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THIS week we have the first sheet of patterns for making the waterline model of a famous liner. It is just the type to have in hand for exhibition purposes and is not a really difficult piece of work to undertake. Very mucl depends, of course, on the finishing touches, so when you have completed building the actual model take extra patience, time and trouble with the painting. The small 2d. tins of Crusoe Enamel are quite good and a colour scheme is mentioned in the article itself.

ISEE that the Air Force wants another 1,500 Boys as aircraft apprentices. Applicants must be between 15 and 17 and those who pass the entry examination being held at various places on June ist are trained in highly skilled and highly paid occupations. So if any reader is looking for a good job, security, and what should be a happy life he should write to Recruiting, R.A.F., Victory House, Kingsway, London, W.C.2. If he mentions Iobbies Weekly they will send him full particulars.

MANY readers, I know, are keen on model aeroplanes and so, should be interested in a list of competitions being held by the Society of Model Aeronautical Engineers, during 1937. In spite of the high-sounding name the Society is very keen to help beginners and amateur model makers. The list they have, I see, contains events for various cups, with medal and money prizes as well, ruming right through from April 4th to August ist when the great International Cup Contest is held at Hayes, Middlesex: If you would like one of these list of events write to Mr. E. F. H. Cosh at 35, Maple Crescent,Sidcup, Kent, and mention Hobbies Weekly.

IF you notice the page numbers in this issue you will see we have once again commenced at Page i. Another volume was

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[^0]TALKING of sky gazing reminds one of telescopes, and mention of telescopes reminds me that an article on how to make one, is coming along next week. It has purposely been kept simple, but is just the size to carry about with you on your holiday to study the ships that pass by when you are on the beach, or the scenery of distant places if you are hiking.

The Editor


## OH YES !

The dear-old lady approached the bed where a soldier lay almost hidden in a mass of bandages.
i "Oh, poor man," she said, " have you been wounded?"
"Oh, no mum, I bin kicked by a canary."


If a house is on fire, why does the piano run the least possible chance of escape ?


## Why does a puss purr?

 -ssnd-ind snoinqo un $10{ }_{H}$
## Why was Dickens a greater man than Shakespeare?


'H2m 210ルm alvadsaqpus asnvoag

## A FIVEFINGER FEAT

You and four pals can lift another lad clean off his feet, using only one finger each.

Ask the "patient" to stand up straight and stiff. Two of your pals place their right forefinger under the "patient's" insteps. The other two put a finger under his elbows while you put a finger under his chin.

At a signal all lift, and your chum will be raised by five fingers.

## SMART!

"There are marriage ties and businees ties,

## And family ties by birth,

But you'll find the ties we advertise, The finest ties on earth."

## SENSE !

Take out the dashes and punctuate the following so as to make sense of it.

That that - is is - that that is not is not - but - that that is not is not - that that - is not is that that is - that that - is not is not - that so.

If you cannot solve it, turn to Col. 3, and you will see it is quite sensible.

How can you shoot 120 hares at one shot?

-82m 0 20 1004S

## MATCHSTICK MAGIC

Ask a pal if he can arrange ten matchsticks so that five lines are formed, each line containing four matchsticks. See Col. 3 for the solution.

## IN BOOTS

Liz. and Mary were proceeding to morning school.

Suddenly Liz paused at the window of the local photographer, and glued her eyes on a certain picture. It was the annual procession of school children.
"Mary!" she shrieked excitedly. "Come 'ere."
" What's the matter, Liz ?" asked Mary.
"You see the photo of Annie Smith in the third row? An' you see the pair of boots behind Annie ?"
" Yes."
"Well, that's me!"


## GOOD !

Wife tenderly: "But, my dear, you've forgotton again that today is my birthday.

Husband: " Listen, love. I know I forgot it, but there is nothing at all about you to remind me that you are a day older than you were a year ago."

## HE WOULD

A fellow feeling makes us wondrous kind,
I wonder would the poet change his mind,
If standing in a crowd he chanced to find
A fellow feeling in his coat behind ?

## ONE STROKE ENOUGH

Teacher-" Some artists are perfect magicians with the brush. With one stroke they can change a smiling face into a weeping one."

Tommy - "So can my Dad!"

## WARM WORK

Show your audience half a dozen pennies. Ask someone to select a penny, mark it so he will know it again, and pass it along to the rest of the audience for examination.
Place all the pennies in a hat which you can ask a member of your audience to hold. Then without looking in the hat you pick out the marked penny.
The secret is that the marked penny is handled so much that it is quite warm. Try it on your friends and they will be puzzled by your cleverness. Then tell them the solution and they will be amazed at its simplicity.

Why is a postage stamp like an obstinate donkey?
-syaizs 12 aloue ayt

Why is an old coat like iron?
-(ıam pıpy) aıdm -pivy fo uauloads o st n! asnvoag

Why is the letter E like London? -pup!ำส fo jon?dou ayz s? it asnvaag
Why is an island like the letter T ?条 fo apppik ayı u! s? !? asnojag

## SOLUTIONS

Here is the answer to the "Sense" sentence correctly punctuated. Get it right?

That that is, is; that that is not, is not ; but that that is not, is not that that is; nor is that that is, that that is not ; is not that so ?


The matchsticks are placed as
shown, when it can be seen, by
The matchsticks are placed as
shown, when it can be seen, by following the dotted lines, that the five lines are formed.

## WATERLINE MODEL OF THE "STIRLING CASTLE"

AS a change from the old-time ships which. we have had recently in these pages, we now offer our readers the opportunity of making up a very modern one. Its beautiful lines and stately appearance are clearly shown from the drawing herewith, and anyone who has seen the actual " Stirling Castle" herself will appreciate the realism of the model compared with the actual boat.

The " Stirling Castle " with her sister"ship the " Atlllone Castle" are the largest vessels regularly employed between England and South Africa, and are the most beautiful British motor ships afloat. Naturally, boats using the Suez Canal
for we knew readers would want to make it as nearly like the actual boat as possible.

The completed model is 2 ft . 6 ins. long without any base, and stands 7 ins. to the top of the masts. Such a model as this naturally occupies a good deal of space on the pattern shect, and we have had to extend it over two weeks in order to incorporate all the parts. Even so, it has been necessary to split some of the patterns and before commencing anything else, the worker must notice where the various decks, sides, etc., have to be cut out as one part although shown on the sheet as two.

As usual, too, we supply a complete parcel for all the parts in which various pieces of wood,
cannot be so large as the Atlantic craft, but even so, the Castle boats are of outstanding merit.

The "Stirling Castle" is 725 ft . long overall, with a gross tonnage of 25,550 tons. She has accommodation for nearly 800 passengers, and is driven by diesel engines. The boat came off the yards of Harland \& Wolff of Belfast as recently as last year, and is now in regular service to the Cape. Her interior fittings, of course, are beautifully carried out, and the boat has a swimming pool, gymnasium, lounges, shops, play rooms, smoke rooms, promenade deck, and the usual appurtenances one expects to find on a modern ship.

We are indebted to the Union Castle Line for their assistance in the preparation of this model,

## MATERIALS REQUIRED

For making this model, we supply a special parcel of satin walnut, whitewood, plywood and deal strips with No. 35 moulding (for the base) and sufficlent round rod for masts for 2/-, post free 2/9.

Fittings required are brass screw eyes, pieces of straight drawn wire, and a snood of special cord for rigging, for $1 / 3$, post free $1 / \mathrm{s}$.

A complete parcel of wood and fittings is supplied for 9/-, post pald.
round rod for the masts, cord for the rigging, wire, etc., is included, as well as a long piece of board for the base.

The boat completed is a waterline model, of course, and if suitably painted is a very striking piece of work.

## Two Large Sheets

As mentioned, it is necessary to have both the design sheets at hand before one can go very far with the work, and even then it is advisable not to use the actual patterns from the sheet. We would recommend a tracing being taken off of each part with transparent paper, and then re-marking on to the actual wood. Another plan is to mark through the pattern sheet part by means of carbon paper.

The reason for this is that the position of adjoining parts is shown very often by dotted lines and by letters. These positions will naturally be obliterated when the part is cut, and the paper cleaned off, and it may be a little awkward, therefore, to join on further pieces unless you have some reference chart to go by.

The best plan, therefore, is either to get another
design sheet, or else to trace on to the wood the various pieces from the actual design sheet itself. This can easily be done with a sharp pointed pencil.

Make a study, too, of the design sheet and the various drawings with this article before you commence to cut, so you may have a good idea of how the boat is built before actually commencing. The diagram at lig. I shows the sectional view, and is quite helpful in so far as all the parts are lettered in conjunction with the actual patterns on the design. Study these carefully, and notice, too, the various small pieces forming the hatches and the derricks, masts, and so on, which have to be fitted on.
structural strength and the foundation for the sides themselves.

Fore and aft also is a bow post, and a stern post, each of which is comprised of two pieces glued together. The bow naturally leans forward, and should be rounded off to the front to form a nice taper, and as shapely as can be seen in the picture of the boat.

On the top of the posts and bulkheads is fitted the upper deck (I)) and here again the pattern is shown in two pieces because of the length. This upper deck portion ( D ) is the only one which runs the whole length of the ship, and those we have to add now are various cabin decks, boat decks, promenade decks, etc. They are lettered on each


Fig. 1-A section showing the various parts as lettered on the Design Sheet


All parts can be cut out with the fretsaw because the material is quite thin. Use a sharp fine blade, and clean up the parts thoroughly with glasspaper according to the usual practice.

The main work involved is naturally on the upper decks, where various superstructure parts have to be fitted. The lhull itself is made as a hollow frame, and the cut-away view at Fig. 2 indicates this sufficiently clearly. The first portion forms the main base, and is shown as the lower deck. Note, by the way, this portion is extended considerably until its overall length is $29 \frac{1}{4}$ ins.

The parts are marked off with spaces of $5 \frac{3}{4} \mathrm{ins}$. between the lines indicated, and these dotted sections at $A$ are the positions for the upright bulkheads which go across the ship and provide


Fig. 3y-Details of davits, steps, boom supports, etc.

Fig. 4 (left)-A closeup of the stern deck
pattern and on the sectional view, whilst the various dotted lines show their actual position clearly.
The deck E , for instance, is narrower than the deck just fitted, and is glued with its curved front 75 ins. from the bow, as indicated by the dotted lines on upper deck D. Fix it centrally between the two sides, and glue down firmly.

## The Main Deck

Above this, and extending beyond its sides, is the deck $F$, a part which runs from the front of I the whole length to the stern. This is the piece upon which most of the superstructure is built, and a good plan, therefore, is to hold this part ( F ) until all the upper works are fitted before gluing it down to the rest of the hull and the deck E.

Actually, a number of pieces of wire have to be fitted between deck $F$ and deck $D$, but these can be done later with the wire supplied in the parcel.

Perhaps we can explain now the best way to do it, although the job will not come along until later.

When the deck F is placed in position, a fretwork drill must be used to bore the holes straight through deck F and down into deck D . Be sure to note the positions of these pin holes, and to keep the drill upright, in order to ensure the wire being straight when fixed. Have the drill point the same diameter as the wire so when it is put in position it beds itself in.

## Wire Supports

The length of the short pieces of wire is $\frac{1}{2} \mathrm{in}$. This allows for it to sink just into the deck D and well into the thickness of the upper portion $F$. The hole in F where the wire is gone, has, of course, to be filled up with plastic wood or glue before the part is rubbed down finally. This, of course, is all by the way, and in the meantime $F$ is heing prepared with its various adjoining parts.

The pattern of $G$ has to be joined as the others, and the part when cut is glued to $F$ with its front curve about $\frac{1}{2}$ in. behind the front of the underpiece. On the same deck ( $F$ ) making the
same level as the part G, are the various minor pieces at the stern, forming the heads, derrick fixings, boat davits, etc., as well as the steps at the back of $G$ which lead from that deck to the one below.

These decks are cut as shown in the detail at Fig. 3, where we have a drawing of various sundry small parts such as davits, ventilators, etc.

Mention of davits reminds us of the various
formers which have to be used on the boat to fit the various decks. Several of these boat davits are in the stern portion of the deck with which we are now dealing ( I ), and their position is shown by dotted lines and letters.

The davits themselves are cut out from $\frac{1}{8}$ in. wood of various shape. The shapes are lettered to correspond with their position on the decks, and it will be noted that on Deck F we have the davits of G, D, I, J, K. The remaining davits and boats are on a deck (H) which comes later.

The mast is fitted right through into the main deck, and is raking slightly backwards to be in line with a similar mast which should be fitted forward. These masts are cut from $\frac{1}{4}$ in. dowel, which must be tapered down towards the top. This tapering can be done first with a knife, then finished off with glasspaper. Keep the dowel


A stern view of the actual boat. Another picture next week
round, and do not make it irregular along its length.
The mast need not be fitted yet, but the position and opening for it must be completed.

On this deck F we also have the piece J which is actually another set of cabins, and standing higher than the ordinary deck appliances. For this reason two parts of J are cut togetleer, then glued in the position indicated by the dotted lines.
( 7 o be continued)

## An Improved Morse Signaller

AREADER from Eastbourne (J. S. Glass) sends us details of a scheme to alter the Scout Morse Code Signaller made from design No. 2106, so it can be used by two people who cannot see each other.

Two models would have to be built, and they would be changed in this way. A buzzer, which can be bought for 6d. or so at any cheap stores, is screwed to the lid of the box, and the special switch, which is made out of sheet brass, screwed in the middle of the box. The leads in the box would be taken round the side to leave more room in the middle. The morse key would have to be altered as in the diagram, and an extra piece of brass being bent up as shown to make contact when the key is not depressed.

The wiring diagram makes all matters clear, and, no doubt, many other readers will like to follow out this advice.


## A USEFUL TABLE OR PLANT STAND

HERE is the ideal article on which to stand that plant or bowl of fruit or flowers. It is a job of which the expert may well be proud yet is well within the abilities of the novice.
A start is made by cutting off six pieces of $3_{4} \mathrm{in}$. square stripwood to a length of 17 ins. Care must be taken to ensure that they are of "exactly the same length or the table will not stand firmly. Six further pieces of the same material, each 2ins. long, are required for the distance pieces.

Those for the tops of the legs have a curved piece cut away from one end, while the rest have a similar piece cut away from each end. The top two are fixed first, glue and $\mathrm{I} \frac{1}{2} \mathrm{in}$. panel pins being used for the purpose.

The ends of the three pieces must be exactly in line and square. The remaining blocks are fixed now, leaving a gap of $2 \frac{1}{2} \frac{1}{2}$ ins. between these and the upper ones.

The feet consist of 3 in. pieces of rin. square stripwood. After they are fixed from underneath with long nails or screws, a $3 \frac{1}{2} \mathrm{in}$. by $\mathrm{I} \frac{1}{2} \mathrm{in}$. base of $\frac{3}{8} \mathrm{in}$. plywood is nailed on the underside of each foot. The latter, however, may be deferred until later when scraps left from cutting the top and shelf may be used.

## The Top and Shelf

A 24 in. by 12 in. panel of ist. quality birch plywood, $\frac{3}{8}$ in. thick, will make both the top and the shelf. The simplest method of marking out the top is to take a sheet of paper and draw a circle with a radius of $6 \frac{3}{4}$ ins. Keep the compasses set to $6 \frac{3}{3}$ ins. and mark off this distance round the circumfer-


Detall of legs and shelf fittings ence. It will be found to "go" exactly six times. Adjacernt marks are joined, thus forming a hexagon.
This pattern is cut outwith scissors and used to mark out on the plywood. The shelf is drawn similarly but with
radius of 5年ins. Having cleaned up the edges with a small plane, the shelf is laid centrally on the upturned top, and a line marked round it. This forms a guide for the positions of the legs.細Three pieces of $\frac{3}{3} \mathrm{in}$. square stripwood, 2 ins. long, are glued and fixed with one screw to the top with their outer edges on the line already drawn. To these the legs are fastened by gluing and screwing from the backs of the blocks.

Bevels along the edges of the latter will improve their appearance although very little of them will be visible. The shelf is fixed in the same way as the top with blocks of $\frac{3}{4} \mathrm{in}$. square stripwood.

The edges of the top and shelf are masked with No. 35 half-round beading in the ${ }_{8}^{3}$ in. size, carefully jointed at the corners and glued and pinned in position.
The particular finish employed will be governed, naturally, by several factors but a few suggestions may be helpful. The materials used will take almost any shade of stain from light oak to ebony equally well, but perhaps medium oak or mahogany will be most popular.

For a full polish of great brilliance and easy to apply.

## CUTTING LIST

## Legs-

6 pieces, 17 ins . by jin. by Fin. 6 pieces, 2ins. by gin. by zin. Feet-
3 pieces, $3 i n \mathrm{ins}$. by 1 in. by 1 in . 3 pieces, ${ }^{3} 3 \frac{1}{2}$ ins. by $1 \frac{1}{2}$ ins. by Blocks
6 pieces, 2ins. by gin. by 3 in . Top and Shelf24ins. by 12 ins. by iin. plywood


How the top and shelf are marked out


HFRE is an attractive little model speed boat which we anticipate most of our young model-makers will make up. The sizes we suggest for the boat are given in I'ig. I, but of course these can be altered if desired to suit say any special size pieces of wood at hand.

The simplest of construction has been designed and the little boat is driven by the elastic principle which will give a drive of several minutes' duration. A hundred or so turns of the propeller to wind the clastic should be given, and the boat gently placed on the water before release.

The best results are got from having a light and hollow hull and the best way of getting this is to build up the sides on to a base piece and a deck as shown in the detail A Fig. I.

## The Hull

The shape of these pieces is shown in the plan (B) and it should be a simple job to full size from the measurements given. The base should be either $\frac{1}{4} \mathrm{in}$. or $\frac{3}{8} \mathrm{in}$. and cut round with the fretsaw and then used as a template for marking round for cutting the deck.

This deck piece will have the opening cut in it to form the cockpit.

When the two pieces are cut, they are held together at the bow and the stern by two shaped


Fig. 1-Side and plan views of the boat


Fig. 2-The general construction of the hull
blocks of wood, the bow block being $\mathrm{r} \frac{1}{4} \mathrm{ins}$. deep and $\frac{3}{4}$ in. wide, and the stern block $\frac{3}{4} \mathrm{in}$. deep and $2 \frac{1}{2} i n s$. wide. Glue and nail these blocks in place, the work at this stage being as shown in Fig. 2.

The two sides of the hull are cut from r/16in. plywood, or, preferably, from thin plain wood as plywood in water is apt to split away.

The correct shape for the sides is given in $C$ Fig. I, and it must be noted from this diagram that the front top edge towards the bow is raised slightly so as to accommodate the spray lood which is made from a piece of tin or aluminium bent and cut to shape and sprung in between the sides. Both sides should be cut at one operation to ensure similarity, and when ready a start may be made with the fixing.

## Cleaning and Painting

The edges of the deck and base are coated with marine glue, the sides put on and further held with fine brass fret pins or brads. Holes, of course, must be carefully made first to prevent splitting of wood. Glasspaper off all the edges when the glue has set hard and then coat the angles inside with the glue to fill any small open spaces.

To make the hull watertight-and this is a most important matter-it should first have a coating of red lead paint followed by two coats of paint or enamel. The Crusoe enawel sold in 2d. tins by Hobbies is admirable for the purpose and it is very economical in use. The deck should also be enamelled an appropriate colour.

## Metal Fittings

The elastic to drive the boat is held by brackets formed of stout brass strip. The bow bracket will take a piece $3 \frac{1}{4} \mathrm{ins}$. long, and it will be angled up as shown in the detail lig. 3, A. Holes must be drilled for the small round headed screws which fit the bracket to the hull, and one through the double thickness of the metal where the wire passes to hold the elastic.

A similar strip must be cut to length $5 \frac{1}{2}$ ins. for the stern bracket, and bent up as in the detail B Fig. 3 and drilled as the other strip. Set the brackets in place and bore the holes for the screws before driving them in.


Fig. 3-The propeller brackets and shape of the blade

Next cut off two pieces of brass wire and at one end of each form fairly large loops or hooks to take the ends of the elastic. The bow piece of wire should be put through the bracket and the straight end turned up with the pliers and burred over.

The propeller is made from a piece of sheet brass or tin cut to the shape shown at Fig. 3.

To make a really strong job of the joint between the shaft and the propeller, a short brass sleeve similar to that found on clock pinions, should be soldered to latter and then passed over the shaft and soldered to this again.

Before threading the wire, which now has the propeller on it, through the holes in the bracket a glass bead should be put over to lessen the friction between the stern and the bracket uprigit.

At least five strands of elastic are needed to give a reasonable amount of power to the boat, but then again the number will of course be governed by the thickness and variety of the elastic used.

Before winding up the elastic rub a little glycerine on each strand, this will help to preserve it.
As a finish to the cockpit of the boat bend round a thin strip of mahogany and put in one or two fine fret pins as fastening, and finally smooth up the top edges with fine grade glasspaper.

A coat of varnish should be given to this mahogany and, if desired, to the deck and the spray hood.
The elastic suggested for use with this boat is of the same kind and quality as that used for model aeroplanes, and for preference $\frac{1}{8} \mathrm{in}$. wide and $\mathrm{I} / 32 \mathrm{in}$. thick.

A rudder could be added to the boat by first runuing in centrally in the stern two brass eyes and then threading through these a piece of round wire with the top turned down to form a handle. Below the eyes, the wire should be flattened and a piece of sheet brass or tin soldered on.
The rudder must be so shaped that when turned to one side there is sufficient room left for the fingers to wind the propeller.

COLLECTING coins-modern ones-is everybody's hobby, but collecting ancient ones is even more fascinating, and they are more easily kept! You will not want to part with them.

It is easier than collecting medals. For one thing there are many more of them, and the hobby is less expensive.
Nevertheless, there are coins which are worth more than their weight in gold. A silver penny of Stephen's reign for instance, is worth $£ 45$, and a George III five guinea pattern piece is worth $£ 70$. These won't worry you very much just now, except as matters of interest.

You can start your collection right away by visiting almost any junk shop. Here you will probably find trays full of assorted coins from which to choose. Commence by trying to get a copper coin of each reign from Charles II then
 work up through sixpences and shillings to crown pieces. But renember that no five-shilling pieces were struck in 1804. If you find one with that date it is a forgery.

The guinea dates from Charles II when it was first made, from gold sent home by the Guinea Company, but it was not until the reign of George I that it received its recognised value of $2 \mathrm{I} / \mathrm{-}$. The last issue was made in r 8 r 3 . Spade guineas add lustre to any collection, but they are not cheap.

And do you know what a groat is ? It was a fourpenny piece first issued by Edward Longshanks and revived again by Willian IV at which
time it twas known as a "Joey." The last was struck in 1856.

French copper coinage too is very interesting to collect. At one time France had twenty official mints and one can easily identify by the mint marks the exact town where the coin was struck.

In these days of easy travelling facilities, thousands of foreign coins find their way into Britain, and despite the care taken by cashiers, you may easily get coins in great varieties at big establishments for almost next to nothing, by asking for them.

You will want some George II big pennies. They weigh about an ounce if in good condition. These were the good old days when real he-men were perhaps overburdened by their wealth! And look out for Queen Anne farthings, and Wood's ha'pence, Spanish doubloons and pieces of eight.

Chinese coins have a square hole in the centre. They are carried about threaded on a string like beads. You will be able to pick up plenty of these, and our Indian currency is also easily obtained.

Old coins have turned up in the most unexpected places. Thousands have been found in the Thames, a gold coin now in the British Museum was found by a gardener during the construction of a reservoir near Tottenham, a Charles II halfpenny was found in a crevice of Gorleston pier, and Roman coins have been found in the fields at Sandy in Bedfordshire. This was once the site of a Roman station.

There are plenty of books dealing with this fascinating hobby but perhaps the best of all are the catalogues issued by the British Museum Authorities.

# NOVELTY CIGARETTE HOLDER 

See centre pages for full size pattern of this simple and practical novelty

ACIGARETYE HOLDER is an essential in almost any house now, and something out of the ordinary is always much more acceptable and admired than the usual box.

You will, then, welcome the opportunity of making up the little container illustrated herewith. When closed it is simply an upright canister with a knob on top, the overall size of which is 6 inns. high and $4 \frac{5}{8} \mathrm{ins}$. square on the base.

Instead, however, of the lid opening right off as in the ordinary way, it merely lifts as can be seen in the second illustration. This provides access to the cigarettes which stand around inside, and which fall back into place when the lid is again dropped in position.

## Complete Patterns

The parts can be cut out in any ordinary fretwood according to the patterns provided on the centre pages, and as most of the parts are plain rectangles, there is not so much need to paste them down. The pattern can be laid over the wood, and a hole pricked at the corners, these holes being afterwards linked up with pencil marks and made true with the square.
Make sure, however, you know the construction


A Cut-away View


The Medallion
before going to work, and that you have the boards in the right thickness with the grain running in the direction required. Oak, satin walnut or mahogany are all suitable, and Hobbies will be pleased to give a price for a parcel if necessary.

The cut-away view shown in the detail herewith illustrates the interior working, as well as the construction of the main box itself. The base is a piece 48 i ins. square, on the top of which is raised the front, back and two sides. All these four parts are $4^{\frac{5}{8} i n s . ~ l o n g ~ w i t h ~ t h e ~ t w o ~ s i d e s ~} 3_{\frac{3}{8}}^{\frac{3}{2}} \mathrm{ins}$. wide,
and the front and back $3-13 / 16 \mathrm{in}$. The two sides fit between the front and back, and all four are glued square and upright centrally on the base.

Some of the fancy moulding (No. 307) obtainable for id. per ft . is cut and mitred on the corners to fit round into the bottom edge. The base, it should be mentioned, has its upper edge rounded off, as shown by the section on the drawing. The overlays to the front and back can be added before or after fitting.

## A St. George Plaque

They are merely fancy pieces of wood cut from $\frac{1}{8} \mathrm{in}$. material glued on centrally, then finished off with a very handsome St. George and the dragon plaque, supplied by Hobbies Ltd.

This plaque is very nicely enbossed in antique finish, is zins. in diameter and merely glued on to the overlays in question. The plaque is No. 5415 and costs 3 d. each. If you prefer, a colour transfer can be added instead of the plaque, or you can put in any other fancy overlay piece from another design.

Now for the interior and lid. Cut one piece $4 \frac{1}{8}$ ins. square, and in the centre bore a $\frac{1}{2} \mathrm{in}$. hole. This is the part shown as C on the patterns. In the centre of it is a plain rectangle 3 ins. square, which is a solid piece without any central hole. On the top of that in turn is another plain piece I交ins. square, but here again the central $\frac{1}{4} \mathrm{in}$. hole has to be cut.

Glue the three pieces together, and round off the edge of the largest one. All parts are cut from $3 / 16 \mathrm{in}$. wood. Underneath this lid there has to be glued the part D which is $3 \frac{3}{8}$ ins. square, but should be tested to the actual size of the box before being cut. It should fit just comfortably, so when glued beneath the lid it serves to hold the whole thing in place.

## The Centre Spindle

Now cut a length of $\frac{1}{4} \mathrm{in}$. dowelling $4 \frac{3}{4} \mathrm{ins}$. long and glue it into the hole provided in the lid, and the piece underneath it. See it passes outwards straight and does not slope.

At the bottom end of the piece of dowelling we
have to fix two square pieces of wood which are shown as part E and measure $3 \frac{3}{8}$ ins. square.

These again must fit snugly into the box itself, and in the centre of both a $\frac{1}{4} \mathrm{in}$. hole is drilled just large enough to take the central spindle or dowel. 'Two pieces are provided to make a suitable thickness, and so prevent the part wobbling when the lid is lifted.

## A Steadying Piece

The upper part slould be glued to the spindle $3 \frac{1}{8} \mathrm{in}$. below the lid, and thus allow just a nice space for an ordinary cigarette to stand in. The second piece E can be glued about $\frac{1}{4} \mathrm{in}$. lower on the spindle so it does not come exactly flush with the bottom. Both these pieces E, by the way, are in $\frac{3}{8}$ in. wood.

In order to handle the lid more easily, the top is provided with one of the Hobbies No. 22 ball feet. This is fitted with a spindle which just drops into the hole cut in the middle of part $A$, and is there glued in place. A complete section through these various parts, and the spindle itself is given with the other patterns on the centre pages.

The whole box can be finished with a coat of satin and varnish, or just stained and dull polished with waxine, and if desired, four little round feet can be glued on the underside.

Now try out the box by putting the cigarettes in the compartment, closing the lid, then lifting it again. When this is done, the cigarettes should fall gently outwards so they can be extracted quite easily.


ITTLE table gardens are always most fascinating, and constant pleasure can be got from them, as there are so many different ways of making or altering them, and much of the fun is in being able to change them about.

All sorts of pagodas, bridges, birds, little figures, and so on, can be got for a few pence, so it is easy to have variety, and make or convert a garden into almost any style you please.

Illustrated is an idea which enables a garden to be frequently changed with very little trouble, according to the season of the year ; at present it gives a very charming effect of graceful catkins and tall white narcissi overhanging all.

## Change

Later on, when these are over, they can easily be replaced by other flowers in season, a few iris with their graceful leaves for instance would make a lovely scheme.

Another good feature is that an excellent effect can be got with just a few flowers.

The secret is to get a small glass tube, or little jar, scoop out a hole for it in the earth, and push it in. The tube can be kept filled up with water, and if wanted, can be taken out altogether for changing the flowers and cleaning purposes, and easily replaced.

Push the glass container well in to, and almost flush with the ground. Moss or small pieces of rock can be placed around it, so that the appearance is that the flowers are actually growing in the ground.

China, or small earthenware bowls are suitable for making table gardens-the illustration shows an earthenware honey jar made beautuful with enamel-pink below, and the scallops at the top pretty shade of bluish green.

## A"Lake"

When making a garden mix some charcoal with the soil to keep it sweet, and set up a piece or two of broken earthenware below for the drainage.

Small pieces of mirror make attractive "pools"another pool effect can be got by laying a piece of plain glass over silver sand.

Little plants can be grown in among the rocks, and a very real looking garden can be made by sowing grass seed over the top. Grass seed grows quickly, and looks fresh and pretty. Another idea for covering the top is to scatter a few of those colourful pearl chips upon it, or silver sand.

To water little growing plants in a garden press the end of a funnel into the earth, and water through this, as it will not upset the rest of the arrangements, and flood everything, as it might otherwise do.

## suraber

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The ' Casco ${ }^{\circ}$ Gluing Guide. Packed with idcas. Tells you all about model making and home repairs. Send for it tmlay.


NOVELTY CIGARETTE II
For full details see instructions on page 9



UNDERLID. CUT ONE 3/16. THIS PART OF THE LID FITS

FRONT \& BACK CUT ONE OF EACH $3 / 6 \mathbb{N}$.
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"T" SECTION
$r_{8}^{3} \times \mathrm{r}_{8}^{2} \mathrm{in}$. 6d. length. $5 / 6 \mathrm{doz}$.

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## UNDERCARRIAGE

 PROPELLERS AND POWERAVERY essential part of a model aircraft is the undercarriage, a very annoying fact considering that apart from take-off and landing purposes this appendage is superfluous. Owing to the various struts, bracings, etc. the undercart brings into force a considerable amount of dragthe designers' nightmare-and is the one reason for the recent frenzied efforts at rectractile undercarts to be seen on present full-size machines.

A retractable undercart on a model is very complicated, and is not to be recommended wuless one is aiming for a very super job, when the difficulties to be overcome, and the work involved are likewise " super" !

## To Take the Shocks

In the average model, the simpler the arrangement the better, care being taken to see that the structure is strong enough to take the shocks incurred without putting too much strain on the general framework. For small models the simplest method is an all-wire affair, with suitable wheels which can be either made or bought. Items of this type are so cheap to buy that it is hardly worth the time spent in making them.

For the more advanced type of machine, the


Showing the movement required on the undercarriage
full use can be made of bamboo, etc. and it becomes advisable to streamline the various struts, etc., and the use of a streamlined type of wheel will be found useful. Incidently, the wire type structure mentioned earlier can be effectively streamlined quite easily with balsa as shown in the sketch.

In designing an undercarriage remember we
have a different factor to consider from the designer of the large aircraft, e.g. the forward motion that is more apparent than in the big machine, where the pilot to a certain extent pancakes the machine to make contact with the ground.

The model lands with a considerable forward motion, and it is advisable for the undercart to have a degree of backward give, or spring, to take this action. The sketch will perhaps explain this more clearly.

| No. Str. -4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | $20^{12}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 8^{\circ}$ | 80 | 64 | 55 | 50 | 44 | 40 | 36 | 34 | 32 |
| $5 / 32^{-}$ | 68 | 59 | 50 | 46 | 41 | 38 | 34 | 29 | 24 |
| $3 / 15^{\circ}$ | 60 | 54 | 46 | 42 | 38 | 35 | 32 | 27 | 24 |
| $1 / 4$ | 56 | 44 | 37 | 33 | 29 | 27 | 25 | 23 | 21 |

A Turns Table for rubber motors (from the 1937
Year Book by Frank Zaic)
Many types of undercart are in use, all with their particular advantages, but one point has been made very clear by past experience. Never make a design that does not incorporate a certain amount of spring, or your model's average life will be considerably shortened.

In considering the question of propellers, or to give them their more correct title, airscrews, we touch on a subject that contains many pitfalls. To go into this section thoroughly would take many pages, and would be highly technical, and my advice to those who are not up in the " expert " class is, " buy a good, ready carved article."

The increased demand for model aircraft materials and sundries has resulted in a general lowering of prices that brings many of these articles within the reach of all, and really at present day prices it definitely does not pay to carve your own props, except in the case of a special size or type.

## Propeller Details

For model work a larger diameter prop is used in proportion to the wing span than is used on the full-size craft. This is mainly owing to the fact that we do not have a constant power output, and a larger diameter and blade area conserves the power available to a certain extent.

The average diameter used is $1 / 3$ the wing span, with a pitch of 1.5 . This means that with say a roin. prop the best average pitch would be around ryins., with ruins. being a theoretically better ratio.

When powering a model-we are only considering rubber driven machines here-we must first of all decide what our purpose is.

If a speedy flight is required a short, hefty motor is desirable, but if duration is wanted we must go about it quite differently. Use a motor length of from $\frac{1}{2}$ to twice the length of the fuselage, preferably of a small gauge rubber, $\frac{1}{8}$ in. or $3 / 16$ in. being very suitable. The $\frac{1}{4} \mathrm{in}$. is good for heavy jobs, but will not take the number of turns that the smaller gauges will consume, whilst it

tends to give rather too powerful an initial outburst of power.

A table giving a fair guide to the number of turns it is possible to pile into a rubber motor is given, but it is not advisable to go to the maximum except on special occasions such as competitions, etc.

## Lubricate the Rubber

Never use unlubricated rubber. For one thing you will be unable to get the number of turns you should, and your rubber will wear out far quicker.

Stretch the motor to from three to four times the unstretched length, gradually coming in as the turns are put inl.

In this way, the fullest advantage is taken of the elastic properties, and there will be less breakages. Where possible use a winder, it being much easier, and the turns are put in much smoother.

Quite an effective winder can be constructed from an ordinary breast-drill, and if some loop arrangement is incorporated at the front of the propeller slaft, the task of stretching the rubber is simplified.

## Winding Hints

To arrive at the exact amomint of power required for a particular model is largely a matter of trial and crror, but can generally be stated as about I/3rd. the weight of the machine. If your model starts off with a terrific burst of speed that looks as though it will fold the wing up, cut down on the number of strands till the flight is steady and sunooth.

Conversely, should you find it difficult to get altitude under fair conditions, put extra strands to the motor until a good smooth output of power is obtained. Do not make the mistake of trying to make a model fly by power alone.

If the design is not good, all the power in the world will not make it a good flier, so you see that everything depends on everything else. Each point must have its full share of consideration to contribute its full share to the whole. No machine is $100 \%$ efficient, but it is possible to get pretty near that mark, and that should be our aim no matter what type of model is under consideration.

One final word. A model of this kind is not one to hurry over, and see how quickly you can complete. Take your time, see eacl piece is properly shaped, cleaned, tested and fitted, then when the whole thing is together satisfactorily, paint it carefully and pay much attention to the


A picture of the actual coach in the last Coronation Procession
odd details which will add or detract so much to the finished article. If you have completed it well, it will be a wonderful piece of work, and one which will be worth a place in any home, or in any window for display, then to keep afterwards as a souvenir of an occasion which comes but seldom in anyone's lifetime.


POINTS are important places on your railway, for any poor adjustment and off the train goes.
With the tinplate type (see sketch) trouble is most likely to occur by the metal at (A) becoming strained or actually bent and so out of alignment. Instead, therefore, of there being continuous rail a break appears against which the flange catches, causing the wheels to leave the track.

In section the end of the movable piece is like


Fig. 3 and fine adjustment can again be obtained by pressing gently the offending side, inward or outward. Do not hold the rail top with flat-jawed pliers, but the type shown can always be safely used for tinplate.

Too loose working is counteracted by screwing down to the base board at (b). By adjusting the screw any degree of tightness can be obtaincd

Trouble at (a) may have a corresponding lack of adjustment at (b) (the section being one piece). The remedy again is gentle bending, but do not attempt to squeeze the blade and stock rail together with pliers. Move the blade into position away from the stock rail and then bend. Thus if (d) required adjustment it should be carricd out while in the position shown.

Tinplate points can be made much safer by the addition of check rails (Fig. 4). 'These are pieces of tinplate rails, slightly bent at the ends, and soldered into position. Check rails to make the point especially safe for scale (fixed wheel and axle) vehicles.

As with other machines a small touch of oil on sliding parts helps to ease movement and this should be tried with stiff points. If the action is
very stiff the trouble lies in the channel (c) and can be cured by working the lever backward and forward a large number of times, which has an easing effect.

COUPI,INGS that are not working properly are a great cause of derailment, they therefore should receive constant attention.
In perfect condition a coupling should be a true "universal" joint, that is it should "give " in all directions, pivoting particularly easily in the horizontal and vertical planes. Fig. I shows the latter and Fig. 2 the former.

If either of these pivoting points do not work freely then sooner or later the vehicle is sure to be lifted or forced off the rails.

If the link does not drop (or lift up) easily, then the hook has probably become slightly bent or out of the true at (a). This can be remedied by squeezing lightly the material around the pivoting joint with a pair of pliers. The link itself may have got slightly out of shape also.

If sideways pivoting is stiff it is usually that the arm has become bent and must be carefully (coupling metal snaps easily) brought back to the straight.

Couplings should be level and not droop, as this causes the vehicles to come apart while running. A drooping coupling is usually caused by the tin of the buffer beam slot becoming bent.

Never lift vehicles from the rails to disconnect as it is very easy to wrench a coupling badly this way without knowing it.

Full couplings can now be bought very cheaply and if they get very bad it is best to scrap the old coupling and fit a new one.


## Duty Patrol

I$T$ is a good practice to have one patrol on duty each troop-night who are responsible for the cleanliness of the trooproom before and after leaving, get out all the gear needed for the evening's work and do any odd jol) the Scoutmaster might require them to do.

This is an ideal good turn to the troop and also the Scoutmaster and if you have not a duty patrol in your troop now I hope you will suggest it at your next meeting.

## First Class Hike

THE competition in connection with this was disappointing inasmuch few Scouts seemed to be certain of what to take. So here is the list obtained from a well known Scout authority on the subject.

Fach Scout.--Groundsheet, blanket, knife, fork and spoon, plate and mug, extra stockings, change of underclothes, light shoes, towel and soap. toothbrush and paste, first-aid outfit and sweater.

Between you.-Frypan, billy-can, candle, matches, map, compass, length of cord, axe and tent. Sufficient food for the journey.

I hope this will help you towards gaining your badge. There were a pleasing number of entries with a very varicd list. The winner of the ist prize-goods to the value of ro/-was Eric Hulme, of Ashton-under-Lyne, Lancs., whilst Consolation prizes of Sheath Knives have been sent to W. Farrer, of Forest Hill, London, and O. Levy, of Bow, London.

## A Very Good Turn

MY own Rover Crew are now busy doing one of their annual good turns in collecting eggs for the local hospital. While you are reading these notes the Rovers will be doing a door-to-door collection and I hope somewhere about ro,000 eggs will find their way to our den ready for dispatch at the end of the weck.

This is a really worth-while deed which might well be copied by other Rover Crews or Scout troops. What about it you chaps? Further details on application.

## Air Raid Precautions

IT seems to me that most Scouts of 14 years and 1 over by virtue of their training qualify as "level-headed persons" for the government's air-raid precautions scheme and I hope many of my Scout readers will volunteer to act as messengers there being many hundreds needed.

The last war proved how useful Scouts could be in an emergency and I am sure that once again they will rise to the occasion. Talk to your Scoutmaster and get him to offer the help of the troop

## Competition

B
ELOW will be found a list of words with some of the letters missing. Fiach word represents something found in most Scout Camps. Fill in the missing letters and send your solution on a post card to Scout Competition, Hobbies Weekly, Dercham, Norfolk by April rotlı. A prize value io/- to the neatest and best correct answer. Give your age, because it will be taken into consideration.

$$
\begin{aligned}
& \mathrm{B}-\mathrm{S} \text { - } \mathrm{S} \\
& \text { I. } \mathrm{A} N-\mathrm{N}-\mathrm{R} \text { - } \\
& \text { FIR — - - D } \\
& \mathrm{G}-\mathrm{R}-\mathrm{-} \text { - - - - } \mathrm{S} \\
& \mathrm{C} \text { - — - - - S } \\
& \text { B - - - - - - }
\end{aligned}
$$

## Clothes Drying in Camp

IN our variable climate it is always well to make some provision for clothes drying in camp and here is one way of doing it. Plant a circle of saplings firmly into the ground, bend then over at the top and tie. A good fire is then lighted in the centre or a fire bucket placed therein. When a good glowing fire is obtained, lay the wet clothes over the saplings and they will soon dry.

## Camping Hints

BROKEN glass and jagged tins are a danger. Bury them. The proper place for a groundsheet is under you. The Reveille does not apply to the whole neighbourhood. Skipper has a first-aid box in his tent. Use it. One bath a day is enough for most people. Plimsolls and no stockings are best for wet weather. Finger nails should not be " in mourning " at camp. Don't eat meals in your tent and don't waste food. You don't go to camp to visit the Cinema. I, eave the site better than you found it. A Scout is not a fool.

The Skipper

# Our model of the CORONATION COACH 

CON'IINUING our instruction on the Coronation Coach we carry on with the fitting on of the wheels. Their method is shown by the detail on tlie design chart. The axle is cut off with sufficient projection to take two washers, the wheel and a hul) cap.

The axle passes through the undercarriage pieces and is prevented from wobbling sideways by a washer being glued on close up. Then at the end of the axle rod which projects $1{ }_{8}^{3} \mathrm{ins}$. is fitted a washer cach side of the wheel itself, coming flush with the end. The ontside washer forms the foundation upon which the turned huls cap (No. 29) is glued.

The main sides of this front portion are, of course, decorated with overlays (NO. 32) which are glued on to stand on the platform and follow ont the outline of the sides. The front of this part, it will be noted, (see Fig. 3) carries an axle across through the little. rest curves.


The under portion carries the axle and the rear wheels exactly in the same manner as the front piece,
 except, of course, that these wheels are very much larger. We have thus far completed the main cradle of the back and front portions, and these can now all be linked up safely.

The two 'Tritons on the side should not have been glued on at present, in order to make the fixing of the cradle of the coach casier. At the front end an axle piece passes through the side, then through the two arms of the cradle, and finally into the opposite side upright (No. 14).

## At the Rear

Washers near this pattern should be put on the outside of the cradle. They are slipped on the axles and glued to this dowel piece as well as to the cradle picce, to give greater strength.

At the rear end, the open slot joint on the craclle fist on to the rear platform (No. I8) by the halving
smaller piece is $3 \frac{3}{8} \mathrm{ins}$. wide and $5 \frac{3}{4} \mathrm{ins}$. long. The larger piece must bed down between the four sides of the coach and come about $\frac{1}{4}$ in. below the top edge. To do this nicely all edges of the part must be chamfered the same slope as the carriage sides. Find this by trial, then get out the smaller piece which forms the roof shape.

## Shaping the Roof

This should nicely slope from the outer edge towards the centre, rising gradually as shown by the section. It can be glued centrally to the larger portion, then above it are added various pieces forming the central ornaments. These are shown in Fig. 5. There is the circular base (No. 1o) over which the ornament (No. ir) is glued, on which in turn stand the figures cut from parts No. 33.

These two pieces are now halved together and are glued as firmly as possible to the base. In the corner of each rightangle is fitted the fancy laurel portion which stretches away to the comer of the roof. This is the festoon (part No. 8) cut carefully from $3 / 16$ in. wood. The more or less straight edge should be cut to the slope of the roof, and just reach to the corner of the upper portion. Inwards it should rest in the angle of the upright figurework and can be chanifered carefully to lie snugly in the corner where it is glued.

## A Removable Roof

This roof, by the way, should not be glued on until the whole of the inside is completed. Indeed, there is no reason why it should ever really be fixed. Returning to the coach itself, we have not added any glass. The piece provided is for the front of the coach, and is fitted from behind the overlay and held in place behind by match-stick-like strips glued to the side. It will be noted no glass is provided for the sides of the coach, but you


Fig. 5-The roof showing shaped overlay and ornamental portion ready to fix
will probably be able to get some locally from a glazier, or to add a very fine transparent cellophane. Before doing this, however, paint the inside
of the coach crimson, and if you wish, add such things as upholstery to the sides and the inside of the doors, as well as putting a little mat on the floor.

The actual construction of the coach is now complete, but there is a good deal of work in the painting and finishing. Of course, many readers will like to go in for a lot more detail, and if they are clever with the carving tools or penknife, can shape up many parts more realistically.


The spokes of the wheels, for instance, are round, the figurework of the I'ritons can be carved out, whilst the Crown and cherubs on the roof might be carved from a solid piece. This, however, is only a suggestion, and unless the reader has had experience of that type of work, we would suggest he cut out the parts exactly according to the pattern, and be satisfied with the very realistic piece of work he will thus have completed.

The whole coach is gilded and the Crusoe gilt is quite satisfactory for this. The only portions not treated with the gilt are the main portions of the sides, which serve to throw up the gilt overlay.

The panels under the side windows and door were, as mentioned previously, richly painted by a celebrated artist. In the model they can be painted a flat dull brown, and the same treatment given to the main side itself round the door and windows. The rims of the wheels should be painted dull black to represent the metal tyres.

## Horses and Riders

Now a word about the horses, riders, ctc. If you want to fix the eight in correct position, long
(Continued on page 16)


## OUR MONTHLY CALENDAR PANEL

$\mathrm{A}^{\mathrm{T}}$I the foot of this page we have patterns for making another one of those interesting calendar panels indicative of the month. We have already had the earlier ones, and now we are into April can take away the one for March and replace it with that for April.
The March winds have been superseded by April showers, and these are clearly illustrated in the little cut-out panel below.

Cut it out-as previously recommended-in wood, ivorine, xylonite or a similar composition - then clean it up in the usual way ready to fix to the backboard. In case you are a new reader, a suitable size for this picce is $3 / 16 \mathrm{in}$. or $\frac{1}{4}$ in. thick board 7 ins. wide and 94 ins. deep, which allows for fixing the two panels and one of the large date pads from a Hobbies Calendar No. 6154 .

The narrow strip with the word April should not, of course, have this wording cleaned off, although if you are a draughtsman at all you can clear away the paper then paint on the wood with enamel or ordinary paint. The silhouette panel itself which is shown in black, can be left in its natural state if cut in wood,
or stained or painted before fixing to the backboard.

As previously suggested too, such a panel as this is quite suitablefor other purposes, and if you like to make the whole set of the 12 monthly pictorial panels as they come out, a charming friezc for a room can be built.

Another suggestion is to make a birthday card of them for anyone whose birthday happens to fall during the month. In that case cut a backboard of $\frac{1}{8}$ in. material the same width as the panel but in. deeper. Glue it flush with top and sides and write your greeting ion a card strip to glue below the picture panel.


## MISCELLANEOUS ADVERTISEMENTS

The advertisements are inserted at the rate of 2 d . per word prepaid. Name and address are counted, but initials or groups, such as E.P.S. or $£ 1 / 11 / 6$ ase accepted as one word. Postal Order and Stamps must accompany the order. They will be inserted in the earliest issue. To sell anything except fretwork goods or those shown in Hobbies Handbook. Orders can be sent either to Hobbies Weekly, Advertisement Dept. 30/32 Ludgate Hill, London E.C.4. or Dereham, Norfolk.

GI.UE. Hobbies gluc is as good as 25 years' experience can make it. Sticks wood, china, leather, etc. In tubes 6d. and 2d.-Hobbics Ltd. Dereham.

LONELY ? Then write Secretary, U.C.C. 16 B.B., Cambridge Strect, London, S.W.l. Genuine Estabd. 1905.

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blocks, cramps, mouldings, etc.
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RETIRAL SALE. Free, if sheets asked during April roo different. Includes Jubilee Gold Coast, St. Hclena, Sierra Leone, Catalogue $1 /$, Old Persia, Set of 17 Jubilce $2 / 6 . \quad 46 ; 9 / 11.100 ; 38 /-$ - H. McAuslan, Stepps, Glasgow.

IVORINE (white) about $1 / 32$ in. thick. Just the stuff for fretwork overlays. In shcets 12 by 6 ins. $1 / 6$; post
2d. Also Xylonite (black) 1/3.-Hobbies Ltd., Dereham.
$\frac{1}{2}$ HORSEPOWER PETROL MO'TOR CASTINGS. $9 / 9$.
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BOYS! Learn the ' why and 'how' of electricity with a Hobbies Electrical Outfit. Fun, fascination, thrills galore. Prices from 3/-.-Hobbies Ltd., Dercham.

MAKE YOUR OWN UKULELE, Mandolin, Guitar, etc. from Hobbies Designs and materials. You'll be surprised how casy and cheap it is !-Hobbies Ltd., Dereham.

## Mouldings Cheaper!



No. 306 This section has a rebate to take $\frac{3}{\text { In }}$ in. wood and may be used as a base or lid moulding. Size $1 \frac{1}{2}$ in. by $\frac{1}{2}$ in. Price $2 \frac{1}{2} d$. per ft, ; $2 /-$ per dozen ft . ; 16/3 per 100 ft .

Save 3d. in the $1 /-$ during Hobbies Sale.


No, 307. Can be used for fillets or as a decorative moulding. Size $\frac{1}{4} \mathrm{in}$. by $\frac{1}{4} \mathrm{in}$. Price Id. perft. ; 9d. per dozen ft. ; 5/S per 100 ft .


No. 308. Useful on almost any woodwork job Size $\frac{z}{2} \mathrm{in}$, by F in. Price Id. per. ft, ; lOd. per dozen ft. ; 6/3 per 100 ft .


No. 309. Fit this moulding to cabinet doors to exclude dust. Size ? in. by if in. overall. Price $1 \frac{1}{3} \mathrm{~d}$. per ft .; $\mathrm{I} / 3$ per dozen ft , ;9/- per 100 ft

Postage is extra. Buy from any Hobbies Branch or Agent or direct from Hobbies Limited,Dereham Norfolk.


LIBERIA, the republic on the West Coast of Africa, furnishes us with the best zoo of the whole stamp album. Large and small animals, birds and fishes all figure on the issucs of the last forty years.

Moreover as most of these stamps are of large size it means that we can to a great extent learn something of the life shown thereon.

The four cent stamp of the 1892 issue shows us the first and the one dollar value of the same issue gives us the second. These two designs were repeated on the five cents of the 1897 and the two cents of the 1897 issue. These animals were (on the 4 c . and 5 c .) the clephant and (on the 1 dollar and two cents) the hippopotamus.


Liberia


The Antelope

Elephants have already had a page of Hobbies Weekly all to themselves, so no further note will be given on their account. Consequently we will pass straight on to the hippopotamus.

The most striking thing about these beasts is surely their thickness of hidc-(one and a half inches to two inches) and since this is used for the making of sjamboks (whips) one must acknowledge that it is striking in more senses than one.

The size of these animals takes some realising, for a large fully !rown adult may be as much as fcurtee:: feet long. Now that is quite as long as a very decent sized room, so try and imagine the sort of beast you would meet. In height, it is about 4 ft . $\because$ : ns . and weighs between three and four tons. Or, to put it more easily for the average person to understand, it weighs as much as fifty averaged sized men.

Onc would imagine from this that the hippopotamus must like at least onc good meat meal a day. But actually it lives on water plants and grasses. The menu for one aged 2 years in captivity was 38 lbs . of hay and 14 lbs . of bran. Another curious point is that the perspiration is red, although this does not mean that they sweat blood. Their teeth furnish the whitest and the hardest ivory known, and they are very much in demand for piano keys and dentistry.

Notice the position of the nostrils, very high on the rounded snout, so the beast although practically submerged can breathe comfortably.

The flesh is often eaten by the natives but since the hide is so thick, it is necessary for the bullet to hit the animal cither just below the eye or clsc just bchind the

ear if it is to inflict a mortal wound.

THEF second illustration is that of the five cent stamp of the 1906 issue, and shows a Chimpanzee. In spitc of its aboreal habits the chimpanzee is a ground animal, and if frightened or attacked will try to scek safcty by going to the ground and running. The illustration shows very well that they run with the closed knuckles touching the ground, and that the palms are clear.

Chimpanzees are of a lively nature and accept human companionship and can be taught many tricks. Their general food is fruit, especially bananas, rice, milk and coffce, but although mostly vegetarian they have been known to catch and kill small monkeys.

When sitting down the chimpanzee is about 2 ft . high, but when

standing it is 4 ft . 6 ins. It weighs about 160 lbs .-shorter, but quite as heavy as the average man.

The ten cents of the 1906 issue shows the plantain eater, a bird mentioned in a recent article, so no further reference will be made herc.

The 15 cents shows the Agama lizard, which is not a dangerous specimen. In fact, there are only two lizards which are known to be poisonous, and as these live in Texas, Arizona, and Mexico they should not worry us. Moraover, even their poison is not very dangerous to man, being only powerful enough to paralyse other lizards.

The Great Egret which appears on the 20 cents has been described and so has the pigmy hippopotamus on the 70 cents.

IN 1918 a set was issucd which gives four animal stamps. The one cent shows a very nice face view of the Jyre Horncd Antelope, but since another form of antclope will be described later on, space will not be taken up here.

The two cents gives us the Palm Civet. This is an animal something like a cat, though it has a longer body and shorter limbs. It is a nocturnal animal and fceds on snails, bectles, eggs, lizards, and all sorts of small birds and mammals. But since its diet includes poultry and young antelopes, the civet is destroyed when possible.

It may live for some ycars quite well in captivity provided that its food-meat and fruit are fresh.
The thirty cents of this issue gives us another bird, the Crowned Eagle of Africa, and this specimen includes monkeys in its diet. The IJommi fish which appears on the fifty cents stamp is one of the mud skippers, and frequents the mangrove swamps where it may be observed slipping over the mud and scrambling about in search of food. Rather a funny sight to see a fish scrambling about!
(To be continued)



BRANCHES AND AGENCIES.
LTD.
Below are the addresses where Hobbies goods can be purchased, In addition, all leading stores and irommongers stock or can obtain your requirements in fretwork and woodwork, designs, wood, turned legs, moulding, polish, etc.

HOBBIES OWN BRANCHES-


Aberdeen.-Jas. Mutch, Ltd., 47 Broad Street; Blackburn.Mr. II. Mercer, 68 Darwen Street; Bradford.-Messrs. T. Underwood is Co., 13 and 15 Manchester Road; Cambridge. Mr. H. S. Driver, 28 Hills Road; Canterbury.-Mr. 1. D. Goorlman, 33 Burgate Strcet and 16 St . George's Street ; Cardiff.-John Hall (Tools) Lid., 22 and 24 Morgan Arcade; Croydon.-L. II. Turtle, Ltd., 6 Crown Hill; Dover.-Mr. E. F. Beeklham, Queen's Gardens; Dublin.-Mr. J. J. McQuillan, 36 Capel' Street; Dundee.-Phins Ltd., 29 Nethergate ; Folkestone.-Mr. W. Allsworth, 16 and 18 Guildhall Street; Hastings.-Mr. W. H. Mozley, 4 York Buildings; Leicester.Mr. Frank Berry, 3 Loseby Lane; Liverpool.--Mir. C. Lucas, 17 Houghton Street ; Lundon.-Messrs. H. Osman, 168 Aldersgate Street, E.C. ; Newport, Mon. - Jobn Hall ('Iools) Ltd., 81 High Street; Reading.-Mr. W. J. Sargent, 44 West Street; Swansea.-John Hall (Tools) Lid., 8 Gower Street; York.-Messrs. J. H. Shouksmith \& Sons, 132 Micklegate.

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## -but you must hurry!



A big bargain in Hobbics' Sale. Contains about 30 tools in strong wood chest. Every tool guaranteed. This is a genuine offer which is not likely to occur again. Grab this opportunity NOW ! We guarantee you will be more than pleased with your bargain.

Sale ends April 3 rd .

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All Editorial matter should be sent to The Editor, Hobbies Weeldy Dereham, Norfolk. If enclosed with orders or other mattor for Hobbies Ltd., it should be written on a separate sheet of paper. Any matter requiring an answer must have a stamped addressed envelope enclosed.

DESIGN SHEETS
The presentation Design Sheet is given only with current copies of Hobbies Weekly, and not with back numbers. The designs, however, can be obtainod separately, from Hobbies Lid., price 4td., post free, or 10 d . in the case of double size sheets.

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All orders and letters respecting advertisements should be addressed either to the Advertisement Manager, Hobbies Weekly, Dereham Norfolk, or to $30 / 32$, Ludgate Hill, London, E.C.4.

INDEXES AND BINDING CASES.
An Index for any volume is obtainable for 4. fd . post free, and Binding Cases to take a complete sct of 26 issues (making the volume) are supplied for $1 / 6$, or sent post free for $1 / 8$. The Cases are in red linen with gold blocked name on the front. The Azabook Binder, to hold 24 copies which you can fix in yourself is $3 / 3$ ( $3 / 6$ post free) including two dozen fastening staples.

## BACK COPIES.

Back copies are obtainable from the Editorial address given above or from the Publisher, price 2d. a copy, plus postage.

## CONTRIBUTIONS

The Editor is always pleased to consider suitable articles for these pages, which, if accepted, will be paid for at the usual rates. While overy effort will be made to return unsuitable contributions (if stamp: for that purpose are sent with them), the Editor does not accept any responsibility for their loss.

SUBSCRIPTION.
Hobbies will be forwarded by post to any part of the world at the following prepaid rates. Twelve months $13 /$-, six months $6 / 6$, three months, 3/3. Registered for transmission by Canadian Magacine Post

## SPECIAL SALE GIFT VOUCHER

Everyone who spends 10/- and over in the Hobbies Sale will receive a special extra gift according to the amount of his purchase. All you have to do is to sign this Voucher and hand it in with your order at any Hobbies Branch, or send it by post to Hobbies Ltd., Dereham, Norfolk. Valuable and practical gifts will be made according to the value of goods you buy. This does not apply after the sale ends on April 3rd, but overseas customers are allowed to send in orders up to July 3lst, 1937.

P/O. No.............................. Value.
Name ...................................................

## Gifts! Gifts! Gifts!

## REPLY COUPON

One of these small Coupons and a stamp for $1 \frac{1}{2} \mathrm{~d}$. must be attached to your letter to the Editor, if you are enquiring about anything which demands an answer. Cu the Coupon out and put it in with your
letter which should be addressed to The Editor, Hobbies Weekly, Dereham,Norfolk


[^1]
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