

FOR CRAFTSMEN OF ALL AGES





AN **'ANTIQUE' MODEL** FOR CIGARETTES AND MATCH BOXES

in this issue

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Part 6

LEARNING THE MORSE CODE

ANY enthusiastic short wave listeners learn Morse, so that they can read Amateur or other transmissions in the code, or as a step towards eventually having a transmitting licence. Morse may also be useful for Scout or other activities.

· · · · · ·	-THE ALPHABET	IS A	S FOLLOWS :
A	•-	N	
в		0	
l c		Ρ	
D		Q	
ε.	•	R	• •
F	• • •	S	• • •
G		T	-
H I		U	••-
11	• •	v	• • •
L L		w	•
ĸ		X	
ΙĽ.		Y	
Т M		Z	

As reading is by ear, it is best to memorize each letter as a combination of short and long sounds. 'A 'dash' equals three 'dots' in length. Leave about one 'dot' space between parts of a letter, with a space of three 'dots' between letters, and about five 'dots' between words.

The simplest method is to learn a few letters each day. 'A' might be sounded as did-dilir, or di-dilir, or it may be hummed, or merely thought of as a brief sound quickly followed by a sound three times longer.

Oscillator

An audio oscillator is of great benefit

when learning the code. The one shown in the diagram has the advantage that it needs no valves or transistors. Volume is sufficient for two people learning together.

The carbon microphone insert is fitted in a hole in a piece of wood, screwed to the wooden baseboard. The earphone is the surplus balanced armature type, with a resistance of about 50 ohms. It is fixed to a bracket, which is attached to the baseboard with a screw. The bracket should be slotted here, so that the distance between microphone and earphone can be adjusted.

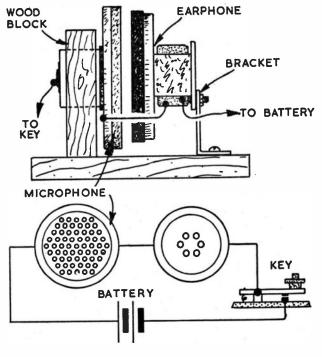
Microphone, earphone, key, and battery are all connected in series. A 3V or 41V battery is sufficient. If no oscillation is heard when the key is closed, reverse connections to the earphone. Also reverse the battery polarity if this improves results.

Keying

To begin, set the key contacts about $\frac{1}{16}$ in. to $\frac{1}{32}$ in. apart. The arm should rest in a comfortable position. Always form each letter correctly, to avoid difficulty later. Speed comes with practice. Most people find it easier to send, than to receive.

If two persons can practise together, this allows alternate sending and receiving. About 10–20 minutes a day, several days a week, will be sufficient.

When the code has been learnt, only a slow reading speed will be possible perhaps one or two words a minute. This speed increases as the sounds become familiar.



Oscillator for Morse practice

At first, there is no need to bother with figures. They are quite easily learnt:

	NUMERALS
1	• 6-•••
2	·· 7···
3	··· 8 ·· 1
4	•••• • • • • •
•	· · · · · · · · · · · · · · · · · · ·
- T	

Gaining speed

Once the code is thoroughly familiar, advantage should be taken of any practise methods possible. To avoid guessing, groups of random letters can be sent and read. If a tape recorder is available, a length of tape can be recorded at a suitable speed, and used for reading. This is easily done by placing the recorder mike near the oscillator earphone, but not on the same table as the key.

With recordings, ordinary text allows too much guessing, due to familiarity. This is avoided by using random letters, and simple, often needed words. When the tape can be read, erase it and record a new lesson at a speed about 2 w.p.m. faster.

For speed tests, a word is counted as 5 letters. Morse tapes and records can be obtained, for reading practice. Slow Morse transmissions for learners are made by the Radio Society of Great Britain.

Radio

The eventual aim is to read Morse from the radio. This cannot be done until some speed has been gained. Some Amateurs send Morse at quite low speed, while call-signs are often repeated. Any code read should be written down. If some of these attempts do not seem to give intelligible copy, this is no cause for alarm — the station may not be using English, or may employ lots of code abbreviations.

If CW Morse is to be received in a simple radio, reaction must be advanced just enough to cause oscillation when the

code station is tuned in. Special or Amateur communications receivers have a BFO (beat frequency oscillator) which is switched on, for Morse. Morse consisting of an audio tone can be heard on any receiver. An ordinary domestic superhet, with SW bands, does not receive CW Morse, because there is no BFO to produce an audible tone.

Morse test

A brief outline of the Morse test may be helpful. The tests are held at coastguard stations, and are also arranged by the GPO at large post-offices. The GPO will furnish exact details.

Reading and sending is for 3 minutes each, at 12 words per minute, plain language. The figures test is 10 groups of 5 numbers in 14 minutes.

It is wise to work up to a slightly higher speed than wanted, so that 12 w.p.m. can be sent and read easily and accurately.

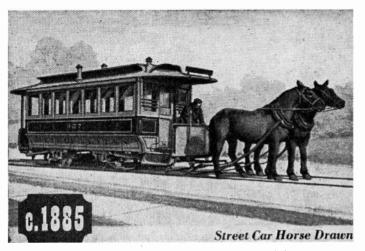
The Old Horse-drawn Tramways

States had its own horse car or mule car be.

The cars were usually drawn by one or two horses, the fact that these ran upon rails instead of on the roadway making the work for the horses much easier. At the end of the line the horses were unhitched and moved to the other end of the car for the return journey. Horse tramway cars continued to be used in America even after 1900, but by 1915 they had all disappeared.

The only example of a horse-drawn tramway still in operation in the British Isles is at Douglas in the Isle of Man. The Douglas horse tramway has survived changes of ownership, closure and electrification proposals and omnibus competition to remain more popular than ever, carrying well over a million passengers during a summer season. The gauge of the tramway is 3 ft. and is double track throughout, running for 1 mile 5 furlongs along the sea front from Victoria Pier in the South to its northern terminus near the Manx electric railway station.

The tramway was first laid down by Thomas Lightfoot & Son and the first public services began on 7th August 1876 and have continued ever since. It was acquired by the Douglas Corporation



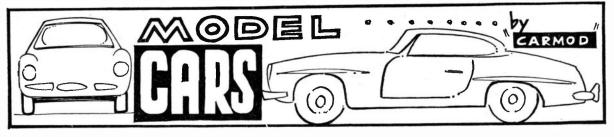
One of the horse-drawn street cars in use in New York last century

Transport in 1902 who operate daily services, usually from May to September. There are some 31 cars varying in size but 30-40 passengers can be comfortably seated in each car.

The 80 horses are splendid stock and are immaculately groomed and attended to by the stable employees and treated when necessary by the Corporation's veterinary surgeon. Most of the horses were obtained from Ireland.

It is interesting to note that a short time ago in Ireland, two fully-laden railway vans were hauled by one horse every day from the Shannonvale mills in County Cork near Clonakilty Town along the half mile spur line to the main rail junction, and this same one horse has been employed on this work for some 15 years. (A.J.R.)

¹⁸¹



THERE are nearly as many variations of the versatile go-anywhere Land Rover as there are owners. It can be ordered with such a multitude of body modifications and specialized attachments that it is difficult to know which examples to describe to tempt choppers to make modifications to the production die-cast miniatures which are available. Basically, Land Rovers are of five types: Regular (short wheel-base), 109 in. wheel-base, Station wagons of both regular and 109 in. wheel-based, and trucks with various bodies based on the 109 in. wheel-base chassis.

It is possible to make up a model example of each of these classes from Corgi and Spot-on basics. The Dinky Land Rover is suitable for the several variations of regular wheel-base cars but this model is now some 15 years old and differs from the current design in having straight sides to the body instead of 'lipped' upper edges, and the radiator front has been altered since the Dinky introduction.

The Corgi model is a good replica of the 109 in, wheel base car except for one important feature — the cab is of a design which is no longer used. This has to be removed and replaced by one fabricated to current design if a hard-top cab is required.

To take off the existing cab cut through the metal and plastic as shown in Fig. 1. Cement the clear windows in position, as these will be inclined to slip without the support of the cab back.

For the open version of the car it is necessary only to file off the rough metal edges, but for a hard-top cab of the new design, cardboard, clear plastic sheet and Plastone should be used as shown in Fig. 2. First cut out from card the back panel with the three rear windows (A) and behind this cement a sheet of thin clear plastic. Bend to shape and cement side edges to rear of side windows and bottom edge of division behind seats. Cut another piece of thin card to the shape of the roof and cement in position. When set hard, smear this with cement and build up the curve on top of the roof with Plastone.

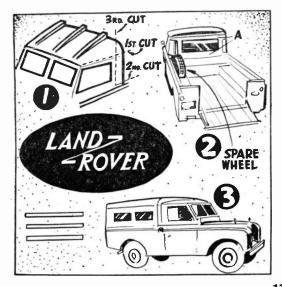
The standard 109 in. W.B. Land Rover has its spare wheel mounted in a recess in the near-side tool boxes of the truck part but this is a difficult chopping operation calling for the use of an electric drill. The bonnet mounting for the spare wheel is an optional extra for the fullsized car so the retaining of the Corgi position for this item is legitimate.

For this long wheel-base car there are five optional body covers. The hardtopped cab can have a canvas threequarter-length hood, with or without two windows on each side (Fig. 3). The non-cabbed car can be fitted with a fulllength hard-top, with or without two windows on each side and one at the back (Fig. 4); or a full-length plain canvas hood (Fig. 5).

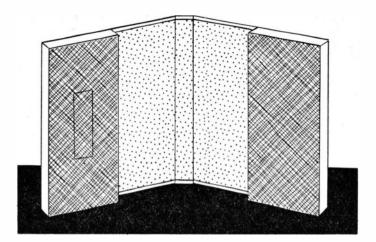
Hard-tops can be made from cardboard, cut in one piece and folded. Similarly, canvas hoods can be made from cardboard over which is stuck an adhesive cloth strip.

As with all other Land Rovers, appropriate body colours are as follows: Bronze Green, Light Green, Mid Grey, and Marine Blue. Upholstery is Grey. Hard-tops are white and canvas hoods are fawn.

The subject of Land Rover choppings will be continued in a following article.







THIS COMPENDIUM TATIONERY always makes an acceptable gift and even more so MAKES A

acceptable gift and even more so when presented in a useful compendium which contains postcards, paper, envelopes and perhaps a few postage stamps. Using cardboard as a basis we can apply a cover of either wallpaper or one of the self-adhesive plastic coverings, and if desired the recipient's name.

You will require a piece of cardboard 20 in. by 9 in. and no doubt you may be able to obtain an empty carton from a friendly shopkeeper. The foundation is cut from this card according to the details shown in the diagram, all dotted lines being scored to permit easy folding. The shaded portions indicate where glue should be applied to the flaps and where glue should be applied to make the pockets for the paper and envelopes. The resultant compendium will hold notepaper measuring 6 in. by 5 in or writing pads of the same size.

Strengthen the spine

Since the spine, which acts like a hinge, is subjected to most wear and tear, it is wise to reinforce with a length of paper gumstrip before applying the cover.

Having cut out and scored the cardboard base we can now turn our attention to the cover. It is up to you to decide whether to use wallpaper or some of the more expensive contact papers. The latter have a decided advantage since they keep clean, are washable and are made in some gay patterns as well as wood grain effects. The method of covering is very similar in both cases for we apply our outer cover first and then a lining so the following remarks apply to both types.

MAKES A NICE GIFT

Obtain sufficient wallpaper large enough to cover the outside plus an extra $\frac{1}{2}$ in. all the way round for folding inside. Cut out the wallpaper, making neat mitres at the corners to avoid undue bulkiness. The paper should be coated evenly with good quality paste and should be quite tacky before attempting to stick it to the cardboard.

Place the prepared cardboard on the pasted paper, press down gently, turning the whole over so that the cover is now

face upwards. Should there be any blobs or bubbles remove the paper gently, relay and then rub down with a clean duster or soft paperhanging brush. This done, turn the card over again, folding over the surplus on to the inside of the case. Smooth this down and we are ready to apply the lining paper.

You may use a different pattern for the inside or a plain paper. This lining paper should be cut and fitted so that it is $\frac{1}{4}$ in. less than the outside measurements, leaving a small border as shown in the illustration. At this stage the work should be left under pressure and allowed to dry.

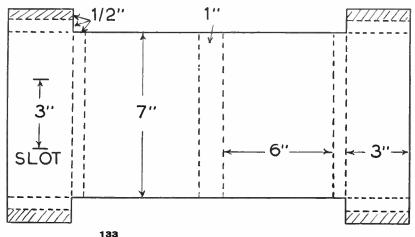
Reference to the diagram will reveal a small strip on the left hand wallet. This provision is made for stamps. Cover a postcard — or you may use a strip of celluloid — with the lining paper so that it is $4\frac{1}{2}$ in. long and $\frac{3}{4}$ in. wide. Cut two slots with a sharp knife three inches apart, threading the strip in at each end and fastening on the back with paper gumstrip.

Finally, the pockets are folded over and glued in position as shown by the shaded portion.

Earlier we mentioned the possibility of adding a name or the word NOTE-PAPER and we would draw your attention to 'some handy little sheets of prepared lettering now on sale at most stationers. We refer to Blick Dry Print obtainable in small sheets of prepared letters costing 2s. 3d. per sheet. There are many styles of type at our disposal enabling us to add a name or title with a really professional finish. Full instructions are given with the sheets but we would advise that it is best to use the accompanying back sheet as a guide line.

The compendium can now be filled with a writing pad, envelopes and postcards along with a few stamps to complete a really acceptable gift.

(H.M.)

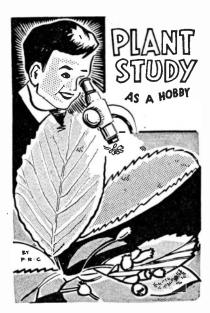


P to now we have been considering plants in general, without particular reference to the places in which they grow. The amateur naturalist, however, will have learnt to look for certain plants (and animals for that matter) in definite types of place, or habitat.

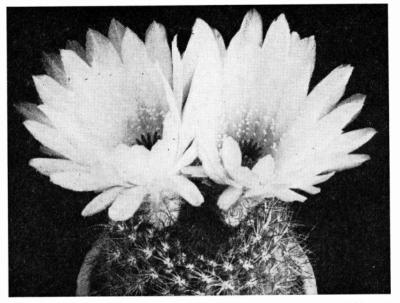
The relationship of living things to the places in which they thrive is called Ecology, and the ecology of plants is a most interesting study for the amateur botanist. We do not, in these articles, intend to describe types of habitat which the amateur botanist is unlikely to be able to visit, with the one exception of the deserts. This is because the deserts show excellent examples of the marvellous adaptability of plant life, and although the average amateur in this country is unlikely to visit them, he is probably quite familiar with some of the desert plants, owing to the popularity of cactus collecting as a hobby. As we shall see, there are plants adapted to dry places in this country, and even some succulents.

Plants and deserts

Many people think that a desert is a place consisting entirely of sand, where it never rains. Certainly, there are a few such places on earth, rocky or sandy wastes with little or no rainfall. In these extreme deserts, there is no plant or animal life. Most deserts, however, although perhaps not pleasant places to live in, are not so inhospitable for plants



THE SUCCULENTS By P. R. Chapman



A flowering Cactus. This is a Notocactus, a species which flowers readily.

and animals adapted to live in them.

Although most deserts have a low annual rainfall, some have almost the same total as Southern England, but instead of having it spread over the whole year, they get most of their rain in one or perhaps two months of the year. It is this short period of perhaps intense rainfall combined with a long dry period that characterizes a desert.

There are three ways in which plants can live under such conditions. They can be of the type known as an ephemeral, which germinates from seed when the rain starts, grows rapidly, flowers and sets seed by the time the rainy period is over. The seeds lie dormant until the next rains.

Secondly, plants can survive underground as bulbs and similar structures, when it is dry, only flowering when the rains come.

Thirdly, plants can be adapted to store water during the rainfall, holding on to it as well as they can during the long drought. It is these, the true succulents, which concern us here. Those readers who have seen Walt Disney's excellent film *The Living Desert* will remember the transformation of the desert into a wonderland of growth and bloom with the onset of the rains.

Not all cacti

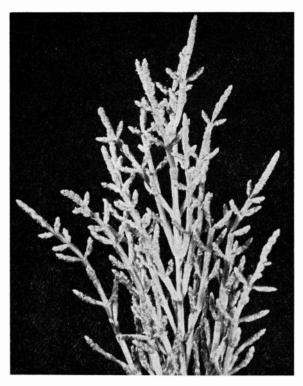
Many people, who know no better, call all the small, potted, thick and fleshy plants, sold in florists' shops, 'cacti'. Many of them certainly are cacti, but the botanist must know better, and be able to distinguish between a cactus and other succulents. All the plants adapted to store water, as we have mentioned above, are succulents, but only those belonging to the family Cataceae are really cacti.

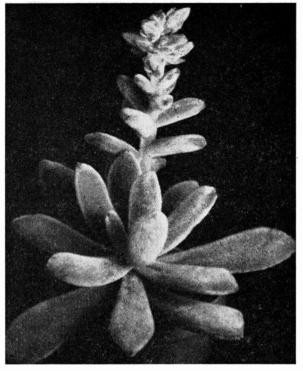
A number of different families of flowering plants have succulent members, so that many different types of flower are to be found amongst the succulents, but cacti, belonging to the same family, all have the same type of flower. Apart from the flower, a distinguishing mark is the structure known as the 'areole', present on all cacti, but on no other plants. The areole is a tiny pin-cushion like structure found scattered over the stems of cacti. From this bristly structure, the spines arise, and usually flowers and branches.

Even cacti without spines (and there are some) have areoles. Other succulent plants, with spines, have the latter arranged rather like rose thorns, without an aerole. Once you have learned to recognise an aerole, you can distinguish a cactus with certainty.

The cacti to grow

Cactus growing is quite a hobby, indeed a 'craze', itself, and there are many





A Salicornia or Glasswort from one of our salt marshes

Echeveria leucotricha, an easily grown succulent

books on the subject. Amongst the cheaper ones, there is again a volume in the 'Observer' series, at 5/-, and also an excellent 'Penguin' book at 8/6.

Assuming, however, that the amateur botanist would just like a few of these fascinating plants as specimens, without making a full-time hobby of it, a number of the smaller types can be grown indoors on a light window ledge. Most of the cacti and other succulents on sale in florists' shops are quite easy to grow if a few simple rules are obeyed. The main trouble with room cultivation is excessive dryness. This may seem strange for plants coming from the desert, but we must remember that in their native state, cacti have spreading roots, able to collect water from over a wide area, whilst in our collections they are confined to small pots. This is of less importance in a greenhouse, where the air is usually moister than in a room. On the whole, plants such as these are happier in an unheated room, since they need a winter rest, with a fairly low temperature, and very little water. As long as the temperature remains above freezing point, they will be quite safe.

The reason for this rest is that, in our

winter climate, there is not enough light for the cacti to grow properly; in a warm room more water must be given to prevent shrivelling, this in turn forces them to grow, and with insufficient light, they are likely to become elongated and sickly. It is much better for them to rest until the spring.

If you have to grow them in a heated living room, you must be particularly careful with the water in winter, giving them sufficient to prevent them from shrivelling, but not enough to make them grow. In summer, they can be watered freely, and they will thrive if placed outside in the open air. A well cared-for cactus will grow fairly quickly, and if the roots are seen to be protruding from the pot, it is time for the plant to be repotted. It should be pushed out of the old pot by means of a pencil through the drainage hole, the roots gently loosened, and it is then repotted in a slightly larger pot.

Do not use garden soil but buy a little John Innes' No. 1 potting compost from a florist (or Woolworths, in the spring) and add a little extra sand or aquarium grit to it.

The following cacti will grow and

flower well if properly cared for: Rebutia (perhaps the best for flowers) many Mammillaria, Echinopsis (flowering when larger), and Notocactus. However do not be afraid to experiment with any others that you may purchase. Small specimens of Opuntia (Prickly Pear) are quite attractive but they quickly grow too big for the room. Amongst the other succulents, Echeveria and Crassula make successful room plants.

Our own plants of dry places

Although we have so far only mentioned the desert plants, others have become adapted to the drier parts of the British Isles. A very common example of this is the familiar gorse. The leaves are thin and spine-like, thus reducing the surface and hence the water loss. As most people know gorse is found on dry heaths and moors. Heather, with its minute leaves and hardened stems, is able to live in dry places.

If you are ever near coastal marshy areas it is interesting to look for small, fleshy plants. One that you will almost certainly find is the Glasswort, Salicornia. Next: The Epiphytes, plants growing on trees.

¹³⁵



PARTY time provides endless opportunities for some happy shots of the family in both black and white and colour. I have taken photographs of the family party assembled at the table complete with fancy caps, the children unwrapping their presents, games in progress, trimming the tree and a host of other homely subjects. It is perhaps true to say that there is no other time of the year when we can produce such really gay pictures of the whole family and which will be treasured in years to come.

This scene can be captured in many homes at Christmas

Most cameras are now made to accommodate a flashgun and this makes our indoor work much easier. The following hints have been compiled to assist you and it is assumed that you have a suitable flashgun. If not, may we remind you that these are very cheap, there is an abundance of choice in the range of small flashguns which are compact and complete with a folding reflector.

The flashbulbs for black and white photography cost 8d. while larger, and stronger ones are 1s. 0d. If you are to take colour transparencies you must use blue coated bulbs in conjunction with daylight type film and these cost a little more.

Each carton of flash bulbs bears instructions with a table of guide numbers. The latter indicate the stop to use with a fixed camera speed according to the distance between the camera and subject and allowing for film speed. I have found by experience that some of these guide numbers vary, as does the information given in books, and usually the strength of the bulbs is overrated.

While the ratings provided by the manufacturer could well be correct in one set of circumstances we have to remember that not only do the flashgun reflectors vary but also the reflecting powers of wallpapers differ. A room lined with dark wallpaper reduces the effect of the flashbulb whereas light coloured walls give a fully exposed picture. In practice therefore, I would strongly recommend you to err on the side of apparent over-exposure.

If the tables indicate the use of stop f/11 you might use f/8 to better advantage, that is the next larger aperture, although in theory this should double the exposure. And this applies more so to colour transparencies which look rather dark when under-exposed. In brief, you can afford to use a stop larger



than is indicated by the guide tables.

So far as films are concerned it is wiser to use a medium-speed film such as Selochrome or FP3. The faster films, although not quite so contrasty, are sometimes too fast for use with a flashgun.

Some people seem to think that ordinary room lighting should be switched off but this is not so. Leave the room lights on as usual. In fact, we can often produce some good lighting effects by using a photoflood lamp for modelling one side of a subject, or one can be used with a reading lamp.

While there is no necessity for a tripod it is often an advantage to use one. The camera can be set up on a tripod and you know it will remain perfectly steady without the risk of camera shake when the trigger is pressed. Moreover, you can pose your subjects then stand at the side of the camera ready to press the cable release the moment you see the best expressions come over their faces.

Quite often we see flash pictures which are far too contrasty but this is partly due to the operator. It is a great advantage to have light coloured walls to reflect the light but failing these we can always arrange white towels or sheets on chairs which will be kept out of the picture. Such reflected light is bound to improve the picture considerably. We can also increase the aperture of the lens by two stops and drape a white handkerchief over the flashbulb to reduce the brilliance of the lighting. At the same time the larger aperture will reduce the depth of field, make focusing more critical but diffuse the background, all to the advantage of the subject.

Another way of using a larger stop to produce a natural effect is to 'bounce' the flash. By this we mean that the light from the flashbulb is directed on to some high reflecting surface and not the subject. This could be the ceiling, the wall or a sheet, resulting in diffused as distinct from harsh lighting. In this instance the light travels from the bulb to the ceiling and back to the subject. You will realize that this increases the distance from camera to subject indirectly hence the necessity to use an aperture two stops larger. You will also realize that some of the light is absorbed by the ceiling.

Frequently the 'soot and whitewash' effect is more likely to be due to overexposure of the subject and underexposure of the background. This arises when the background is some distance away from the camera and has been overlooked when calculating the guide number, hence my original remarks about using the next larger aperture, or lower stop number.

Over-development of films can be responsible for this effect and if you do

your own processing it is better to give a generous exposure and develop the film for a shorter time than that recommended by the manufacturers. You can reduce development by as much as 20% at the quoted temperature to produce good portrait negatives. This is an important factor in flash photography because this type of lighting where a single bulb is used on the camera produces a hard, overall effect. Earlier exponents of flash photography advocated longer development times but since those days the

Children at play make happy subjects

flash apparatus has changed and the exposures are considerably longer.

Since we shall most likely expect some young children at the party let me assure you there is no danger of the slightest injury to a child's eyes. But don't mention the word FLASH while they are within earshot or they may adopt apprehensive expressions which are difficult to overcome.

Give the children something to do which keeps them occupied in one position — a toy or something — and wait for that pleasant expression. Let





them blow balloons, unwrap parcels, pull crackers and so on. Toddlers are not difficult to deal with as a rule. Sit one on a cushion and after preparing the camera smear the child's thumb and first finger with a little treacle or a little rubber gum. He will try to loosen his fingers and have a fascinating expression when he succeeds. Neither the treacle nor the gum are harmful and can quickly be removed.

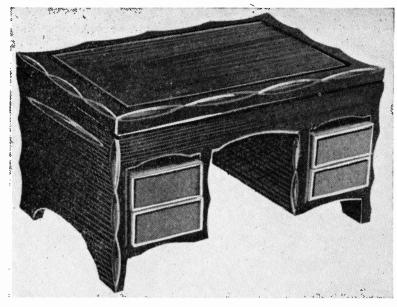
Four years old today

And if you want a picture of the family cat there is no surer way of getting it to sit still than by thoroughly warming a cushion before the fire. In fact, you may not be able to make it move when you have taken your picture!

Providing you note these few hints there is no reason why you should not produce some really happy party shots like our illustrations. If in doubt you can always make one or two trials before the party as an experiment, noting the guide numbers and stops for future work. Watch out for undesirable reflections in the form of glass. You will appreciate that a mirror in the background would just bounce the flash back into the camera and you may not get any picture.

All the pictures accompanying this article were taken on Ilford films.

(S.H.L.)



the design sheet. Pieces 3 are then glued to the underside of piece 7 and to these add pieces 4. Pieces 6 are now glued in the matchbox compartments. These can be pushed back to the required depth with a matchbox so as to ensure that the boxes do not slide too far back into the compartments, thus making withdrawal difficult. Piece 5 is glued to the top of piece 7 and between ends 1, thus completing the cigarette tray.

Position the lid of the desk on the box and mark off where the hinges are to be fixed. Small recesses should then be cut in the lid with a sharp knife to let the hinges lay flush. Fix the lid to the box.

A suggestion of carving is indicated in the finished illustrations. This is done with a sharp knife or craft tool. You will see that the edges are given a 'fluted' effect and a V-groove cut around the top of the box $\frac{1}{2}$ in. in from the edges. Clean up thoroughly with glasspaper and apply a suitable finish.

We suggest staining the box and

For Cigarettes

and Matchboxes

MINIATURE DESK

THIS Miniature Desk design should appeal to all workers interested in making projects that are not only decorative but serve a useful function. The desk is designed to hold approximately 15 cigarettes plus up to four boxes of matches. Measuring 6 in. by 4 in. by 34 in. high, it forms a very attractive novelty for standing in any room in the house and would be very appropriate for placing on an office desk.

Despite the real 'antique' effect seen in the photograph the work is quite straightforward and can be confidently undertaken by even the beginner in fretwork. The same thickness of wood $(\frac{1}{4} \text{ in.})$ is used throughout and the only other requirement is a sharp knife for shaping.

Hobbies kit consists of suitable panels of planed wood plus a pair of $\frac{3}{4}$ in. lightbrass hinges and screws.

All parts are shown full size on the design sheet. Commence by transferring these parts to the wood by means of carbon paper and a sharp pencil. Cut

***** * * Hobbies Kit No. 3599 for * ** making the Miniature Desk * contains planed panels of wood, * × hinges and screws. Kits price 4/3 * * from Hobbies branches or direct *

from Hobbies Ltd, Dereham,

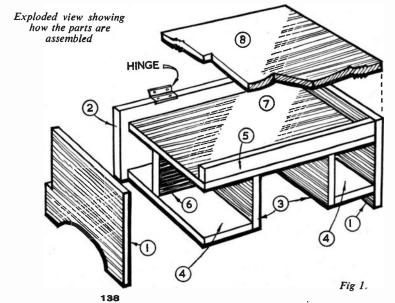
- ★ Norfolk (post 1/3 extra)
- *

out all parts, taking care to hold your fretsaw upright.

The assembly of the box is clearly shown in Fig. 1. Glue is used throughout the assembly. Take tray piece 7 and glue it between back 2 and end pieces 1 in the positions shown by the dotted lines on

leaving it unpolished as this gives a very pleasing 'antique' appearance.

Additions such as small wood knobs for the matchbox drawers and a leathercloth or plastic panel for the desk lid are left to the choice of the individual worker.



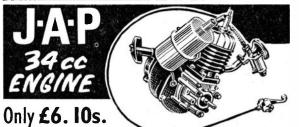
A Christmas Gift for all seasons

Get a Mamod Steam Model for Christmas and you've got hours of fun the whole year round. These really well constructed steam models operate alone or with working models. They're absolutely safe and attractively finished in red. green and black enamel. brass and polished metal. The new Traction Engine 105/-, Steam Roller 92/6. Stationary Engines 32/6 to 99/6.

S.R.I. S.E.J. S.E.J. S.E.S. S.E.S.

Manufactured by

Malins (Engineers) Ltd., Thorns Road, Quarry Bank, Brierley Hill, Staffs.



EACH (Carriage paid)

New J.A.P. two-stroke petrol engine, 34 c.c. Model J.S.34. Complete with mounting studs, recoil starter, carburetter and silencer. Size 10 in. long, 12 in. wide, 11 in. high, weight 12 lb. Suitable for lawn mowers, go-karts and saws, etc.

L. W. VASS LTD, (Dept. HW4), Ampthill, Bedford Ampthill 3255



ONLY 3/3d. Post 4¹/₂d. 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 $4\frac{1}{2}$ -volt battery. Full instructions enclosed.

HOBBIES LTD., (Dept. 993) DEREHAM, NORFOLK



Gives mirror-smooth finish to roughest surface - in minutes!

The Speedy Surface Smoother is a new idea in scraping and sanding and makes these laborious chores a thing of the past. Now with Speedy you can make the roughest wood, plaster or paint surface as smooth as polished marble without hard work — in minutes!

Awarded the Bronze Medal at the International Inventors Exhibition in Brussels in 1963 the SPEEDY is an ingenious combination of slotted nylon holders and retractable blades which



glide over the surface, flattening and smoothing with complete ease! It will save you hours of hard work and will never wear out!



MERRIVALE MANUFACTURING COMPANY 121M Bensham Grove, Thornton Heath, Surrey



LATEST STAMP ISSUES FROM COMMONWEALTH

PITCAIRN

The Pitcairn Islands issued a new definitive set on 5th August. Designs include: ¹/₂d. Pitcairn Islands Longboat. Id. H.M. Armed Vessel Bounty. 2d. Out From Bounty Bay. 3d. Frigate Bird. 4d. Fairy Tern. 6d. Pitcairn Sparrow. 8d. Austin Bird. 10d. Bosun Birds. 1/– Chicken Bird. 1/6d. Red Breast. 2/6d. Ghost Bird. 4/– Wood Pigeon. A very nice set this.

MALTA

The Independence stamps have just arrived from Malta. The designs reflect history, religion and importance of the island. The 2d. and 1/- values depict the British Crown and recall the strong ties which exist between the Island and Britain. The 3d. and 1/6d. values depict the Pope's tiara and symbolize the fervent adherence to the Roman Catholic faith by the Maltese. The 6d. and 2/6d. values show the emblem of the United Nations, of which Malta hopes to become a member.

SAMOA

Western Samoa will issue 4 new stamps to mark the second anniversary of the Signing of the Treaty of Friendship between the Governments of New Zealand and Western Samoa in August 1962.

TRINIDAD

In June 1914 a group of girls met and formed the first Girl Guide Company in Trinidad — the Port of Spain Company. Today there are over 5,5000 Guides in Trinidad and Tobago. A special stamp marking the Golden Jubilee of the Trinidad and Tobago Association appeared on September 15th.

FIJI

A set marking the Golden Jubilee of the Boy Scout Movement in Fiji appeared in September. The movement was founded in November 1914 by the late Sydney Frank Marlow on the personal commission of the founder of the movement, Lord (then Sir Robert) Baden Powell. The stamps show the Queen and various Scouting symbols.



Examples of the new issue from Pitcairn

A NEW ISSUE FROM UNITED NATIONS

A 5 cent black and red stamp appeared on October 23rd, marking the 'Cessation of Nuclear Testing'.

The use of nuclear and thermo-nuclear weapons is contrary to the spirit, letter and aims of the United Nations and would cause indiscriminate suffering and destruction to mankind and civilization. It is a war directed not only against an enemy or enemies, but also against man-

OVERSEAS FRIENDS

L. M. A. PEIRIS of Hirana Ferry, Panadura, Ceylon, is 16 years old. He is



a keen stamp collector. His friends call him L.M.H. He will send stamps of Ceylon in exchange for those of Britain.

'I am a Chinese boy aged 18,' says NICHOLAS F. TEE of P.O. Box 228, Miri, Sarawak, Malaysia. 'My hobbies are stamps and covers.'

MANFRED CLAASE of Mahadowa Div., Mahadowa Group, Madulsima, Ceylon, is 21 years old and collects stamps. He is looking for reliable friends throughout the world. kind in general. Any State using such weapons is to be considered as violating the Charter of the United Nations, and of committing a crime against mankind and civilization.

The stamp shows an atom-blast cloud being symbolically gripped by a lock bearing the words 'Cessation of Nuclear Testing'.

Miscellaneous Advertisements

I NDI A'S largest hobby club provides congenial penfriends in all countries. Send self details to: F'R I E N D S' W O R L D, postbox 708, Calcutta, India.

STAMPS FREE — Empire Packet with approvals (3d. postage). — John Peck, 143 Markham Road, Winton, Bournemouth.

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

PENFRIENDS home and abroad, all ages. S.a.e. for details. European Friendship Society, Burnley, Lancs.



140

New PENCIL CRAFT Colouring Sets

The latest idea in colouring by numbers. Anyone — even a child — can make wonderful finished pictures. They make no mess, are easy to do and give hours of enjoyment



No. 7836/12. PENCIL CRAFT No. 2. As shown above with twelve colour-vue pencils and six pictures to colour, three different designs: Marines, Animals and Favourite Scenes. Price 13/11 each (post 2/-).



No. 7835/8. PENCIL CRAFT No. I. As illustrated, with eight colour-vue pencils and six pictures to colour, three designs to choose from: Sports, Historic and Landscapes. Price 8/II each (post 1/-).

From all branches and stockists or Dept 993



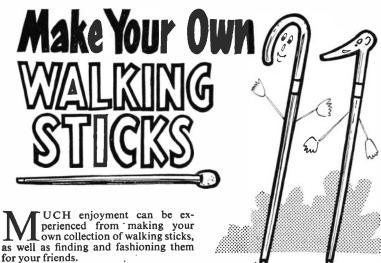


DEVELOP AND PRINT YOUR OWN FILMS WITH A JOHNSON DO-IT-YOURSELF KIT

These easy-to-use kits come complete with chemicals, accessories, instructions and the "Home Photography" book. Stocked by good photo dealers. From 37/6 to 112/6.







Only certain woods are suitable. Basically, you must have a hard but supple wood which will not rot or crack with age and use. The 'common' walking stick is made from the ash, but thorn woods make excellent sticks, especially the hawthorn and the blackthorn. Holly is excellent; silver birch and laburnum will also do.

You are now ready to take a walk into the country to look for a straight young branch 3 ft. or more long, and about 1 m. thick.

Hedges which have been well pruned usually produce the best blackthorns and hawthorns. Here branches spreading horizontally from the main stem will sprout up straight shoots. Bushy clumps of young shoots may be seen growing from a trunk lopped close to the ground. Straight holly shoots frequently grow from the base of old trees, particularly in thick woods; or a straight young branch will grow from the lower portion of the trunk. Ash trees are plentiful in the English hedges, and should be cut when quite young. Ground ash may be found in a wood plantation and can be pulled up by the root.

Before cutting the stick, make sure that it is straight by viewing from as many angles as possible.

Bending the handle of a walking stick is often difficult. Ash bends fairly well, but holly must be done with care. The stick should be longer than required, say 5 ft. The bending operation will be easier if the bend is made about 18 in. from the top. Soaking the stick overnight in the bath will also help to soften it. It is then put in a loose-fitting pipe or tube and heated with steam from a kettle for at least half-an-hour.

The steaming completed, grip the top of the stick in a vice — taking care not to strip the bark — and slowly bend it over. If it shows signs of splitting, stop and repeat the steaming process until the wood is finally pulpy enough to bend satisfactorily. Remember not to touch the wood with bare hands, as it will be very hot. The bent end is then firmly tied down with string and put away to set and season. After steaming, the bark is very soft and must be protected from the tight string by wrapping strips of cloth over it at these places.

Season thoroughly

The root of the ground ash forms its own characteristic handle, but holly or ash growing from the tree must be cut from the knob (where it branches from the trunk) which will make a fine handle. A thorn stick should be cut to include a portion of the branch from which it sprouts. This, when shaped, will make an excellent handle, but it should not be attempted until the wood is seasoned, or cracks may appear.

Each stick should now be laid flat on such as the attic rafters to dry out, when it will become hard and the crook of the handle will set. The string is taken off, and the stick is ready for trimming or stripping its bark without fear of cracking. Any notches should be cut close in and smoothed off with a file. To shape the handle, a model knife will be found useful.

After any defects are filled in with plastic wood, the stick is smoothed with glasspaper.

Do not remove the bark of a thornstick. It will polish magnificently and give it character. Holly bark can be retained for its bright colours, which a varnish will emphasize. If stripped it will produce a clean white stick which will polish like ivory.

A fine clear varnish may be applied to the stick, two coats being given, allowing the first to dry before putting on the second. This will secure the bark to the wood and give it a professional finish.

All that remains now is to cut the stick to a length suited to the person who is going to use it. If you are not sure, use an umbrella as a guide for length.A ferrule is finally hammered on to the tip and secured with a light nail. Make sure it is a good fit, and you will have a stick which you will be proud to use for many years. (E)



"I THINK YOU WILL AGREE-IT 15 A GENUINE COMPLAINT!"

142



AKE up this glider from $\frac{3}{32}$ in. sheet balsa, cutting out the parts modelling knife. Make sure that the wings and tailplane fit tightly into the slots provided.

Finish off by painting the decorations as suggested. They could be red or blue. It is not advisable to paint the whole glider since this adds to the weight. A small piece of lead or other metal is 'nipped' on at the nose to give correct balance.

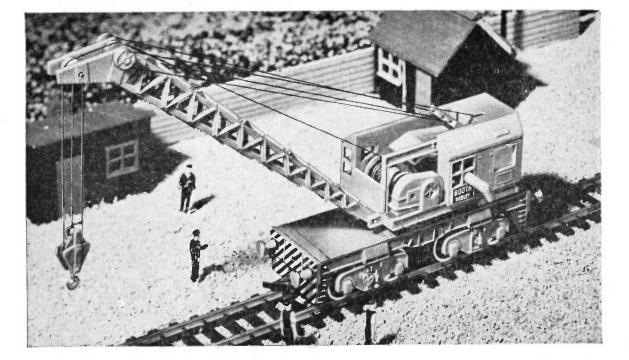
Gliding trim is effected by sliding the wing backwards or forwards in the slot. (M.p).

PARTS SHOWN FULL

SIZE

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143



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