



# MORE SPARE TIME ACTIVITIES

By  
GILCRAFT  
(Don Potter and Jim Ridley)



London  
C. ARTHUR PEARSON LTD.  
Henrietta Street, W.C.

*First published* 1933  
*Second Impression* 1935

Made and Printed in Great Britain at  
The Mayflower Press. Plymouth. William Brendon & Son, Ltd.

Downloaded from:  
"The Dump" at Scoutscan.com  
<http://www.thedump.scoutscan.com/>

Thanks to Dennis Trimble for providing this booklet.



Editor's Note:

The reader is reminded that these texts have been written a long time ago. Consequently, they may use some terms or express sentiments which were current at the time, regardless of what we may think of them at the beginning of the 21<sup>st</sup> century. For reasons of historical accuracy they have been preserved in their original form.

If you find them offensive, we ask you to please delete this file from your system.

This and other traditional Scouting texts may be downloaded from The Dump.

**CONTENTS**

**CAMP LIFE**

- MAKING TROOP NOTICE-BOARDS
- TOTEM POLES . . . . .
- TABOO SIGNS FOR CAMP
- CAMP HORN . . . . .
- CAMP SHOWER BATH . . . . .
- HINTS ON How TO MAKE A RUCK-SACK
- MAKE YOUR OWN SLEEPING BAG
- MAKING ROMAN SANDALS
- HOW TO MAKE A CAMP BUCKET AND BASIN
- HOW TO MAKE AND THROW BOOMERANGS .
- MAKING FISHING NETS . . . . .
- HOW TO MAKE A CORACLE

**SHOWS**

- HOW TO MAKE COSTUMES FOR PATROL STUNTS
- MAKING MASKS . . . . .
- HOW TO MAKE A RED INDIAN WAR BONNET .
- SIDE SHOWS . . . . .
- TWO MORE SIDE SHOWS . . . . .

**HOBBIES**

- CAN YOU MAKE PINE CONE BIRDS?
- BEATEN COPPER WORK
- CANDLESTICKS
- MAKING A LAMP STANDARD
- CUTTING FIGURES IN THIN WOODWORK
- MAKING MATS

## More Spare Time Activities

---

MAKING LINO PRINTS  
EGGSHELL MOSAIC  
MAKING THINGS OF LEATHER  
HOW TO MAKE CORD  
BASSET MAKING  
CHIP-CARVING  
INDIAN BEAD-WORK  
CCHIXG SKINS  
MAKING STOOLS  
MODEL MAKING

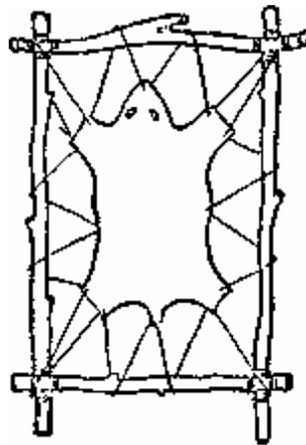
(NOTE. – The article on model making is included by kind permission of the Editor of *The Scouter*.)

# More Spare Time Activities

## I

### MAKING TROOP NOTICE-BOARDS

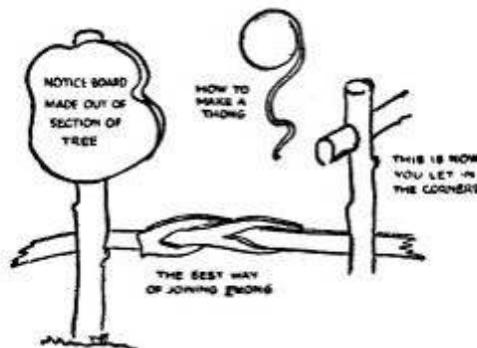
EVERY Troop should have a good notice-board, as this is not only a very useful article, but if well-executed can add considerably to the Scout-like appearance of the Troop Room. If you would like to do a good turn for your Troop, then just get down to it and make one now. If it is to be a skin one you might possibly get your Scoutmaster to buy the materials for you, because a good skin may cost anything from five to ten shillings.



A fine skin notice-board.

The best kind of skin for the purpose is cowhide for a large board, and calf-skin for a small one. Your bootmaker could probably get you a piece or put you in touch with someone else who could do so. A whole skin is not needed; for a full-size notice-board ask for a piece about three feet by two.

When the skin arrives it will be oblong and not shaped like an animal. You must shape it yourself by drawing the outline of an animal on it with a piece of chalk and then cutting round with a sharp knife. It is important to draw with chalk, because if you go wrong the mark can easily be rubbed off while a pencil will always leave an impression.



Now, pierce a number of holes about one inch from the edge of the skin for the thong to go through. To make a thong, take the pieces left over and cut them into discs as large as the

size will allow and then cut round the edge in gradually diminishing circles (see illustration). The leather will cut more easily if it has previously been soaked in water for a minute or so.



A notice-board made from a skin and a sapling

The frame for the notice-board must, of course, be of rustic work – nice stout pieces of oak, ash, beech, or silver birch are best. Choose knobby pieces; do not take the first piece of wood you set eyes on, but select carefully until you get four beautiful pieces.

The accompanying illustration will show you how the crosspieces are let into the uprights. Now make the frame secure by means of square lashings.

If your notice-board is going indoors, the wood will look much better if it is first scrubbed well with soap and water and varnished when dry. If it is to go outdoors it will last much longer if you take the bark off; otherwise water will get under the bark and the wood will soon rot.

Now soak the skin and thongs for a few minutes in from a skin and a sapling, cold water and then lace the skin to your frame. Get it moderately taut and when the leather dries it will contract and be as tight as a drumhead.

The accompanying illustrations show several kinds of notice-boards which you can make.

## II

### TOTEM POLES

A TOTEM is generally some kind of animal – a hawk, a snake, or a rat, for instance – but it may be a plant of some kind, and more rarely it is something not animate at all, such as red ochre, or a cloud, or fire, or it may be even a mere phase of things, such as a season of the year. Even abstract qualities are found, such as “pride,” the totem of a weaver clan in Madras.

#### THE STORY OF TOTEMS

A peculiar variety of totem is the split-totem, in which only part of a thing is the totem. For instance, instead of buffaloes, buffalo tongues are the totem of one Omaha sub-tribe.

Another group are called cross-totems, and consist of parts of more than one kind of thing. For instance, the ends of things are the cross-totem of a certain Samoan group, the ears of animals of one species the totem of an Assam tribe.

Again, one group may have a number of totems, which are then called linked-totems. For instance, clans in New Guinea are always associated with a species of bird, of plant, of fish and snake.

## More Spare Time Activities

---

It was usually the custom to depict the totem on the clothing, on the tent or near by the dwelling-place. In some cases a very crude representation was made, in others very elaborate totem poles were erected.

In North America totem poles were carved from cedar posts. At the top of the pole was carved the head of the totem, whether it was bird, animal, or fish, or an inanimate object.



Below this were carved various devices and symbols giving the history of the person or his ancestors. A clan totem naturally depicted the chief incidents in the clan's history, and represented the tradition of the clan. Occasionally special totem poles were set up to record particular events.

The totem poles were heirlooms, and were frequently very costly affairs, anything from £20 to £200 being paid *in blankets* for a well-executed one, so that only chiefs could afford the luxury of a totem pole.

The device of the totem was, however, carved on nearly everything the family used, even to totem spoons and dishes in precisely the same way as we engrave our family crest on our spoons and forks.

The Chief Scout knew the value of totems when he suggested the names of animals and birds for Scout Patrols. He based this suggestion on the well-known belief that since the totem of the group is the brother of all the members of the group, these are also brothers of one another.

### THE USE OF TOTEMS IN SCOUTING

Here are some ways in which totems can be applied to our Scout work so as to further the objects which we have in view.

## More Spare Time Activities

---

Personal names and totems can be awarded to individual Scouts. Sometimes the names of animals can be awarded to those who resemble them in any way; for instance, the name of “Kavanick” – the otter – can be awarded to the boy who is good at swimming and diving or is particularly fond of the water.

After the name is awarded that particular Scout is entitled to set up the otter totem in front of his tent in camp, to draw the totem after his signature in his Scout correspondence – in addition to his Patrol signature – and to mark his Scout possessions with his totem.

Such awards – made by the Court of Honour – will undoubtedly have the effect of making each individual Scout keen to earn distinction and will create further interest in his Scout work and bring to it a real spice of adventure and romance.

Further, full use should be made of the Patrol emblem as a totem, and every Scout in the Patrol should be encouraged to study the ways and habits of the bird or beast represented, and to take a pride in it.

Each Troop can also have a sign of its own derived from the totem idea. This sign and its meaning is communicated to each recruit who joins the Troop on enrolment, and most excellent traditions can be passed on from year to year through a Troop by means of these signs.

As awards for Inter-Patrol or even Inter-Troop competitions, a simple totem made by Scouts themselves or a totem stick is much more in keeping and usually much more valued than cups and shields and other shop-bought trophies.

A totem stick is merely a reproduction in miniature of the totem poles set up to record history and happenings. It can convey messages by means of signs, and these signs can convey the idea of the particular competition, and, in addition, certain injunctions or advice in regard to Scouting generally, the signs used depicting not only activities but also qualities, such as courage, chivalry, endurance, joy, delight in the outdoors, and woodcraft as the key to Guiding and Scouting.

And now to the making of them!

With a few chisels, gouges and a mallet you can carve a totem from two feet to twenty feet high, the bigger, in fact, the better. Some of the finest Indian totems were carved with flint and bone implements. Carving tools, not carpenters’ chisels, should be used for totem-carving. The former can be obtained at any big tool-shop; half a dozen at the most is all that you need to start with.

Don’t forget to buy a hard stone for sharpening, as carborundum is too coarse for a finished edge. Wood-carvers generally use a washeta stone and leather strop, and one or two slips (small stones with rounded edges, for sharpening the inside of gouges).

One of the most important things in carving is to be able to sharpen a tool properly. This needs considerable practice, and the best way to learn is by personal tuition. Get in touch with a cabinet-maker or a good carpenter and learn from him. The way to test the sharpness of a tool is to cut cross grain on a soft piece of wood, and if it leaves a nice, smooth finish, then it is sharp. If blunt it will leave a coarse feathering edge. One cannot stress too greatly the importance of always using tools which are really sharp; blunt ones only result in bad work.

Almost any wood will do for a totem as long as it is dry. Green wood will split, and nothing is more disheartening than after finishing a piece of carving to see this happen. If possible, select a piece that has been seasoning for at least a year.

The woods of the cedar, oak, ash, elm, birch, pear, and apple trees are suitable for totems. Choose a length of wood that has character – a piece with one or two kinks in it is more effective than a perfectly straight bit.

Make the log fairly smooth and then draw your design on it with chalk or charcoal. Start carving from the top and work downwards. There is no need to carve right down to the

bottom; a plain bit is quite effective and shows up the carving better. You will sometimes find it helpful to draw preliminary sketches on paper or to make a clay model first.

An important thing to remember is that your design of birds, animals, men's heads, and so on, must be a design, and not too close to Nature. Leave out detail and aim at getting a fine broad effect.

The chief beauty of the Indian totems is their barbaric massiveness and colouring. The colours were symbolical, and white, which indicated peace, purity, and death, was the chief. Red stood for blood, fighting and valour; blue for the lakes, rivers and sky; yellow for the sun, light, and happiness; green for the fields and trees; purple for the mountains and distance, and black for power.

### III TABOO SIGNS FOR CAMP TABOO SIGNS

SOMETIMES it is necessary to put up notices in or about our camps to warn Scouts and others of places they must keep away from.

Placards scrawled with such information as "Trespassers will be prosecuted," or injunctions such as "You must not go by this way," are very unsightly, and it is better to make use of signs.

Taboo signs are quite common amongst native tribes; an idea of magic is associated with many of them, but they also serve the purpose of keeping certain places private.

#### A BOX ON THE EARS

We all know the Scout's "not this way" sign (i), a simplification of the broken arrow that barred the Indian's way. Other taboo signs are not so well known, and some of them are illustrated here. No. 2 comes from the South Sea Islands, and tells you that beyond the sign you will get a noise in your head like the beating of the waves on the seashore. In other words, "If you go past here, you will get your ears boxed."



No. 3 owes its origin to the somewhat ancient and gruesome habit of burrying a slave up to his neck in the path to a ju-ju place, with frightful consequences to him and an awful warning to would-be passers-by.

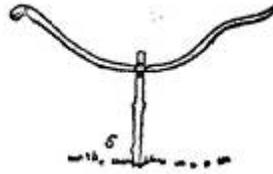


No. 4 is used in many parts of the world where crocodiles abound, and intimates the punishment that will wait you if you disobey the sign.

## More Spare Time Activities

---

No. 5 conveys the information in snake-infested countries that you are likely to die of snake-bite if you go that way.



“HE WHO RUNS, MAY READ”

No. 6 is a simple no-way sign, also found in certain parts of West Africa. These are all ancient signs, of almost universal use and we all respect them and obey them much more than the word *don't*, which somehow seems to raise a spirit of antagonism in all of us.



A taboo sign conveys the order, the reason, and the punishment for breaking it, all at the same time and in the simplest kind of way. Scouts can use all these signs, but it is greater fun to invent new ones. The sign should almost explain itself in some picturesque way so that “he who runs, may read.”

## IV

### A CAMP HORN

THERE is something about a horn which appeals to most of us – perhaps its graceful shape, or perhaps it arouses some primitive hunting instinct in us. It is much more picturesque than the bugle and each horn has a distinctive note so that it makes a good call for a Troop.



FIG.1.

The 1st Gilwell Troop uses a Kudu horn, like the one in Figure 3, which was captured by the Chief Scout from the Zulus in the Zulu War. It is highly prized within the Movement and taken great care of, especially as it was used at the first Scout camp, held at Brownsea Island in 1907, and at the great Jamboree at Birkenhead where the Chief blew it at the opening ceremony.

#### PREPARING THE HORN

Get the horn in the rough and prepare to polish it yourself. Slaughter-houses and second-hand shops will often be able to supply rough horns. A noise can be obtained from almost any shape of horn, but try to get one over 18 inches long, as the short ones give a poor note. Apart from cows' horns, some beautiful ones can be made from the horns of antelopes and mountain goats.



Conch Shell

First of all the core must be extracted. This is not difficult, as it usually comes out quite easily. If the horn is from a freshly killed beast, boil it in water and alum. This will help to get rid of the smell.

#### POLISHING

The first stage of polishing is to file all the corrugations and scratches with a rasp. After this, get some pieces of broken glass and scrape well; then use different grades of sandpaper, from coarse to the very finest, and you will now begin to get a dull polish. To get the final waxy polish, rub with a mixture of dust from the horn itself and linseed oil. This and plenty of elbow-grease will do the trick.

A polished horn makes a very much better note than a rough one – probably because it is reduced to a thinner and more uniform thickness.

#### THE MOUTHPIECE

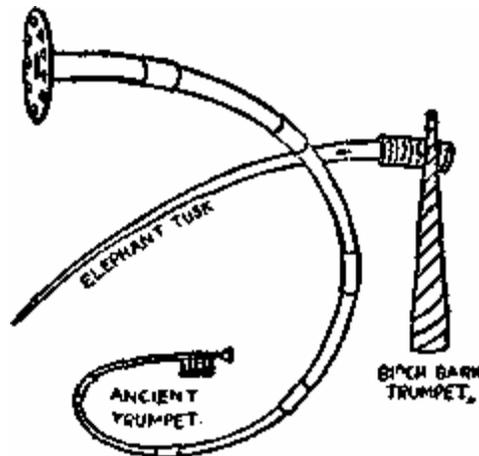
The next thing to do is to make it “blowable.” The two best ways of making a mouthpiece are (1) to bore a hole in the side, and (2) to cut the point off and to shape it into a mouthpiece (see Figure 1).

If you are going to do the former, be sure to drill your hole as near the top as possible. The top is solid horn for a few inches, then it starts to get hollow, and you should drill your hole just at the point where it begins to get hollow.



FIG. 3. KUDU HORN

A good way of finding out where to drill the hole is to run a piece of wire up the inside of the horn until it stops and then to mark the place on the wire with your thumb. Draw the wire out and lay it along the outside, to see how far along it comes. Drill a hole of about 1/4 in. diameter with a twist drill, or better still two holes side by side so as to form an elliptical mouthpiece. If by any chance you drill the hole too far up so that it does not run into the hollow part of the horn, make the piece of wire red-hot and run it up the inside quickly, and it will burn its way through.



## More Spare Time Activities

---

Another way of making a mouthpiece is to cut the point off the horn where its diameter is about  $\frac{3}{4}$  in., and shape it like a trumpet mouthpiece (see Figure 1).

### A CONCH SHELL HORN

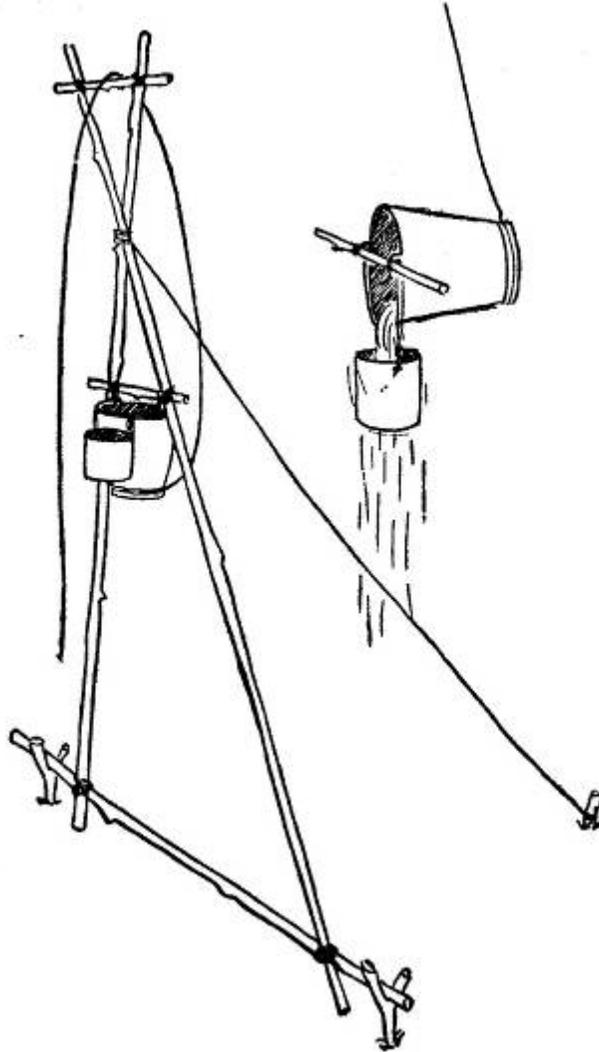
If you wish to be very original, get a conch shell and saw the end off with a hack-saw, about  $\frac{1}{2}$  in. down; this will expose the hollow part. Smooth the end down with file and sandpaper so that there are no sharp pieces to cut the lips. If the right kind of shell is used, you will find that you can make a terrific note, worthy of a trombone. This kind of shell is shown in Figure 2.

## V

### CAMP SHOWER BATH

ONE of the difficulties experienced in some camps is the absence of a suitable place for bathing purposes. A bath would, of course, be far too cumbersome to take. Here, however, is a simple form of shower bath which can be rigged up quickly with little or no expense, and which apart from the novelty of its construction is of really practical use.

The following materials are required: two spars for sheer legs, one shorter one for ledger, one bucket, one large tin, a supply of twine for lashings.



---

## More Spare Time Activities

---

Lay the spars on the ground and get them symmetrical; then lash the ledger to the butts of the two longer spars with square lashings, and make a sheer-leg lashing where they cross at the top. The sheer-legs should be about twelve or fourteen feet high. This is important as otherwise the tin will be too low and will hit you on the head when the shower bath is in use. The ledger at the bottom is supported at either end by a forked stick to enable the sheer-legs to be lowered every time you want to fill the bucket. The sheer-legs are not vertical, but lean slightly forward and are kept in position with a guyline.

The bucket is suspended from a crossbar with a piece of string or wire. The small tin has a hole punched in it each side of the rim so that it can be tied to the bucket handle with a small length of string. Punch a number of holes in the bottom with a nail – not too many, otherwise the water will go through like a sieve. About twenty is a good number: then the water will go through slowly, and a bucketful will last for quite a long time.

The bucket is tilted by a string tied to the bottom and going over a higher crossbar, and down again. Pull the string gently, otherwise you will get a deluge.

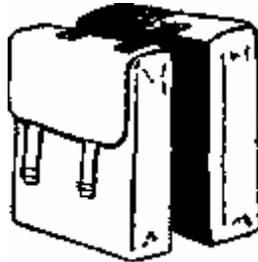
Besides being of practical value, one can get an enormous lot of fun in making this gadget.

## VI

### HINTS ON HOW TO MAKE A RUCK-SACK

A REALLY efficient ruck-sack must fit comfortably upon the back, be waterproof, and of fairly stout material. The size should suit the person that is to do the carrying.

After you have taken your measurements, make a paper pattern and pin it together, remembering to leave half an inch all round for seams. This will give you some idea of how it will look when finished, besides warning you of awkward parts to be cut out. The sack should be so shaped that the weight is distributed comfortably. A square bag is most uncomfortable. Rounded parts should not have the corners cut out, but just snipped, as this makes the joining-up easier and ensures a better appearance when finished. This applies especially to the pockets.



Pannier bags.

The back and the bottom of the sack are two separate pieces, the bottom being reinforced with an extra piece cut out afterwards. Pockets must be put on before the sack is joined up, and all binding of edges and attaching of buckles and straps should be done before the pockets are attached.

Choose good strong binding for pocket flaps and bag nap, and, if of leather, use waxed threads. Secure all ends of threads thoroughly. Pockets should *not* be put on patch-like but should be shaped to allow a reasonable amount of gear to be carried in them.

Reinforce all points where buckles are to go and make sure that they are in the right places to enable them to be done up properly. All metal parts should be smooth and have no sharp edges and corners.



A useful type of ruck-sack.

Care should be taken to see that the front of the sack is not too deep or it will droop when packed. Suspend the sack from the middle top of back on wide adjustable shoulder-straps and attach these, in turn, to the extreme corners of the bottom. The opening should have grommets sewn into it, or, better still, get eyelet holes punched into it at a sailmaker's.

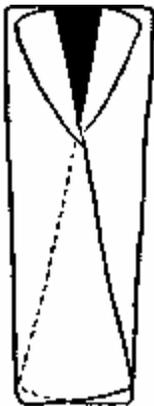
If the sack is to be attached to a Meis (frame) it should fit snugly and not be allowed to flap around the frame. See that the Meis fits the hips properly or the pack will not ride comfortably.

Cycling with a pack can be rather tiring and unpleasant, especially if one has to wear a cape over it on a rainy day. Pannier bags abolish these discomforts and they can be easily made or adapted from Army packs. The illustration shown here should be sufficient explanation of what is intended. The suggestions given for making ruck-sacks apply also to the making of pannier bags.

## VII

### MAKE YOUR OWN SLEEPING BAG

SOME of us are restless sleepers and cannot make our blankets "stay put" while we are asleep, thus causing cold and uncomfortable nights in camp. For this reason a sleeping bag or sack is a great advantage and certainly worth the little trouble taken in its making.



An improv  
method  
folding.

The method of folding, shown in the accompanying sketch is, we think, an improvement on the usual style. In this, it will be noticed, the shoulders are more protected and are more unlikely to get outside the bag and so become cold. This avoids the tendency to cover one's head with blankets. With the entrance to the bag in the top centre, one can sit up without undue disturbance to the bed.

Fluffy blankets sewn in this way make very serviceable bags, while, if you are able to procure a discarded down quilt, you can do yourself right royally. But in the latter case, it must be a full-size quilt, six feet by five. Working to these measurements, let us first make the bottom of our proposed bag by folding it into three and sewing across. This means we get one thickness below and two above to keep our feet warm.

The centre of the top end is now found and each side is brought across to this, just overlapping about three inches either side. This forms a lapel to the bag. From the centre leave six inches either side, sewing the remainder down. This gives the shoulder-protection already mentioned and needs no further sewing.

At a glance at these instructions one might be inclined to think that thickness above is intended as an additional advantage, but this is not so. In fact, a great rule to remember in bedmaking is to have as much under as above – preferably more under.

And so it is presumed that a ground-blanket is to be used with a sleeping bag. If you have a small tent of your own its comfort is greatly improved by a coloured ground-blanket pegged out with your ground-sheet. And there is the advantage of being able to lay sheets of newspaper between them for added warmth.

A good material to use for the ground-blanket is felt cloth, as it is fairly light in weight, is made seventy-two inches wide, will not fray out (and therefore needs no hemming), and can be obtained in warm shades of red – giving a really cosy appearance to your little house. It should be a shade smaller than the ground-sheet; small rings should be sewn to the corners for pegging down.

## VIII MAKING ROMAN SANDALS

MAKING sandals is a fine spare time activity. Here is an unusual design.

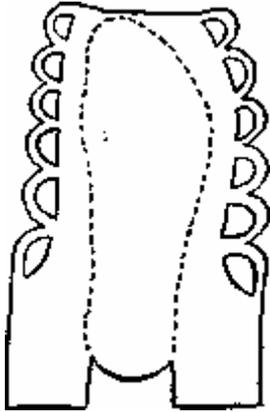


Fig. 1.

First make a pattern out of a strong piece of paper by placing the foot on it and marking round with a pencil. Then cut the leather to this shape.

This kind of sandal is comfortable and will stay on without flapping about and chafing the toes as most sandals do. The design was used by the Romans, and you can see the real thing in the London museums. There are also some of exactly the same pattern on view in one of the Edinburgh museums; these were used by the old Highland clans.

Sandals are ideal for camp use, especially in the early morning, when the dew is on the grass. Shoes and stockings soon get wet, and you may be forced to go about with wet feet all the morning. Sandals get wet easily but dry quickly.

Sandals, too, give the feet a chance of developing properly.

Before starting to cut the leather, it is advisable to make a pattern out of a strong piece of paper by placing the foot on it and marking round with a pencil. When you are satisfied with the pattern, get a good stout piece of cowhide about an eighth of an inch thick and cut it to the shape shown in Figure 1.

Soak the leather in cold water for a few minutes until it gets soft and pliable. It is then much easier to work and can be pulled into shape to fit the foot.



Fig. 2

The back of the sandal, shown in Figure 2, has to be stitched with two needles. Buy from your shoemaker an awl, a length of waxed thread and two leather-work needles, which are a little stronger than ordinary ones and have blunt points. The awl is used for making holes in the leather

so that needles and thread can be passed through easily. Sew with two needles at once. This means having a needle at each end of the thread and they are passed through the same hole from opposite directions. The sandals are held on by interlacing thongs, as shown in Figure 2.

When the sandals are completed, lace them on wet and walk about with them for a bit so that they form to the shape of the foot. Then take them off and dry them.

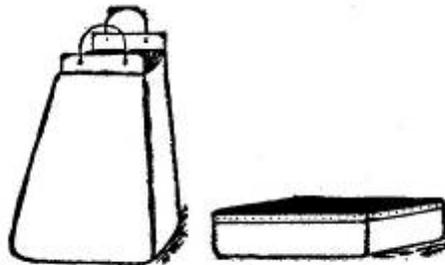
## IX

### HOW TO MAKE A CAMP BUCKET AND BASIN

FOR a shilling or two a camp water bucket and washing basin can be easily made.

You need a yard of 18 in. deck-chair canvas, obtainable in various colours from most house-furnishers.

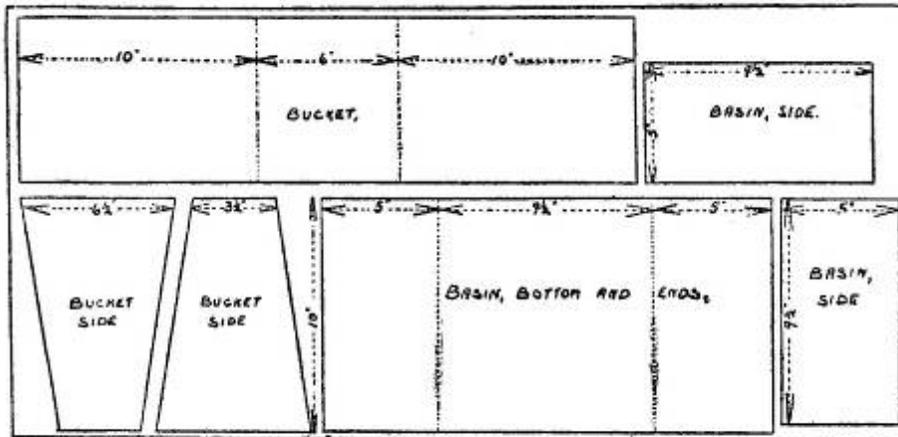
It should be bought "treated," but need not be extra heavy, a twelve ounce per 36 in. width being quite a suitable weight. It is well to remember that an 18 in. canvas usually measures only 17 inches to 17½ inches.



The water bucket. The washing basin.

Before we proceed farther, let us urge the use of a machine for all sewing purposes. A great deal of labour and time is saved by it and one's patience is less taxed than if a needle and thread is used. The difficulties are practically nil, and after five minutes or so of practice, one is able to work quite efficiently.

The foot of a machine can be adjusted to allow a thick or thin material to pass under the needle, and by a twist or lift of a small knob, the size of the stitches can be varied to suit tent or ration bag.



Lay-out of patterns on 38" x 18" canvas for water bucket and basin.

A machine can be picked up cheaply in most marketplaces, and is a real blessing to a Group's equipment. If of a reliable make, a machine will sew anything one is likely to need in the way of gear.

The accompanying diagram shows how the water bucket and washing basin should be cut from the material, and care should be taken to assure no faulty cutting. It is as well to make paper patterns first. These sizes include turns for the seams, but they should be kept even to make the finished article fit properly.

The bucket is in three parts. The largest piece is given a wide hem at the top and bottom, and the side pieces are then sewn on to this. Next turn the bucket inside out and sew back along the seams. This is to make the bucket watertight, but should it leak slightly, beeswax should be rubbed along the seams. Handles are attached by sewing (with strong thread) two pieces of stout cord to each side.

The basin is made in much the same way as the bucket, except that the top hem is best sewn on last of all. Mention has already been made of the fact that materials can be obtained in various colours and one may hope to see brighter camping gear in future, in place of the usual green!

## X

### HOW TO MAKE AND THROW BOOMERANGS

BOOMERANGS were known in ancient Egypt and India long before they came to Australia. The present form developed from a throwing-club. The Australian aborigine has carried it to a fine art, but sad to say, it is now dying out.

There are two kinds of boomerangs, one being used for hunting and the other for war. The former returns when thrown, while the latter does not, but goes an almost incredible distance and will cut a man in two. The hunting boomerang is used chiefly for sport and for bird-catching, and is dangerous to the thrower and can give a very nasty knock even when it is nearly spent.

Almost any kind of wood will do for a boomerang, but ash is the best. Cut a suitable elbow from a tree, about 18 inches long, and 4 inches in diameter. Saw it lengthwise down the middle, so that you can get two boomerangs out of it; then shape each piece, making it resemble Figure 1 ( $\frac{1}{4}$  inch thick, 3 inches wide, 18 inches long), or make the width one-sixth of the length, and the thickness one-sixth of the width.

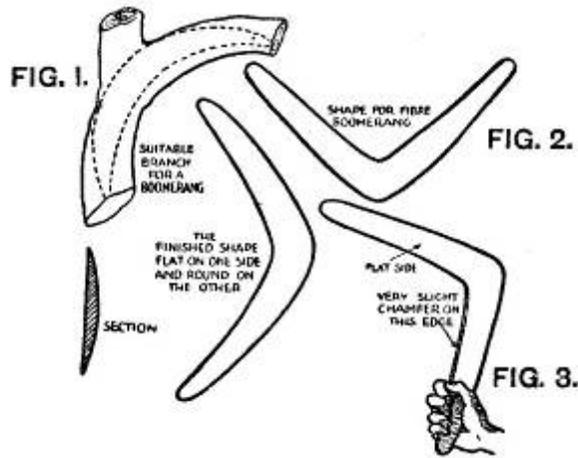
Make one side curved and the other flat. The tools to use for shaping are the plane and the spoke-shave. Finish off with sandpaper.

Fibre boomerangs are very strong and are easier to make than the wooden ones. Sheets of fibre can be obtained at any big ironmonger's. Figure 2 shows the best shape for fibre, and with careful manipulating you can cut quite a number out of one sheet, using a fretwork or bow saw.

For throwing, hold the boomerang *vertically* as in Figure 3. Throw with a forward motion, giving a good spin just as it leaves the hand. It should travel parallel to the ground in a vertical position for about twenty feet, and should then gradually heel over on to its side and describe a clockwise circle.

The figure described, however, depends on the boomerang; some travel in a circle, and some make a figure of eight, while many won't go at all for no apparent reason!

Care should be taken in using boomerangs. See that no one is anywhere near the probable line of flight, otherwise a nasty accident may result.



## XI

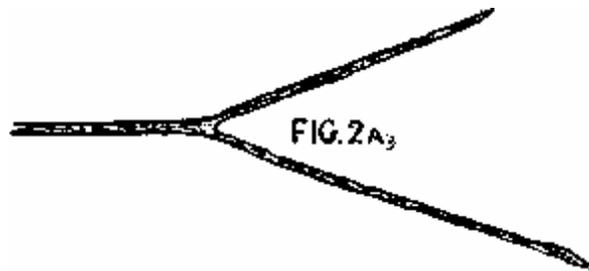
### MAKING FISHING NETS

IF you are in camp near the sea or a river, great sport is sometimes offered in fishing or shrimp-catching. But nets are needed, and as they are not always to be bought readily, a little advice on their making will be found helpful. Often, materials will be found on the spot, for any waste bit of hessian or coarse canvas stretched between two sticks makes a simple but effective net. To make a better one, floats of bark may be fastened at the top and stones for sinkers at the bottom edge of the net. (See Figure 1.)



With a forked sapling and a ball of string, a good, strong net can be made in the following manner. First, clean your stick clear of any twigs and sharp points (Figure 2a) and bend the two branches until their ends overlap about six inches on either side. Bind firmly together with twine and the frame is ready to take the strings for the net. (See Figure 2b.)

For a net that is to be, say, two feet deep, cut the string into lengths of eight feet, double in half, and pass the ends over the frame and down through the loop formed in the doubling process.

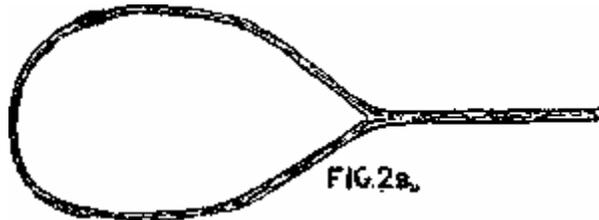


## More Spare Time Activities

---

This brings the strings hanging in pairs. Take a string from each adjoining pair and knot them together by a simple thumb-knot as shown in Figure 4.

Continue right round the frame, knotting alternate strings in this manner. After about the eighth row, it will be found necessary to begin tapering downwards. This is done by knotting the strings a little closer together and cutting off one string at equal distances apart, say, at every fourth knot, to start with.



Tie as before until the clipped string is met. Here a string is taken from each side of the single one and knotted, being careful to make it come even with the others in the same row.

Before the double knot is finally tightened, the single string (a) should be passed down through this, and after tying a knot up close to the double one, should be cut off short. (See Figure 3.) Continue along as before until the remaining ones meet at the bottom.

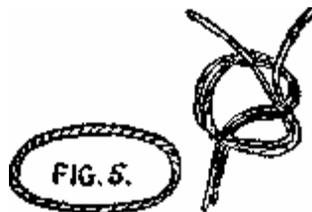
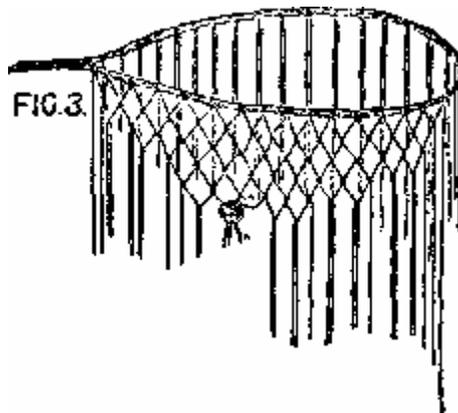


Fig. 4

Care should be taken in the spacing to see that no clipped mesh comes directly under another of its kind. After fixing a rod to the desired length, the net is complete.

Of course, this type of net can be utilised for a number of purposes besides fishing, and makes a good carrier bag for a football or for tennis balls, or even a vegetable marketing bag. In these cases, instead of making the net on a rustic frame, it should be made on a large quoit ring made from a single strand of unravell'd rope. A loop is made in the centre of this strand, and the remaining ends "laid up" within the loop, the ends being tucked under the nearest strands and trimmed off. (See Figure 5.)

## XII HOW TO MAKE A CORACLE

GET about twenty strips of ash:

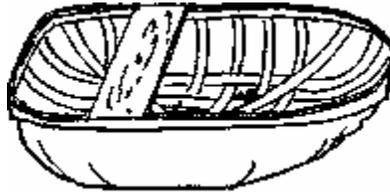
Eight pieces 7 feet long, 1½ inches wide and ⅛ inch thick.

Eight pieces 6 feet long, 1½ inches wide and ⅛ inch thick.

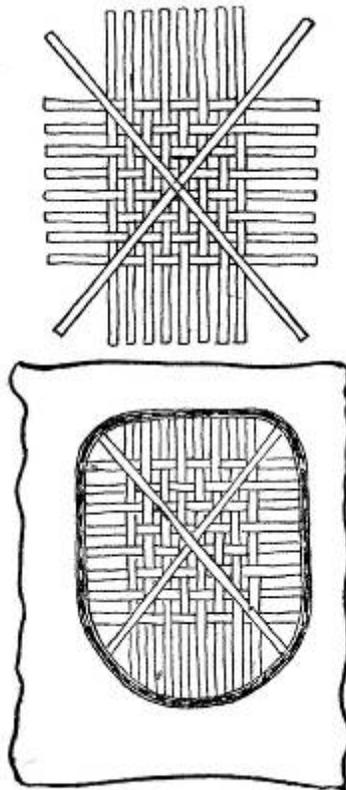
Two pieces 8 feet long, 1½ inches wide and ⅛ inch thick.

Two pieces 16 feet long, 1½ inches wide and ⅛ inch thick.

Any wood yard will have this in stock. Take the sketches along and show them to the foreman and he will understand better what you want.



After soaking in water for about a week, lay eight parallel strips on the floor and weave another eight through at right-angles; these should be a foot shorter than the first lot. Now get the two 16-foot pieces. These are going to serve as a rim. Fit them to the framework by curving the ribs upwards. One rim goes on round the outside and the other inside the ribs, fitting snugly in between. Nail the ends of the rims together and try as far as possible to make the framework roughly pear-shaped.



Now get a length of stout canvas (an old tent does very well), lay the framework on top and tack the canvas up between the rim and the ribs. Finish off by nailing all round, taking care that

each nail not only goes through both rims but through ribs and canvas as well: this will make a strong, workmanlike job of it.

Next comes the seat, which is a flat piece of deal board reinforced underneath by another board at right angles. The seat is fixed by nailing to the framework at the widest part of the pear-shape.

Make the coracle watertight by painting canvas with tar, or better still, a mixture of lampblack, pitch and resin melted together and put on hot.

A paddle can be made out of any wood and is used from the front of the coracle (the narrow end) with a sort of sculling motion. It is held between the hands, not resting on the edge, and requires very little practice to manipulate.

Coracles are still used to-day by some of the fishermen on the Severn and the Dee. It would be great fun to make one for the Patrol. They are very light, strong, and easy to carry about, and a tremendous lot of exploring could be done with one of them.

### XIII

## HOW TO MAKE COSTUMES FOR PATROL STUNTS

### DRESSING UP FOR PATROL STUNTS

To be told you are to play the exciting part of the bold pirate in the coming Patrol show is one thing, and – unless you are a man of wealth – to produce the required costume is another.

And it does not always stop at that, for if you have what the producers call “talent,” you probably have to appear in quite a different character in the next scene.

However, it is really surprising how quickly characters can be changed by simply re-draping the properties at hand.

#### A MONK BECOMES A KING!

For example, a jovial monk whose dress properties comprise nothing more than a pair of sandals, a girdle, and a blanket, the latter draped over the head to form a cowl, can very soon be transformed into a king by allowing the cowl-piece to drop back over the shoulders to form a cape, and adding a belt and sword, together with a cardboard crown, studded with wine gums, which sparkle very convincingly.

Impromptu dresses are very often more effective than long-thought-out affairs. A burlesque ancient warrior looks equally warlike with a large meat-dish as a chest protector as does one in a perfectly correct shop-hired suit of armour.

#### ARMOUR IS EASILY MADE

Occasionally the need arises for a more or less correct turn-out, and it need not be thought a hard task to make such armour requirements. It is always worth the trouble to obtain correct descriptions and diagrams of period dresses and armour, and this information is easily obtained from most public libraries.

Cheap imitation leather, known as leather cloth, can be used for making doublets and tunics, and chain armour can be made from cotton-mesh swabs, which can be bought from any household stores. After they are shaped and stitched together, the whole garment is given a coat of ordinary grate polish which, when dry, has a dull, steel-like appearance and seen at a distance is difficult to distinguish from the real thing.

Plate armour can be made from stout silver or bronze paper, which can be bought in various thicknesses and will stand a fair amount of wear. It will be found advisable to use paper-clips for fastening purposes rather than stitching, as the latter makes too many holes.

---

## More Spare Time Activities

---

Newspaper patterns should first be made and these fitted on a model or person to make sure they fit properly. Always remember that you can measure your materials many times, but you can cut them only ONCE.

### THE PIRATE IN PYJAMAS

A pirate's "get-up" is one of the easiest and yet most effective of costumes to concoct, for pyjama trousers, a coloured shirt and sash, a scarf tied around the head, the Scoutmaster's gumboots, a couple of daggers thrust in the belt, and an eye-shade make a perfect costume.

Headwear is improved or varied by using a large stocking cut short with the end knotted and worn turned inside out.

### OLD-TIME SAILORS

Old-time sailors' hats – those worn in Nelson's time – are quite easy to make from old Scout hats. To do this, cut a piece of cardboard to the shape and size of the crown; push the crown down for about a third of the way, and glue the flat top on to the crown. The result should be as in Figure 1.

It may be found necessary to cut off a strip all round the brim to give it the correct style, but it must be done slowly and carefully, using a large pair of scissors.



### BULL-FIGHTERS

No doubt these hats will remind you of Spanish bullfights, for they are not unlike those worn by the Spaniards (see Figure 2). Given a red chin-cord with tassels peeping over the brim and you have the very thing.



Of course, both these hats have to be dyed black, and will probably need to be dipped three or four times before they take on a black appearance.

Another style of bull-fighters' hat is made from the crown of a bowler hat. Having cut the crown free of brim and lining, a piece of coloured cotton cord is sewn oval-shaped along the top of the crown and afterwards slightly pushed in to give the effect of a sunken top.

Next, large red pom-poms must be sewn at each side and the hat is complete (Figure 3).

The rest of the costume is very easy to produce, for a low-cut waistcoat given an edging of red braid or gimp and worn over a white shirt with a red tie is very like the real thing. If you need a pukka outfit, an old Eton coat makes an almost perfect garment after very little adaptation. First cut two pieces of cardboard to look like epaulettes, cover with some coloured cloth and edge with red fringe and stitch into position, afterwards giving the sleeves a loop or two of braid and the coat is finished.

The rest of the costume is made up of a pair of black running shorts, gathered below the knee with elastic and red pom-poms, a large sash, and white stockings.

### A COWBOY'S DRESS

Impromptu ranchers and cowboys are simple to represent. Two rag slip mats produce a most excellent pair of "chaps" or "cowboy's trousers." An old trilby hat can be used for this type of dress and never seems out of place. Should you need the correct shape, an old felt hat soaked thoroughly in hot water will do the trick. It should be placed over some blunt

object (your bedpost might do), and pulled steadily down until it is stretched to the desired depth. It is then a simple matter to arrange the shape and, when dry, you will have just what is required for the part (Figure 4). Various styles of hats may be shaped in the same way.



FIG. 4.

Clown dresses can be adapted from large-sized pyjamas by threading elastic through the bottom of the legs and arms, and adding slip-on frills at the cuffs, ankles, and neck.

A “champion weight-lifter” needs tights to look the part, and these can be made from the drawers of an ordinary suit of underwear worn over a bathing costume.



FIG. 5.



FIG. 6.

Running shorts with elastic in the bottoms should be worn over the drawers and pulled well up to give the final effect (Figure 5). If it is not possible to obtain bright, coloured underwear, they should be dipped in some dye.

#### PERIOD COSTUMES

A very effective “period” costume can be made with a complete set of underwear and a little trimming. The vest, which must fit closely, should have a white ruff or lace collar attached and a bow of ribbon hanging in front to hide the buttons. Lace cuffs are added to the sleeves, and the bottom edge is hemmed (Figure 6).

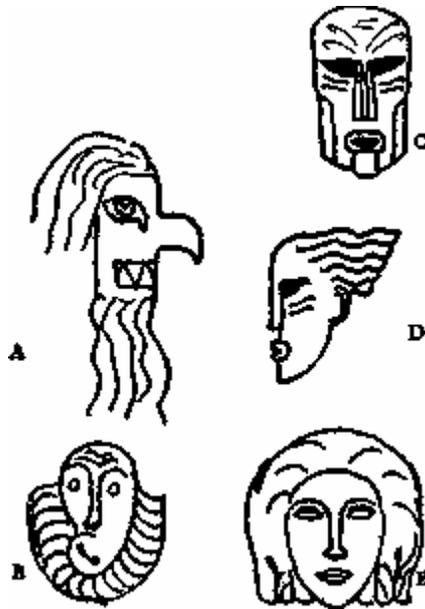
The tights are made as already described, but with sateen trunk drawers in place of the running shorts. The bottoms of the tights must have straps to keep them well over the instep and heel of the foot.

### XIV

## MAKING MASKS

### MASKS FOR DANCES

PROBABLY some of you were lucky enough to go to the great Jamboree in 1929. If so, you may remember that among the very fine performances given in the open-air theatre there were some wonderful masked dances, including the Japanese Lion Dance, the Red Indian Thunderbird Dance, and a dance by the Nigerian Scouts.



A. Sketch drawn from memory of the mask the French Scouts used at the Jamboree for the Thunderbird Dance. The Shell was cardboard rose-wood, beard and hair coloured raffia.

B. Man-ape mask. C, D, E. Various masks you can make.

One could not help being impressed by these dances; there is something uncanny about a person dancing with a mask – the mask seems to come to life, and the person inside instinctively to take on the character of the mask.

With a little care and patience it is quite possible for us to make a mask and invent or copy a dance. Of course, music and lighting play a very important part in the effect.

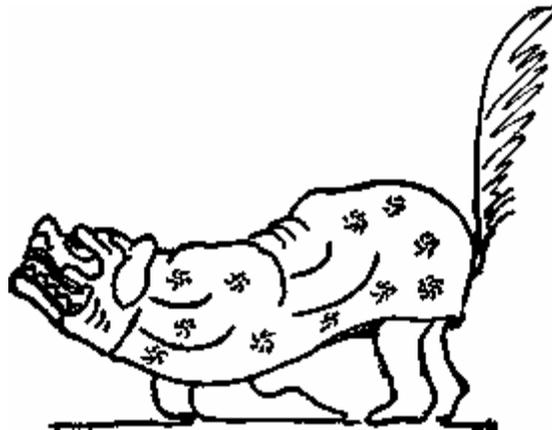


FIG. 1.

Japanese lion mask.

Figure 1 is a rough sketch of the lion for the Japanese Lion Dance, the head being made of gilt papier-mache. The lower jaws and ears move up and down, worked by levers from inside. The body part is made of green doth, with white stencilling, and the tail is of paper. It requires two men to work the lion, one doing the head and the other the tail.

### THE JAPANESE LION DANCE

The Dance goes something like this. The curtain rises and shows the lion asleep on the stage, which is lit up with a green light, and the notes of a flute are heard. (If you cannot get a flute-player a good substitute is the gramophone record of Debussy's *L'apres-midi d'un Faune*. H.M.V. B.1768.) A butterfly then comes on, represented by a player in a black cloak, holding a small whip with a wad of cotton-wool or paper on the end of the string. He dances round the sleeping lion once or twice and then gives him a flick with the whip which makes him stir in his sleep. A second flick causes the lion to wake up, and very slowly to rise to his feet, back legs first, the head swaying to the rhythmical beat of the music. After the lion has been playing with the butterfly for a while, a spider appears and the butterfly goes away. The spider has a very sinister appearance. He is wearing an evil-looking mask and carries three streamers in each hand. After dancing round once or twice he throws the streamers over the lion and the enraged beast struggles to get free of the web while the spider throws more and more streamers. The lion's struggles gradually weaken until he sinks unconscious to the ground. And so it ends.

The streamers used for the spider's web are of the kind usually seen at parties and can be bought at most toyshops.

This is a very rough description of a dance that is full of beauty if it is done well, as the Japanese Scouts did it at the Jamboree.

### HOW TO MAKE THE MASKS

There are three methods of making masks : By carving in wood, using papier-maché, or by building direct in paper, first getting the shape roughly and then gluing layer upon layer of bits of paper until the required shape is obtained. Smooth off with a sharp knife and sand-paper. This last way is, however, the most difficult.

The simplest method is to make the mask of paper-mache. First make a clay model of the mask, then from the model make a plaster-of-Paris mould. When the plaster is well set, take the clay out of the mould and dean it well. Then begin by lining the inside of the mould with small pieces of well-soaked newspaper pressed in to the shape of the mould. Continue to build up layer upon layer, each layer being glued together with paste made of flour and water. When the mask has attained a suitable thickness, let it dry for a few days and then take it out of the mould and finish off by painting, Tarnishing and making holes for the eyes. The chief thing to remember is to avoid making your mask too Lie-like. Make a design of the features and simplify everything.

There are some very fine Japanese masks in the Victoria and Albert Museum which any boy within reach of London and who is interested in this subject should go to see.

## XV

### HOW TO MAKE A RED INDIAN WAR BONNET

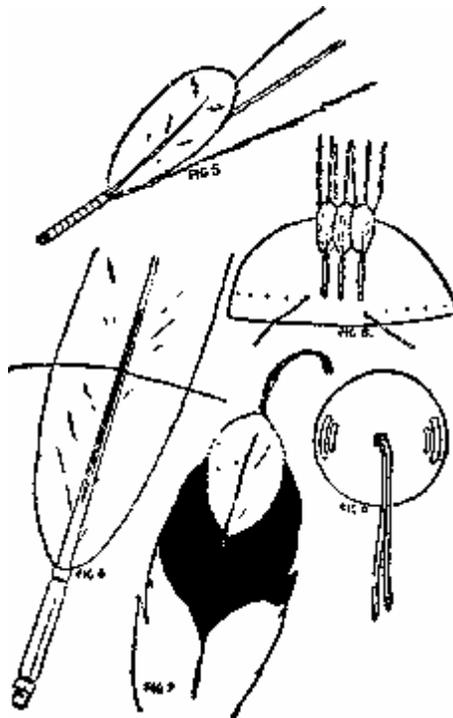
To most of us the very name of Red Indian brings a vision of a person in war-paint and feathers, although this vision is not wholly true. In fact, many of the Indian tribes rarely wore feathers. But perhaps we can blame the cinema for this misunderstanding!



Probably the most familiar type of war bonnet (this is the name given to the head-dress) is of the drooping variety favoured by the Sioux and Cheyennes tribes of the Plains Indian. It is fascinating to look upon and well worth the little trouble taken in its making.

### THE BASE OF THE BONNET

For the base of the bonnet an old Scout hat or, better still, an old vivid-coloured felt hat is required. This should have the hatband and brim removed and should fit loosely. Measure from behind the ear across the forehead to the same point at opposite ear and mark this measurement upon the crown of the hat about 1½ inches from the edge. This should be divided up and cut into seventeen pairs of slits each ¼-inch long and the same distance apart. Under the last pair of slits on each side cut another pair, ½-inch from the edge, making nineteen pairs in all. Figure 1 will make this clear. Eleven more pairs must be evenly spaced and cut in the remaining portion about half an inch from the edge. The sudden drop at the sides makes the bonnet flare out.



### PREPARING THE FEATHERS

We now come to the most tedious part of all – the preparing of the feathers. Before we start, however, let us say definitely that chicken feathers will not do for the main parts. They are too coarse and are not long enough to give that fine sweeping effect so essential in a war bonnet. Turkey feathers are probably the easiest to get and answer the purpose quite well.

Thirty tail feathers and sixty fluffy base feathers will be needed. First snip off the ends of the quills as shown in Figure 2. Insert cuttings of wood about 2½ inches long as in Figures 3 and 4, first tipping the wood with seccotine. For the next process, 3½ yards of stout ¼-inch web is required, cut into thirty equal lengths.

One of these lengths is folded in half and fastened to the main feather by the last few turns of the adhesive tape, as in Figure 5. A piece of flannel or felt is sewn over the base of the feather and tape wrapping (Figure 6) and bound with coloured twine about ¼-inch from each end. Another fluffy feather and a wisp of horse-hair is stuck on the feather tip as in Figure 7. A spray from a “tickler” sold at most fair grounds will do just as well as horse-hair.



#### FIXING THE FEATHERS

The feathers are next laced to the hat-crown with a leather lace as in Figure 8.

To keep the feathers together a piece of twine should be threaded through the rib of the main feathers as shown in Figure 6 and the ends tied together. They should be spaced just close enough to prevent them from turning inside out when placed upon the head.

#### FINISHING OFF

The bonnet is now ready for the brow-band, which should be beaded. Two nickel-plated discs about 2 inches in diameter will be needed and should have holes  $\frac{1}{2}$ -inch apart drilled in the centre. Punch two holes in the hat-crown so that the discs (Figure 9) will be in the position as shown in the finished bonnet (Figure 10). A piece of coloured felt under these discs adds to the effect.

Ermine tails are attached to these discs and the bonnet is complete. Imitation ermine may be bought at most drapers' and milliners' shops. Should the bonnet be too loose, two thongs may be fastened under the discs and tied under the chin.

## XVI

### SIDE SHOWS

SIDE shows at fêtes, bazaars, etc., need plenty of thought and ingenuity, while fairness to the public must be a guiding principle. Few of us really like the laugh to be on us and it means this when we pay for something which is little better than a fraud. Here are a few suggestions for the next amusement stunt that you are likely to run, but before we proceed further we would like to impress upon you the necessity of carrying out the various schemes as thoroughly and professionally as possible. Even though your performing lion is comic, let the public HEAR his roar coming from behind the curtains (a lamp glass does the trick admirably), and let the tamer prance up and down, complete with whip and waxed moustache, announcing "the finest show of the age."

Of course, should the Stadium, or whatever you choose to call the fair ground, be a small hall, a little discretion is needed on the part of the different announcers so as not to kill other items that are striving to attract patrons. It is well to arrange the order in which this advertising is to be done, with not more than two shows "crying the odds" together.

An occasional free show helps to create a jolly atmosphere, and often incites the loosening of purse-strings that might otherwise remain tied. An amusing stunt to watch might be billed as "A genuine box of cigars or nuts for threepence," and is arranged in the following way. A twelve-rung rope ladder is fixed to the wall and floor, sloping at an angle of about forty degrees. Inserted between the ladder and the fastening rope – that is, the rope that is attached to the floor and wall – are two very well-oiled swivels allowing the rope to rotate at the slightest pressure from either right or left. At an arm's length from the tenth rung is placed a shelf on which stands the box of cigars, ready to be taken by those who are able to mount the ladder without losing their balance, so causing the ladder to rotate. A couple of mats should be placed beneath the ladder to help break the fall of the unfortunates, who receive only a bag of nuts after their failure to secure the cigars.

## More Spare Time Activities

---

This show, in charge of a nimble climber, complete with huge white sweater to add to the effect, who is able to demonstrate how easy it is to climb the ladder, would prove a good money-maker as well as a laughter-maker. Obviously, the whole affair is a matter of concentration on balance, although most people's minds will be on the prize.

Reviving old-fashioned peep-shows might prove a novelty and could almost be truthfully called "the oldest type of entertainment in the world" and the "ten shows in one," or whatever number of peeps could be arranged conveniently in one booth. They are complete in themselves, being encased in a box with the side cut out in the form of a proscenium opening, complete with draw-curtains. We have seen a very excellent peep in the form of a camp-site that showed very minute detail, even to a small storm-lamp outside a tent. Darkness gradually descended on the site by slowly removing a concealed electric light and at the same time lighting one at the base of the show. This lower light caused tiny fires to glow in the darkness and patrol tents could be seen illuminated. Even the storm-lamp was alight. These lighting effects were obtained by making the actual model on a glass base, the "ground" beneath the fires, tents and lamp being carefully faked so as not to be noticeable at "daytime." This glass base also helped to provide a realistic stream running through the camp and the whole affair was a noteworthy achievement. Many of these peeps can be constructed, after a little adaptation, with models that are already in use, and working models such as may be made with meccano sets and the like would make quite good shows. Every possible advantage should be taken of the lighting effects and only one show should be on view at a time, the rest being covered with the draw-curtains.

No collection of side shows would be complete without the Lucky Dip or Bran Tub, although this might well be disguised under the title "Bunty pulls the strings." To construct this, a stand is made with uprights and a covered top or roof. Inside this roof, a brass curtain ring is hung, sufficiently large to allow coloured strings to be easily pulled through. Laid out on view upon the table of the stand are the various prizes with a string attached to each. The strings are then passed up through the ring and brought over to the front of the stand and fastened loosely together with a piece of ribbon. Each string is then sold at a copper or two a piece. Such a stall, nicely decorated, looks quite attractive, and certainly pays financially for the little trouble involved in its construction.

Another show that will not fail to attract both young and old is "Treasure Trove"; this gives a great deal of enjoyment to all concerned. Two or three pirate characters from the famous *Treasure Island* have a large chart on view of a treasure island and are prepared to receive applications for claims to be "pegged." These claims are to be bought from Long John Silver, at, say, sixpence each and take the form of pins with a tag attached complete with the purchaser's name. Having bought a claim, the purchaser is allowed to "peg" it out on the chart which has already been marked up into small plots. No claim is allowed to be "jumped," which means only one claim to each plot.

At some previously stated hour the treasure is unearthed and the spoils are then distributed to the lucky claimants. Of course, a little pre-arrangement is needed for, obviously, the treasures have to be "buried" beforehand. The chart must be a fair-sized one, the ideal thing being a Southern Railway poster of the Isle of Wight. This is a picture map of the Island and is about the right size. If it is not possible to obtain one from the Advertising Office, Waterloo Station, some idea of the type wanted is explained. Having secured the chart, it must now be pasted on cardboard, while another piece of wood or stout cardboard is cut to the same size as the chart, and then divided into, say, three-inch squares and given a series of numbers, distributed haphazardly. The chart itself is then divided into the same sized squares and carefully cut up into pieces, the pieces afterwards being replaced in order upon the already numbered baseboard. This baseboard should have a beaded edge so as to prevent the cut-out squares from falling or sliding about. When exhibited it should be flat on a table or stood at a sloping angle on an easel. The prizes are given numbers and stored away in a chest until the

## More Spare Time Activities

---

appointed hour, when they are spread out in full view of the treasure hunters. One pirate carefully removes the plot from its position on the chart disclosing a number beneath, while another selects the corresponding numbered prize and Long John Silver presents the treasure to the speculator. Given a little imagination and a certain amount of costume and make-up, this would prove a very popular side show indeed.



Many of the quite ordinary shows may be improved upon almost beyond recognition and can be made really attractive shows. The secret of success is with the showman, for if he can create an enthusiasm for his particular booth it is surprising how quickly this enthusiasm spreads. For instance, here is a brand-new scheme – at first glance, anyway. The front of a booth is made to look like the side of a gondola of some aircraft or other, complete with steps and gangway leading up to it. An attendant in flying kit is announcing a cruise to foreign lands – about to start immediately, with very limited accommodation for, say, twenty people at the low cost of only threepence the return journey. Tickets are bought and the passengers mount the steps and pass out of sight only to climb down again into the inside of the booth, where they are shown a couple of travel films thrown on to a tiny screen by a Pathoscope projector. These films are hired or bought very cheaply and the whole show can be made novel and interesting at little cost, providing some kind friend is able to loan the projector. As you see, an old idea in new surroundings, but brand-new, at first glance.



Shadowgraphs offer scope for a side show, for they can be screamingly funny, and any show causing laughter does not fail to attract curiosity and its followers. These shadowgraphs

## More Spare Time Activities

---

are thrown on to the screen by the hidden performer standing between a bright light and the screen. Surgical operations and the like are always very popular with this type of show, and umbrellas and old boots that are “discovered” inside the patient never fail to raise roars of laughter. Animal shadowgraphs have a fascinating appeal to lots of people, although this needs a fair amount of practice to get a large enough variety to make a show of any length.

Scenery can, and does, play an important part in a successful performance, and is easily constructed from any cardboard waste, such as old chocolate or cigarette boxes. Cotton-wool “fluffed” out and then pressed flat and stuck on to sticks makes very realistic trees and hedges, while a piece of tissue-paper gives an almost perfect still-water effect. All scenery used must be placed flat against the cloth. A story-teller, who possesses a little sense of humour, can greatly improve a show and short dramas might easily be presented in this way. Here is how a sea-battle might be produced, the whole scenery being made from cardboard and paper. The sea is made by cutting two strips of cardboard with wavy edges; these strips are moved backwards and forwards to give the appearance of rolling waves. A cut-out shape of a ship held at some distance from the screen appears very large and, by drawing it nearer the screen, may be made to decrease in size, giving it the appearance of sailing out of sight. Storm effects can be produced by “noises off” with a piece of tin and a flash lamp. With a little ingenuity all kinds of other effects can be produced, but do not overdo these effects, for they really play an important part in a good show. Quite a number of historical events lend themselves to this type of show and could be made exciting affairs, after a little experimenting.



Talking of shadows reminds us of cut-out silhouette-making and good likenesses can be produced after very little practice. The method of shadowgraphy as explained above can be easily adapted for the production of silhouettes. In place of the screen, however, a sheet of glass is used, covered with a piece of thin detachable paper around which is traced the silhouette; this outline is afterwards filled in with Indian ink. The correct distance needed for this work is very soon discovered after experiment and such an exhibit can be tucked away in any spare corner.

Wild West shows, with plenty of gun-firing, are always very popular and need very little preparation. The usual thing is to have a sharp-shooting episode, with one of the audience to assist the cowboy. Toy balloons are burst at a distance of about twenty feet with the shooter blindfolded, and an apple is cleft in two in an equally awkward position for the shooter. Biscuits are splintered with the assistant holding the biscuit at arm's length, and many other feats of skill are performed which, to the audience, are very clever indeed, at least until the assistant breaks the biscuit out of turn and so gives the whole show away, much to the supposed dismay of the cowboy. The number of side shows that could be devised is far too great for detailed description here. Try to invent something fresh if you can; even a new variation of an old stunt is better than repeating well-known things. Remember to aim all the time at pleasing your public, and not trying to rob them!

## XVII TWO MORE SIDE SHOWS

A WOODEN tray about forty-eight inches square by four inches deep will be needed for this show, which is “billed” as the “Coal Mine.” The idea is first to mark a position at the bottom of the tray and afterwards fill in with earth. On the top of this earth a model pit-head is made, complete with wheel and perhaps coal-trucks and rails. Claims may be staked for the coal (the hidden mark) by buying pegs as in “Treasure Trove,” and after sufficient claims have been sold, the coal is unearthed. The prize is, of course, a quantity of coal, the weight depending upon the price of the claims and the number put up for sale.

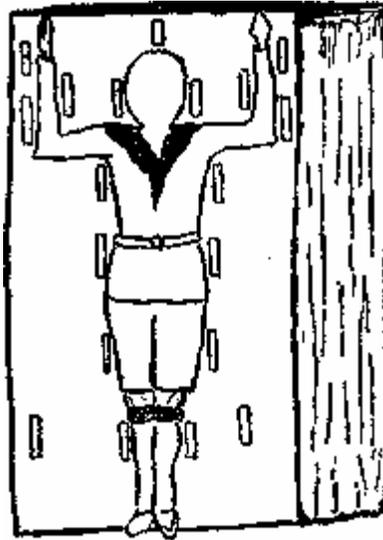


Fig. 1

A sensational side show is always well patronised, and a knife-throwing act can be produced without the danger to the “human target” in the following way. First, you need a background for the target to stand against, which should be made box-like with side and back curtains as in Figure 1. Of course, for this show, no knives are actually thrown, although the public are not to know this.



Fig. 2.

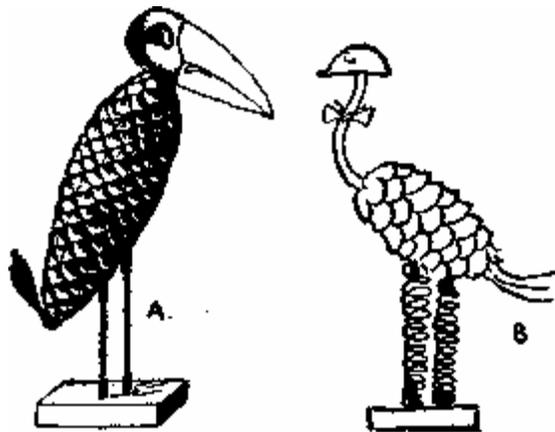
The knife-thrower produces a large tray of knives containing about twice the number to be thrown, and places them on a table. The target then takes up his position and the thrower starts, standing BETWEEN the table and the audience, that is with the audience on his right and the table on his left. Taking aim at the target, his arm swoops down slant-wise and the knife is seen quivering in the background. What actually happens is that the thrower swoops the knife back on to the table and a confederate behind the background pushes the knife into position, without the audience realising what has happened. It is a perfectly natural thing to let the eyes travel with the flying object, and seeing it arrive, conclude that it was thrown.

Now for the background and its making. It should be made up of lathes about two inches wide, which are held in position by gluing them together. But before this is done, a look must be taken at Figure 2. Here a knife is driven through the width of a lathe and nails put into position to act

as pivots. A series of these knives are planed on the background and put into position during the course of gluing together, making sure they swing easily to allow the knives to change sides. A peep-hole is made for the confederate and the mechanism is complete and ready for the knives to be swung into position at the critical moment. Figure 1 shows how the knives should be spaced.

## XVIII CAN YOU MAKE PINE CONE BIRDS?

WHEN next on one of your jaunts into the country, keep your eyes open for fallen pine cones. Here are sketches of two cones made into novel paper-weights, and they find a ready sale at Scout Fairs and the like. It is surprising how human they can be made to look; the varied expressions obtained often cause much amusement.



Two "cute" little birds that can be made quite easily.

The head of "A" is cut from a Brazil nut (not the shell). It is joined to the neck with a large pin, after the top has been cut flat. A dab of seccotine adds strength to this join.

The base is made of lead, with two stumps inserted to take the legs. To get a convenient-sized piece of lead the following scheme will be found quite satisfactory.

Get a match-box and thoroughly grease the inside with fat (margarine will do), and after standing two screws on end at a little distance apart, pour in the molten lead. After this has set, the base can be easily removed and the box used for the next article. The projecting screws can then be cut to the required length, which needs to be about a quarter of an inch.



A cheeky pine cone bird.

The legs are made from wire springs made by wrapping a piece of wire round a thick needle or nail and then attached first to the cone stumps and then to the base screws. It will be found that at the slightest touch the bird begins to totter and sway. It should be given a tail of feathers or

dried grass to finish it off. Enamel paint can be used for colouring the head and base and a little line here and there adds to the expression.

“B” is made in much the same way, except that the head is a walnut shell and needs to be painted and perhaps cut a little to shape. The long neck is of wood and has a little bow tied to add to its comical expression.

#### LEAD TOYS

The mention of an improvised mould for the lead base raises the possibility of making various small things in lead. Farmyard sets and cowboys, and the many other lead toys can really be produced without a great deal of practice. “Toymoulds,” of 67 Stafford Street, Birmingham, are manufacturers of various shaped moulds, and these can be bought at prices ranging from 2s. 6d. to 6s. per mould. Paints for colouring the finished articles can be bought at eight colours for 3s. Instructions, which are very few indeed, are given with these moulds, and all that remains is to organise massed production, with a person for each stage, which means that results will be more rapid and the standard of goods much higher. The making and painting of these toys can be a very popular exhibit at a Scout Fair and would no doubt cause a larger staff to be needed in the “sales department.”

### XIX

## BEATEN COPPER WORK

### WHAT YOU WILL REQUIRE

WITH very little skill one can make quite a number of useful things out of copper or brass. Things like lanterns, spoons, woggles, etc., can easily be made.



Brass Lantern

Of course, this kind of work can reach a high stage of craftsmanship and some very fine modern work is being done by experts who have had years of practice; but if you start on a few simple articles, even without experience, you can produce some good results.

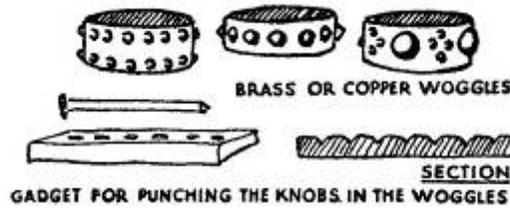
The essential tools for the job are a few drills, a vice, riveting hammer, soldering equipment, a pair of tin shears, one or two files, and perhaps a hacksaw.

You must then get some metal to work with. Old bugles or the brass shell of side-drums are ideal for the purpose, and there are quite a number of Troops that have stowed away in some corner the remains of the Troop band that died a natural death years ago. So here at last is a use for the relics. You can also buy copper from various handicraft firms.

### A BRASS LANTERN

Before making an article like a lantern it is advisable to make a cardboard model first. This will help you to understand the construction and to know how much material to get. Then when it comes to working in metal you make the shape just like the cardboard model.

Bending or rounding has to be done in the vice. The action of hammering brass or copper tends to harden it, so occasionally you have to soften the metal by heating it red-hot and plunging in water. The illustration shows you a design for a lantern. If you are capable of making a cardboard model of it you can do the same in metal. When it comes to bending the strips at right-angles for the bottom and sides the best way is to draw a line to mark out the place; put the strip in the vice, and gently tap it over at right-angles.



When riveting together is necessary, drill a hole through the two pieces of metal large enough to take the rivet and then see that one end of the rivet is resting firmly against a block of metal so that you can burr the other end over.

Don't forget to solder some little strips of thin copper on the inside of the lantern which can be bent over the edge of the glass to keep it in place. Use nice crinkly pieces of glass, not the plain sort you get in windows.

### METAL WOGGLES

You can also make very effective woggles out of thin strips of brass, copper or silver, by punching knobs round in a design. For a few pence you can buy enough metal to supply the Troop with very posh woggles, and once you have made a punching gadget you can get any number off quite rapidly.

The gadget is made by getting a plate of iron or soft steel about 3½ inches long and sinking a series of holes along the middle about ¼-inch apart, drilling no deeper than the point of the drill (see illustration).



Then make a punch out of a nail the same diameter as the hole and file the point at the same angle as the point of the drill.

Having done this place on the plate the strip of brass that is going to be your woggle and punch into the holes. When this is finished bend into a ring and join the two ends by soldering. Finally polish well with brass polish.

## XX CANDLESTICKS

CANDLESTICKS are always useful and quite simple one' can be made which will serve as useful presents for Christmas. The illustration shows a black enamelled candlestick with a red shade, and both day and night it has a really pleasing appearance. The candlestick is made from three cotton reels, a piece of dowling that will just pass through the reels, and an empty shoe-polish tin.

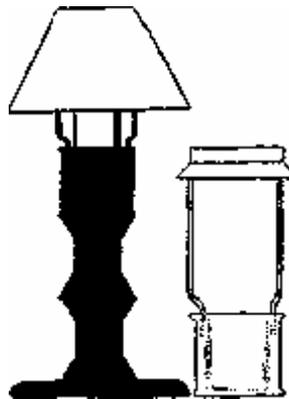


Fig. 1.

The top reel in Figure 2 needs the centre taken out, and if the use of a lathe is obtainable, a dozen or so of these can be “chucked” out in a very few minutes. Otherwise a very sharp knife will do the trick, but do not hurry over the operation!

Do not forget the little holes to be drilled at each side to take the shade holder. Next, the small notches at the top of the reels have to be rasped off level before they can be joined up.

Having carefully nailed the piece of dowling to the lid of the tin as in Figure 3, the tin should be tightly filled with sand, and after giving its edges a dab of seccotine, closed.

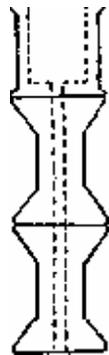


FIG. 2.

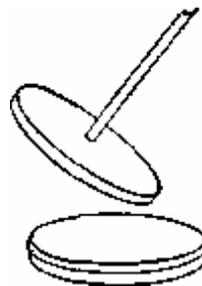


FIG. 3.

The reels are then passed over the dowling and each glued together. When the whole is quite dry it should be enamelled to the required colour, and the candlestick is ready for the shade. In deciding what shape and style of shade is to be made, the candlestick must be considered so

that both match properly. Remember, simplicity pays in the long run, for elaborate designs are not so pleasing to look at and need a great deal more time and care to make. The shade must have a suitable opening at the top, too, so that it will not scorch when the candle is lighted. The circular shade, as in Figure 1, is cut from a piece of paper, 9½ inches in diameter, using a little less than half the circle as shown by the dotted lines in Figure 4. It is 3 inches deep.

If a larger flare or spread is required, a little more than half the circle is needed. It is a good plan to use brown paper for patterns. Should it be decided to decorate the shade, it is well to remember that this can best be carried out if the shape is kept flat. The two ends are wrapped over for about a quarter of an inch and firmly stuck with an adhesive.

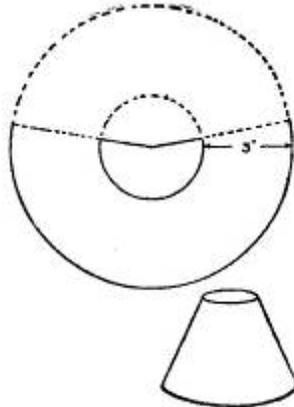


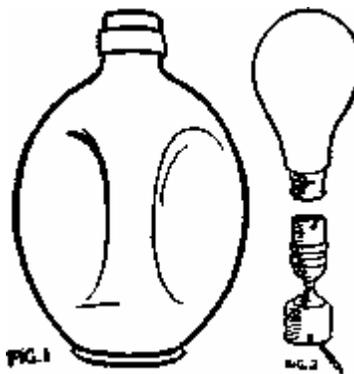
FIG. 4.

The holder is made from wire and a narrow strip of tin as in Figure 1, and carefully soldered together, the legs of the holder being easily bent to shape with a pair of pliers.

## XXI

### MAKING A LAMP STANDARD

THIS is the way to make a novel electric lamp standard. The first thing required is a bottle, but not of the ordinary type. A “John Haig’s Dimple” whisky bottle, as shown in Figure 1, serves the purpose admirably, and can be obtained from most wine and spirit merchants (empty!). Don’t clean the inside of the bottle, as any water would make it difficult to get the paint evenly spread. A trace or two of spirit will do no harm!



Having cleaned the outside of the bottle and removed the labels, it should then be decided what colour the standard or bottle is to be. Get some paint of the colour you want and strain it through a muslin cloth to remove all impurities.

The colour is then applied by pouring a small quantity of the desired paint into the bottle and slowly revolving it until all the inside is thoroughly covered; make sure that the colour is evenly distributed. The surplus paint is then poured from the bottle.

The next job may sound rather difficult, but is really quite simple – that of drilling a hole in the bottle. This is to allow the flex lead to pass through and so the hole must be near the base, preferably at one of the three corners.



Fig. 3

If a proper glass drill is not available, and they are expensive to buy, an ordinary metal-work drill will do the job. Use a little carborundum powder mixed into a paste with turpentine as an abrasive.

It is a slow business, and great care must be taken. Make certain to have the correct sized drill, because it is fatal to try to enlarge the hole once it is through the glass. An eyelet taken from an old plimsol and inserted into this hole puts the finishing touch to the job.

The lamp-holder is attached to the standard neck by fittings as shown in Figure 2. These consist of an ordinary lamp-holder screwed to the shell of a two-way switch.

The two-way switch shell or container *is* reversed and clips over the neck. All that now remains is to buy or make a coloured shade to tone with the standard and the finished article, Figure 3, is in your hands.

## XXII

### CUTTING FIGURES IN THIN WOODWORK

WE are all familiar with the usual type of fretwork and the thousands of elaborate designs available. Many people do not like these designs, as they are often more ingenious than beautiful (and take a lot of dusting!). There are, however, many things to be made with the fretsaw which are simple in form and quite attractive.

A few reminders on one or two practical points first may be useful. If the fretsaw is forced into the wood, the result is an abundance of broken blades! Number 2 blades are most satisfactory both for speed and finish. Remember to keep the saw upright and to let it work freely up and down by its own weight. The Archimedean drill, used to pierce holes to allow the saw to pass through for cutting internal frets, should be a shade larger than the blade. Work should be placed

flat on another piece of wood before being pierced to prevent the splitting of the grain as the drill comes through the underside.

Files sometimes play a part in fretwork, but should be used only as a last resource, especially in geometrical designs such as a circle or a triangle, for these designs show inaccuracies in workmanship very quickly.

Wood should be bought ready planed and glass-papered, although cigar boxes and the like are quite suitable. Of course, ply-wood being made up of layers, the centre of which runs at right angles to each of its sides, is to be specially recommended because of its equal strength in width and length, and of the less likelihood of it warping.

Articles made for sale demand careful consideration and, to ensure their selling, there should be an element of novelty about them. Cut-out figures of well-known characters such as might be found in *Alice in Wonderland* or *Peter Pan* find a ready sale. They should be copied or traced from an illustration, and, having been pasted on the wood and cut out, should be carefully coloured with water- or poster-colours.



The Duchess, from *Alice in Wonderland*.

The more highly coloured they are the better, and given an egg-shell black backing, they appear really attractive. A small piece of wood is glued to the bottom as a platform for the figure to stand upon. The whole should then be varnished.

Photographs of people can be dealt with in the same way; the photograph itself being pasted on to the wood.

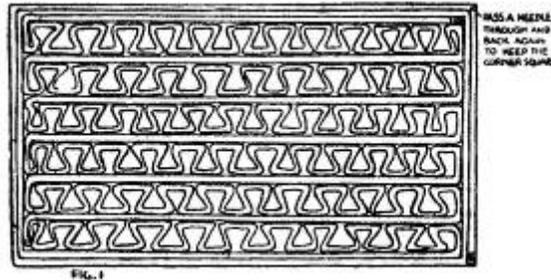
Another idea is to cut out figures of dogs in much the same way as the figures described above, but instead of colouring them, actual fur is glued on to the figure. This can be obtained from old coats, or cuttings may be bought from a furrier's shop.

It gives the finished article a realistic effect, although a little practice is needed to acquire the knack of producing the correct appearance of the rear legs. A small pair of scissors is used for this operation.

The eyes are produced by gluing a tiny piece of glass in place. A piece of wine gum, the sweetmeat, answers this purpose quite well. These little figures may also be cut from pieces of felt and, after the fur has been attached in the same manner as on the wooden figures, may be used for decoration on hand-bags, etc.

## XXIII MAKING MATS

MAT-MAKING is not such a difficult activity as might at first be imagined, and the tools required are very few indeed. Shapes and designs are unlimited, although only a few can be described here. You can use your own imagination for devising others.



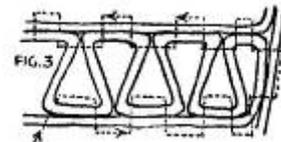
The type of lay-out described here can be used for both Sennit and Rush work, and should be made according to the use the mat is to be put to. Sennit is a flat plait made of coco-nut fibre and is suitable for rough outdoor wear. Its formation as a mat allows for the removal of dirt and stones quite easily.

### A COCO-NUT FIBRE MAT

The coco-nut fibre may at first be found a little hard to the fingers, but unless they are very sensitive this will soon wear off. A large, slightly bent sail-maker's needle and a sewing palm will be needed for the sewing. Strong, waxed string or twine should be used and the stitches measure about one inch long.



To make a mat as shown in Figure 1, it is necessary to mark out on an old table the size required with four nails, going twice round the shape with the fibre, first whipping the end of the coil to stop it from unravelling. In order to keep the shapes true and even throughout the mat, it is a good plan to mark out the first row of "zigzags" with nails, as shown in Figure 2. Having succeeded with the first row, it is quite an easy matter to keep the following rows in their correct proportion, working the mat towards you. If any difficulty is found in this, the completed row may be lifted off the nails and the next row worked as in the first, and so on. Great care should be taken to keep the mat to its proper shape and to see that the "zigzags" do not vary too much in size.



As each shape is made, it should be stitched firmly into position. Figure 3 gives an outline of how this sewing should be done. Work from right to left.

The corners should be nice and square and held in position by an extra stitch put in after the mat is finished. The size most commonly in request is No. 3, which is 30 inches by 15 inches.

### MAKING A KNEELER

Besides mats, kneelers can be made quite easily by just stitching a row of shapes on to a miniature mat, as in Figure 4. After articles have been made they should be passed through a flame of some sort to singe off any surplus whiskers, so giving them a cleaned appearance.

### A RUSH PLAIT MAT

Heavy rush plait may be worked in exactly the same way and has two advantages in that it is much easier to work and can be obtained in various colours. The rush should be soaked in water for a few minutes and afterwards left in a damp cloth for a few hours. This little preparation will help in the working. Of course, rush mats are intended for indoor use and can be made to fit any colour scheme. Figure 5 shows another principle of working and in this it will be seen that it is possible to use two colours at the same time. The inside may vary in shape and colour and is made independent of the rest of the mat. The outer backing is just worked round and round, firmly stitching in position as the mat continues.



## XXIV

### MAKING LINO PRINTS

You have probably tried cutting your initials in a piece of rubber to make a stamp. The result is rather smudgy, but the idea is sound, and if carried out on proper materials can be very useful for printing headings for Troop notice paper, for making Christmas cards, book-plates or for decorating the programme for a concert or display.



An example of a picture cut from linoleum.

#### THE MATERIAL

Pictures have been made by means of many different materials; even potatoes have been used for this purpose; but the simplest form of all can be cut in linoleum. You must get a piece of plain (that is, without pattern) linoleum (not the cork variety) and glue it on any piece of wood so as to keep it level. There is no need to cut a piece out of the family floor-covering; any shop that sells linoleum always has odd bits that it will gladly let you have.

### DRAWING THE DESIGN

The next stage is to draw on paper whatever design you want to reproduce. Remember that the result is to be printed in dead black and white. The parts in your design which are black will stand up from the rest of the block so that they can take the ink. All the white parts have to be cut away.



There is one very important thing to remember. The actual block shows the REVERSED picture. For instance, if we were going to cut out the word MAN, as shown in Figure 1, the actual block will show the word reversed, as in Figure 2. The simplest way of getting this reversed word or picture on to the block is to trace the word from your original drawing and then with carbon paper to transfer it on to the surface of the linoleum by simply turning over the tracing paper and going over the lines from the other side.

### CUTTING THE BLOCK

Having got our design on the block, the next job is to do the cutting. This can be done with a good, sharp penknife (it *must* be sharp!). First cut along the lines drawn on the block, sloping the knife a little away from the body of the design. This is best illustrated in Figure 3, where the N is shown cut out. When you have carefully gone round the whole design, you can then remove the rest of the linoleum, that is the white parts, with any small gouge, or even with a penknife if you are very careful.

Printing is quite a simple matter. The best ink to use is printers' ink, which can be bought in tubes. This should be spread out on a piece of glass or other flat surface. It must not be very thick, or very thin, but just easy for spreading. The ink can be applied to the block in a number of different ways. The best is by means of a rubber roller, which can be bought quite cheaply from a photographic shop, but a brush can be used instead, though it is not so easy to get the ink to spread evenly.



Another way is to make a dabber of old rags and cottonwool covered with a piece of linen. You will find that ordinary duplicating paper is quite useful for your purpose. Shiny paper should not be used. The paper should first of all be moistened. To do this lay a sheet of wet blotting-paper on a board, and on it put three pieces of the printing paper, then another sheet of wet blotting-paper, and so on. Put a weight on top of the lot and leave it for an hour so that the printing paper can get thoroughly moistened.

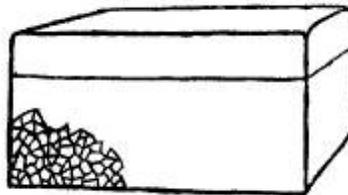
When the block has been inked, lay the damp paper on it very carefully, and on top put a piece of dry paper. The easiest way to rub off the impression is to use a dessert spoon and rub evenly OH top of the dry paper, starting from the centre and working out gradually with even pressure to the edges. The prints will soon dry if they are just hung up somewhere for an hour or so.

The example we have chosen, the word MAN, provides a very simple first exercise, and you should carry this out to learn the tricks of the trade. After that you can try much more difficult things, as, for example, the picture reproduced at the beginning of the chapter, which was cut in linoleum.

### XXV

#### EGGSHELL MOSAIC

You have probably never thought of covering a box with eggshells, but this form of decoration works quite well and looks rather beautiful when finished. The surface bears some resemblance to porcelain, and can be used with good effect on photograph frames, and white wood boxes – the kind which can be bought at picture shops for about a shilling. Simple shapes are the most suitable.



Having obtained the material on which you are to work, you must get some eggshells, which can either be all of one colour or of three colours, using white and fawn hens' eggs and a blue duck's egg. Always remove the skin from the inside of the shells. Obtain a tube of seccotine and start on your box by first smearing a daub of seccotine on it about the size of a shilling and then placing a piece of eggshell, roughly the same size, on the seccotine. Press the piece of eggshell flat so that it cracks into small pieces. Continue to do this until you have covered the box with eggshell. The various pieces do not always fit closely together, so fill in the blank places with little bits of shell. These are rather awkward to handle unless you use tweezers or a matchstick, but by licking the end of a matchstick you will find it will pick up a piece of shell well enough.

Don't attempt to make any designs of flowers or letters, as this only looks fussy. It is far better to aim for a broad effect by using one colour alone or the three colours together in bold splashes all over the box.

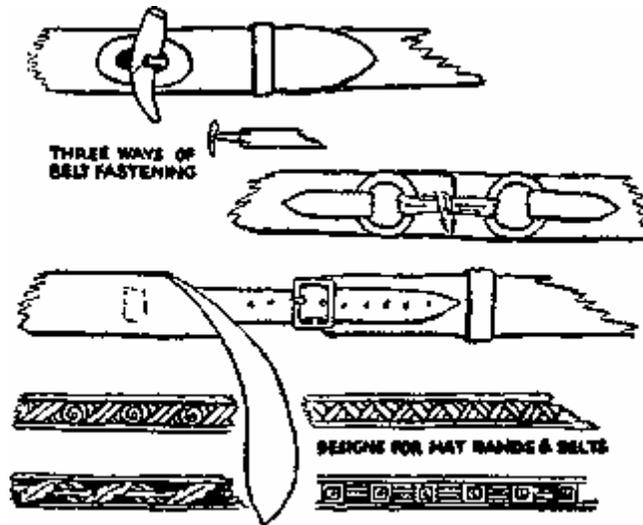
Finish off by cleaning the surface with a damp rag, and then, if you like, covering with a flat varnish. Although this is not absolutely necessary, it has the effect of making it waterproof.

You will find this a very good way of raising Troop funds, a well-made piece of eggshell mosaic selling very easily at a Troop bazaar, and for a good price.

### XXVI

#### MAKING THINGS OF LEATHER

THERE are three kinds of leather suitable for the use of Scouts: sheepskin, calfskin, and cowhide. Sheepskin can be used for making many things, such as moccasins, pouches, arrow-quivers, jerkins, plaited work, etc. Calfskin and cowhide are used principally for making knife-sheaths, axe pouches, belts, hat-bands, notice-boards, and woggles. Calfskin is thinner and has a finer grain than cowhide. Crocodile skin is beautiful stuff, but rather expensive. If you ever get the chance of obtaining a piece, you will see how well it looks and what a fine polish it takes.



### BUYING THE LEATHER

When buying leather, avoid any that is highly polished; choose the dull sort that shows the natural grain of the skin. Polished leather is nearly always of inferior quality. Sheepskin, or, as it is sometimes called, basil, is bought by the skin, and costs about 1s. 4d. a square foot. It is less expensive to buy scraps of leather from places like upholsterers, etc., which, though too small for them to use, are very useful for beginners to practise on, or for making small articles.

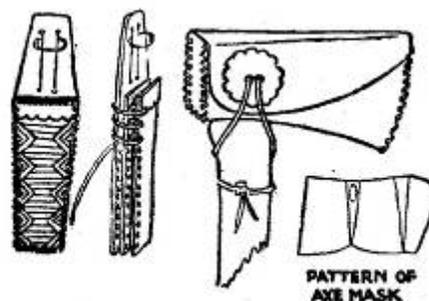
Victoria damask (a leather cloth) can be obtained from any large general stores, in various colours. It is very suitable for ladies' articles, such as can be sold for a good profit at Troop bazaars. It is very cheap and suitable for things like dance bags, comb cases, card-cases, elastic match-box containers, etc. The articles should be lined with coloured silks or cotton materials and lightly glued before thonging with gold Russian braid.

Here is a list of tools needed for leatherwork :

Leather punch, sharp knife, a gadget for fixing press buttons, and a metal rule. These are the most important. If you want to stitch, waxed hemp, two leather-work needles (blunt-ended), an awl, and a leather comb, which marks the stitches out evenly, will be required.

### MAKE A PATTERN FIRST

It is a great help to make a paper pattern before starting on the leather. Get a *bold and simple* design, and trace it on to your leather. Wet the surface with a damp sponge, and press round your design with an embossing tool, which can be bought or made out of a suitable piece of bone or metal. An old bone toothbrush filed into shape like a blunt nail-cleaner will do quite well. When the leather dries, the embossing will "stay put."



How to make a knife sheath.

Another very good effect can be obtained by stamping with metal stamps, which can be bought or made from six-inch nails by filing a design on the head. These are used for basket-work designs, where there is an interlacing effect, or for designs that repeat themselves.

It is easier, instead of stitching, to punch holes down the pieces of leather to be joined, and to lace them together with a thong. Remember to damp the leather well with a wet sponge, as this makes it soft and pliable and renders the work a good deal easier. Here is a list of some articles you can make: Knife-sheaths, axe-cases, hat-bands, belts, woggles, moccasins, sandals, arrow-quivers, leather jerkins, logbook covers, notice-boards, wallets, camera-cases, and various kinds of plaiting.

## XXVII HOW TO MAKE CORD

### THE WINDER

To be able to make a fairly thick three-ply cord in any desired colourings is certainly useful, and the following method will be found the quickest and most effective way of doing so.

The material for the cord itself may be practically anything, so long as it has not been twisted too much before you start. If it has, the cord will not "lay up" properly.

For the winder gadget, cut out three pieces of three-inch square wood – an old cigar box is ideal for the thickness. Next bore three holes in each piece, all at equal distances apart (Figure 1).

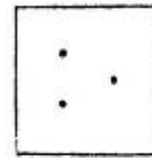


FIG. 1.



FIG. 2.

A foot of stout wire should now be cut into three and bent into shape as shown in Figure 2. After passing the ends of these wires through one of the pieces of wood, they should be bent into hooks as in Figure 3. The other ends should be passed through the corresponding holes in yet another piece of wood, and bent into flat circles to prevent the wires from falling out (see Figure 3). So much for the winding gadget.

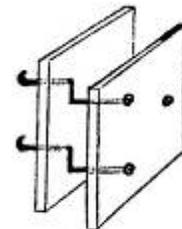


FIG. 3.

Now, if the piece of wood containing the hooks is held firmly with one hand and the back piece of wood is moved in a circular motion it will be seen to rotate. It is upon this principle that all rope-making machines work.

### MAKING THE CORD

Figure 4 shows how the threads should be set up. First knot the strands at each of the hooks on the gadget. Pass the strands through the remaining piece of wood, taking care to see that they go into the holes that correspond with the hooks, afterwards knotting them together with an overhand knot. It will be found necessary for two people to work the gadget. Person AA (Figure 4) will hold the front part of the winder in his left hand and turn the back part in a circle away from him, after Person BB has attached the end to a hook in some firm object to keep a tight strain on the work.

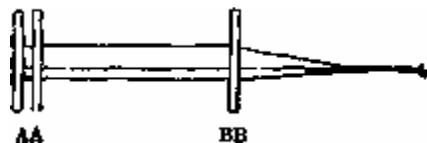


FIG. 4.

Person BB will help the newly-formed cord to twist away from him, at the same time moving the third piece of wood backwards and forwards along the threads to ensure that the twist in each thread is being transferred properly. Do not despair if the first cord is not perfect, for it is practice that makes perfect.

After the first cord is completed, the gadget wire will need a little adjusting, but this is only a moment's work.

### A FINE HEAD-BAND

Various uses will be found for the cords when made, such as fancy lanyards, key-chains, etc. Quite a romantic-looking Agayal or head-band can be made for use in camp. The ends of the cord are joined together by wrapping coloured wool or thread around them, and if this wrapping is repeated once or twice it adds to the design.

## XXVIII

### BASKET MAKING

ELABORATE basket making requires a great deal of skill that comes only from long practice, but this should not deter us from turning out quite useful articles after having learned a few methods of weaving.

#### MAKING A MARKETING BASKET

A round marketing basket (Figure 1) shows the principal methods of weaving, and requires no other tools than a sharp knife and a bodkin.



Fig. 1.

Strips of willow, termed osiers, suitable for this work can be bought either in white or stained buff from basket-makers and furniture repairers, and if mention is made of the size and style of basket to be worked, no difficulty will be found in obtaining the correct thicknesses.

All osiers must be thoroughly soaked in water before use in order to make them sufficiently pliable for bending.

#### THE BASE

To make a basket as shown here, the bottom should be commenced by preparing six twelve-inch lengths cut from thick ends. These must be tied together as in Figure 2, but as an uneven number of spokes is necessary, a whole rod must be used to provide the extra spoke, as well as binding material.

This rod will rest with its thick end alongside one of the sets, and the remainder pushed under and over the crossed ends until it has been twice round.

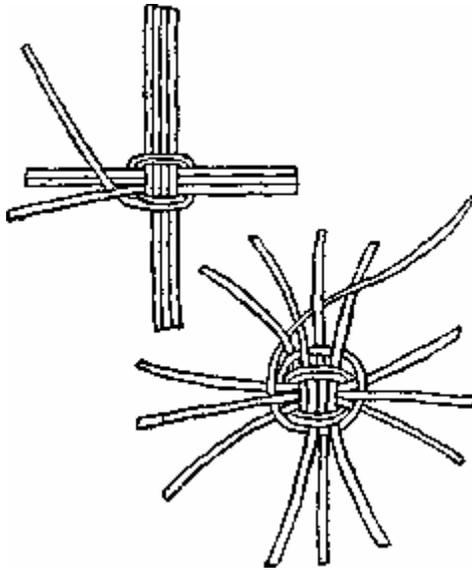


FIG. 3.



FIG. 4.

The next step is separating the spokes by continuing the binding round under and over each spoke until it is all used up (Figure 3). Care must be taken to bend the spokes out evenly and to see that the weaving is kept close up to the centre.



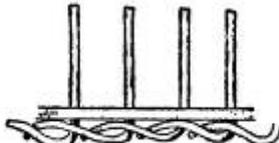
FIG. 5.

Having once spread the rods properly the rest *of* the weaving is quite simple and straightforward. Additional rods are started two spokes back and left projecting about one inch, to be cut off when finished. When a diameter of about seven inches is reached the weaver should be cut off and pushed down alongside the nearest spoke, and the remaining ends of the spokes cut off close to the weaving.

#### THE SIDE OF THE BASKET

It will be found that a hollow tray has been made, and this is now ready to take the sides of the basket.

Again, it is necessary to have an odd number of rods, so with thirteen spokes in the bottom we shall need twenty-five rods, all with the ends sliced fiat. Each rod should be pushed down alongside a spoke, a hole being made with the bodkin, if found necessary, and the single rod placed at the point where two spokes are closest together. The bottom must now be placed upon the table with the crown uppermost and each rod turned upwards. Provided these rods have been thoroughly soaked, after digging the point of a knife in the angle to be bent, the rods will bend readily enough. A hoop should be placed over the tops to help keep control of these rods.



METHOD OF LOCKING  
BASE BORDER  
FIG. 6.

We next come to what is known as the upsett, three rods being worked round the rods to stiffen them. These three rods should be sharpened and the first pushed alongside the single stage and the next two following. The three are then worked together, each being carried in front of two and behind the third (Figure 4), continuing in this order until they are all used up.

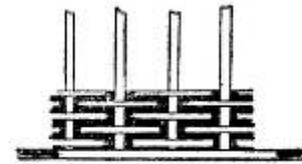
It is important that this be done as closely and tightly as possible, working down to the corner, as it is the foundation of the succeeding work.

### FINISHING OFF

The method of filling up the sides is known as slewing, and consists of three rods worked in and out all the way round and up, new lengths being taken as required, starting at their thin end. The end is left projecting on the inside and cut off when the work is dry.

This slewing should be continued until a height of about eight inches is reached, the rods being worked out to come level at the top. If necessary, short osiers can be worked to obtain the required level.

Next a band, known as a wale, is placed around the sides to strengthen the whole work. To start this band, pick out four thin rods of medium length, and, starting at the tops, place them behind four stakes in order and carry them alternately in front of three and behind one until the round has been completed and the commencing ends covered.



SIMPLE WEAVING, BUT WITH  
SPACING EXAGGERATED  
ALWAYS KEEP WORK UP CLOSE

FIG. 7.

A simple weaving is worked for about two inches and the side is then ready for the border, which is formed by bending each stake down in turn and taking the bent top in front of the first one to the right, behind the next and in front of the third, the end being trimmed off a little beyond the stake that it rests on.

The handle is formed from a stout rod and held in position with strips of osier. The rod is cut 30 inches long and both ends are sharpened. One end is pushed down through the border alongside one of the stakes for about six inches and the rest of the rod carefully bent, and the other end pushed down the opposite side. This plain bow may be covered with a double spiral made by driving in a sharpened end of a rod each side of the handle.



FIG. 8.

The rods should be carefully wrapped around and the ends worked across and through under the border on the opposite side in each case. The basket should be finished off by cutting off all projecting ends, but only when perfectly dry, unless ample allowance is made for shrinking.

So much for simple basket work, for having thoroughly understood the past instructions, a basket of any size can be made if the sizes are worked out proportionately. Small coloured baskets made and filled with chocolates or toys form ideal presents.

## More Spare Time Activities

---

In making the basket described here, or any basket for that matter, one will find the really difficult part to make is the base, and often this is the cause of unfinished work. One way of overcoming this difficulty is by using a wooden base.

### A BREAD BASKET

Our next example is a bread basket (Figure 5). First cut out a circular base 8 inches in diameter from a piece of three-ply wood. Round the edge drill twenty-five holes to take the rods for the sides. These holes must be carefully drilled or the twenty-fourth hole will split the base!

Next cut twenty-five rods each 10 inches long, not forgetting to soak them thoroughly. Push the ends of the rods through the base for a couple of inches, and the base is ready for its underneath border. This is formed by passing each rod in front of one and behind the next to the right. This is continued until the last rod is reached, when it is tucked under the loop formed in turning down the first rod. With the sharp knife, all projecting ends are cut off leaving enough to hold securely.

The base is turned over and the border pressed firmly against the wood. With the base the right side up, the sides are adjusted to stand out slightly and are evenly spaced. The slewing may be continued as already described or may be worked by placing one end of the weaver behind any of the stakes, and working to the right, passing alternately behind one and in front of the next. When a new weaver is required it should be inserted as in Figure 9, care being taken to keep the sides upright. After weaving to a height of about four inches, the ends of the weaver should be cut off and tucked under the last row to keep it from slipping out.

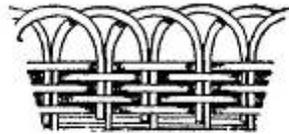


FIG. 9.

A simple method of finishing off is to sharpen the ends of the side rods and bending them over, push them down into the gaps between the weaving. It helps a good deal if these rods are given another soaking before bending into position, and a nicer finish is ensured if all are bent evenly.

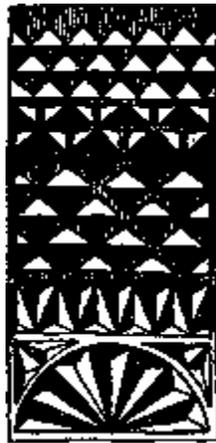
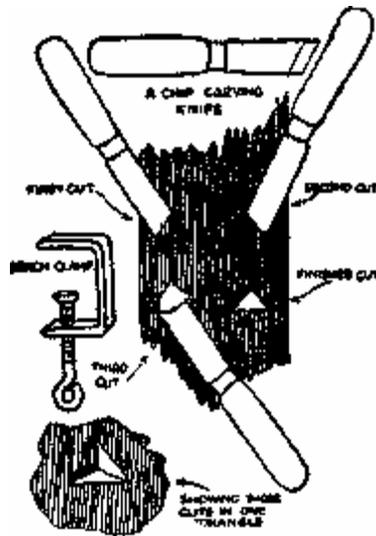
## XXIX

### CHIP-CARVING

CHIP-CARVING is an activity which practically everyone can do, with a little practice. It is very useful when applied judiciously for decorating furniture, and is especially suitable for Scout staffs and hunting-knife handles.

Very few tools are needed for chip-carving, and the following are sufficient: a skew-chisel, or, as it is sometimes called, a chip-carving knife (see illustration), a couple of clamps, and perhaps one or two gouges, although the latter are not absolutely essential. What is important is a good, fine oilstone. Much bad work arises from blunt tools, so make sure that your tools are really sharp. Dull edges mean dull work.

The best woods with which to begin carving are the soft ones—American whitewood, yellow pine and lime-wood. Almost any kind of soft wood will do for a beginner to practise on, however, but when he gets more advanced he can use oak, walnut, teak, Spanish mahogany, etc. Whitewood boxes and other articles suitable for working on can be bought at most art shops, and after they are carved can be improved by colouring.



Some chip-carving designs.

It is difficult to teach chip-carving from a book, but very easy with personal tuition. On looking at the illustration, you will notice the various designs are all made up of triangles, so the first thing to do is to learn to chip a triangle with a certain amount of skill. Get a piece of wood and a chip-carving knife (an old penknife ground to shape will do), draw a triangle on the wood and follow carefully these instructions.

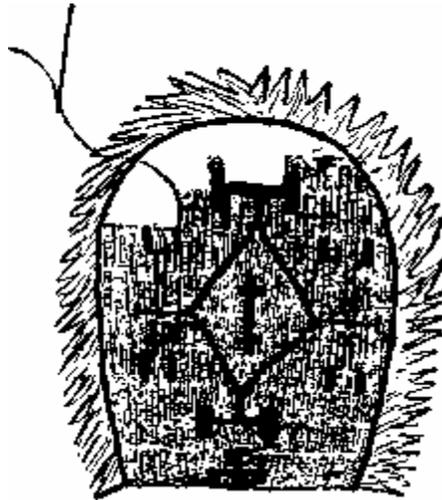
Be sure you get the wood clamped down firmly on a table so that you have both hands free, then sink your knife vertically down along the left-hand side of your triangle, the point going in deep at the apex, and getting shallower as it reaches the base. Repeat the cut from the right-hand side. Now take a slanting cut from the base of the triangle and a wedge-shape chip comes out between the two sides: the cut should be clean and with no whiskery bits left in it, otherwise you must repeat the performance until it comes right.

Look at the illustrations, choose the design you like best, and notice how the triangles are placed. Then draw them on your piece of wood and after very little practice you will be surprised how easily a pleasing pattern can be carved.

After making a copy of one of these designs, you should invent patterns of your own; this is much more fun than just imitating someone else's ideas.

**XXX**  
**INDIAN BEAD-WORK**

THOSE of us who have seen articles made by the Red Indians have marvelled at their skill and perseverance. Perhaps their most noted achievement in this direction is their gay-coloured bead-work embroidered on practically all their wearing apparel.



How a purse can be decorated with Indian bead-work.

The design is sewn on as shown.

There are two types of Indian bead-work – that woven upon a loom and the other embroidered, which means a number of beads strung on a thread, and sewn to design upon the particular article in work. By this method you are able to work unlimited designs upon camp-fire blankets, buckskin coats, moccasins, purses, knife-sheaths, axe-cases, etc.; in fact, anything you care to decorate gives satisfaction in the pleasing effect of the finished article.

All one needs in order to turn out this work is a very fine needle, a reel of linen thread, and a few bunches of coloured beads. These beads can be obtained from any large draper's or milliner's shop, or can be bought direct from Messrs. Beads, Ltd., Aldersgate Street, London, E.G. The size required cost a penny a bunch, measuring about a foot long when strung.

Notice that linen thread is used, and after a little thought you realise that this must be strong, so mother's cotton will not do! It is well to remember it has to pass through a tiny eye of a needle and then through a very small bead – which means that it cannot get its strength from thickness.

The needle has to pass through your bead, which in some cases will already have a thread running through it, so this, too, must be of the right thickness. Do not force your needle through or you may have to unpick a quantity of work to remove a broken bead to avoid spoiling a design.

The method of attaching beads is simple, yet effective, for the beads are held firmly in position. After having strung your bead, pass the needle down through the material and back again through the last but one bead and out through the last, and, re-stringing, continue as before.

For a new thread, pass the end back through five or six times and cut off, starting a new one by passing through beads also. How you arrange your threaded beads depends upon your design.

Where geometric designs are being worked, they are laid on in straight lines, not unlike loom-work, but where curved designs are required, the design is built up by following the desired contours.

The diagrams shown here give a foundation for true Indian designs – certainly enough for any of our needs.

### USING A LOOM

We next turn to the Loom Method, which means a loom has to be made before we start. This is a simple wooden structure as shown in Figure 1, measuring about twelve inches by eight. In the top end is fixed a revolving wooden spool, which has four holes in the left-hand side into which nails are passed to keep the spool firmly in position while the threads are being worked.

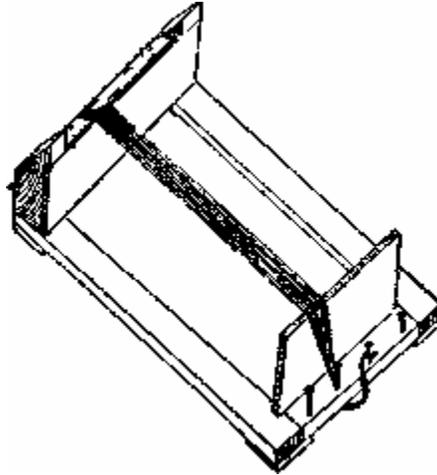


FIG. 1. The Bead-work loom.

To set up your warp (the threads running lengthwise), you need to cut your threads a few inches longer than the required length, allowing one more thread than there are beads.

Next, group them together and secure to the nails in the spool on the loom. Then place the threads in rotation in the groves in the two bridges and secure them by passing the ends down through the holes at the far end, keeping them firmly in position by replacing the wooden pegs. Wind the remaining lengths around loom and pegs.

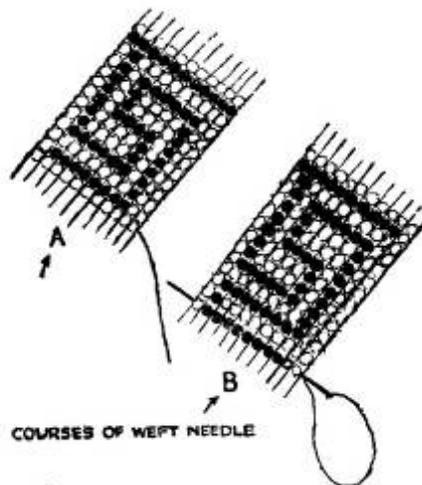


FIG. 2. The row of beads is threaded under the warps (A), and the beads pushed up through the warps. Then the needle is threaded back through the beads and over the warps (B).

## More Spare Time Activities

---

Tie your weaving thread at the top left-hand corner of your warps and you are ready to start. Thread the right number of beads for your first row, pass the needle under the warps from left to right, pushing beads up between each warp. If there are too many beads to stay on the needle, let them slide down the thread, afterwards holding them up between warps with the forefinger of the left hand. They should be pushed well up between the threads. Take the needle back from right to left through the beads, taking care that the needle keeps above the warps to the end of the row, Figure 2. Tighten the thread after each row is finished.

When the loom is full, wind it on the spool, leaving a little of the work to project over the bridge to avoid a gap. Tighten the warps again before restarting. This method is known as the "double-weft weaving," and is to be preferred to the single-weft, which means just passing the needle under and over the warps but once.

New threads are attached by running the remaining end back two or three rows, cutting off, and starting the new one by running through two or three rows also.

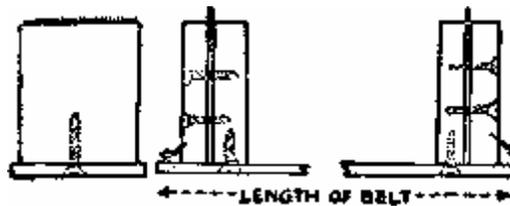


FIG. 3.

There are several ways of finishing ends. Leaving the warps about six inches longer than the article made, group them together and knot them close up to the beads, afterwards plaiting or combing to form a tassel. Or you may sew a piece of chamois leather over the end, afterwards attaching bead tassels.

### A SIMPLE WAY TO MAKE A BELT

Should you desire to make a belt and yet not go to all the trouble of making the loom described, you may improvise a practical loom from a strip of wood the length of a belt, four blocks of wood, and an old comb. Figure 3 shows how these are joined up to get the finished article, the comb being broken in two and placed between the blocks to act as spreaders for the warp threads. The two dresser hooks at each end are substituted for the spool and pegs. Having worked your design you will no doubt want to back your belt with leather and this can be done by sewing as shown in Figure 4. If you cut tiny grooves in the leather to take the threads, nothing is left above the surface to rub and wear out.



FIG. 4.

## XXXI

### CURING SKINS

THE principal animals whose skins we can use for curing are rabbits, moles, and perhaps, very occasionally, stoats, weasels, and grey squirrels (the nasty kind of squirrel that is killing off our beautiful red ones).

Skin the animal while it is still warm, tie it up to a tree by its hind legs, and with a sharp knife slit it down the middle and up the inside of the legs. Be careful not to cut too deeply or you may cut into the intestines, which will make things very messy!

## More Spare Time Activities

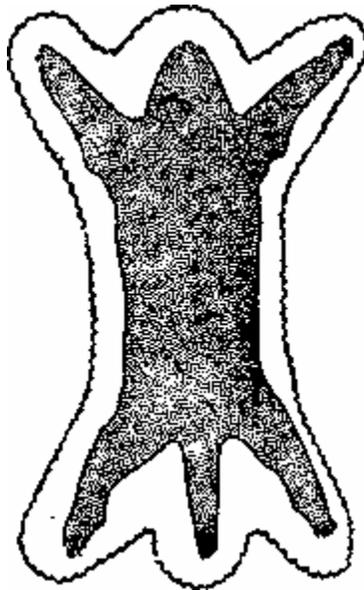
---

The skin does not come away from an old animal as easily as from a young one, and sometimes it is necessary to help with the knife by cutting between flesh and skin. Whether you leave the claws or not depends on what you wish to make from the skin. If you leave them, be sure to get all the flesh away.

### CLEANING THE SKIN

Now, lay the skin on a flat board with the hairy side underneath, and scrape it well with a blunt knife. This scraping is very important and requires a little patience to do properly, but all flesh and fat must be removed. The scraping finished, stretch the skin out tight on the board by nailing round with small nails or tacks and then dust with powdered alum, which can be obtained from any chemist, and rub it well in until the skin will not absorb any more.

Leave the skin for a day and repeat the operation; then leave it in a shady place to dry. When dry, you will probably be disappointed to find that it has gone hard and stiff, but it can be made quite pliable by stretching, tugging and kneading in the hands. After a good bit of this treatment it will go from its transparent colour into a soft white, and will always stay soft as long as it is kept dry.



The smaller skins look very effective mounted on a piece of felt.

The Indians waterproof skins by hanging them over a wood fire for two or three days, but this is not really necessary for the purposes for which we shall require them – e.g., for making gauntlet gloves, jerkins, etc

Even rat-skins – properly cleansed! – can be used for such articles as tobacco pouches, if lined with oil-skin. The claws can be used for clasps. The smaller skins look very well mounted on a piece of felt, and can be used as table mats or as very effective decorations nailed to the Troop-room wall, thus giving the place some of the atmosphere of the out-of-doors.

## XXXII MAKING STOOLS CHOOSING THE WOOD

OLD logs are sometimes found in the garden that can be turned into quite attractive stools after a little thought and preparation. The more irregular the shape of the log the better, for it is to be worked to its natural shape, and for this reason it will be seen that no two stools can be exactly alike.

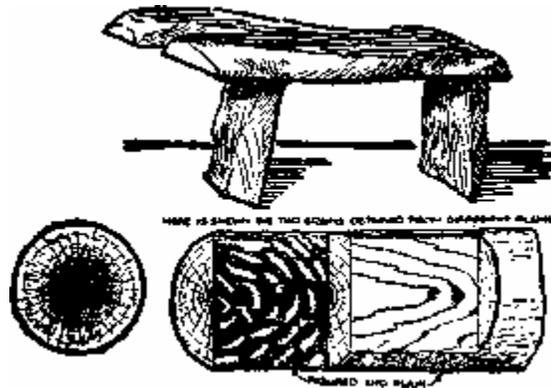


FIG. 1.

If a choice of wood is available, then choose a hard wood. Oak offers a pleasant appearance in its grain, having two distinct kinds, known as “plain” and “figured.” The latter is the more expensive of the two. As most of us know, a growing tree adds a fresh layer of wood every year, so forming a series of concentric rings. It is quite possible to tell the age of a fallen tree by these. If a sawn log be examined there will be seen narrow white lines radiating from the centre. These rays are the nutriment carriers, known as medullary rays, Figure 1. They are responsible for the grains to be found in all woods. Naturally, the centre of a log contains the greatest number of these rays, which means that if a log be sawn into planks the “figured” grain (which comes from the centre) will be in the minority. This explains the expensiveness of “figured” grain wood.

### HOW TO GET TO WORK



Fig. 2

Having procured a log about fourteen inches in diameter, we strip it of bark and give it a scrubbing with a hard brush. Then we place it in a very dry place for a week or more so that it can dry out.

Should it have a lopped branch stump this will add greatly to its appearance and should be cut as in Figure 2. The stool illustrated was made from a large forked branch of sycamore and is left

---

## More Spare Time Activities

---

unpolished. If it is possible to borrow a cross-cut saw, it will lighten the labour considerably. A chalk line will help to keep the plank true.

Of course, an axe will do the job quite well, except that there is a good deal of waste. The plank should measure about four inches in thickness after both sides have been planed smooth. This smoothing needs to be done carefully, for it is very easy to tear up the grain when it is running in various directions, as, no doubt, it will be.

Two planks about thirty inches long will be needed for the stool and, having planed them, one must be selected for the seat and the other for the legs. Care must be exercised in cutting these legs, for unless they are perfectly square and true the stool will be wobbly. It is best to use a tenon saw if a good finish is wanted.

Having pieced the stool together, the legs should be screwed into the seat so that the screws are counter-sunk for about one-third of the way through, the holes then being plugged with wooden pegs. Next, the stool should be thoroughly sand-papered and lightly stained, although a plain waxed polish is very pleasing.

### EQUIP YOUR DEN WITH LOG FURNITURE

The beauty of this type of stool is that it will fit in with any kind of furniture, and can be equally in its place as an outside seat. The idea can be extended to tables and arm-chairs. What of a Patrol den furnished in this way – an achievement worth while!

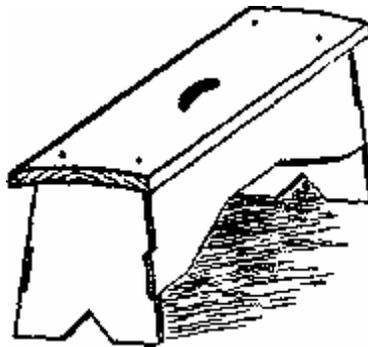


FIG. 3.

Figure 3 is a design for another stool. This is very serviceable and is easily made. In design it is free from superfluous detail, which usually weakens its structure. It will be noticed that the sides are dovetailed together and then pegged, using dowling for the pegs. This again looks very well if waxed only, and should be made of one-inch wood, nicely planed.

### BUTTER-BOX SEATS

For movable yet compact seating in Patrol comers, butter-boxes adapted as in Figure 4 will be found really efficient. These boxes, which measure about one foot square, can be bought very cheaply from any large provision dealers. Make sure they are sound and thoroughly scrub them before you start the transformation. You next need a back-rest that should be 24 inches long, by the inside width of the box. Looking again at Figure 4, it will be seen that a side is removed, allowing the back-rest to be inserted at a slight angle, this angle being governed by two wooden blocks glued at the base of the seat.

The side is afterwards replaced and firmly screwed, leaving the seat ready for a coat of paint to match the rest of the den's colour scheme. The back-rest should be shaped to some simple design, with the Patrol Totem stencilled upon it. If suitable, the Patrol animal or bird may be cut out and used as the back-rest, but care must be taken to avoid the sharp edges of tails and beaks that may easily be broken off.

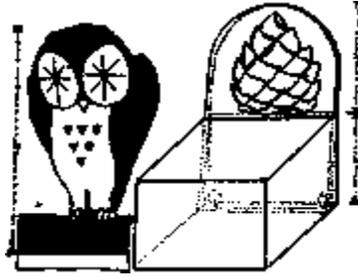


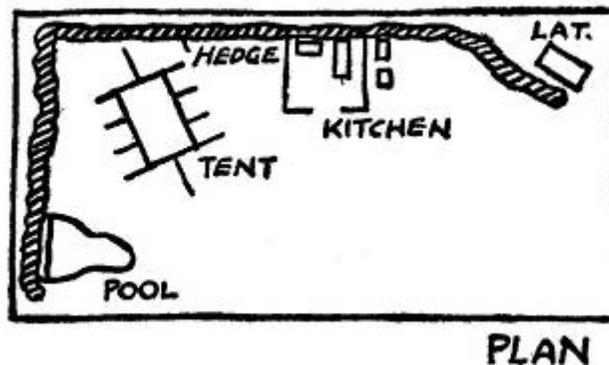
FIG. 4.

### XXXIII MODEL MAKING

By "GREY HAWK"

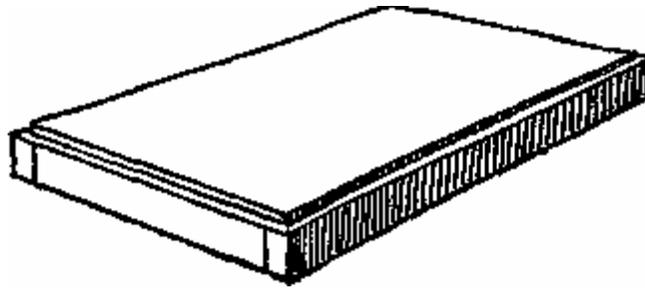
#### I

HAVING made up your mind as to the subject for your model, and the size that you require it to be overall, you will be able to decide upon the scale to which it is to be built. Let us assume that you are going to attempt to reproduce, in miniature, a patrol camp situated in the corner of a meadow, and that it is to occupy a space 3 feet long by 18 inches wide, and, further, that a scale of  $\frac{1}{2}$ -inch to the foot has been decided upon. This means that you will have a ground area of 72 feet by 36 feet upon which to set out your scheme.



PLAN

As a preliminary step, get a piece of rough paper, and mark out upon it your 36 inches by 18 inches, and allot the positions for all the main features, such as the tent, fire, wood heap, refuse pit, latrine, hedge-line, any trees, etc., and this will serve as your pattern for reference. The first essential is a good base, and for this a sheet of three-ply wood, firmly secured to a wood frame, about a quarter of an inch larger all round, will be found the most satisfactory. Procure a tin of plastic modelling clay which, when mixed with water, can be readily applied with a brush or a flat knife-blade, and sets hard in about twenty-four hours. If a level site is to be represented, then it is only necessary to cover the area with a coating about one-sixteenth of an inch in thickness, leaving the finished surface fairly rough. Should, however, an undulating site be chosen, which of course adds greatly to the general interest and gives scope for many realistic effects, it will be necessary to affix rough pieces of wood, or matchboxes, varying in size and thickness, till the general conformation of the whole is about correct, with hillocks and slopes in the right places, when the whole can be covered over with the plastic clay and finished off to hide all the joints and sharp edges.



BASE

When hard and dry, the surface can be coloured with ordinary water-colours to represent grass, etc., as required. The wood base should be given a couple of coats of ebony stain, and a great appearance of finish can be added by affixing a small brass plate on the front edge stating the scale employed. The tent should be carefully cut out of stiff drawing paper and fixed on its poles, with guy ropes of fine string or thread to little pegs driven into the surface. The fire, formed of tiny twigs, gummed to the three-ply, can be made very real by the inclusion of a small piece of red tinfoil such as is used for the coverings of fancy chocolates.

Small bushes are best fashioned out of pieces of sponge stained green, and trees can be effectively built up on shapely twigs by the same means. Fence posts are easily made from matchsticks with rails from the thin wood of matchboxes. A pool or stream always looks very effective and is simply formed with a scrap of glass, coloured blue on the underside, and fixed flat, the plastic clay being carefully finished off to cover all edges. Another good effect can be produced by sprinkling sand and very small gravel on to a previously gummed surface, the residue being dusted off when thoroughly dry and set.



VIEW

The type of adhesive sold in metal tubes will be found admirably suitable for the constructive work.

## II

MODEL bridges of various types are full of interest to everybody, and demonstrate the uses of lashings, knots, and hitches in a very practical manner.

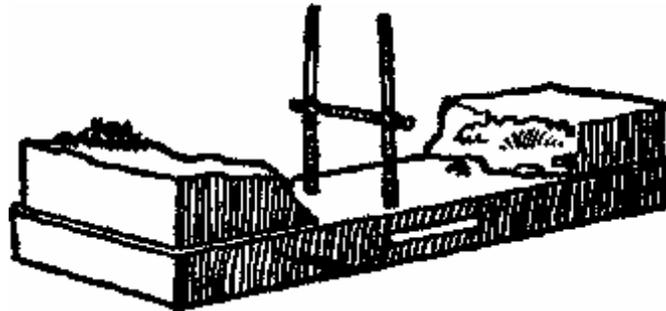
The base for a bridge model can be constructed in a similar manner to that already described for the model camp in the last article, but the addition of blocks of wood to represent the banks of the river to be bridged will be necessary. These should be as rough and uneven as possible.

A surface should first be formed with the modelling clay to represent the grass on the top faces of these blocks, the banks of the river being made to represent earth by applying sand and small stones. The whole should next be coloured, the base between the blocks representing

## More Spare Time Activities

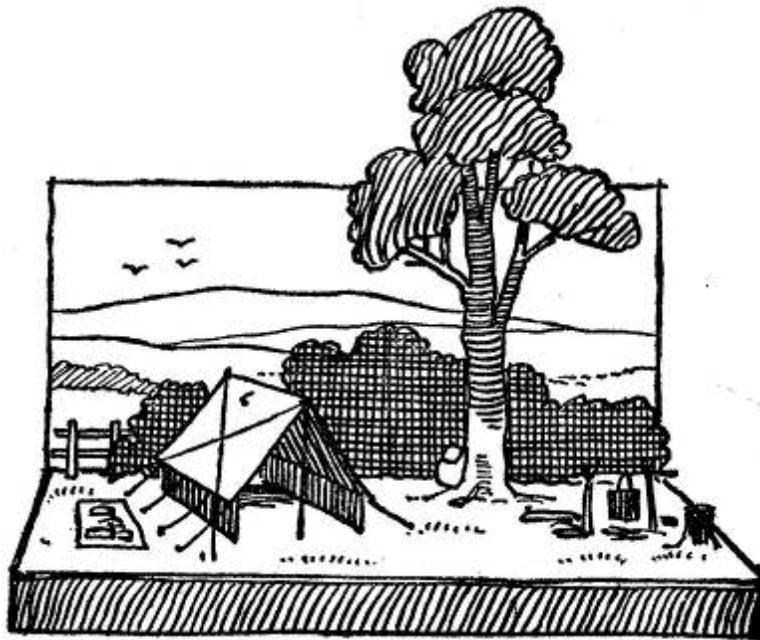
---

the surface of the water a blue tint, and the grass, earth, etc., all according to their individual character. The addition of small pieces of dyed sponge as bushes adds a realistic touch.



A collection of suitable pieces of twig of various diameters, to the scale decided upon, should next be obtained. There are many small trees and bushes in our common hedgerows which can supply this material, which should give a surface appearance of bark.

Cord for lashings can be obtained from those firms which supply all the necessities for model shipbuilding, as can also small-scale blocks and pulleys, for the formation of lifting and straining tackle. Fishing-line, or chalk-line, the latter obtainable at most ironmongers, are also excellent. Care should be taken to make all lashings absolutely correct, never rely on tacks or gum to get your effects.

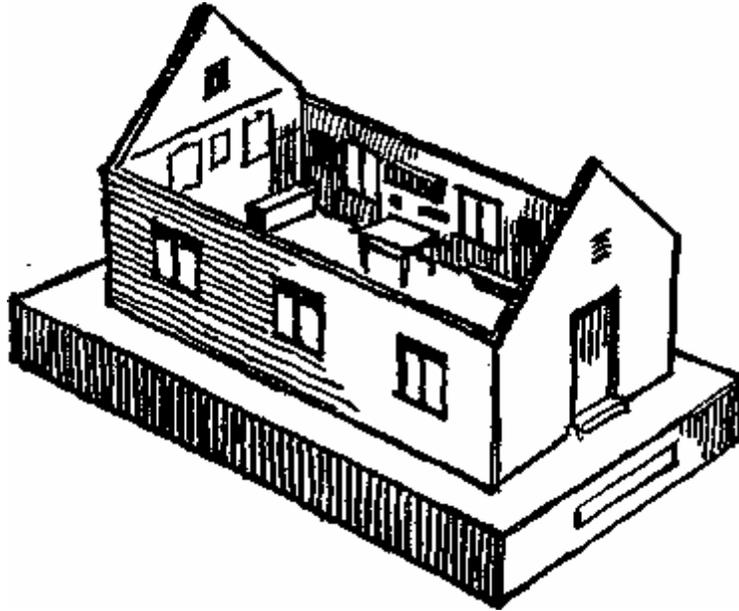


Trestles in the stream, or posts and stakes on the banks, should be fixed by inserting in holes bored therein; this will result in increased stability of the whole.

Delightful replicas in miniature can be made of tents, boats, trek-carts, and other items of equipment, the rule for successful achievement being always the same – copy the actual subject as closely as possible, keeping every item true to scale and matching the material, texture, and colouring with punctilious care.

Models of buildings – such as a Group Headquarters' hut – can be made very much more attractive if the roof is made to lift off, allowing the interior to be viewed, completely furnished with the ordinary belongings of a Scouty fraternity. Windows should be fitted with real glass, and a

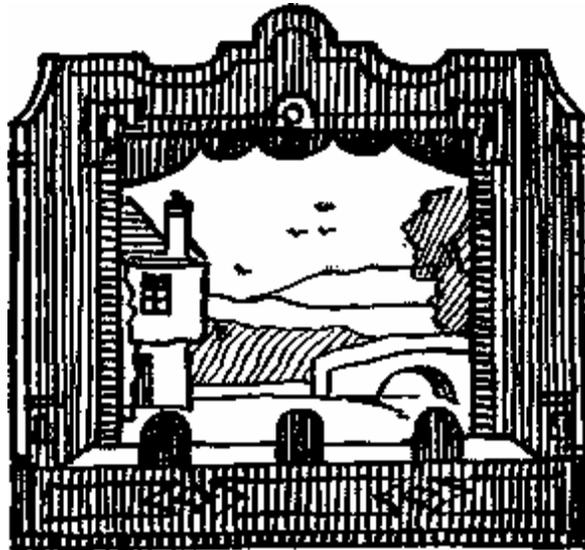
novel effect can be produced by arranging an interior lighting installation on the lines of the ordinary electric torch.



With a little thought and ingenuity many surprising effects can be introduced into varying types of models.

### III

A MODEL theatre, besides providing endless amusement for the Pack, can also be of practical use to the Group generally. Stage effects for the shows shortly to be presented to the public can be tried out. Lighting, grouping, entrances and exits, and a host of other details, can be experimented with and improvements carried out as a result.

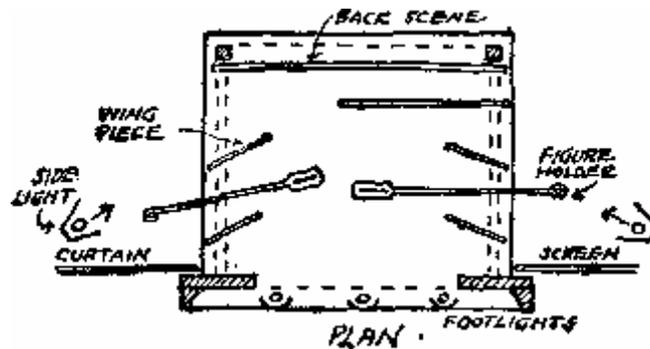


The stage should consist of a sheet of stout ply-wood mounted upon a framework, deep enough to allow the free access for the hands and wrists, and consisting of front and sides only.

## More Spare Time Activities

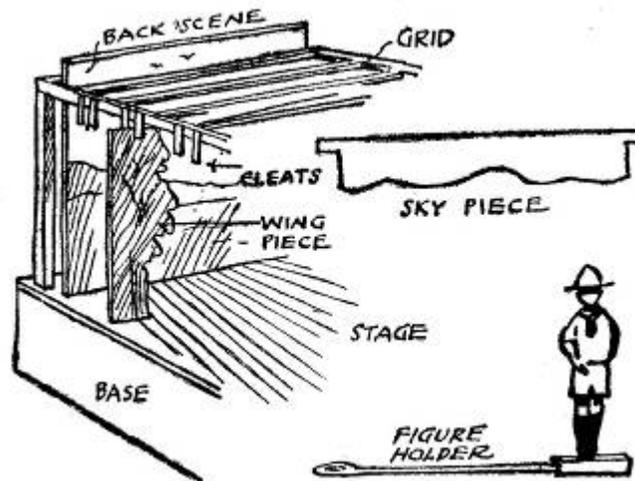
This will enable trap-door stunts to be carried out, as well as affording a storage place for any dry battery which might be used for the lighting effects.

The proscenium or front should next be erected on the fore part of the stage, sufficiently set back from the front line to permit of a row of footlights being set up. This can also be of ply-wood cut out to the required shape with a fret-saw, with small mouldings and other decorative features applied to the surface – and here there is plenty of scope for the use of both colour and ornament. Two uprights at the rear of the stage will carry the “grid” or ceiling which forms the means of support for the scenery, which latter can be divided into four categories, viz. the “cloths” or flat backgrounds, side scenes or wing pieces, cut-out pieces for mid-distance or foregrounds, and sky pieces.



The slots between the laths will hold the main scenes and the sky pieces, whilst the cleats at the sides will take the tops of the wing pieces.

A good effect of perspective can be given by marking the surface of the stage in slightly radiating lines to suggest boards.



Good drawing paper, mounted on cardboard, is the best medium for making the scenery, which should be drawn out and coloured to give a strong effect with not too much fine detail. Trees should be cut out boldly at the edge when used as wing pieces, and special pieces, such as bridges, banks, walls, and railings, etc., may be built up in the same way as

## More Spare Time Activities

---

actual models. Figures, on stout cardboard, can be sent on to the stage and supported in the slot of a “holder” such as that suggested in the diagram.

The “drop-scene” or curtain should either be fixed to a roller and work up and down with cords, or could drape back to either side – in both cases being formed of a suitable fabric.

In addition to the front lighting by means of footlights there should be side lights, masked by the wing pieces, to give full effect to the stage setting. The use of tinters of coloured glass or gelatine (the latter is dangerous with naked lights) will permit of various pleasing effects.

The finishing touch is a surround of screens or curtains to hide the movements of the operators.

THE END