

HOBBIES weekly

30th SEPTEMBER 1964

VOL. 138

NUMBER 3590





FOR CRAFTSMEN OF ALL AGES

6°



T may seem to be a rather unusual thing to suggest the making of a philatelic scrap-book when we have on so many occasions stressed the fact that only the very best material should go in the stamp album. In point of fact that is the very reason why one should be made.

A PHILATELIC SCRAP BOOK By L. P. V. Veale

You will not have been collecting very long before you are sure to have some material, which although it cannot find a place in the collection, yet is far too interesting to throw away. For example, nowadays many of the large firms which do a big postal trade have specially printed stamps for their parcels which are in the form of labels, as you can see from the illustration. You could not very well put one of these in a collection, yet they do, without a doubt, have some considerable bearing on the postal facilities of today.

For one thing, they serve as a protection against theft. The average house-holder takes his parcel to the post office, has it weighed, buys the necessary stamp, sticks it on the parcel, and away it goes. If a private individual took a parcel for

posting with one of these printed stamps on it, the clerk would note the number and it would then be an easy task to find out if the parcel should have been posted in that manner.

Again, look at the saving in time. Just imagine if you went to post a parcel, but found some clerk there before you with a couple of hundred parcels to be weighed and stamped! Now you could hardly put such a label in your own collection, so what better place than a scrap book.

An International Reply Coupon is also illustrated. You could hardly place this in a stamp collection, as it is rather big (4 in. by 3 in.) for the average album. But it serves a very useful purpose so far as the post office goes. If you reply to some advertisements you are requested to enclose a stamped and addressed envelope. Well that is easily managed in this country, but if you are replying to an advert from abroad you purchase an International Reply Coupon, and enclose that in your letter.

The person who receives this takes it to his own post office, who will provide the necessary stamp for him to send a letter back to you by the cheapest method. If you had the necessary foreign unused stamps it would be cleaper, as the reply coupon would cost you 1s. 0d., although the foreign postage rate is only 6d.

The example shown came from France. On the front the instructions are printed in French, while on the back the same instructions are printed in four other languages. The coupon was sent to the writer some years ago. The amount shown is 30 francs, but now the rate is only a matter of centimes.

Quite a large number of the letters nowadays bear slogans on the envelope. Again, these could not very well go into a stamp collection, as the covers would take up far too much space. But they can easily go into the scrap book. It would be quite a costly business to keep and mount all the envelopes, so select only the best specimens.

It is well within the bounds of possibility that you will at some time in your collecting life receive unusual items of interest — for example an envelope with an Irish stamp alongside an English one. Such curiosities would also go into the scrap album. Embossed stamps which are printed on the envelope are not normally admitted into the album, but they might well have a place among the

International reply coupon (full size is 4 in. by 3 in.)





A parcel stamp

scraps. Note that this applies to stamps printed on the envelope, because in 1847-54 three embossed adhesive stamps were issued. These are really quite valuable, and should certainly go into the stamp collection. A good specimen would easily fetch £5.

Telegraph stamps, newspaper stamps, and fiscal stamps (for example those that are used to pay dues on cigarettes, or the 2d. stamp that is affixed to a receipt) should not go into a postage

Continued on page 403

MAKING A NATURE DIARY

F you have never kept a nature diary, now is the time to start. When you look back on a year's entries next autumn the record will surprise you and bring back most vividly interesting and delightful memories of the past twelve months.

This record is best commenced at this time of year — not in the spring, when many of the details you can note in the next month or two as trees and hedges shed their leaves are already hidden by the new year's growth.

By A. Gower

You may have a particular interest in botany, ornithology or entymology, and in this case your diary may be laid out accordingly; but by far the most interesting record will be one which in the main comprises varied interests. By so doing a much more panoramic view of your particular neighbourhood is obtained.

It is suggested that a stiff covered exercise book is used, and the notes taken in the field are edited as they are recorded with the relevant information noted in particular columns. The pages might be divided into columns thus: date, time, weather conditions, situation, object, details and remarks. A further column might be allowed for a sketch or photograph, and it is good plan to let the entries occupy a double page to allow the fullest possible space. Thus a single item might appear like this:

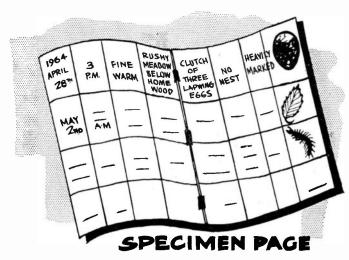
'1964. September 25. Afternoon. Dry, with keen winds. Rear lawn, after mowing. Starlings from this year's broods feeding on flying ants now making last flights. Young birds easily noted because of lighter, brighter colouring. Distinctive hues of fully grown adult birds not yet developed. Young birds only noticed in these flocks.'

1964. October 4. II a.m. Mild and sunny. Right bank of Home Lane. Primroses in bloom. Not unusual, but first time noted in this district. N.B. View

again in Spring.

Illustrations add interest

Photographs relevant to entries can be pasted or mounted at the end of the remarks column which will naturally be the widest one; alternatively sketches may be made while the subject is fresh



in the mind. Those relating to birds, flowers, or insects, or to any other entry which lends itself to illustration may be made first in pencil or ink, and then coloured with crayon or water paints. This is particularly advised when colouring or variation is the main feature of the data concerned: birds' eggs, flora, insects, leaves and the like.

Once the diary is commenced it is surprising how many small but unusual incidents are remarked as worth noting, two or three often being written up each day. Winter evening walks will also be very productive of unusual sounds and scents.

Besides the details already mentioned above it will be as well to bear in mind others which are worth noting, depending on the nature of the entry: weight; size; exact location; depth, if below ground level, or height, if above; immediate conditions of weather or locale, and so on. It will be found that various entries require different ranges of notes.

Nothing is ever quite so fascinating as looking back over something captured in the past on film or in words. A nature diary becomes a veritable treasure trove of memory over the years and the keen observer will start it now as the old year dies.

• Continued from page 402

SCRAP BOOK

stamp collection, as they have not been used for postal service.

Now a few points as to how the scrap album should be set up. Remember that this may have to last quite a long time, and it is quite probable that the first home of the specimens will be the last. Do not go for anything gigantic, it is better to have something smaller, and a fair few pages filled. A photographic album is an ideal setting. Failing this an ordinary spring back binder into which you place your own paper is relatively cheap.

For mounting small items use stamp mounts. Larger items such as slogans on covers are best put in with photographic art corners.

A well looked after Philatelic Scrap Book should in a year or two provide a most interesting sideline to your collection.



Fiscals—A telegraph stamp from Belgium and an excise stamp from Canada

is designed specifically to meet both categories. It can be made as a kitchen

cabinet and finished off by painting, or can be constructed of good quality timber and serve as a small sideboard or cocktail cabinet. Shelves can of course GREAT deal of money can be

For the beginner, joints will be as ments for the home, and as the simple as possible, using butt joints handyman becomes more experienced, where practicable. Any screws used can items of furniture can be tackled with be countersunk and nails driven in confidence. The elegant cabinet illustrated here, slightly below the surface. The heads can

saved by constructing simple fit-

GENERAL PURPOSE CABINET

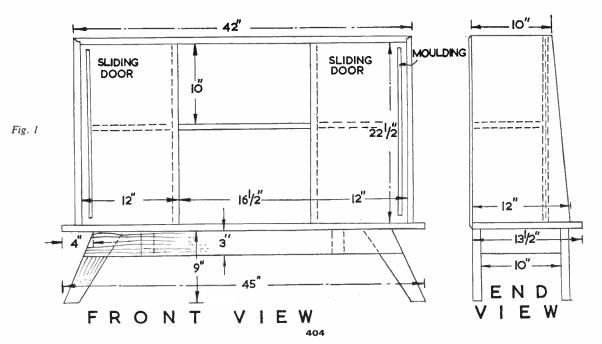
then be filled with woodfiller and sanded flat before painting.

The measurements are shown in the diagrams in Fig. 1. The front and end views show the construction and it will be evident that there are three separate partitions with a central shelf running right across the cabinet.

If making up as a cocktail cabinet it will be necessary to omit the shelves in the end partitions, fixing it in the centre one only. Note that there are two sliding doors, and these will cover the end partitions only. For kitchen use the doors can be made wider to cover the shelves completely.

The legs are made up as detailed in the diagrams and are fixed by screwing from inside.

Commence work by making the car-



be modified to suit either requirements.

case as shown in Fig. 2. All parts are made from $\frac{3}{4}$ in. wood and should be squared up before fixing. The ends are let into the base by means of stopped housing joints and the top mitred as indicated in the drawing. Alternatively but the joints if you intend painting the cabinet.

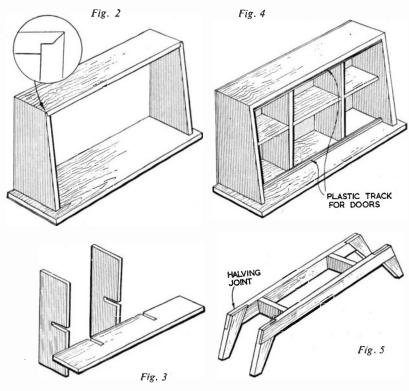
The shelves and partitions are cut from ½ in. or ½ in. wood 8½ in. wide and are halved together as shown in Fig. 3. The halving joint is marked out, sawn, and finished off by chopping away with a chisel. The partitions and shelves are now inserted and fixed as indicated in Fig. 4. They are secured by gluing and pinning.

The back is of ½ in. plywood which is cut to size, glued and pinned in place and the edges then nicely rounded.

The legs and rails forming the stand are cut from 1 in. material, halved together as in Fig. 5. The legs are splayed outwards to the approximate angle shown in the front view and it is advisable to trim off the bottoms to the correct angle after assembly, not before. The 10 in. cross rails are shown butted in position, but they could in fact be inserted into a housing joint. Screw through the floor to fix the stand in position.

The doors are cut from $\frac{1}{8}$ in. hard-board and will slide in plastic channels, made specially for the purpose, which are screwed in position top and bottom. The channels are made in two depths for top and bottom. The deeper one goes at the top. The doors are then trimmed so that they can be slipped in and out without removing the channels.

The door handles should consist of lengths of suitable moulding or pieces of



‡ in. square stripwood glued and screwed along the edge of the doors as seen in Fig. 1. The ends, top and bottom, should be nicely rounded.

To complete the cabinet all parts should be cleaned up with glasspaper and

the grain filled. Rub down again and apply one or two undercoats, finishing off with high gloss paint. If using as a cocktail cabinet a finish of stain and polish would be more suitable, but clear varnish could be used instead. (M.h.)

AIRCRAFT POCKET BOOKS

A COMPREHENSIVE guide to contemporary aviation, providing silhouette drawings and information on 544 aircraft types contained in eight pocket sized books. The series are in the following sequence: 1. Fighters. 2. Bombers. 3. Trainers. 4. Military Transports. 5. Commercial Transports. 6. Rotocraft. 7. Low Wing Light Planes. 8. High Wing Light Planes.

Each volume costs 2s. 6d., or the eight volumes (in a handy case) costs £1 ner set.

Published by Macdonald & Co. Ltd, Gulf House, 2 Portman Street, London. W.1.

THE HANDBOOK OF FOREIGN BIRDS

By A. Rutgers

THIS book serves the double purpose of being a reference to foreign birds, and an invaluable handbook to their keeping, for both beginner and the experienced fancier.

There are 145 accurately coloured photographs which are necessary for the identification and selection of the species. Also 253 species of small seed eating and insect eating birds, fruit eaters and nectar feeders are fully described, each with notes on its habits and breeding, care and diet required.

Published by Blandford Press. 167 High Holborn, London, W.C.1. Price 18s. 0d.

Miscellaneous Advertisements

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

PENFRIENDS home and abroad, all ages. S.a.e. for details. — European Friendship Socilety, Burney, Lancs.

BUYING OR SELLING?

Classified advertisements on this page are accepted at a cost of 4d. 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.

FREE — Interested in Marquetry? A special leaflet 'Making Pictures in Wood' by the fret saw method is free for the asking. Send to HOBBIES LTD, DEREHAM, NORFOLK.

PHOTOGRAMMICS

N occasion we have considered how photograms can be made by the action of light on photographic paper without the necessity for a camera. To remind you of previous features about this subject we would mention that a few objects are laid on the sensitized paper which is then exposed to light. After development in the usual manner we find our objects have left a white shape on a dense black

By S. H. Longbottom

background. Odds and ends have been used such as buttons, paper clips, screws and the like, and we have also shown how these could be arranged to make patterns and pictures.

Having examined the basic principles more closely we now find that we can extend this idea, and with the aid of some shading patterns we can produce what we term as photogrammics. There is an extremely wide field at our disposal, and once again a camera is unnecessary. It is merely a question of using the photographic processes to achieve our purpose.

For some time now a variety of shading films have been available, and these are extensively used by draughtsmen in the preparation of plans or drawings. These are Plastitone shading films, pre-drawn to cover a wide range of patterns from simple line shading to spattered designs.

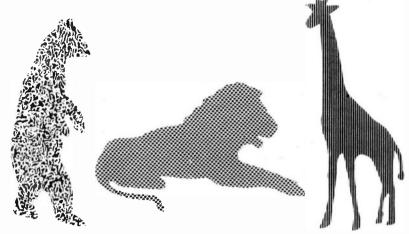


Fig. 2-Simple examples of uses

Fig. 1 shows just a few examples of the more unusual patterns, and we can use these for our photogrammics. It should be recognized that the textures have been reduced by reproduction, and some allowance must be made for this. When used by draughtsmen the prepared film is cut out to size and shape required, then affixed to the drawing. The films are self adhesive, and apart from the printed texture are otherwise fully transparent. The advantage to the photographer is that the sheets are not affected by strong light, and may thus be

used as screens, a far cheaper method than buying photographic screens.

And since we need not always stick them on to the photographs, they can be used repeatedly in many different ways and combinations. The shadings may also be affixed to tracing paper or cellulose acetate for making permanent screens, each sheet measuring 8 in. by 12 in., and large enough to lay over most prints. Additional effects can also be obtained by affixing the shadings to small pieces of acetate, and using these as negatives, when the texture can be enlarged or used to diffuse a background.

In Fig. 2 you will see how we have used some of the shadings shown in Fig. 1. It is important to observe when using these shadings that we have to consider the reverse effect. Here we have merely affixed the shadings to stencils, and made a direct print on photographic paper. While this example shows quite a simple application of the process, the method becomes even more intriguing when extended.

We can make numerous designs and effects from simple subjects, and the method is still closely related to the method of making photograms.

We now propose to explain in some detail a few experiments conducted by using these line screens. Incidentally, I buy my shadings from a local drawing office and artists' suppliers, but should you experience any difficulty I would suggest that you write to Charles B. Roff & Co. (Leeds) Ltd., Basinghall

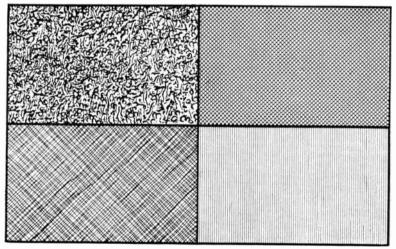


Fig. 1-Examples of patterns available

Street, Leeds 1. or A. West & Partners, 684 Mitcham Road, Croydon, Surrey.

It will be realized that when straight lines are crossed at right angles they make small squares, if crossed at different angles we produce all kinds of textures. There are wavy lines at our disposal, and these may be combined with straight lines to make an infinite number of patterns.

Used alone with odds and ends Plastitone screens can make intriguing patterns. For example, a sheet of paper is laid on the enlarger baseboard with a vertical line screen on top. The sensitive paper is exposed, then further exposed after laying on a couple of pennies, a triangle or square. Remove the objects, and alter the direction of the screens, laying on the coins in new places. The result may be unpredictable, but on development a design is produced.

This simple example can be extended by careful control and planning to make all kinds of fascinating patterns. When the shadings are affixed to cellulose acetate they can be used in direct contact with the paper or used as negatives. If the screens are raised from direct contact with the paper by means of a sheet of plate glass (which may be also raised) we can produce diffused effects.

These are only a few suggestions worthy of experiment, but we will first consider another easy example as shown in Fig. 3. You will observe that we have a photogrammic of a shoal of fish in this example. A large fish was first sketched out on a piece of thin, opaque card and several others made of the same shape, but scaled down to half size. This is done by marking out ½ in. squares on the original specimen, ruling out ½ in. squares on a new sheet of paper, and preparing a new reduced sketch. The smaller fish were then cut out from black paper.

Before proceeding to make the photogrammic the sensitive paper was tested to ascertain the number of tones of grey it would produce from white to black. A paper scale of this kind is made by laying a strip of sensitive paper on the enlarger baseboard covering 1 in. at the bottom with a piece of cardboard. Using the enlarger as illuminant an exposure of two seconds is made, and the cardboard then raised a further 1 in. This procedure is repeated with the same exposure time each step to reveal that several tones of grey can be made.

Should you find the exposure times difficult to regulate at such short intervals, more control will be possible by placing a piece of transparent tracing paper in the enlarger negative carrier. This dims the light, and allows longer exposure times.

Returning to the example of the fish, a sheet of printing paper was laid on the

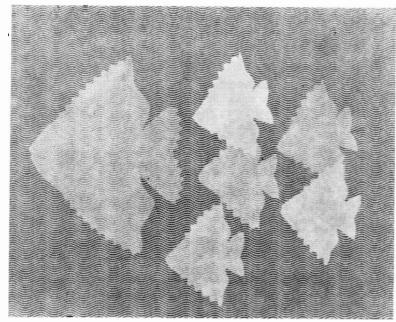


Fig. 3—A shoal of fish

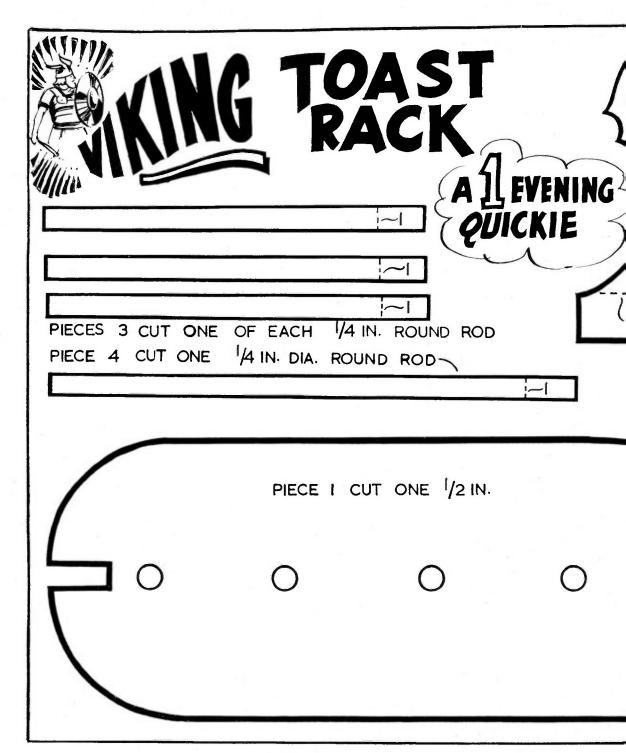
baseboard, and covered with a film of Plastitone wavy line screen. On top of this I placed a sheet of plate glass to ensure contact, and the fish were arranged on top of the glass. Now here is the difference between a photogram and this example. In order to produce the different tones the fish were removed at different exposure times.

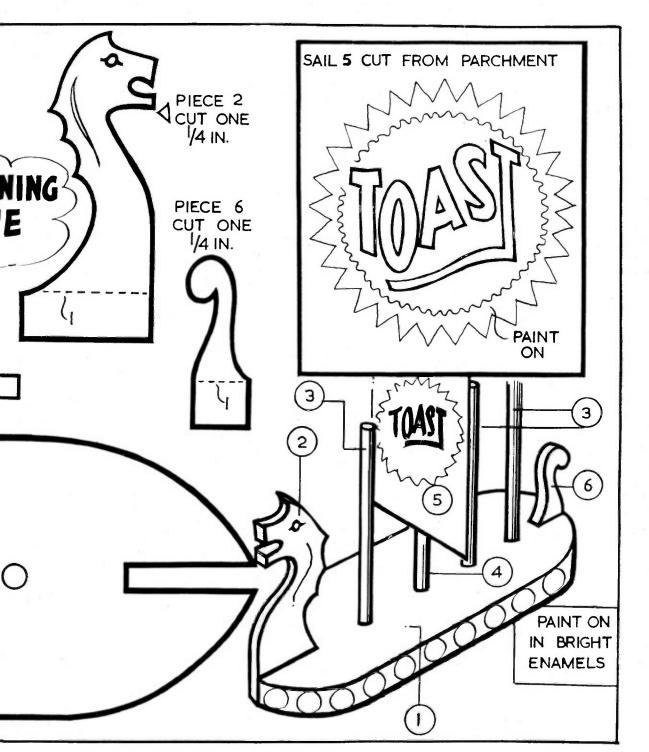
A modification of this could easily be

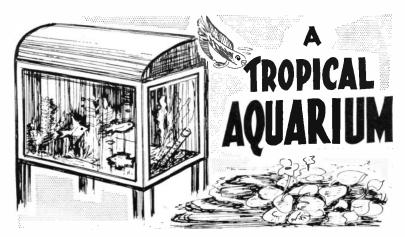
made by preparing the fish on tracing paper after treating same with different Plastitone textures. In such a case there may not be the necessity to vary the tones by different exposure times.

In a following issue we propose carrying the project a little further, showing how line screens can be used to best effect.









ANY hobbyists hesitate to take up tropical fish-keeping because they believe it to be a difficult and expensive pastime.

This is not really so. Once the initial cost of the tank and heater has been met the cost of upkeep is very little indeed. A well laid out tropical tank is a delightful and soothing object, and the hobby has various side lines (such as breeding) that continually offer new fields of interest to the aquarist.

Tropical fish are on sale in all waterlife stores, and in many pet shops. They are small, usually very gaily coloured, and are imported from tropical and subtropical countries. They, therefore, have to be kept in heated aquaria.

Something about a few of the many breeds available will be said later, but first the necessary equipment must be considered. This consists of the tank, heater, and thermostat, net and cleaning tube. Before the tank can be set up it will also be necessary to know something about aquatic plants.

Suitable tanks can be bought in various standard sizes. The framework is usually of painted angle iron, with the sides of sheet, and the bottom of wired glass. They can be bought complete with a 'hood' in which an electric light bulb

Part 1

THE TANK

By N. Wainwright

can be fitted to illuminate the tank. At the same time the hood prevents the fish from leaping out of the tank, for some breeds leap fantastically well, especially when in breeding condition.

In a fish tank depth is not as im-

portant as surface area, for the fish absorb oxygen by means of the water surface in contact with the air. So if a tank with a surface area of 2 sq. ft. can safely accommodate six small fish in a depth of 8 in. of water, it will still only be suitable for the same six fish if the water depth is increased to 18 in.

When starting fish-keeping it is not wise to begin with too large a tank. One measuring 24 in. by 12 in. by 12 in. would be very useful.

Some readers might like to try making a fish tank. A very simple type, made of wood, and with only one glazed panel, is described. For a wooden tank it is advisable to use a resin bonded plywood for the water has no effect on this. Ordinary plywood will peel off in layers because the water affects the glue. Solid wood can be used for tanks, but it has to be very thick indeed, and even then, with some woods, the moisture gradually seeps through to the outside of it.

A resin bonded ply of $\frac{1}{2}$ in. or $\frac{3}{4}$ in. thickness should be used. From this a back should be cut to about 25 in. long by 12 in. high, with two sides, each

12 in. square.

The back is screwed on to the ends of the sides, using brass screws, but before the various parts are assembled, the meeting edges should be treated with a waterproof glue. The screw heads should be driven well home, and treated with a dab of plastic wood.

A bottom is then cut to size, and similarly glued and screwed into shape, illustrated. Keep all measurements cor-

rect, and all parts an exact fit.

Plastic channelling, with a groove to take ½ in. plate glass, is used for holding the latter. Four strips of this are mitred at the corners to make a framework that exactly fits the front opening. The bottom and sides of this are glued into place, the glass is slid in position, and the top strip is added.

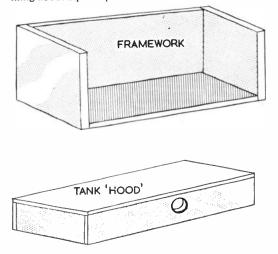
All inside corners of the tank, and where the glass fits into the channelling should be treated with a thin beading of aquarium cement. This must be proper aquarium cement and not ordinary glazier's putty. The inside woodwork should be given a couple of coats of quick-drying enamel, after a suitable undercoating.

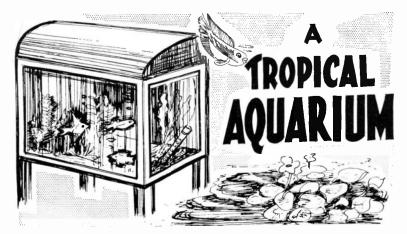
Once the paint has dried the tank can be filled with water, and any small leaks made good with aquarium cement.

A hood is simply a box shape about 4 in. deep, that will rest firmly on top of the tank. Halfway along the back edge a hole is cut through which a lampholder can be fitted. The lampholder should not be fitted through the lid, as the water level would have to be lowered too much so as to prevent the bulb being in the water. The inside woodwork of the hood should be painted with high-gloss enamel, so that the bulb reflects well.

An aquarium heater consists of an element in a glass tube, with the two wires coming out of a rubber plug in the neck. They can be bought in various wattages, and are quite cheap. Forming part of the heater (or sometimes a separate item) is the thermostat, which switches the heater on or off as necessary to keep the water temperature at about 75°F. This is the temperature considered to be most suitable for tropical fish. The heater is connected up to a power socket in the ordinary way.

• Continued on page 411





ANY hobbyists hesitate to take up tropical fish-keeping because they believe it to be a difficult and expensive pastime.

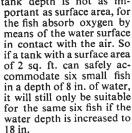
This is not really so. Once the initial cost of the tank and heater has been met the cost of upkeep is very little indeed. A well laid out tropical tank is a delightful and soothing object, and the hobby has various side lines (such as breeding) that continually offer new fields of interest to

Tropical fish are on sale in all waterlife stores, and in many pet shops. They are small, usually very gaily coloured, and are imported from tropical and subtropical countries. They, therefore, have to be kept in heated aquaria.

Something about a few of the many breeds available will be said later, but first the necessary equipment must be considered. This consists of the tank, heater, and thermostat, net and cleaning tube. Before the tank can be set up it will also be necessary to know something about aquatic plants.

can be fitted to illuminate the tank. At the same time the hood prevents the fish from leaping out of the tank, for some breeds leap fantastically well, especially when in breeding condition. In a fish tank depth is not as im-

Part 1



Suitable tanks can be bought in

various standard sizes. The framework is

usually of painted angle iron, with the

sides of sheet, and the bottom of wired

glass. They can be bought complete with

a 'hood' in which an electric light bulb

THE TANK

By N. Wainwright

When starting fish-keeping it is not wise to begin with too large a tank. One measuring 24 in. by 12 in. by 12 in. would be very useful.

Some readers might like to try making a fish tank. A very simple type, made of wood, and with only one glazed panel, is described.

For a wooden tank it is advisable to use a resin bonded plywood for the water has no effect on this. Ordinary plywood will peel off in layers because the water affects the glue. Solid wood can be used for tanks, but it has to be very thick indeed, and even then, with some woods, the moisture gradually seeps through to the outside of it.

A resin bonded ply of ½ in. or ¾ in. thickness should be used. From this a back should be cut to about 25 in. long by 12 in. high, with two sides, each

12 in. square.

The back is screwed on to the ends of the sides, using brass screws, but before the various parts are assembled, the meeting edges should be treated with a waterproof glue. The screw heads should be driven well home, and treated with a dab of plastic wood.

A bottom is then cut to size, and similarly glued and screwed into shape, illustrated. Keep all measurements cor-

rect, and all parts an exact fit.

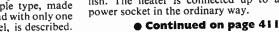
Plastic channelling, with a groove to take 1 in. plate glass, is used for holding the latter. Four strips of this are mitred at the corners to make a framework that exactly fits the front opening. The bottom and sides of this are glued into place, the glass is slid in position, and the top strip is added.

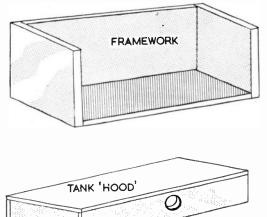
All inside corners of the tank, and where the glass fits into the channelling should be treated with a thin beading of aquarium cement. This must be proper aquarium cement and not ordinary glazier's putty. The inside woodwork should be given a couple of coats of quick-drying enamel, after a suitable undercoating.

Once the paint has dried the tank can be filled with water, and any small leaks made good with aquarium cement.

A hood is simply a box shape about 4 in, deep, that will rest firmly on top of the tank. Halfway along the back edge a hole is cut through which a lampholder can be fitted. The lampholder should not be fitted through the lid, as the water level would have to be lowered too much so as to prevent the bulb being in the water. The inside woodwork of the hood should be painted with high-gloss enamel, so that the bulb reflects well.

An aquarium heater consists of an element in a glass tube, with the two wires coming out of a rubber plug in the neck. They can be bought in various wattages, and are quite cheap. Forming part of the heater (or sometimes a separate item) is the thermostat, which switches the heater on or off as necessary to keep the water temperature at about 75°F. This is the temperature considered to be most suitable for tropical fish. The heater is connected up to a power socket in the ordinary way.





TOY PANORAMIC PICTURES

OY panoramas were extremely popular earlier in the century as a means of showing pictures to children in the home. Briefly, they were a form of lantern slide, the pictures being in reel form, sometimes continuous and wound from reel to reel. It was not unusual to find that the pictures were highly coloured and looked their best with a lighted candle at the back, for they were not projected on to a screen.

By S. H. Longbottom

You can quickly make a simple panorama of this type from an empty shoebox and two short lengths of dowel rod. Your reels of pictures can be taken from comic strip cartoons and the like joined together.

Obtain an empty shoebox cutting out an aperture about 2½ in. square in the bottom as shown in Fig. 1. Note that this size may not fit every strip cartoon and it may be advisable to modify same after examining the size of the pictures you wish to use. This size will be all right for the majority of cartoons and only a slight adjustment may be necessary.

We also have to make provision for the picture coming into the aperture when it is unwound from the reel and this is done by fitting a gate through which the film may travel. Prepare two strips of cardboard 1½ in. wide by 3 in. long, trimming the top and bottom corners as shown in Fig. 2. This will prevent the film from tearing when it enters or leaves the gate. These strips should partially cover the aperture and only be glued down one edge. When operating the panorama it may be necessary to ease these strips inward slightly to allow free passage of the film.

We now bore two holes $\frac{3}{8}$ in. in diameter for the dowel rods which will hold the reels of film. These holes should be situated centrally down each side and $1\frac{1}{2}$ in. from the top and bottom. You will also require two dowel rods $\frac{3}{8}$ in. in diameter and each 9 in. long.

The panorama is now constructed and it is a question of preparing films for your shows. By making a square aperture you will realise that we can use the box both vertically and horizontally. Strip cartoons may be joined together in correct sequence to make a horizontal film and you can assemble quite a few to

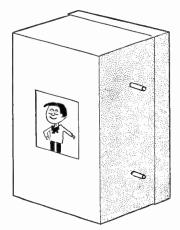


FIG 1

make a long showing reel. We would mention that some newsprint is rather soft and it is an advantage to paste your cartoons on to stiffer paper. When joined together the pictures are fed on to the right-hand roller backwards and unrolled on to the other for showing. In other words, your pictures will move from right to left. When shown vertically they must move from the bottom to the top.

In both cases we have to make provision for the space between the first picture and the roller. All you have to do is to attach a leader, which is a long strip of paper the same width as the cartoon. Fold over the end of this leader and glue down to make a tight sleeve through which the dowel rod will pass when threading. This blank strip can be wound on to the dowel rod by turning it until the first picture appears

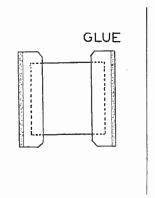


FIG 2

in the aperture. We must also have a similar strip at the end of the film.

Apart from strip cartoons we can also make our own films on white paper cut to fit the aperture. Here there is a decided advantage since they may be coloured and illuminated from the back by means of a cycle lamp or torch. If we did this with the printed strips we would reveal the printing on the reverse side of the paper.

Pictures may be traced on to white paper from painting books, stencils or magazines and you can thus produce an interesting film library.

Greaseproof paper is also suitable for making your own coloured pictures and strips can easily be gummed together to increase the length of your films. No doubt many other ideas will spring to mind once you have constructed the simple apparatus.

• Continued from page 410

TROPICAL AQUARIUM

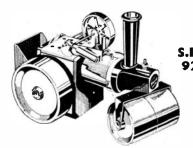
It is best to buy one large and one small net. They must have a very fine mesh, and it will be found easier to catch the fish if a square (rather than the more usual round) net is chosen.

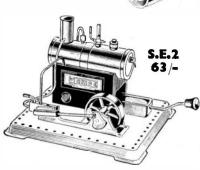
The cleaner is a glass tube of about 1 in. diameter and 15 in. long. Its use will be explained later.

With all the equipment available the tank is ready for setting-up. A bag of

aquarium gravel is spread over the bottom of the tank. It should slope slightly from back to front, being about 1 in. high at the back.

The water has then to be put in, but there are one or two important points that need to be noted about the water. These will be discussed in the next article in this series.





S.R.I 92/6





Full steam ahead to hours of enjoyment with Mamod Steam Models. You'll be proud to own one of these solidly constructed, smartly finished working models which operate alone, or with miniature machine tools or with your own Meccano Models.

SEE THEM AT YOUR LOCAL TOY AND SPORTS SHOPS

Manufactured by

MALINS (ENGINEERS) LTD. Thorns Works, Thorns Rd., Quarry Bank, Brierley Hill, Staffordshire





ONLY

3/3d.

Post 41d. Empire made

This low-price kit for lighting your model contains pea bulbs, (red, green, amber and plain) with holders, plastic covered wire and clips. Works off 41-volt battery. Full instructions enclosed.

HOBBIES LTD., (Dept. 99) DEREHAM, NORFOLK

You simply pour out these

NOVELTIES

with NEW LIQUID PLASTIC

Here's the hobby to make your spare time pay dividends. You simply choose your mould and pour out beautiful castings. We supply everything, including instructions. Wonderful results achieved — wonderfully quickly! Start right away - no training needed. Send 6d. stamp for exciting book and market details. No obligation.

QUALITY PLASTICS LTD.

Dept H37, Feering Factory, Kelvedon, Essex

The name DAVIES is synonymous with all that is best in Roller Skates. Strong, speedy, light and durable, they are fully guaranteed as to workmanship and materials.

No. 10

Junior model with girder-type construc-tion and rubber com-position wheels. Selflubricating nylon bearings. Amazing value.

2 | /= pair

Post 2s. 6d.

No. 9

Senior model with double ball bearings and rubber composition wheels. Electroplated with oscillating cushion. Very good skates, indeed.

32/6 pair Post 2s. 6d.

1A SPECIAL

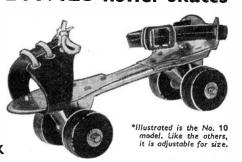
The best of all! Chromium-plated chassis, rubber toe brakes, extra wide rubber composition wheels with 192 precision ball bearings.

38/6 pair

Post 2s. 6d.

HOBBIES LTD, (Dept. 99), DEREHAM, NORFOLK

DAVIES Roller Skates





N the greenhouse, garden and orchard, growth is slowing down and preparation must be made for the winter. Greenhouse plants can be watered less frequently and some rested altogether in the cool house.

Fuchsias will begin to drop their leaves and need only be watered sufficiently to keep the soil from going dust dry. Once the leaves have fallen they can be stood under the staging out of the way, but do watch for any decay and trim off at once. Seed pods particularly will produce mould growths if left on the plants. Pelargoniums can be lightly watered, but do not allow the leaves to become wet.

In the orchard and soft fruit garden a start can be made on pruning. Loganberries can be cut down and the new growth spaced out and tied in place. New raspberry canes can be planted, and gooseberries pruned and protected from birds.

In the vegetable garden beetroot should be lifted and stored. Twist off the leaves and store the beet in a box of dry peat or sand. Late sowings of peas and broad beans can be made, but these are chancy in some districts. One almost certain crop, however, is lettuces under cloches. The variety Trocadero Improved can be sown now, broadcasting the seed and raking in. Provided the soil is moist there should be no need to

Cover the seed with cloches immediately, making sure that they are tight fitting to exclude draughts and cold air. The seedlings will require no further attention during the winter beyond removing the occasional weed. The only pest that is likely to cause any trouble is the small slug, and pellets should be laid regularly to kill them.

In March or April some of the small plants can be lifted and transplanted under barn cloches and the rest gradually hardened off and transplanted outside to provide a later crop.

Given average conditions, the first batch will be ready as early as those grown in the cold greenhouse. Spring sowings will then give a succession of well hearted lettuces.

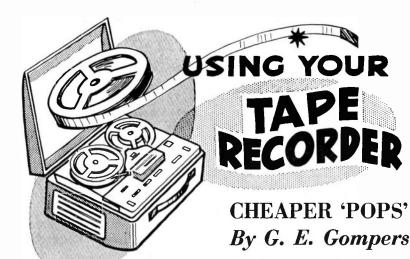
(M.h.)

T has been pointed out that a 45 r.p.m. pop disc costs about 8s. 6d., which means about 4s. 3d. a pop, whereas a 5 in, spool of recording tape costing about 30s., played at the standard 3\frac{3}{2} i.p.s. speed, could hold at least 20 pops, which works out at 1s. 6d. a pop. Also; it is very easy to plug your cable into the wireless. Providing there is no public performance of the tape, no law is broken. According to sales charts however, this isn't being done, so our pop fans are more honest than one might think.

Doing things the cheapest way is hardly dishonest, especially when the price of pop discs is excessive. Ethics hardly enter into the question. The only concern of the pop fans who wish to collect in this way is the best way to do it. The real problem is how to select individual pops at a moment's notice.

On the really cheap type of tape recorder, which has no numbering device for measuring the feet going through the gate, then nothing much can be done in the way of instantaneous selection. However, the presence of a numerator on a tape recorder is halfway to solving the problem.

Stick a small circle of jointing tape near the beginning of the magnetic tape, on the shiny side. This serves to mark the

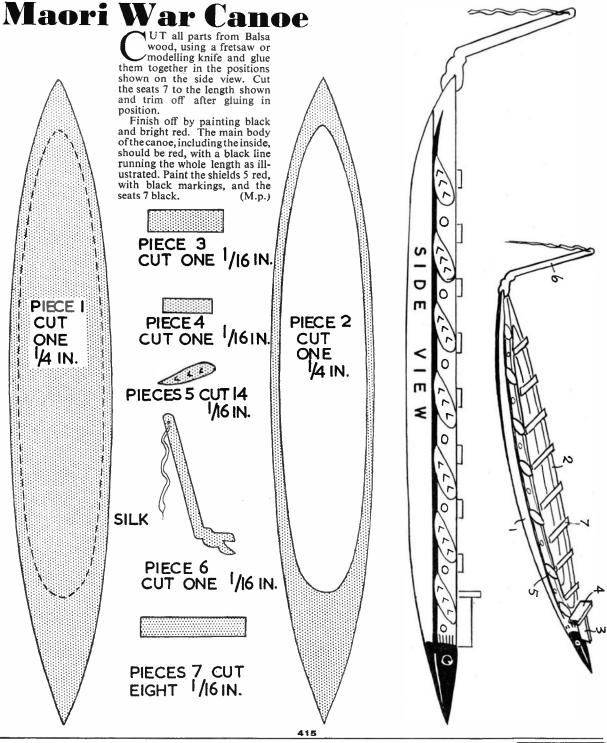


gate position of the tape at 000. In this way you can get the numerator number of each pop, and you can write a list of the pops of one side of a tape, with the appropriate numerator number next to each pop.

Providing you always lace up with the distinguishing mark at the gate

head, while the numerator is set at 000, you will quickly find your particular pop with the aid of the fast wind.

A similar distinguishing mark could be stuck to the other end of the tape for the benefit of the second track. Another of the great advantages which tape pops have over disc pops is that when you are tired of them, you can always swop them for something else - for FREE!



Printed by Balding + Mansell, Ltd., London and Wisbech, and Published for the Proprietors, Hobbies Ltd., by Horace Marshall & Son, Ltd., Distribution Centre, 8-11, St. John's Lane, Clerkenwell, E.C.I. 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 Postal Propriet Propriet

HW SEPT. 1964

THE LATEST – AND GREATEST!

ON SALE NOW

COMPLETELY REVISED PUBLICATION OF THIS WELL-KNOWN ANNUAL. ENLARGED TO 200 PAGES — AND STILL ONLY 2/6

Hundreds of projects to interest all the family, and each copy containing 2 FREE designs worth 6/-.

'PLUCKY' — A 24 in, working model tug using electric motor propulsion. Ample space for installing radio-control. A sure winner — and the pride of every owner.

LOG CABIN CLOCK — Has several features which, apart from making it an attractive looking project, make it also of practical use. The tops for novelty, with electric illumination and a musical movement.

Instructions and plans for many interesting projects



- **★** HOW TO MAKE YOUR OWN RECORD PLAYER
- **★ PRACTICAL DESIGNS FOR BATHROOM WALL CABINETS**
- **★** BIRD NESTING BOX OFFER AT BARGAIN PRICE
- **★** HANDY GARAGE FOR A MOTOR CYCLE
- **★ POP GROUP PICTURE FRAMES AND SPORTING CUT-OUTS**
- ★ OFFER OF YOUR OWN INDIVIDUAL HOUSE NAME

Hundreds of designs to choose from for toys, models, furniture, etc.

То Н	obbies	Ltd, D	ept. 99,	Dereham	, Norfolk
		of Hobbies luding pos		ual containing 2	FREE Designs.
NAME			••••••	•••••	•••••••••
ADDRES	S	*************		***************************************	***************************************
	***************************************	******************		*************************	.,
	************		••••	***************************************	***************************************

OUTSTANDING VALUE FOR 2/6

From all newsagents, bookstalls, model and handicraft shops, Hobbies branches and stockists, etc., price 2/6 (by post 6d. extra).

Send in this coupon NOW