupled with *I'm Gonna Make It With You* — a number which he penned himself.

Graham is 5 ft. 11 in., has blonde hair, blue eyes, likes Italian sea food, rice pudding, sketching, swimming, horse-riding and wearing dark casual clothes.

Ambitions? To make hit records, good films and own a villa in Greece.

Advertisers' Announcements

UNDER 21? Penfriends anywhere — details free. Teenage Club, Falcon House, Burnley.

PENFRIENDS home and abroad, all ages. S.a.c. for details. European Friendship Society, Olney, Bucks.

100 DIFFERENT stamps free! Request 1d. upwards discount approvals. — Bush, 53 Newlyn Way, Parkstone, Dorset.

INVENTIONS, Original ideas always wanted for sale. Originality Unlimited, 30 Devonshire Drive, Stapleford, Nottingham.

HOME BILLIARDS FOR FAMILY FUN
Tables in 3 sizes, 4 ft., 5 ft., and 6 ft. from £8. 17s. 6d. to £17. 5s. 0d., including snooker and billiard balls, cues, marker, and rules. Available at all branches. Send for full details from **HOBBIES LTD, DEREHAM, NORFOLK.**

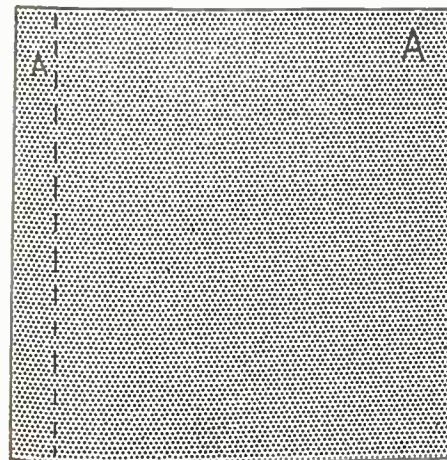
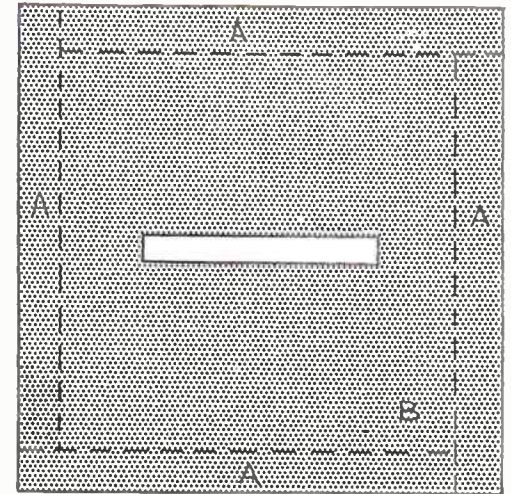
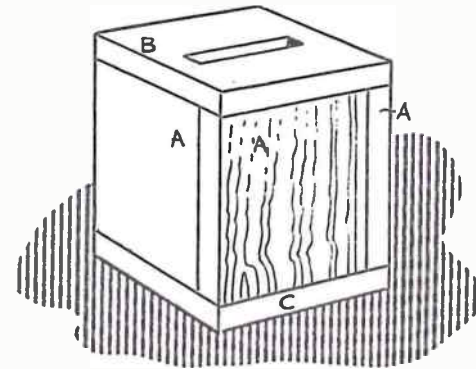
BUYING OR SELLING?
Classified advertisements on this page are accepted at a cost of 6d. per word prepaid. Use of a Box No. is 1/- extra. Send P.O. with advertisement to *Hobbies Weekly*, Advert. Dept., Dereham, Norfolk. Rates for display advertising on application.

ATTRACTIVE MONEY BOXES

ATTRACTIVE money boxes can be made by using transfers for decoration. Being quickly glued together, and using only a small quantity of wood they could well be constructed in large numbers for sale.

Make the box from $\frac{1}{4}$ in. wood, cutting out the various parts with a fretsaw. You will need four pieces A, one B, and one C. Piece C is the same size as B, but without the coin slot. Glue pieces A and B together, and screw the base C in place, using countersunk screws. Paste a piece of brown paper over the base. The money may be extracted by removing paper and screws.

Apply a transfer such as the Decorette nursery rhyme 253 (four on a sheet) to piece of $\frac{1}{4}$ in. wood, and cut out, leaving an irregular shaped background. Glue to the front of box, and finish off by painting. (M.p.)



31

Printed by **BALDING + MANSSELL, LTD.**, London and Wisbech, and Published for the Proprietors, **HOBBIES LTD.**, by **HORACE MARSHALL & SON, LTD.**, Temple House, Tallis Street, E.C.4. Sole Agents for Australia and New Zealand: Gordon & Gotch (A'sia.) Ltd. For South Africa: Central News Agency Ltd. Registered for transmission by Canadian Magazine Post.

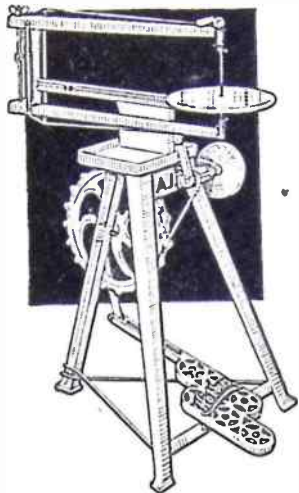
READER'S REPLY
HW OCT. 1963



WORLD-FAMOUS FRET MACHINES

Making toys, models and novelties in wood, metal, Perspex, etc. is a paying pastime, and with a machine you can double your output right from the start. In fact you have a factory in the home.

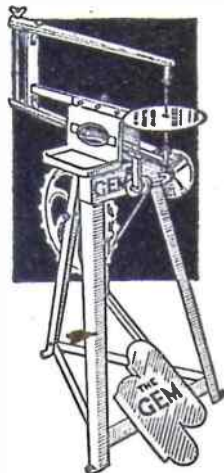
'A.I.' TREADLE SAW



'MARVEL' with motor



'GEM' TREADLE SAW



Fitted with Black & Decker D.500 Drill
Available separately £6. 19. 6

'A.I.' A sturdy machine with cast metal legs, metal table, wooden arms, special saw tension, etc. Easy to treadle, smooth running and rigid. Provides a factory at home for the handyman — a machine for profit and pleasure. **£10.10.0**

KITS TO CONVERT ABOVE MACHINES TO MOTOR DRIVE



Anyone can fit these parts to a Gem, A.I. or Marvel machine for driving by Black & Decker D.500 Drill.

KITS of parts (as shown)
For A.I. machine £2.2.6. For Gem £2.3.6. For Marvel £2.4.6 (Postage 2/9).

If required complete with Black & Decker D.500 Drill, add £6.19.6 to above prices.

'GEM' A lighter machine with pressed metal legs, but easy running and a reliable worker. Sound value and a machine for all kinds of work. Spare blades, instructions, and designs are included with machine. **£6.19.6**

'MARVEL' A bench fretsaw. Cuts wood to about $\frac{3}{8}$ in. thick by means of spring-loaded saw action. Space 17 in. between sawblade and back of frame. 700 r.p.m. Complete with Black & Decker drill, as shown. **£15.3.6**

Also supplied as a plain bench machine without motor attachment. **£5.19.6**

EASY PAYMENTS

A system is now in operation whereby goods to the value of £5 or over can be despatched carriage paid after the initial down payment, and subject to the completion of a simple form of Agreement. The slight additional cost over cash price is to cover extra clerical work, books, interest charges, etc. It is impossible for us to allow this system to apply in any part of Ireland, or anywhere outside Great Britain. Agreement Forms are obtainable at any Hobbies Branch, where machines may be seen, and money paid each month. Or, you can do the business through the Head Office at Dereham, sending your instalments there.

MARVEL MACHINE with motor £3.17.6 DOWN and 6 monthly payments of £2.1.6. (Cash price £15.3.6).

MARVEL MACHINE without motor £1.10.0 DOWN and 6 monthly payments of 16/5. (Cash price £5.19.6).

GEM MACHINE £2.0.0 DOWN and 6 monthly payments of 18/3 (Cash Price £6.19.6).

A.I. MACHINE £2.15.0 DOWN and 6 monthly payments of £1.8.5 (Cash Price £10.10.0).

HOBBIES LTD. DEPT. 991, DEREHAM, NORFOLK