

# Hobbies

## WEEKLY

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## A Streamlined CYCLE TRAILER

**W**E have, from time to time, had requests for the construction of a box trailer to be fitted to a bicycle. Well, here is one, and we hope the suggestions made will fit in with the ideas of our workers.

Our sketch shows a trailer of ample size for linking up to the pillar of the seat of an ordinary cycle. The carrier overall is just over 30ins. long, 20 ins. wide to the outside hub of the wheels and 19ins. high.

### The Wheels

Of course the diameter and type of wheels used will influence the two latter dimensions. The wheel suggested here as being most suitable is a wire-spoke solid rubber tyred pram wheel about 9ins. in diameter.

Solid wooden wheels may be used however, but they should be as large as possible in diameter on account of smooth running.

The floor and sides of the trailer are made from  $\frac{1}{2}$ in. boards, while the front and the back might be rather thicker, say  $\frac{3}{4}$ in. or  $\frac{7}{8}$ in. The side view Fig. 1 gives a general idea of the trailer and its attachment to the cycle.

Here it will be seen that the sides are nicely shaped to get a good streamlined effect. At the rear of the box-like compartment there is a useful receptacle for small parcels. This

addition not only has its uses but materially helps to complete the streamlined body of the article.

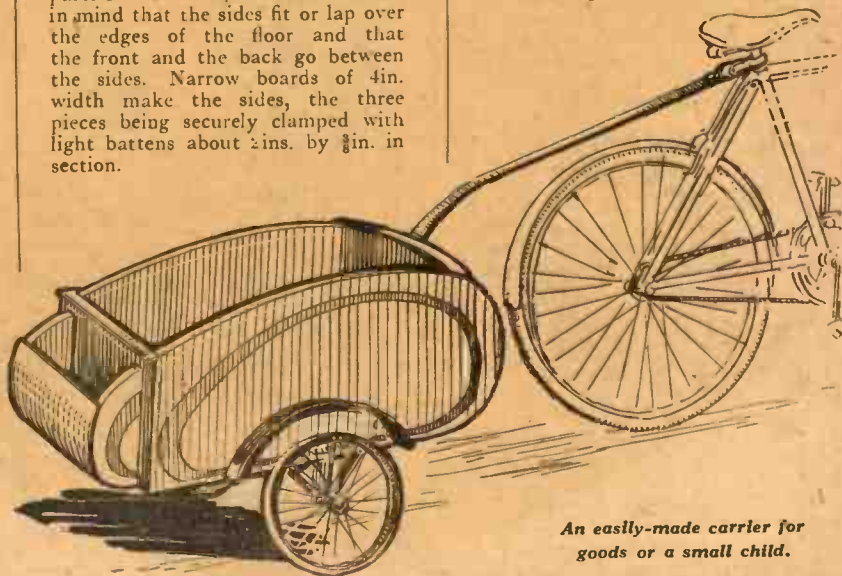
It would, however, be simple to omit this back addition if desired as it is put on as an independent unit and is fixed by screws to the rear end of the box.

### Assembly

Touching on the assembly of the parts of the trailer, it should be borne in mind that the sides fit or lap over the edges of the floor and that the front and the back go between the sides. Narrow boards of 4in. width make the sides, the three pieces being securely clamped with light battens about 2ins. by  $\frac{3}{8}$ in. in section.

In Fig. 2 the method of construction of the sides is given, and when the boards have been cut roughly square to size and the battens nailed on, the outside shaping can be drawn in. Cut round to this outline and clean up the rough edges with glasspaper.

Make up both the sides, the shaping of the second one being got by using the first finished one as a template for drawing round.



*An easily-made carrier for goods or a small child.*

The floor is made from three battened boards as in Fig. 3, and the front of the box as Fig. 4. There are two 12in. by 6½in. boards for this, in which the grain of wood runs upwards.

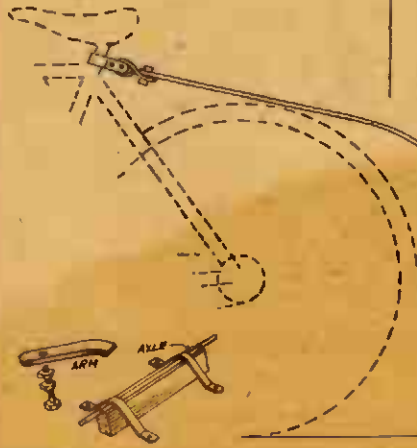


Fig. 7—Top bar connection.

The floor of the article. In this case the axle bar is screwed to a piece of wood 10ins. or so in length and about 2½in. by 1½ins. in section.

This piece is screwed in place by two broad-head screws run through the bar from inside, large iron washers being inserted beneath the heads. To strengthen the axle two pieces of hoop iron ½in. to ¾in. wide and about 14ins. long are added as in the detail in Fig. 6.

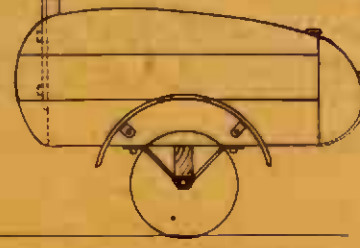


Fig. 1—Side view showing bar connection to frame.

trailer. At the top end of the arm there is another hole through which passes a bolt and nuts for holding the twisted link connection shown in the detail at Fig. 7.

#### Trailer Connection

This link is in turn held between the pillar clip by another bolt, having either an ordinary nut or a wing nut as shown for easy detachment. A simple pillar clip may be purchased at almost any cycle dealer.

The detail on the right in Fig. 7 shows the bolts passing through the

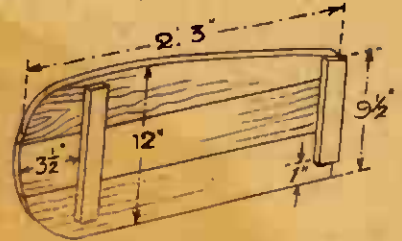


Fig. 2—Inside view of side construction

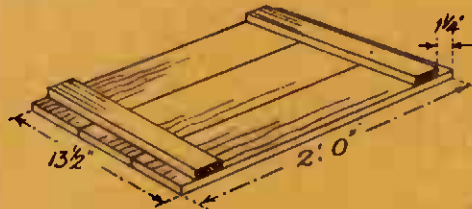


Fig. 3—How the floor is made.

The two boards are here again clamped together with narrow battens as shown. The vertical middle batten is intended to form a sound backing for the bolts and nuts which hold the trailer arm. The top end grain of the front boards is covered by a capping piece of thinner wood and about 1½ins. wide bent over and nailed on.

In the diagram, Fig. 4, the top bent rail is shown ready for nailing on. The back of the box is made up in a similar manner to the front. It is 9½ins. high instead of 12ins. and the top is square and not cut to curved shape.

#### The Rear Box

A plain capping is here again added. A detail of the curved end of the trailer is given in Fig. 6. Two boards, each 9½ins. by 3½ins. by ½in. or ¾in. are marked out and cut to the simple curve shown and fixed to the back of the box by screws run in from the inside, holes being spaced and bored before insertion.

The curved part of the end is made by bending round a piece of thin sheet metal measuring about 11ins. by 8ins. This metal is secured by screws or by broad-head good quality tacks inserted at close intervals.

The axle bar, if the pram wheels suggested are obtainable, is generally supplied with the wheels, with holes drilled through ready for bolting to

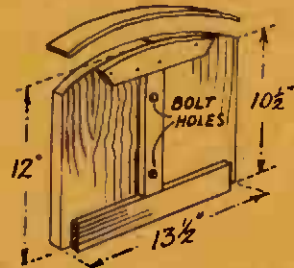


Fig. 4—Front end with upright stiffening

Over the wheels two sections of mudguard may be fixed with small angle supports made from the hoop iron mentioned and put on as shown in Fig. 1.

#### The Connecting Rod

The arm connecting the trailer to the cycle is explained in Fig. 7. The arm itself may consist of a strip of iron about 3ft.6ins. long drilled with two holes for connection to the

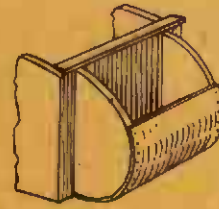


Fig. 5—The rear compartment.

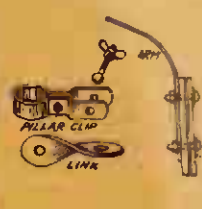


Fig. 6—Bottom end of bar connection.

wooden front of the trailer and through the upright batten inside. A washer is here inserted under the heads of the bolts, the whole being tightened up with the nuts in front.

All the ironwork of the trailer should be painted black enamel while the woodwork, after being thoroughly glasspapered and cleaned, should be given two coats of paint with a finishing coat of enamel. Brown and cream paints, would make an attractive combination, whilst the inside of the trailer might be painted dark brown.

**A** READER'S enquiry recently appeared as to how to colour glass for a spotlight—red, orange etc., and another reader—E. Dobson of Malvern Link, Worcs.—promptly supplied this further method from his own experience. He says—"I required a red and a green glass for navigation lights on a river boat, and having two plain hurricane lamps on hand, experimented with colouring the glass. I had very satisfactory results from using model aeroplane dope which is obtainable at most model aircraft dealers in all colours.

I thinned the dope down until it was "runny" like ink, and then applied two coats, brushing in one direction only with a very soft brush and letting the first coat dry thoroughly before applying the second.

The result was two excellent navigation lights and each lantern glass has a smooth transparent finish and looks quite professional.

I recommend this experiment to anyone who has need of transparent coloured glass.

I may add that in my case I applied the dope to the outside of the glass and with a small flame there is no danger of fire. The dope, of course, is weatherproof and will not wash off with the rain."

# Patterns and details for a simple miniature OLD-TIME CLIPPER



Full size patterns  
on cover iv

**A** LITTLE time ago we gave instructions for making a model of the Queen Mary, the modern transatlantic liner. Now we are going back a few years and giving details for a full-rigged sailing ship of about 1866. Unfortunately the question of comparative scale cannot be taken into account when it is remembered that the Queen Mary is over a thousand feet long whereas the sailing vessels of earlier days were less than two hundred feet.

If a relative scale therefore, is desired in making up these two models then our sailing ship model would only be about 1½ ins. long compared with our former model.

## An Historic Model

The ship we are going to make, is modelled on the lines of the "Stonehouse" a three-masted vessel built in 1866. The model may be made as a waterline model or as a full-heel model showing all its graceful hull shaping, etc.

In the latter case we suggest the ship rests in a suitable stand, and here we have included suitable sizes for this. The whole work of construction has been simplified by our being able to devote a whole page to the hull and deck details on cover iv.

In the plan and side view of the model, Fig. 1, a good general idea can be gained, and in providing a scale too the work of drawing out the sails and scaling off certain other details makes for ease of construction.

The keel piece A, should be cut first, then the deck B, both from ½ in.

wood. Note the slot in the bow of the deck. This fits over the raised projection of the keel piece. Glue these two pieces together taking care that there is an equal projection of the piece B each side of A.

Next cut two pieces as C and D, glue pieces D to C in the position shown by the dotted lines. Now glue the two distinct sections one on either side of the keel piece and close up to the underside of the deck.

The shaping to the hull is obtained by paring away with a knife, and rounding off with rasp and file until the section shown in Fig. 2

is obtained. Cut away steeply at the stern of the hull as indicated by the dotted line on A in the sheet of patterns, and also round off at the bow as the dotted lines show at this part.

The raised deck E, at the stern just over half of which is shown on the pattern sheet, is cut from 3/16 in. wood and glued to the deck B. Then two pieces as F are cut, also from 3/16 in. stuff, and glued to the deck where indicated.

To finish the hull the two raised sides G must be added. The length and profile of these are given on the sheet, and each may be cut from either thin wood or stout card and glued to the edges of the deck, one or two fret pins being put in to hold it securely until the glue has hardened.

## Deck Structures

The cabin, consisting of a block of wood cut to the shape of the dotted lines shown on deck B and from 3/16 in. wood is glued in place, with a piece of card glued over rather larger all round than the block beneath to form the roof.

Some idea of the size of the helm-wheel and its house can be got from the plan, and scaled off, and the whole shaped up and made as Fig. 3 in the details.

There are three boats, and the patterns for these are given. Shape them up from 3/16 in. or ½ in. wood, and either paint the seats in or recess the wood slightly as shown in the details at Fig. 4. The davits for the two side boats may be made from wire driven into the deck in the

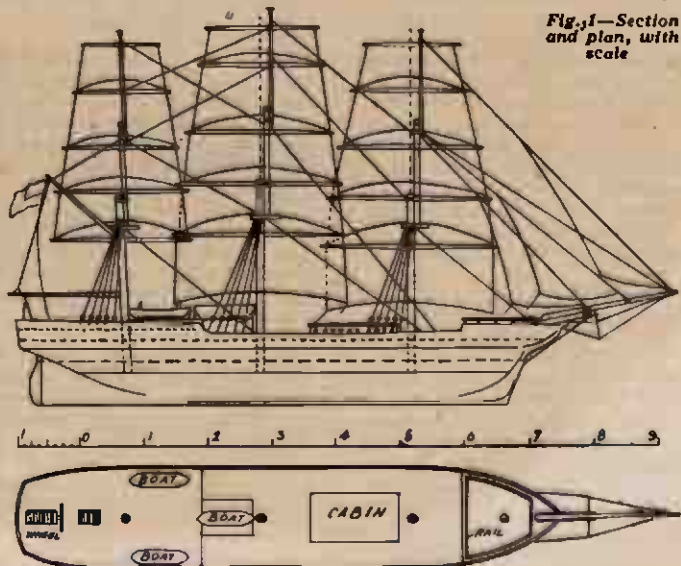


Fig. 1—Section  
and plan, with  
scale

places shown. The central boat is stood upon a block of wood  $\frac{1}{2}$  in. thick and as size shown on the plan in Fig. 1. Do not put boats or helm-wheel in place until the mast and the sails and rigging are complete.

A rail for the raised bow deck may be made from wire as indicated on plan and side view. At H on the

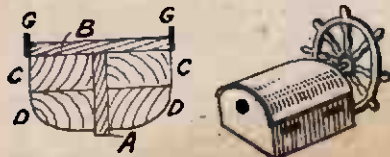


Fig. 2—Hull Section

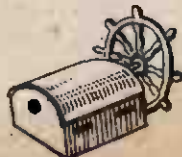


Fig. 3—Wheelhouse

pattern is shown the mast cross-trees, and three of these will be wanted. Cut them from thin wood also holes for the three lower masts to be glued in.

The upper masts will rest upon these cross-trees and be wired or bound with thread and afterwards varnished, as in the detail at Fig. 5.

#### Mast Positions

The positions of all three masts are shown on the pattern sheet and also in the plan Fig. 1, and holes  $\frac{1}{4}$  in. diam. are bored for these. The lower foremast is cut from  $\frac{1}{4}$  in. rod  $2\frac{1}{2}$  ins. long, the lower main mast  $3$  ins. long and the lower mizen mast again  $2\frac{1}{2}$  ins.

Glue these into their holes and add the "tops" and the upper masts. The lengths of these can easily be scaled off from Fig. 1.

The 18 sails are cut from white or cream stiff paper and the shape and size of each can be got from the "side view" Fig. 1. In measuring the width of each sail allow an



Fig. 4—Boats

additional  $\frac{1}{4}$  in. for "bellow" or curve.

The spars are shaped from thin Fig. 5—Crosstrees

wood and glued to the sails, the tops of the latter being held with fine cord and glue. Each spar is held to the mast by a touch of glue and is cross bound with cotton and afterwards coated with glue or varnish.

The bowsprit will be made up somewhat like the masts. There is a short member cut from  $\frac{1}{4}$  in. rod, shaped and glued to the deck (see Fig. 1).

To the top of this piece a secondary

spar will be glued and bound. This piece is tapered and strengthened by a wire boom underneath and another wire at the sides. The rigging ropes to all masts are cotton or thread.

Before the sails and their spars are added, coat the masts with varnish all over. Then varnish the spars with a fine camel-hair brush before fixing them to the masts.

Paint the boats white with a brown



Fig. 5—Crosstrees



Details of suitable base

bulwark line and paint dark colour between the seats of the boat. The hull and deck of the model should be finished before the masts and sails are installed.

The deck should be varnished and narrow lines drawn lengthwise in hard pencil to represent the deck planking.

The hull from the keel to the waterline may be painted white or red, and above this, black, including the raised upper sides.

## Making a Quill Pen—

QUILL pens are, as the name implies, made from large, strong feathers. We hardly see such pens nowadays, but once upon a time people used nothing else but quill pens for all their letter-writing, for metal nibs were unknown.

In these stirring times, however, there is a shortage of metal and commercial labour. As a result, the price of pen nibs has gone up. Nibs are becoming rather scarce. This is more noticeable in villages and out-of-the-way country towns. As feathers are plentiful, it is worth remembering that a quill pen—which is made in a jiffy—will get you out of a difficulty and enable you to go ahead with your correspondence.

#### Suitable Feather

Select a neat, long, strong feather. The length does not matter so much as the thickness of the stem. This must be at least, about  $\frac{3}{16}$  in. thick, but even good pens can be made from  $\frac{1}{4}$  in. diam. stems. Duck feathers, hen feathers, etc., are just too small and weak, but can be tried. Turkey feathers are ideal, but the stems must be hollow. Another source, by the

way, is discarded ladies hats; these often have large, gay-coloured feathers which could be used.

Having obtained a suitable kind of feather, there are four stages in cutting the nib at the end, these being shown in their order herewith.

#### A Penknife

Using a sharp penknife (it is interesting to point out that this is probably the first time you will use the knife in the manner for which it was originally invented), cut away a slice of the quill as at Fig. 2, then cut a shorter slice off as at Fig. 3.

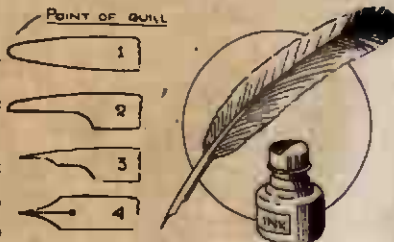
This latter cut gives the "point" to the nib, as shown at Fig. 4. To help the ink flow easily, a small pin hole is made in the centre, then a knife cut made down to the pen point. It is just possible that the split will not be found necessary.

Dip the quill in the ink and try it on paper. If the ink flows reasonably enough, do not bother about the split, as this is suggested to help the capillary action of the ink.

A broad-pointed nib end is better than a sharp-pointed one. The latter scratches too easily, giving a spidery

scrawl. A slightly flat-pointed nib will produce excellent "old-English" writing, or rather, letters.

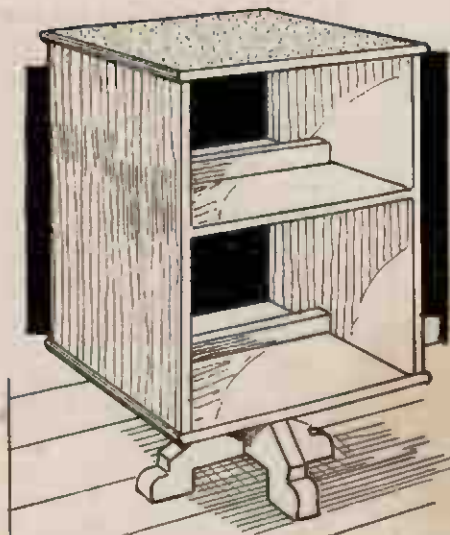
Feathers are usually slightly bent—never are they dead straight. As you lean on the stem, there is a



tendency for the bend to turn downwards, thereby reversing the nib point on the writing paper. So, hold the feather in the hand, as though you were going to write with it, prior to cutting the nib at the end.

You will then be able to judge the best position for the point to be cut. A quill pen, correctly made, will last for a long time in use.

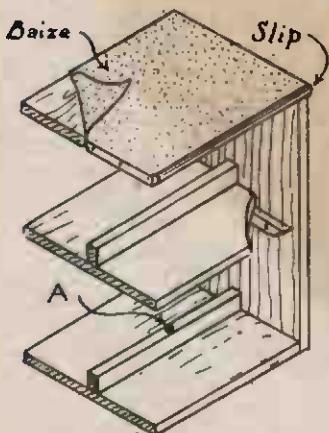
# A real piece of furniture to make is this small REVOLVING BOOKCASE



**T**HIS fine revolving bookcase can be made with a common wood box as its main constituent. Even boxes are hard to get just now admittedly, but one can sometimes be got from a friendly tradesman or some readers may have one already in their possession.

Of course, the bookcase can be made from boards, nailed to box shape, if no ready-made box can be got. No dimensions are given in the drawing as the size of the bookcase may have to depend on the size of the box, but the following details may be helpful.

Size of box is 18ins. high, 15ins. wide and 15ins. deep; slight variations will not much matter either way. Clean up and well glasspaper the sides, both in and out, and strengthen with more nails if thought necessary.



If it can be managed without breaking the wood, take the box to pieces and plane the wood to smoothness, then nail and glue together again.

The middle shelf can perhaps be provided from the spare parts of the box left over, or any spare wood come to that, available. It is supported on fillets, nailed to the sides, as seen in Fig. 1. The ends of these fillets should be bevelled off to appear less conspicuous from the outside.

Across the centre of both bottom and shelf nail division pieces of stout substance, say 1in. thick and 2ins. wide. In the centre of the bottom division, at A, bore a hole halfway through, large enough to sink the head of a 3in. round-headed screw—the pivot pin on which the bookcase revolves.

This job is best done before the bottom division is nailed across. Now insert an awl in the hole and force through the bottom of the bookcase.

Turn it over and from the hole made by the awl strike a 3in. circle. On this, at equal distance apart, drive in three round-headed brass nails, of the upholstery kind, as in detail Fig. 2.

## Stain and Cover

Give the work, except the top, a coat of stain, oak or mahogany. On this apply two coats of size, and when dry a finishing coat of clear varnish. Alternatively, the work could be finished off with two coats of paint, any matching colour, and if possible a coat of clear varnish over all. Enamel paint, of course, would need no varnishing.

Cover the top of the bookcase with green baize, or similar material, stretched tightly over and tacked along the side edges. The tacks are afterwards hidden by nailing over a half round moulding, or just a plain slip of wood. Finish the moulding, or slip (a blind lath would do for the slip) to match the rest of the wood.

The stand will be understood from Fig. 3. Cut two of the upper parts B from thick wood, not less than 1in.

more if possible cut a slot in each so that both can be placed together at right angles.

The slot in one will be as in the illustration and in the other as shown by the dotted lines. Most readers already know this joint. The feet, C, are pieces of the same thickness wood, glued and nailed, or dowelled, to B, as shown. Round off the corners of these feet.

## Turntable Portion

Cut a disc of 1/2in. wood D to size given and nail firmly to the top of the stand, on this place a 3/4in. circle of tin plate, beaten reasonably flat. A hole is punched in the tin plate exactly in the centre, large enough to admit the pivot screw. Finish the stand off to match the bookcase.

The bookcase is now placed over the stand and the pivot screw driven through hole A in the division into the stand, the heads of the nails driven into the bottom of the bookcase resting on the tinplate circle, as in detail, Fig. 4.

Do not screw down too tight, as the bookcase should revolve freely. It may be necessary to remove the shelf in order to drive the pivot screw well in.

## Making the Case

Readers having no box to make the bookcase of, can quite easily make up one if a few boards of cheap wood are available. Simple, glued and nailed joints will suffice, but it is suggested that the top and bottom be nailed to the sides, instead of the more usual vice-versa, then the top, if the wood is at all of decent quality, can be cleaned off and stained and varnished to match the rest, omitting the green baize.

The edges can be covered with the moulding, or plain slip, as before, covering both top and bottom edges. The bottom edges of the made-box type can also be so covered to match the top baize covered one as well.

The shelf could be grooved in place, instead of resting on fillets, a more business-like method. Taking a little trouble over the finish, quite a pleasing article of furniture can be made at little cost.

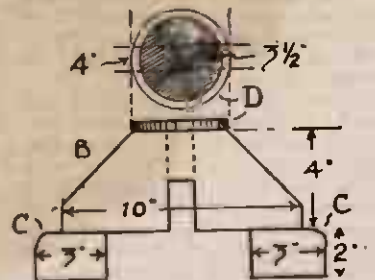
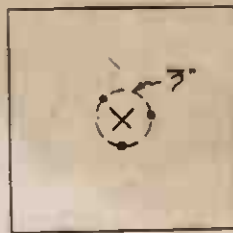


Fig. 1—General constructional details

Fig. 2—The floormarking

Fig. 4—The pivot section

Fig. 3—Detail of leg parts

# Amateur photographers should learn how to undertake A COMBINED HOBBY

**N**EARLY every amateur photographer has another hobby. Unfortunately the large percentage of camera owners only look upon it as a side line for the holiday period, although it is hoped that this is not the case with many of our readers. After all, photography is a subject embodying a number of scientific factors and certainly requires a good deal of thought and experimenting if one wishes to achieve a fair amount of success.

Yes, even the most expert amateur will find plenty of time for carrying on his other hobbies and at the same time use a camera in connection with them.

For instance, if any of us go for a hike or if our bent happens to be exploring an old town or village the camera invariably finds its place in our kit. But how often do anglers, butterfly and moth hunters, botanists or those keen on scouting, boating, cricket etc., have the camera present on the off chance of getting something really out of the ordinary.

## Photography and—

Turn your thoughts to the various indoor hobbies with which you are familiar. There is first our old friend fretwork and then comes a long list, carving, joinery, stamps, modelling, models in wood and metal, wool rug-making and so on. Any of them can become more fascinating and helpful by the aid of your camera.

There are many gardeners and allotment holders who could retain some valuable information by photographing their results of fruit, flowers and vegetables by exposing a few films on their best specimens. How much more convincing it is to place that extraordinarily large marrow or chrysanthemum under a foot rule to obtain a record of it by means of that camera.

## Light and Speed

How can all this be done? Well, most of us today have electric light in our homes and it is the easiest thing in the world to attach a lead to one of the holders in order to handle a portable lamp to any position so as to focus all the light on the subject. Of course, the stronger the light the shorter the exposure.

A very fast film, such as the Selo H.P.3, is strongly recommended and, if you use this with a lamp of say 100, 200, or 250 watts for all your work then you have two factors which control exposure and which are standard and should enable you to secure correct negatives on every occasion after the first two or three shots.

There are, however, some other points necessitating consideration. Sometimes it is required to use a very small stop to get the utmost fine detail but if a smaller stop is used it increases the exposure by twice the length of the next stop. If f8. requires one second f11. wants two seconds and so on.

## A Counting Hint

It is easy enough to set the shutter to time by twisting the indicator to T but to judge seconds is not quite so easy for some persons. Here is a method which most professionals use and you can become very accurate in a short while. Count as follows: One, two, three, four, one. One, two, three, four, two. One, two, three, four, three and so on but always using as the last of each five words the number of seconds reached.

Try this while watching the second hand of a watch and you will soon find the correct pace at which the counting should be done.

## Focussing

There now remains the very important question of focussing and those who have cameras without a focussing screen must use implicit care in adjusting both the object to be photographed and the camera.

Those who have only viewfinders can use these only for the purpose of making sure that the object can be seen by the lens. It is not a means of focussing, you have got to rely on the distance scale being absolutely accurate.

If the scale can be set to five or

ten feet then take a rule and carefully measure that length on bench or table on which you are working. Remember it must be from the lens to the nearest point of whatever you are photographing. Further, be quite sure to set the object perfectly square with the front of the camera or vice versa. Otherwise you will have a distortion of the stamp, coin, fish or other object.

In photographing a near object the lighting should be in position at the rear of the camera and on the side. For this reason many workers use two lamps, one on each side and each of 150 or 200 watts. Each, too, is provided with a reflector, and with such an outfit you are certain to get the full effect of the lighting on the subject without any shadows being cast or the light dimming on one side.

## Wiring a Set

For a few pence, those who know wiring for electric lighting can quickly make a very serviceable portable lamp complete with a reflector. This consists of a piece of bright tin, shaped to a cone or cup, in which the bulb is fitted. Allow for sufficient flex to reach the present holder in the room and if you can fix a switch to the portable lamp it will make it very much more valuable and useful to you for other jobs.

Very soon it should be possible to obtain supplementary lens. You may be able to get one that will fit and suit your lens now, and it is certainly worth trying for they are a great advantage for taking close-ups and for all copying work.

## Photographing a Model

Here is an example giving point to our article above and showing how a model should be photographed. Notice the background just dark enough to throw the subject up sharply. Notice the angle to give an attractive view of sails, without too much overlap. Notice, too, how the lighting is arranged to cut out dark shadows. The picture, by the way, is of a model made by I. Wilkes, of Willenhall, Staffs., who is to be congratulated on his ability.



## From The EDITOR'S NOTEBOOK

THE collection of lead soldiers is no new hobby, and before the war some amazing exhibitions could be staged with them. They are now, I learn, being put to war service in at least one instance, by Lord Greenway at his home at Edenbridge, Kent. Complete mock battles are staged on a billiard table to inculcate military tactics into members of the Cadet Batt. of the Royal West Kent Regiment. Scenery forms a layout of the local district and the toy soldiers of all kinds including paratroops—are disposed in appropriate places for defence and attack. Amazing how almost everything can be turned by ingenious minds to the quicker winning of the war!

A MODEL of St. John's Church, Wembley, was exhibited recently when the Wembley and Sudbury Boy Scouts held their second annual handicraft exhibition at St. John's Brigade Hall.

The model is to scale and helped to gain for the 1st Sudbury Group the Gildersleve trophy which they have won for the second year in succession.

The model took six months to construct. Inside it has pews, a font, an altar and a pulpit. Figures of saints have been painted in colours

in the church windows and the effect is heightened by a gramophone underneath playing organ and choir music.

CONGRATULATIONS to R. C. Wilson of Wisbech who has raised £21 10s. 0d. in 17 days for War Red Cross Parcels. He did it by displaying his model Zoo and Circus in a local shop window after having spent 2½ years on its construction. The local newspaper took very highly of the effort saying that the model was correct in every detail, even to the microphones and loudspeaker in the "big top". The circus contains nearly 200 pieces, made from wood with Handicraft tools, is completely furnished with tents, caravans, flood lighting (on four accumulators) and a complete programme of 40 different acts. Just how you, doesn't it what a little ingenuity and ability can do?

I WAS glad recently to hear again from a very old friend—William Sutton of Lrdington, Birmingham. He reminds me of the fact that, now nearly 70 years of age, he has been doing fretwork since he was 12. What is more, he still enjoys it, and is looking forward to volume 100 of *Radio Weekly*. He started with No. 1 he says, and cannot express

in words the help it has given him along all those years. It is real good to hear from such ardent and staunch supporters of our pages and craft, and I certainly hope to be hearing from him when our issues reach Volume 100!

WILL readers remember, when they order back numbers, that the design sheet is only presented free with the current number. That is, when the next week's issue is out, the design has to be purchased separately and costs 4d. In ordering it, too, you should quote the reference number usually found at the top of the sheet, as well as the name. For instance if you order just a Photo Frame design, it maybe one of a dozen; if you order Photo Frame No. 2462 you are sure to get the right one. These pattern sheets, as you will probably have noticed, now only appear every other week owing to the paper restrictions and rations.

THE 1st issue of September marked the close of Volume 98 and the Index covering the Weekly for the six months from April is now ready. You can get it from me for 1/- post free and will find it exceedingly useful for reference purposes.

The Editor



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for building  
on page 19

