

HOBBIES WEEKLY

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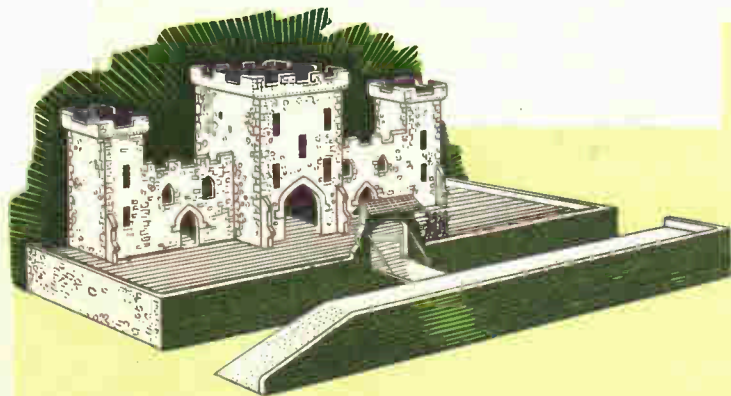
NUMBER 3220

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All correspondence should be addressed to the Editor, Hobbies Weekly, Dereham, Norfolk



*Make it
from FREE
Design inside*

A MODEL FORT

THIS model fort makes an ideal project as a gift for a youngster, to whom it will give many hours of pleasure and entertainment. The layout of the fort consists of a main keep connected to two outside towers by battlements and the courtyard is reached via a ramp over a drawbridge.

The method of construction is quite simple and should present no problem to the average handyman. The fort is 20ins. wide with a depth of 10ins from back to front, and the height is 9ins.

It is intended as a 'defence' post to repel attackers advancing via the ramp, and therefore no provision has been made

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
★ Illustrations on next page explain ★
★ fully the detail work. ★
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for an inner courtyard, but this and other effects, however, can be added together with a back for the buildings.

225

Some of the pieces are shown full size on the design sheet, while for others such as the ramp the measurements are indicated. Trace the parts from the design sheet and transfer them to their appropriate thicknesses of wood, laying out the parts on the wood to the best advantage in order to obviate waste. Before cutting, ensure that all the parts which go to make up the fort have been accounted for on the wood. Then cut out all the sections with a fretsaw and clean up preparatory to assembly.

FOR ALL HOME CRAFTSMEN
Over 60 years of 'Do-it-Yourself'

4¹/₂^D

MAKING THE MODEL FORT

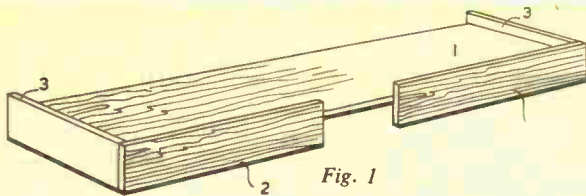


Fig. 1

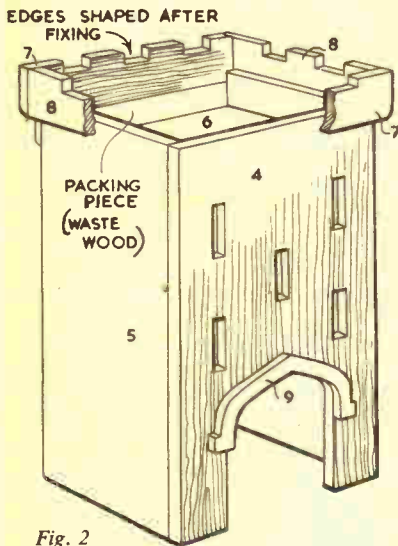


Fig. 2

KIT FOR 21/-
 All the wood and materials needed for making the Toy Fort are contained in Kit No. 3220, price 21/-, from branches or Hobbies Ltd, Dereham, Norfolk (post free).

Start by making up the base (or courtyard) which consists of pieces (1), (2) and (3) which are glued together as shown in Fig. 1.

The central keep is next assembled as shown in Fig. 2. Pieces (7) and (8) form the battlements which are glued round the top of the keep in their positions shown by dotted lines on the design sheet. Now make up the two outside wing towers as shown in Fig. 3 which is the left-hand tower. The right-hand tower will, of course, be the same shape, but the details and assembly will be reversed. Now glue the three towers to the base and add the four buttresses (pieces 10).

The makeup of the entrance and drawbridge is clearly shown in Fig. 4 while Fig. 5 details the assembly of the approach ramp.

With the assembly thus completed the outside walls should be covered with the special fort paper provided by Hobbies Ltd. and the sides of the ramp and courtyard should be covered with imitation stone paper. The backs of the battlements can be painted grey with the tops red. The finish for the courtyard will be at the discretion of the worker. As this is a parade ground for the soldiers, a covering of glue followed by a sprinkling of sand would do quite well. Grass can also be simulated by paint and the addition of Velvet Spray.

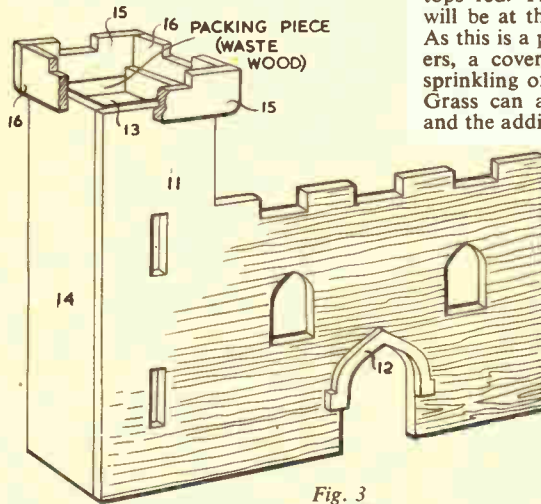


Fig. 3

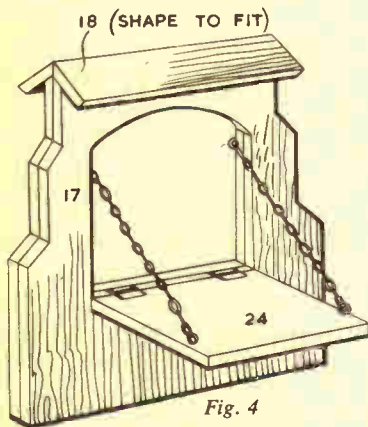


Fig. 4

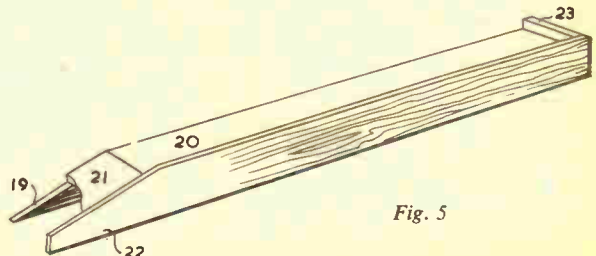
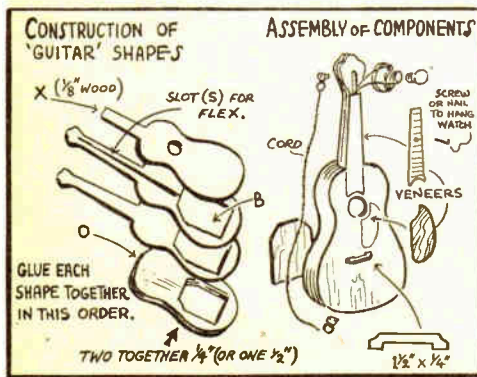
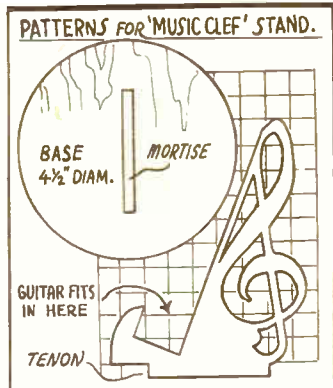
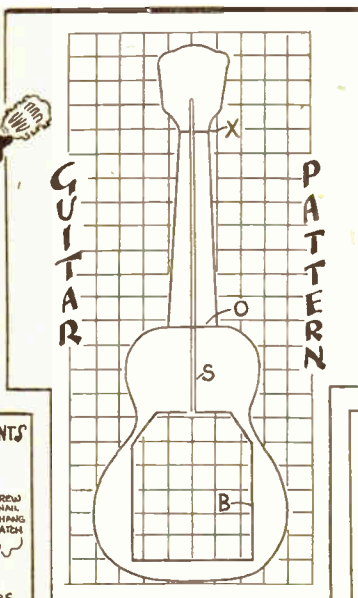
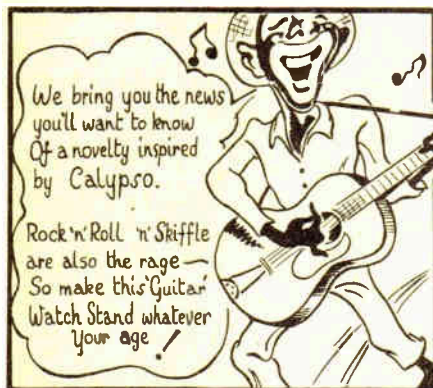


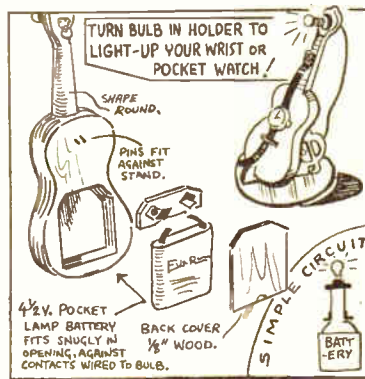
Fig. 5

Strip by T. Richmond

'GUITAR' WATCH STAND



COPY PATTERNS ABOVE OVER 1/2" SQUARES AND TRANSFER OUTLINES FOR EACH SECTION ONTO 1/4" PLY OR FRETWOOD. PANELS CAN BE TEMPORARILY NAILED TOGETHER AT EDGES FOR CUTTING OUT MATCHING SHAPES. SANDPAPER SMOOTH EDGES AFTER ASSEMBLY.



A discordant note!

I HAVE had a letter written in very plaintive terms from a young school-boy reader. It concerned our design and instructions for making a guitar, which appeared in *Hobbies Weekly*, dated May 1st.

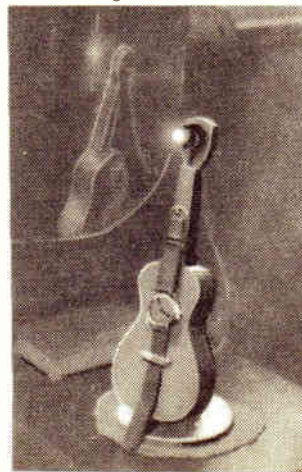
Apparently articles which appear in our magazine are frequently made up by the woodwork class in this young lad's school under the guidance of a teacher, and he and his friends particularly wanted to make a guitar. They sought the co-operation of the woodwork instructor and were disappointed to find that he frowned on such a project, particularly when he noticed such names as Elvis Presley and Tommy Steele being quoted as exponents of this instrument.

While appreciating that you either like rock'n'roll and similar rhythms or you hate them immensely, I should have

thought that the fact that the boys were making something would have been sufficient excuse for the master to encourage them in their endeavours. I know that modern rhythms are not everyone's cup of tea, but all tastes have to be catered for. We found there was a demand from readers who wanted to make their own guitars at a reasonable cost — so we provided the design, instructions and kit, enabling a satisfactory instrument to be produced for as little as £2 10s. 6d. Incidentally there have been many orders from schools!

In any case, as we pointed out at the time this instrument is one of the oldest known, and properly played can give no end of delight. Its application is by no means limited to skiffle or rock'n'roll. The kit (No. 3209) is still available from branches or Hobbies Ltd., Dereham Norfolk (post free). THE EDITOR.

— and in this corner here we bring a picture of the finished thing.



RAMBLING HINTS

TO the ever-increasing band of young enthusiasts who love to explore on foot the sylvan lands of England or the hills and glens of Scotland, the following hints may come not amiss, now that the tramping season is here again. The summer holidays afford a good opportunity to take the footpath way to pleasure.

By A. Sharp

Foot comfort is a primary consideration. It is important to wear a pair of stout, easy-fitting, watertight boots, and, if intending to do some hill-climbs, have the boots studded. Prior to a long tramp, wash your feet carefully, and rub a little vaseline over the heels and in between the toes. At the end of the day's march examine your feet again and attend to any little troubles that may have developed. If any signs of blistering apply boric ointment to the affected places.

Carry the minimum of luggage. Dress sensibly. Remember, you are cross-country walking, not going to a garden party. A light waterproof cape should be carried in case of need. Be provided with a good clear map of the area you intend to explore, and remember that short cuts in strange country seldom result in a gain of time; the O.S. maps with scale of lin. to one mile are excellent. Plan your tramp with care! Avoid the busy main motor highways — stick to field-paths, old green lanes, and moorland tracks. It is possible to make your way from village to village and never do more than merely cross over a main road.

Travel easily. Don't rush. Rest frequently. On a long walk carry spare socks or stockings and change if needs be. Don't prolong your day's walk until late in the evening. If you are on a few days' or a week's tour, arrange for your night's lodging in advance if you can. It is a good idea to become a member of the Youth Hostels Association. The Ramblers' Association also affords privileges and facilities. On a long tramp take a good companion with you or join with a small party.

Some 'Do's' and 'Don'ts'

It scarcely seems needful to thrust lessons on department upon the Rambler who is 'country-minded'; but, perhaps, we may venture to remind beginners of a few 'do's' and 'don'ts'.

Ramblers should make a point of

closing gates after passing through into the next field or the road. 'Please shut this gate' is a sign that is not painted on a gate to be merely ignored. Leaving them open or unfastened may cause a lot of trouble for the farmer, as animals in the fields may stray away on to the roads or into other fields where crops are growing. If with a party, the last person through the gate should be responsible for closing it.

Do not stray or straggle away from the footpath that crosses a field of grass unmown or where corn or other crops are growing. When there are a dozen or so in a party, if there is a lot of straggling from the path each side, a lot of harm can be done unintentionally.

Do not invade private grounds — at least, not unless by mistaking the route, when an apology, if necessary, should be made to the owner. Woods, coverts, and spinneys are private property or held by the Forestry Commission. Here, again, stick to the path; do not damage trees or shrubs, and do not heedlessly pick flowers only to throw them down a few minutes later. Many of the fair sex cannot resist flowers — they hope to reach home with them intact, but, generally, the posies droop and wilt long before the day is through.

Keep to the tracks

When tramping over moors keep to the well-defined tracks, especially on grouse moors, which are strictly preserved. On most moors and heaths there are public footpaths, and though you may be tempted to strike off across the heather, it is wiser to resist. The short cut across a moor may be the longest way round by the time you have negotiated patches of bog or marsh, or found a spot where you can wade a stream. 'Ware snakes — they may be adders!

Never cut across a moor in summer, when grouse-shooting — which commences on August 12th — is in progress, it is simply asking for trouble. Grouse moors are to be avoided on shooting days, during August and September especially.

Do not leave the embers of a fire smouldering if you have occasion to light one to boil a kettle at lunch-time. Be sure that they are quenched before departing on your journey after your refreshment. Sometimes a fire, seemingly dead, bursts into flame again if a wind springs up, sparks are carried into the heather or the dry, sapless bents, and soon a lively moorland blaze is raging, which will need some stopping.

Perhaps it is better to carry with you a small kettle and a spirit stove, if you wish to have a 'brew-up' on the journey, through the wilder places, than to risk an open fire.

It appears senseless to stress the danger of throwing down lighted matches into the dry grass and heather or any undergrowth but it is easy to be forgetful. Cigarette ends still alight are the cause of many fires. Be most careful about this, and see they are stubbed out before casting them aside.

That Litter!

Yes! litter! We still find rubbish spoiling the countryside everywhere during summer holidays. Please do not become one of the 'litter fiends'. Country lovers simply hate them! For they prowl about in the beauty spots leaving a trail of sandwich papers, empty bags, cartons, cigarette packets, match boxes, wrappings, scraps — even glass bottles on occasion.

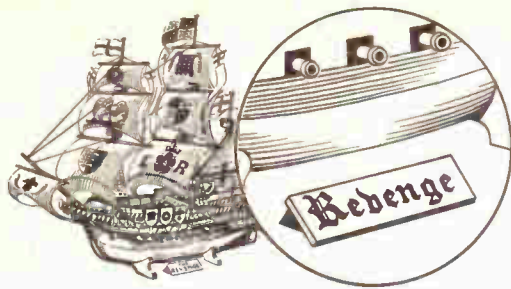
After your wayside meal, destroy all litter, push it down a rabbit burrow or in a hole in the bank; or carry it home and dispose of it there. But, for goodness' sake, don't dump it into a stream — people and cattle living in the valley where the water flows may have to depend upon it for drinking purposes, especially in remote countryside. Do not look upon the burn or beck or river as a convenient dumping-ground for empty sardine tins, etc.

On a tramp in the wilder parts, *do* play safe. Take a compass. Stick to walking and leave all climbing of peaks and hilltops to expert climbers. Carry emergency rations with you in such kind of country, and do not forget a pullover, mackintosh, and a drink in your flask.

If using the Youth Hostels be prepared to do your share of the chores before you leave after a night's doss. Don't infringe any rules of the Association. Do not omit to carry your membership card in your pocket. During the height of the season you will be well advised to book your lodgings in advance. Try and ensure that you arrive at the hostel on time if your evening meal has been booked.

SOLUTION TO CROSSWORD NO. 7 PUBLISHED LAST WEEK

Across: 1. Insist. 5. Edict. 8. Tong. 9. Credit. 11. Onset. 12. Direct. 14. Mess. 16. Sense. 18. Dairy. 19. Stet. 20. Tomtit. 24. Erode. 25. Pierce. 26. Mile. 27. Tasks. 28. Errors.
Down: 1. Inch. 2. Shed. 3. Stir. 4. Totems. 5. Egotist. 6. Instant. 7. Tattler. 10. Diver. 13. Oddment. 14. Minions. 15. Systems. 17. Eerie. 19. Sample. 21. Tier. 22. Trio. 23. Pens.



Old-Time Alphabet Lettering

FOR galleons in particular, there is nothing to equal a nameplate written in the style of lettering shown here. It is a fitting finish for any 'old-time' model you may be constructing.

House name-plates look well if the letters are painted in black on light oak. Draw out the name first and then transfer to the wood by means of carbon paper. Use a small brush for painting and do not thin down the paint too much or it will be inclined to spread.

Gothic style

The alphabet shown is known as the 'Gothic' or 'Black Letter' and is still frequently used as an ornamental letter. Note that only the J has been shown in the capitals. The J and the I are exactly the same.

For old-time galleon models the name should be printed in ink, preferably black indian ink, as shown in our illustration. Mark out in pencil first and finish off with a fine mapping pen.

Letters can be cut from wood, preferably plywood, if they are large enough. A glance at the drawings will show that unless they are of sufficient size the thin strokes will not have enough substance to cut. Wood letters (Fig. 1), mounted on a suitable backboard give a pleasing carved effect.

Small letters, say 2ins. high, may be cut from metal such as aluminium.

Increase the thickness of the thin strokes as shown in Fig. 2 and drill the interior frets. Cut these out with a fretsaw and then cut round the outlines. Finally drill at convenient points for pinning to a backboard.

Do not be afraid of tackling aluminium or plastic with a fretsaw. They cut as easily as wood. Use a metal cutting saw for aluminium. (M.h.)

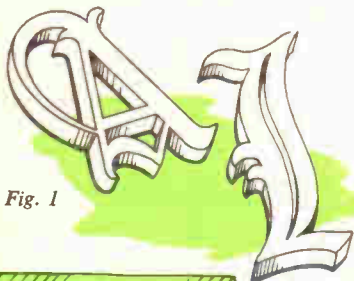
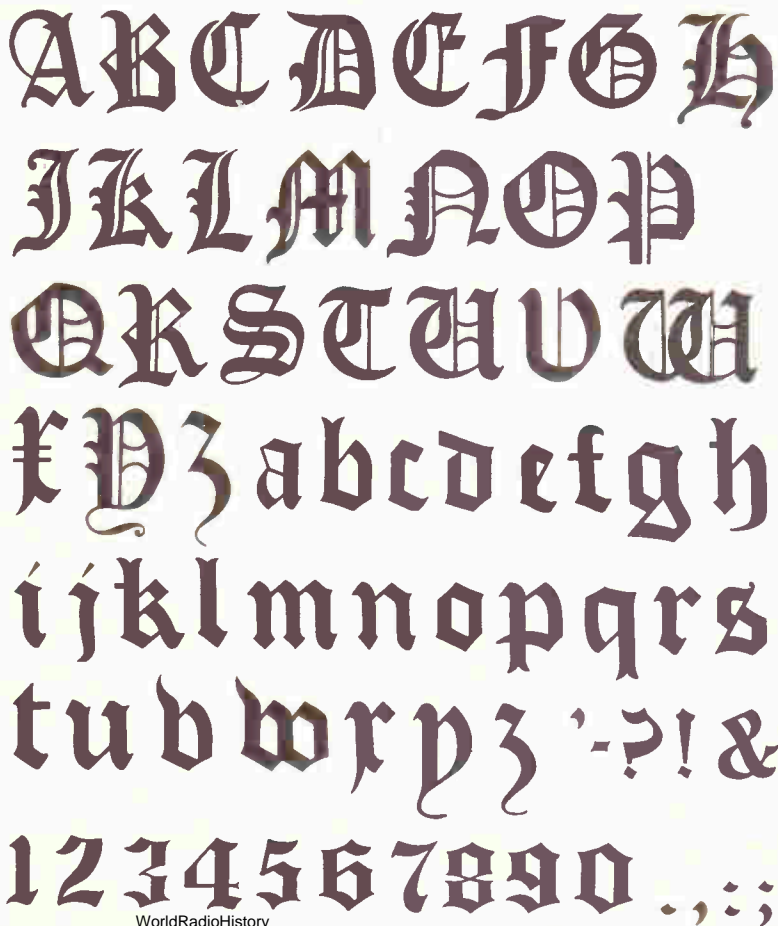


Fig. 1



Fig. 2

TOURING BY CANOE



Fully loaded, but everything out of sight. These canoeists have everything on board for a week's cruise on the River Trent.

THE greatest satisfaction in owning a canoe is to be had when you use it to take you and your kit for a cruise. You do not need to go far from civilization to discover the joys of being close to nature and reliant on your own self-contained resources. A home-made canvas-covered canoe will take its crew

canoe decks is more than in a couple of rucksacks, so the bulk of your kit is not so important. What is important is the way you pack your kit.

Because of the shape of a canoe, kit is most easily packed if it is broken down into a large number of small packages.

There is no place for a frame rucksack in a canoe. Instead, most of the bags should be of the kitbag type. At least one bag should be fully waterproof and used to store bedding, a change of clothes and a towel, so that in an emergency these vital things are dry. A rubberized fabric should be used and strips stuck over the seams. The bag should be much longer than necessary, then the neck tied around, doubled back and tied again (A). The enthusiast will have this type of bag for all his kit.

I usually have an inflatable lifebelt as reserve buoyancy in each end of the canoe. The tent is made into a package rather longer and thinner than usual and pushed right into the bow alongside the buoyancy bag. Next comes the bedding

bag. At the stern goes a bag containing spare clothes, followed by the cooking gear and most of the food (B).

It is unwise to stow much in the cockpit, although in a long double there may be room for a bag to be lashed behind the front seat. At each side of the seat there can be such things as bad weather clothing, maps, camera and mid-day

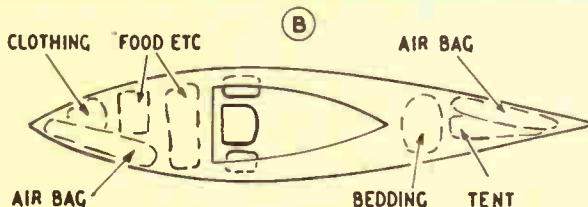
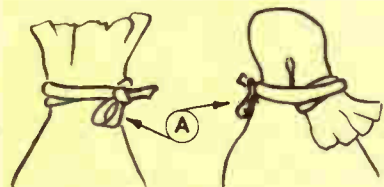
~~~~~  
*By P. W. Blandford*  
 ~~~~~

food, preferably in bags fixed to the canoe. The area around the feet should be kept clear.

Primus stoves are usually carried, as fires get tedious when almost every meal is at a different place. If there are more than four in the party, a pressure cooker is worth having. Each canoe should carry a quart water bottle.

When loading the canoe see that it trims properly. Because of the high fore-deck there is a tendency to put too much in the bow. A canoe which is down by the bow is very sluggish to paddle and could be dangerous if it grounded forward first in a rapid. If anything, the canoe should be slightly down by the stern.

It is best to think out in advance what your daily programme will be. If you



and all they need for a camping cruise down a river, for a holiday which will be completely different.

It is possible to tour with a canoe and find accommodation every night, but most canoeists favour the complete independence which goes with canoe-camping. Riverside camp sites are easy to find and your trip does not have to be restricted to suit available indoor accommodation.

Camping with a canoe is very similar to any other sort of camping, except for a few differences which are all to the canoeist's advantage. Weight in a canoe does not make very much difference afloat, so kit does not have to be cut to the limit as is often necessary when hiking or cycling. The space under the

rise about 7 a.m. it should be possible to be loaded and on the water by 10 a.m. After a little experience the time taken to have breakfast and do the morning chores can be cut considerably without discomfort. Around 1 p.m. there can be a break for a riverside snack, but it is not usually advisable to cook anything then, except, perhaps, tea to drink. The next camp site is reached about 5 p.m., and you have your big meal in the evening (after a day on the water you will make sure it is a big meal).

Camping with a canoe is simple. You lift the canoe out and put it beside your tent. You only take out what is actually needed in the tent. Your canoe serves as

●Continued on page 231

More 'Thought-Reading'

HERE is a clever 'thought-reading' trick with cards but requiring the co-operation of an assistant who must be thoroughly trained in the mechanics, so that places may be changed if necessary. The secret is most difficult to detect and the trick may be repeated quite a few times.

First of all we will describe the performance, giving the explanation later.

As performer, ask any member of your audience to select any two cards from the pack, revealing them to you and the audience. The assistant is not allowed to see the cards for you explain that you are to attempt to tell him the values by passage of thought.

Taking the cards, look at them, square together, place face downwards on the table, and place the balance of the pack on the table.

Calling your assistant, you ask for the values and suits of the two selected cards which, after a little thought, he should be able to give quite accurately, to the amazement of the audience.

You will observe that there are no indications of any message that could pass between performer and assistant, nor handling of the cards after selection, making the trick really perplexing, but reference to a diagram will help.

It is best to lay a handkerchief on the table so that the assistant can forecast the correct cards merely by noticing their position on the table. Should the two cards be in the same position — or rather, the pair of cards and the pack — it would indicate that both were of the same value, but they could be of a different suit, while an ace, beyond the range of the handkerchief, will be positioned at one corner of the table. This rectangle, represented by the handkerchief, should be memorized by both performer and assistant and with co-operation the positions may be reversed.

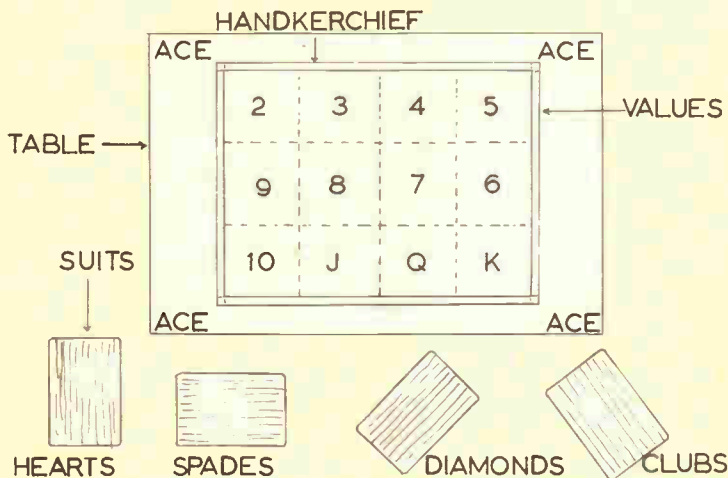
So much for the values of the cards. You will want to know how to determine the suits. Reference to the diagram again will show four different ways in which the cards should be laid to indicate the different suits. For example if the two of hearts is selected, the performer will lay it vertically on the '2 space' of the handkerchief, while the ace of spades will lay horizontally at one corner.

That is the basis of this trick, but it will be appreciated that the key plan or angles of the cards may be altered to suit yourself, or you may make it more confusing by asking for the selection of three cards. In the latter instance the card case is placed on the handkerchief to indicate the third value, in addition to

the three selected cards and the pack.

You may start off the trick by first 'transferring' a card value to your assistant, then a card and suit. After this you may then proceed to either two or

three selections at your discrimination. It does not matter whether your audience sees the handkerchief or not, but obviously it will be more mystifying if they do not.
S.H.L.



● Continued from page 230

Touring by Canoe

a store tent. With its spray cover closed right over it is proof against cows as well as the weather.

If the party is bigger than just two or three canoes there should be a leader. When a rapid or other hazard has to be tackled, everyone should examine it, then the leader goes through first while the others watch. The others come through in turn as the leader signals. If the party is very large, it should be divided into groups of four or five canoes, each with a leader. They keep together always, although they may be out of sight of other groups. The party leader has some assistants, and when they meet a hazard, one of the assistants stops there and sees the others through.

Repairs have to be considered. Patching material, adhesive, thread and a needle, should be carried by each canoe. Someone in the party should have a few tools for doing repairs to the woodwork. Serious damage is unlikely, but it is surprising what repairs can be done on the river bank with very few tools.

A folding spade is useful with a party. The lone canoeist can manage with a trowel, for latrines or burying rubbish. One large canvas bucket can be shared. A single large paraffin can is better than many small containers.

Food depends on your river, but in most places it is as well to carry a reserve of tinned stuff for emergency. Remember that the average village store does not carry enough stock to cope with a dozen hungry canoeists who clamour for bread without warning. Write or telephone ahead if your party is very big.

Next week we shall describe how to make a Peninsular Table — a boon for the small kitchen. Also free competition, marquetry and fretwork plans, etc.

For only £2

BUILD THIS 3-VALVER

MAKING a 3-valve speaker set for just over £2 may seem incredible to many readers, especially so when it is known to be a mains set with its own power pack. However, a list is given, with prices and sources of supply. This will prove it really can be done.

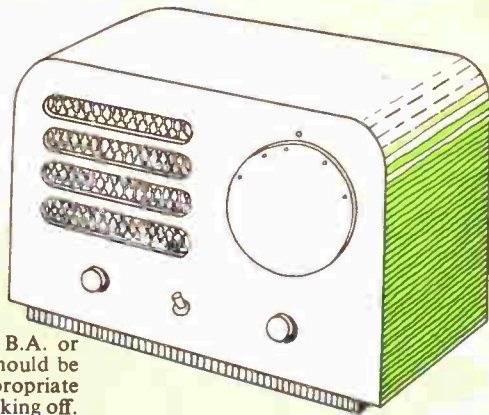
A set of equivalent performance would cost £5 and more in kit form in the shops. So financially, we have here a good proposition. Moreover, it is very easy to build. It is a T.R.F. circuit and, therefore, will present no obstacles to the constructor. The remarkable cheapness is due, amongst other things, to using Government surplus components, especially the SP61 valves which are now so inexpensive.

In building the set, the first thing to do is to make the chassis. A piece of

*Described by
A. Fraser*

The smallest holes can be 6 B.A. or 4 B.A. The positions of them should be ascertained by holding the appropriate components in position and marking off.

Fig. 1 gives the chassis punching plan. The hole marked (B) is directly below the tag on the second (or back) section of the tuning gang condenser. (Incidentally, the gang condenser should be mounted so that the vanes rotate outward towards the centre of the chassis, not towards the V1 side of the chassis.) Do not, however, mount the gang yet.



Next, fix the two tag strips, one near valveholder number one, and the other on the back runner well above and to the left of valveholder number two. (See Fig. 2).

In Fig. 2 the chassis walls, or runners, are shown splayed out in perspective to make the wiring more comprehensible.

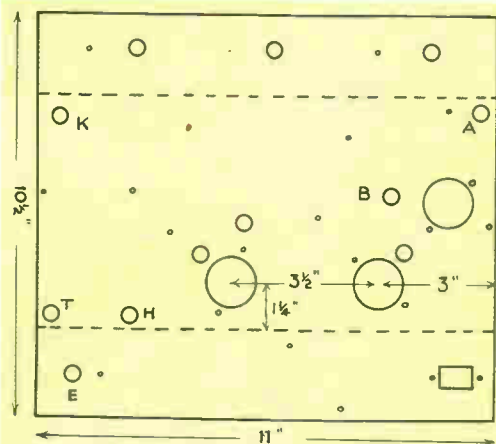


Fig. 1

aluminium sheet 11ins. by 10½ins. is needed. This can be anything from 18 to 24 gauge in thickness. It should be bent to form a deck of 5½ins. across and sides (runners) of 2½ins. deep. The 11ins. represents the length of the chassis.

Holes should be made in the chassis for valveholders, etc. These can be done with special punches, or with a fretsaw, or a drill and file. If preferred, these holes can be made before bending the aluminium. The valve holes should be 1½ins. diameter (Octal size). The other holes should be ¾in. diameter, and should later be filled with ¾in. rubber grommets.

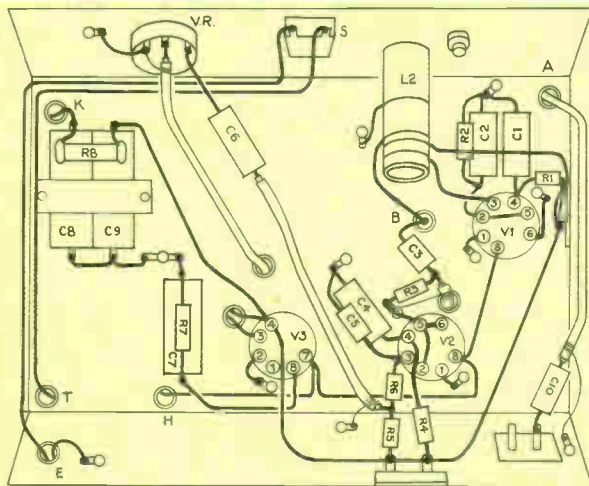


Fig. 2

When the chassis is ready, the valveholders can be bolted in. V1 and V2 are Mazda Octal types, while V3 is International Octal type. Make certain of this, otherwise you will cause yourself a lot of trouble.

It is also important to place each valveholder properly. Reference to Fig. 2 will show how each one should be placed according to the tag or pin numbers. The metal fixing base should be below chassis, only the amphenol top projecting through the chassis deck.

Don't forget to fix soldering tags under the nuts holding the valveholders where these are shown in the diagram (Fig. 2.)

Next, fix in the switch and the volume control on the front runner. The end of the control spindle should project about 1in. from the front of the chassis, so saw off to the requisite length before fixing to the chassis.

Start wiring

Wiring may now be commenced. Use 22 gauge tinned copper wire, single conductor and P.V.C. or rubber covered. Start with the valve-heater chain, joining all the positive tags first. Thus, pin 8 of valve one to pin 8 of valve two, then from there to pin 7 of valve three. Then from this last pin pass a lead through the chassis, leaving about 3ins. above

the chassis. Let this lie free for the time being — we will come back to it later. This wire of the heater chain should be pressed close to the chassis floor. Complete the heater circuit by joining tag 1 (V1) to the adjacent soldering tag on the chassis, then tag 1 (V2) to its soldering tag. With V3, note that it is pin 2 that is joined to chassis.

Next, join pins 2 and 5 on V1. Then connect pin 6 to chassis tag. After this, add C2 and R2 between chassis and pin 2. Then add C1 and R1 as shown in the diagram (Fig. 2). Leave pin 3 alone for the time being.

With V2, first join pins 2, 5 and 6 to chassis. Then put in C5 and R6 and R5 as shown. Next, C4 and R4 as shown. Then join the two tags of the tag-board.

From the junction of R5 and R6, take a screened lead to C6, and so to the volume control. Wind some bare wire round the metal sheath, twist tight, and connect to chassis.

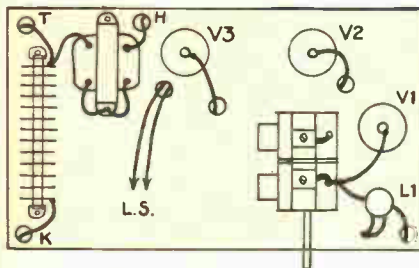


Fig. 3

Leaving the volume control unfinished, turn to V3 and wire in R7 and C7. From pins 3 and 4, take leads through the chassis. These are loud-speaker leads and should be of stranded insulated type. Leave about 6ins. projecting through the chassis.

Then join pin 4 (V3) to the tag-board to which R5, R4 are joined, and then join the tag-board to the tag-board adjacent to V1.

Leave the under-chassis temporarily, and turn to the top deck.

Bolt the transformer and rectifier into position.

Completing heater chain

Now take two or three yards of lighting flex. Attach a plug at one end, and undo the other end for about two feet or so. Pass the flex through the grommet (E) in the back runner, and solder the short end to chassis. Take the long end along the side of the chassis and along the front runner to the switch. Cut it and join to one tag of the switch. Solder the piece of wire left over to the other tag and lead this back the same way and pass it through the chassis deck (grommet T). Then join it to the black end of the rectifier and from there to the 250 volt tag of the

primary winding on the transformer. Join the bottom ends of the primary and secondary windings to the chassis.

The 6.3 volt end of the secondary is soldered to the heater lead already hanging free from grommet (H). The heater chain is now complete.

Next, join the red (positive) end of the rectifier to a lead going through the chassis (grommet K) to the positive tag of C8.

C8 and C9 are held down by a strip of thin metal and bolts. From the positive tag of C8, the smoothing resistor (R8) is joined to positive tag of C9. This latter tag is then joined to pin 4 on V3.

The negative bottoms of the condensers C8 and C9 are joined to chassis.

Wiring precaution

Complete the volume control now, earthing the end tag to chassis and taking a screened lead from the centre tag through the chassis grommet, leaving about 5ins. free for the moment. Earth the metal sheath.

Now take the tuning condenser, and solder about 1½ins. of thick tinned wire to the bottom tag on the second or back section of the gang. Mount the condenser so that this wire projects through grommet (B). Take care it does not make contact with the chassis at any point.

Solder C3 to the wire projecting through (B) grommet. Then add R3 and the screened lead as shown in Fig. 2. Earth the metal sheath. Leave about 5ins. of the screened lead above the chassis.

Fix in the coil on the under chassis and join (B) to the top end of the larger winding. The bottom end goes to chassis. Join the bottom end of the small coupling winding to pin 3 of V1, and the other end to the H.T.+ tag, to which R1 is also joined.

From the aerial socket join some screened lead and take to grommet (A), keeping it well away from the other wiring. Leave about 4ins. projecting above chassis.

Mount the aerial coil (L1) on the chassis deck at the corner (see Fig. 3). Join the screened lead from the aerial socket to the bottom of the coupling coil. Join the top of this smaller winding to the bottom of the large winding and then to chassis solder tag. Join the top of the main winding to the tag on the

COMPONENTS LIST

Twin-gang tuning condenser, .0005 (a)	s. d.
2	6
Twin trimmers, 50pfd + 50pfd (b)	7
C1, C2, C4, C6, .1 mfd. 350 V working (c)	8
C3, C5, .0001, .0003, mica (c)	6
C7, 25 mfd., 25 V electrolytic (d)	6
C8, C9, 32 mfd. + 32 mfd., 350 V (d)	2 0
R1 (47K), R2 (560), R3 (1M), R4 (220K), R5 (100K), R6 (33K), R7 (470) (b)	2 4
R8 (1.5K) 1-5 watt. (b)	7
V.R. 1 meg. pat. (d)	1 6
Switch (on/off toggle). (c) List No. 1847	6
Valves, V1, V2, SP61 (c)	2 0
Valve V3, EL32 (b)	3 9
Valveholders, two Mazda Octal, one I.O. (c)	1 1
Speaker and transformer (8,000 load) (e)	10 0
Mains heater transformer, 6.3 V 1.5 A (b)	5 9
Rectifier, 250 V 50-100 mA, half-wave (e)	2 9
Knobs, ¼in. fitting (c)	8
Panel bushing (¼in.) (c)	2
Brass, ¼in. spindle coupler (b)	6
Drive spring (b)	2
Aerial/earth socket (b)	4
Tag strips (two) (b)	4
Chassis, aluminium	1 6
C10, .005, 750 V working (b)	4
Total	£2 1 0

- (a) Televox Radio, 70 Brigstock Rd., Thornton Heath, Surrey.
 (b) Radio Supply Co., 32 The Calls, Leeds 2
 (c) J. E. Annakin, 25 Ashfield Place, Otley, Yorks.
 (d) Wm. Benson, 136 Rathbone Rd., Liverpool 15.
 (e) Duke and Co., 623 Romford Rd., Manor Park, London, E.12.
 (The prices listed above do not include postage).

fixed vanes on the top of the first (front) section of the gang. Join this same tag to the grid top cap of V1. A proper grid clip is best for connecting, but failing this, just twist the wire end into a tight loop over the cap.

Next, fix the trimmers over the gang condenser, using aluminium strip and nuts and bolts. Earth the trimmers (if this is necessary) to the frame of the condenser, and connect the other trimmer tags, one to the tag of the fixed vanes of the first section, the other to the tag on the fixed vanes of the second section of the gang.

After this, connect the top caps of V2 and V3 to their appropriate leads through the chassis.

(To be concluded next week)

Fire-lighting made easy

IN place of the usual method of kindling a fire with paper and wood, the following will be found cheap and efficient.

Keep a large jar about three-quarters filled with paraffin and soak a large, dead cinder in it overnight. To light the fire, lay a piece of newspaper over the bottom of the grate, put the paraffin-

soaked cinder in the middle and cover it with fairly small lumps of coal. Then ignite the paper. The cinder will burn long enough to kindle the coal.

Before lighting a fire by this or any other method, always thoroughly clean out the dust and ashes from the fret and the bottom of the grate to ensure the maximum draught. (R.L.C.)

MAINLY for MODELLERS

IN our deck layout there are several fittings we can add to make our model more authentic and therefore more interesting. We add first a capstan. This goes on the main deck, behind the mast and just in front of the half-deck. I give a sketch of an early capstan of around this period in Fig. 1. It can be carved from wood, drilled for capstan bars, the bars being pins with the heads and points cut off and the bars painted black. For our model carve from a piece of $\frac{1}{4}$ in. square stripwood.

Another way I have found very useful

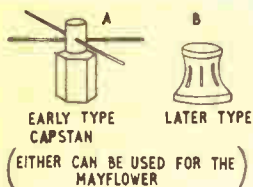
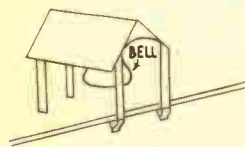


FIG. 1.



BELFRY, REAR PILLARS ON DECK, FRONT PILLARS ON BRACKETS AFFIXED TO BULKHEAD

FIG. 4.

DEAD EYES FOR SHROUDS

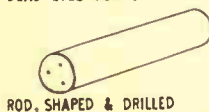


FIG. 6.



FIG. 5.

for making this type is to use a hexagonal brass collar cut to size for the lower half and fitted with a piece of brass rod of the same diameter as the bore of the collar; both these items can be obtained from old electric fittings. I have quite a collection of such items from a discarded wireless set.

A knighthead can be fitted just aft of the mast as in Fig. 2, to take the main halyard, make this of square stripwood to the dimensions shown in the sketch.

The ship's boat can be carved from wood as in Fig. 3, or made from card

in the manner shown in my earlier article on modelling ships' boats.

The belfry, Fig. 4, is placed in the centre of the front edge of the quarter deck; it can be assembled from $\frac{1}{4}$ in. square stripwood with a V-shaped roof of bristol board as shown, the bell is carved from boxwood or holly, ideal wood for small carvings, and gilded.

A knighthead is fitted just in front of the mizzen mast to take the mizzen halyard. Make one as in Fig. 2. A fife rail is fitted right behind the mizzen mast and behind this the whipstaff shelter,



FIG. 2.

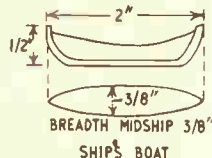


FIG. 3.



MIZZEN MAST
FRONT OF MODEL



FIFE RAILS.
1/8" STRIPWOOD
PILLARS, RAIL
1/16" PLY.



WHIPSTAFF SHELTER

FIG. 5.

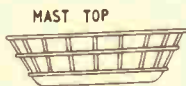


FIG. 7.

both are shown in Fig. 5. The whipstaff shelter can be carved from a block of wood or assembled from card. In the latter case make it of two sides, back and roof, leaving the front open and fitting two pillars made of $\frac{3}{8}$ in. diameter bamboo, stout pins could be used for the pillars if preferred.

We now come to two items that, in ships of this period, distinguish the model from the sideboard ornament, namely the deadeyes and the mast tops.

Dead eyes of this period were heart shaped and it well repays to make them to this shape. The extra little time it

takes is well spent, and we have the satisfaction of knowing we are correct in a detail that is most noticeable, especially to anyone who knows a little about these things.

To make heart shaped deadeyes you cannot improve on the methods I outlined in a much earlier article on block making. Another article is in preparation on this subject dealing with later types of blocks and tackle and how to model them.

The deadeyes can be made from $\frac{1}{8}$ in. boxwood dowel, or for a stronger job, less liable to split, obtain a pair of plastic knitting needles of this size. They are quite cheap and one pair will provide enough material for several models.

Cut the end square and drill the three holes in the end, deep enough to serve for two or three dead-eyes and a little over, so that when you cut the last one off you have the drill marks to follow in the next drilling, this ensures that the holes in your deadeyes will all be exactly the same. Shape the material along its

'MAYFLOWER' Deck Layout By 'Whipstaff'

whole length so that the ends are heart shaped as in Fig. 6, cut off your first two or three deadeyes, drill again and repeat the operation until you have the number of deadeyes required.

The Euphroe must be made from a piece of $\frac{1}{8}$ in. wood, drilled with three rigging holes and grooved around the edge with a rat-tailed file. The grooving can be done with a sharp penknife and finished with a piece of fine glass-paper folded to make a sharp edge, if you have no rat-tailed file. Sand down to $\frac{3}{32}$ in. thick.

Now to the tops, and I suggest that you build them up to represent the actual tops of the period. If you have a lathe you can turn them and add the outside strips in card, see Fig. 7. To build them, cut the bottom out of $\frac{1}{8}$ in. wood to the size shown on the design and cut a rabbet around the edge to take the outside wall of bristol board. Cut to fit your wood circle and flare outward. The strips are then added in bristol board and when set, the whole assembly can be painted in white and the strips and edging picked out in red.

In our next, and last, article on the *Mayflower* we will rig the model in detail in the custom of the period and I would suggest to those who want the maximum pleasure from their model, that the sails are made in fabric. Fine Irish lawn is excellent for the purpose.

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Replies to Readers

Is this YOUR Problem?

Removing Paint from Walls

I PAINTED my kitchen fifteen months ago with emulsion paint. It has cracked very badly and pulled back right to the bare plaster, fetching off the distemper over which it was painted. I now intend to repaint the kitchen. Can you recommend a method of removing this emulsion paint off the walls in order that I can obtain a satisfactory finish? (J.D.—Nantwich).

YOU should never paint over distemper. Remove the remaining paint and distemper from the walls with Arnolite, and make good any bad patches in the plaster. Clean off, then give a coat of priming colour to fill up the pores. A finishing coat of any good interior paint should then give a satisfactory finish.

Building an Aviary

I WOULD be glad if you can advise me of a non-poisonous rot-proofer to use on a wooden aviary for budgerigars. Also the best thing for water-proofing the hardboard of the roosting shelter, and the most suitable glue to use. (P.G.—Southampton).

ALL preservations are poisonous when wet, but when they have dried and ceased to smell strongly you should find them safe. Cuprinol is one sort that should do. Any hardboard for outside should be oil-tempered type. If this is painted it will have a good life. Ordinary hardboard soon disintegrates. For gluing we suggest Aerolite 306 or Cascamite One Shot.

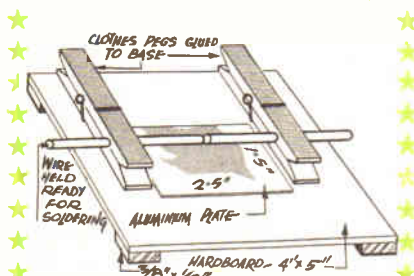
Electric Guitar

I AM interested in converting an ordinary guitar into an electric guitar and would like to know if you have any information on this subject. (F.F.—Wavertree).

SEVERAL methods are possible. A small microphone mounted on the sounding board is often used. If maximum volume is desired, the microphone may be mounted in such a position that the bridge supporting the guitar strings may be secured to it. A few moments testing will immediately show the different results with the microphone in different positions. If the strings are of metal (steel) an earphone, with diaphragm removed, may be secured below the strings at their point

of maximum vibration, the earphone being at such a height that the wires of the guitar are very close to the poles of the magnet. This will give very pure reproduction, although volume is slightly reduced. The output from the microphone or earphone should be amplified by a radio receiver or amplifier.

★ ★ ★ WORTH KNOWING ★ ★ ★



A CLOTHES PEG SOLDERING CLAMP

Protection Against Steam

WILL you tell me what could be done to prevent steam and smoke badly defacing the front of a mantelpiece? Is there any protective varnish which could be applied over the paintwork? (T.G.—Edinburgh).

A GOOD washable varnish which is also steam-proof may suit your purpose. There are several proprietary brands on the market. If you are troubled with an excess of smoke, a good cowl on your chimney-pot would probably cure the nuisance. The Colt cowl can be well recommended, and could be ordered from a local builder.

Cellulose Finish on Furniture

I WOULD be glad if you could tell me how to varnish or paint furniture, etc., to get the finish one sees in the furniture shops. (G.B.—Barnsley).

IF you are inexperienced in polishing, a cellulose finish should be about the most satisfactory method of obtaining a professional result. Stain the wood if necessary, then if of a porous nature like a soft wood, for example, apply a

coat of cellulose filler. Glasspaper down to smoothness then apply a cellulose varnish (clear) with a sprayer for preference. Alternatively you can employ a brush-on type of cellulose, but if you do, remember the cellulose is not brushed out as in varnishing, but flowed on with a full brush, not going over the same place twice. Do the work in a moderately warm room.

To Silver Glass

PLEASE let me have a formula for silvering glass. (J.H.—Tunbridge Wells).

STRIP the old paint and silvering, swash in warm soapy water and flush thoroughly with warm water and do not thereafter touch the surface to be silvered, otherwise grease films from the skin will mar the result. Three stock solutions are required:—

- (1) Dissolve 25 grams Rochelle salt (potassium sodium tartrate) in 250 c.c. of water.
- (2) Dissolve 2.5 grams silver nitrate in 250 c.c. water.
- (3) Mix 50 c.c. strong ammonia (specific gravity 0.88) with 250 c.c. water.

All water used in these must be distilled water. To 100 c.c. of (2) add some of (3) drop by drop, stirring well. A precipitate forms at first, then redissolves. Carefully add more of (2) until a slight permanent turbidity appears — only a drop or two should be needed if (3) has been added with due care. Stir in 20 c.c. of (1) and pour the mixture over the glass contained in a non-metallic tray. Allow the silvering to take place for about twenty minutes, remove glass, rinse with water and allow to dry. Protect the back by spraying on cellulose lacquer.

Khaki Dye

I HAVE been unable to obtain a khaki dye and shall be glad if you will tell me a source of supply. (B.A.—Earl Shilton).

YOU should contact The British Drug Houses Ltd., B.D.H. Laboratory Chemicals Group, Poole, Dorset or George T. Gurr Ltd., 136/138 New King's Rd., London, S.W.6. British Drug Houses sell in quantities of 25 and 100 grams, and Gurr Ltd. in 5, 10, 25 and 100 grams. As we do not know the nature of the material to be dyed, no specific dye can be quoted. Different dyes and different dyeing methods are needed for each type of fibre. If you mention to the supplier the fibre you wish to dye, you should have no difficulty in obtaining the appropriate dyestuff.

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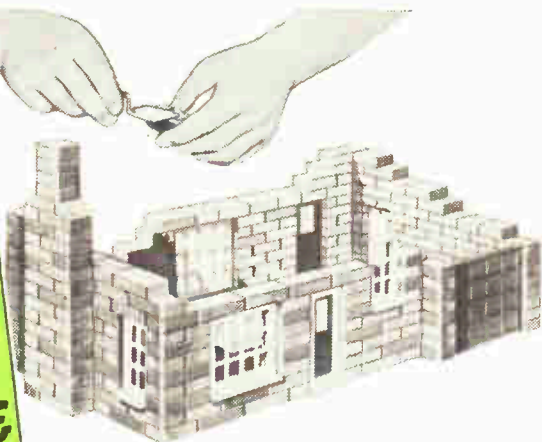
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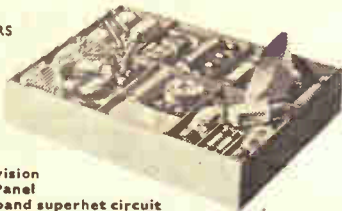
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WHEELS (Hardwood and Rubber Tyred Metal). Cot, Pram and Doll's House Fittings and Papers. Beads, Transfers, Prints and other accessories. Stamp for new lists. (Trade supplied.) New address — **JOYDEN CO.**, 91 Peplins Way, Brookmans Park, Herts.



Musical Cigarette Box It plays when you lift the lid. Full kit to make 4/10. Musical movements to fit, 18/10 (ask for tune titles available).

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Musical Cigarette Box, Kit No. 3106 - 4/10

List of musical movements available at 18/10

Name _____

Address _____

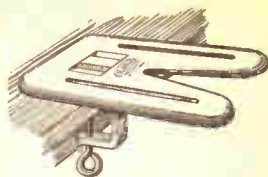
TOOLS FOR THE HANDYMAN



TOOLCLIP

For holding any handled tool
Spring steel.
Holed for hanging.

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STEEL CUTTING TABLE

With clamp for easy fixing to bench
6ins. by 4ins., strong and light. 3/9

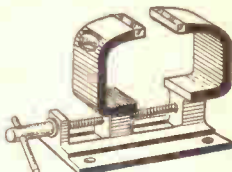
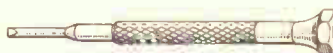
BENCH STOP

3½ins. by 2ins. — Spring loaded
6/6



SINGLE HANDED SCREWDRIVER

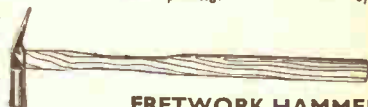
5ins. long. Ideal for small work
1/9



MODEL MAKER'S BENCH VICE No. 1

Strong, light and rigid, ½in. opening.
6/9

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8ins. long. Strong and light for small work.
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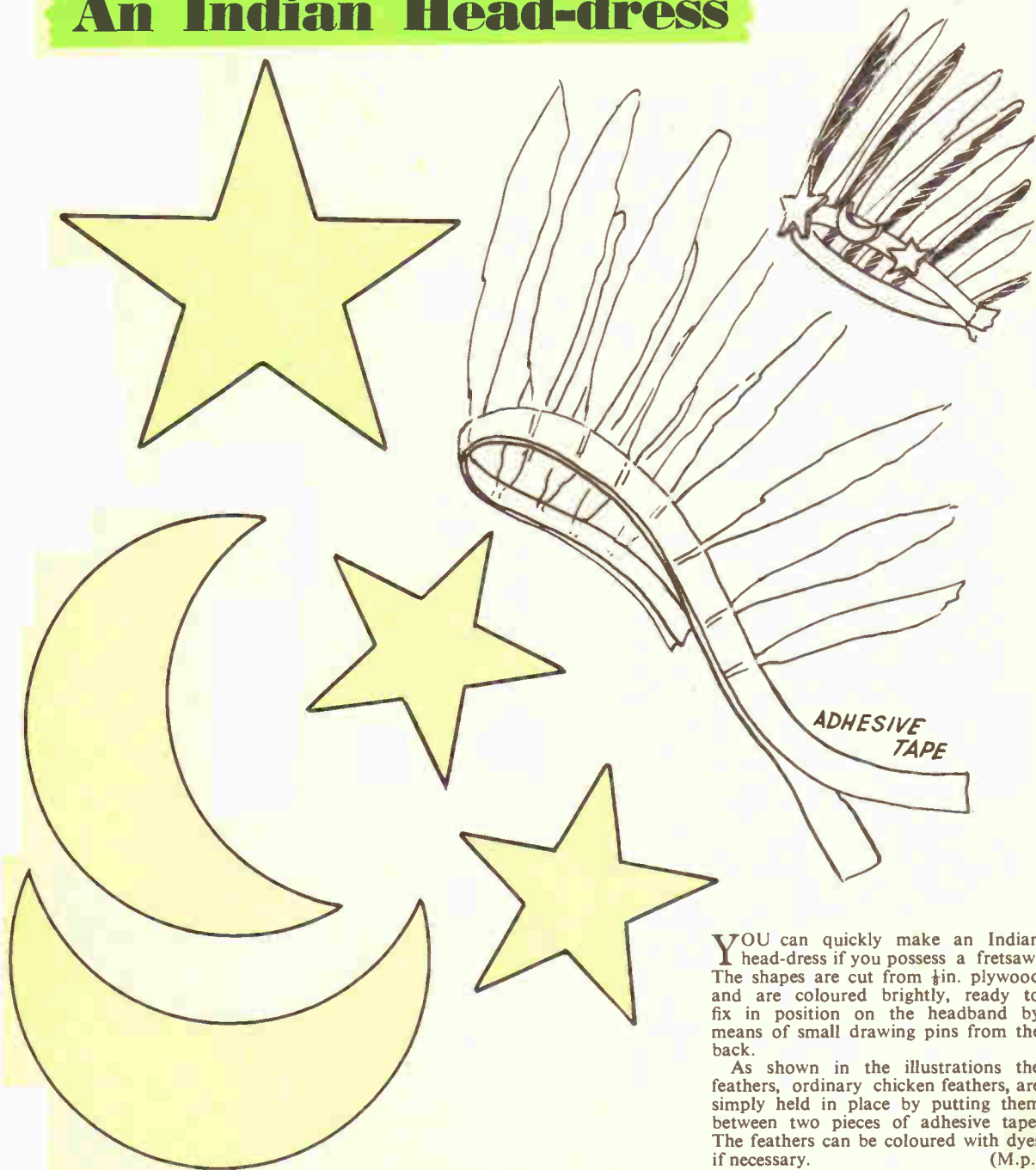
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Liverpool, Manchester, Leeds, Birmingham

Just the job for youngsters

An Indian Head-dress



YOU can quickly make an Indian head-dress if you possess a fretsaw. The shapes are cut from $\frac{1}{8}$ in. plywood and are coloured brightly, ready to fix in position on the headband by means of small drawing pins from the back.

As shown in the illustrations the feathers, ordinary chicken feathers, are simply held in place by putting them between two pieces of adhesive tape. The feathers can be coloured with dyes if necessary. (M.p.)

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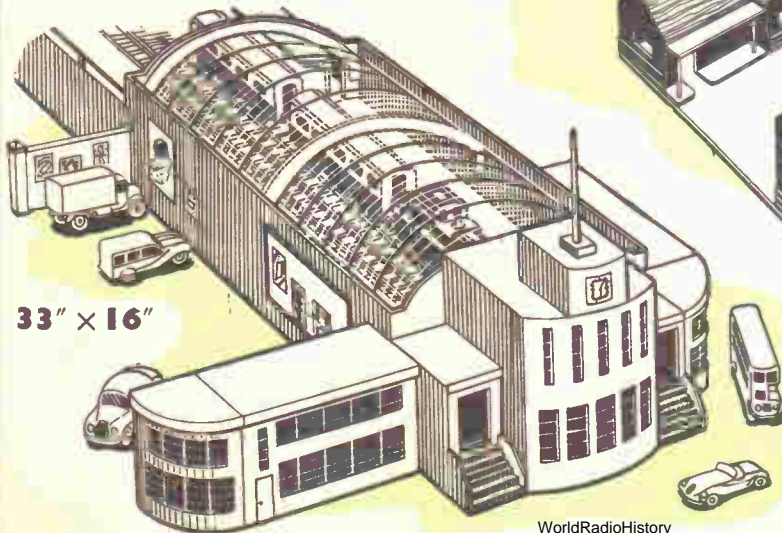


Sculptorcraft

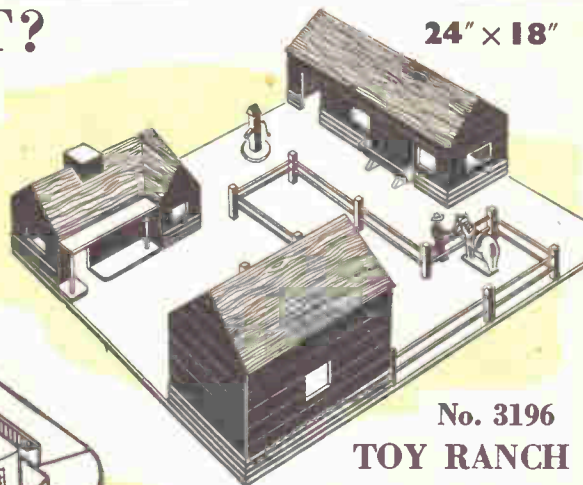
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MADE THESE YET?

Kits from branches or
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DEREHAM, NORFOLK



33" x 16"



24" x 18"

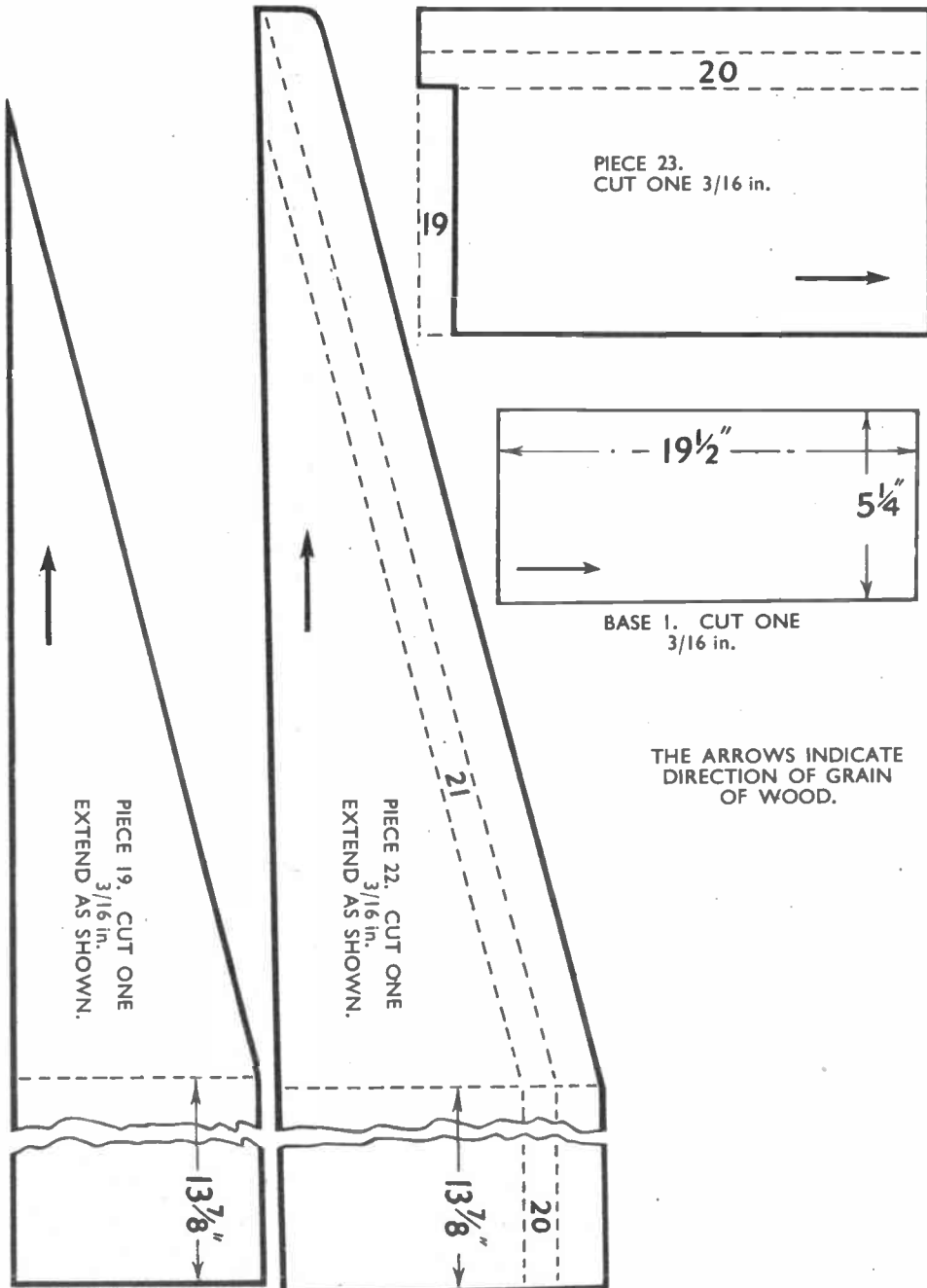
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TOY RANCH

All materials, Kit 13/6

IT'S MUCH EASIER
WITH A KIT

No. 3190
'OO' GAUGE STATION

All wood, transparent material,
posters, etc. Kit 17/6



PIECES 2. CUT ONE
8 ins. BY 1 1/2 ins.

PIECES 3. CUT ONE
5 1/2 ins. BY 1 1/4 ins.

PIECE 6. CUT ONE
4 ins. BY 3 ins.

PIECES 13. CUT TWO
1 1/2 ins. BY 1 5/8 ins.

PIECE 20. CUT ONE 13 1/2 in.

PIECE 24. CUT ONE 2 1/2 in.

PIECES 18. CUT TWO 3 1/2 in.
GLUE ALONG



DESIGN

No.
3220

PIECES 2. CUT TWO
8 ins. BY $1\frac{3}{4}$ ins. BY $\frac{3}{16}$ in.

PIECES 3. CUT TWO
 $5\frac{1}{4}$ ins. BY $1\frac{3}{4}$ ins. BY $\frac{3}{16}$ in.

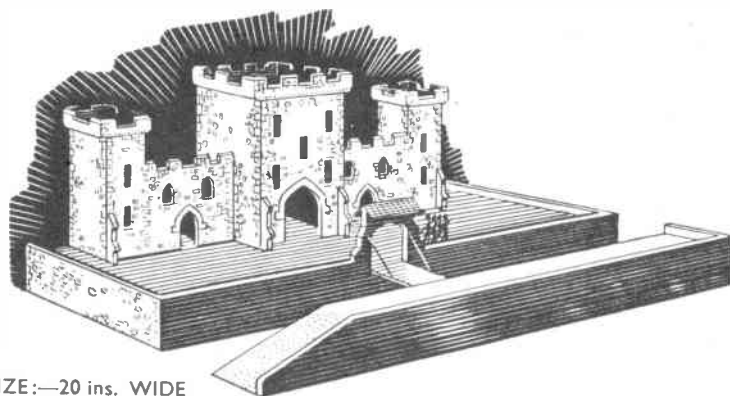
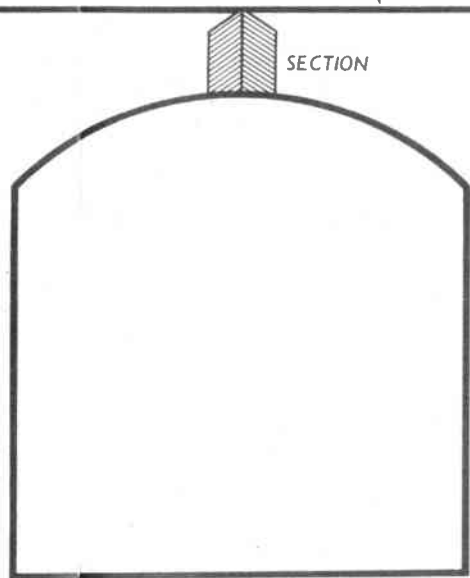
PIECE 6. CUT ONE
4 ins. BY 3 ins. BY $\frac{3}{16}$ in.

PIECES 13. CUT TWO
 $1\frac{1}{2}$ ins. BY $1\frac{5}{8}$ ins. BY $\frac{3}{16}$ in.

PIECE 20. CUT ONE $13\frac{1}{4}$ ins. BY $2\frac{3}{4}$ ins. BY $\frac{3}{16}$ in.

PIECE 24. CUT ONE $2\frac{1}{2}$ ins. BY $2\frac{3}{8}$ ins. BY $\frac{3}{16}$ in.

PIECES 18. CUT TWO $3\frac{1}{8}$ ins. BY $\frac{3}{4}$ ins. BY $\frac{3}{16}$ in.
GLUE ALONG TOP HERE ↘



SIZE:—20 ins. WIDE
9 ins. HIGH

A KIT OF MATERIALS FOR
MAKING THIS DESIGN IS SUPPLIED
BY HOBBIES LIMITED
DEREHAM, NORFOLK
PRICE ON APPLICATION

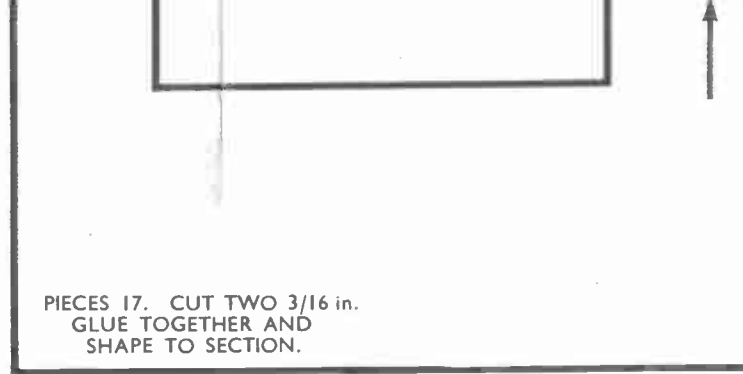
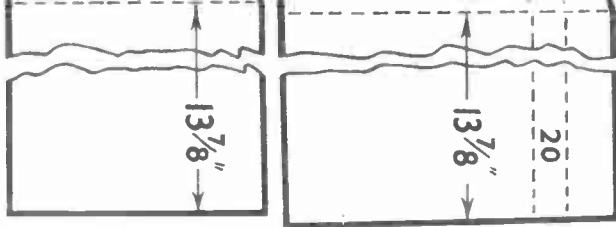
Use



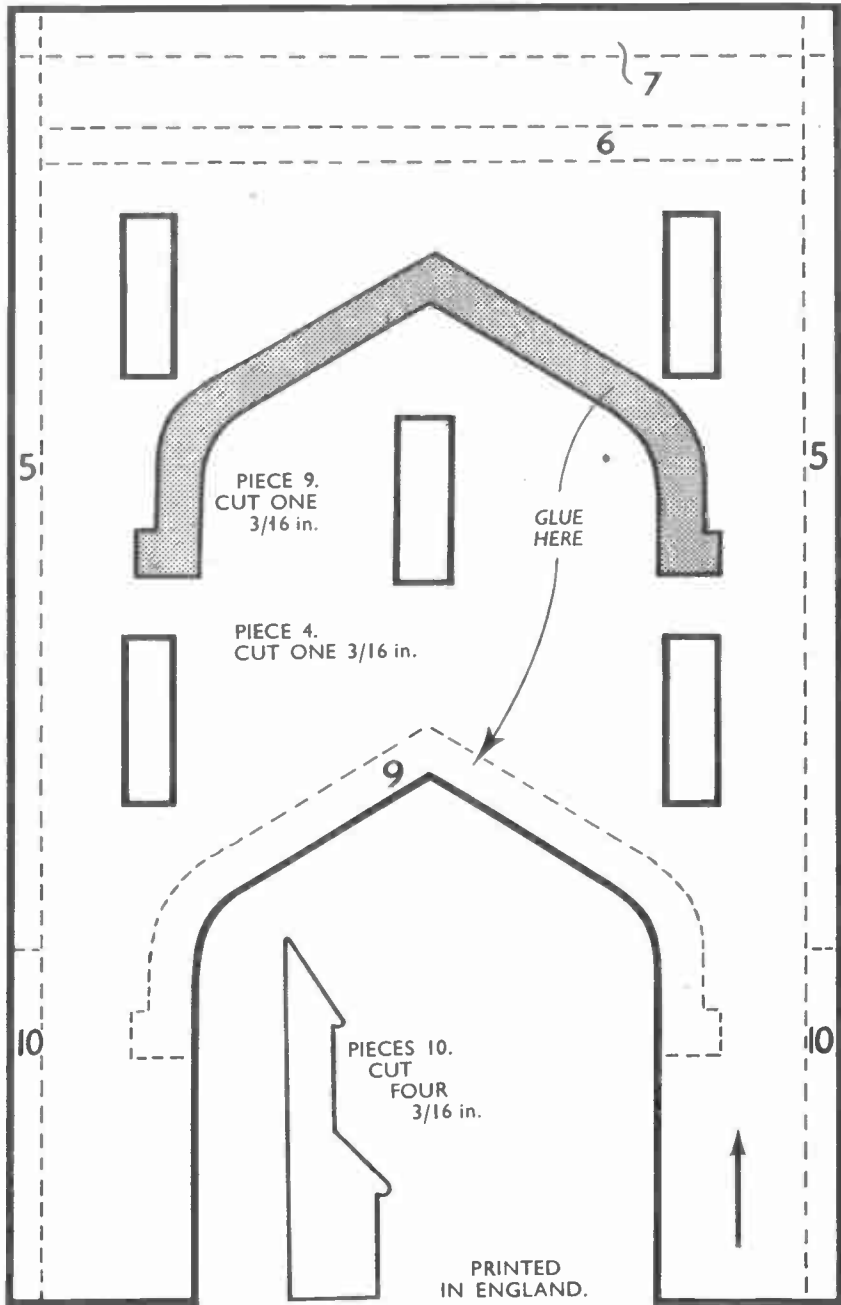
CroidAERO

IT'S DESIGNED FOR THE JOB

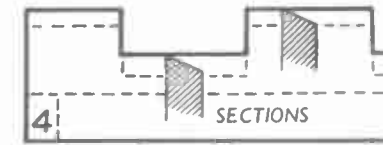
This pure hot animal glue of great strength needs no mixing or preparation. The Home Outfit consists of 8 oz. tin Croid Aero Glue — Hot Water Container — Handy Brush — 4/- complete.



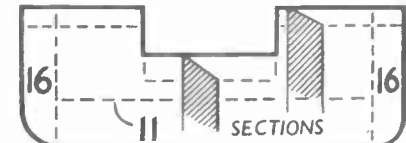
HOME OUTFIT
IT'S DESIGN
 This pure hot air
 needs no mixing or prep
 consists of 8 oz. tin Croid
 Container — Handy Brus
 AVAILABLE FROM ALL BRANC



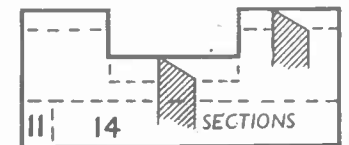
PIECES 17. CUT TWO 3/16 in.
 GLUE TOGETHER AND
 SHAPE TO SECTION.



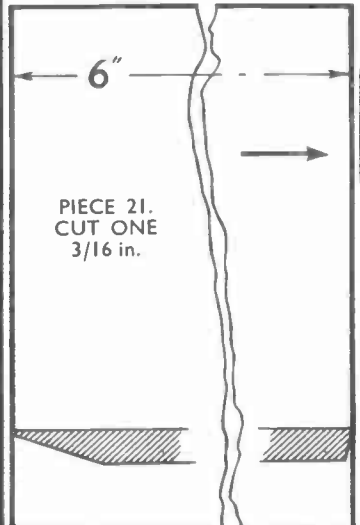
PIECES 8. CUT TWO
 SHAPE TO SECT



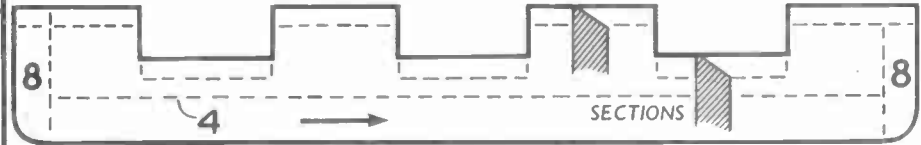
PIECES 15. CUT FOUR 3/16 in.
 SHAPE TO SECTIONS.



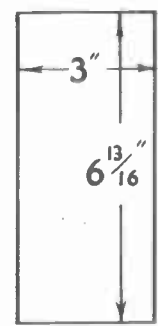
PIECES
 SHAPE



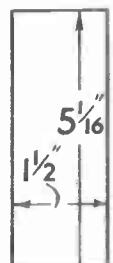
PIECE 21.
 CUT ONE
 3/16 in.



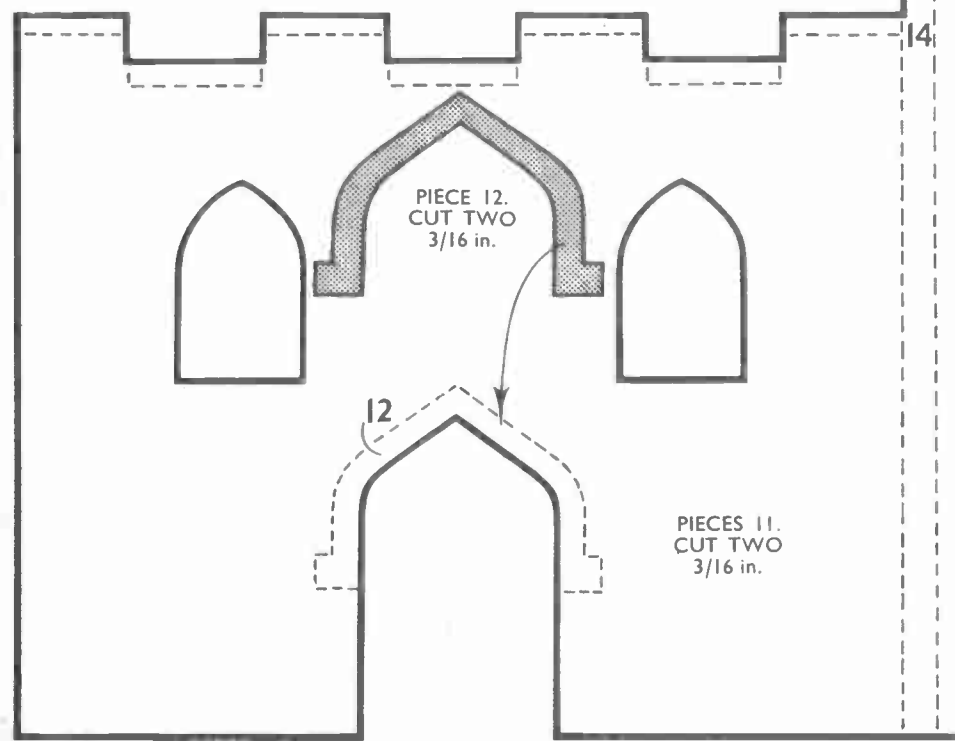
PIECES 7. CUT TWO 3/16 in.
 SHAPE TO SECTIONS.



PIECES 5.
 CUT
 TWO
 3/16 in.



PIECES 14.
 CUT
 FOUR
 3/16 in.

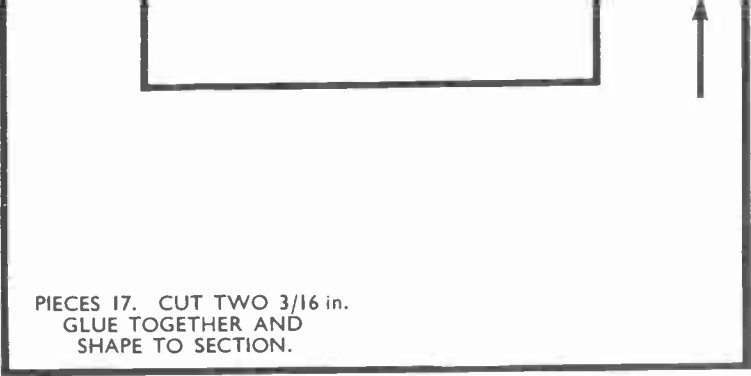




IT'S DESIGNED FOR THE JOB

This pure hot animal glue of great strength needs no mixing or preparation. The Home Outfit consists of 8 oz. tin Croid Aero Glue — Hot Water Container — Handy Brush — 4/- complete.

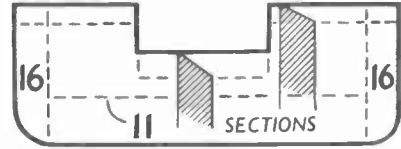
AVAILABLE FROM ALL BRANCHES OF HOBBIES LTD



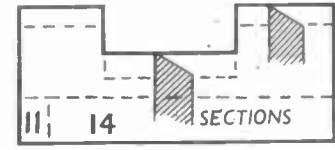
PIECES 17. CUT TWO 3/16 in. GLUE TOGETHER AND SHAPE TO SECTION.



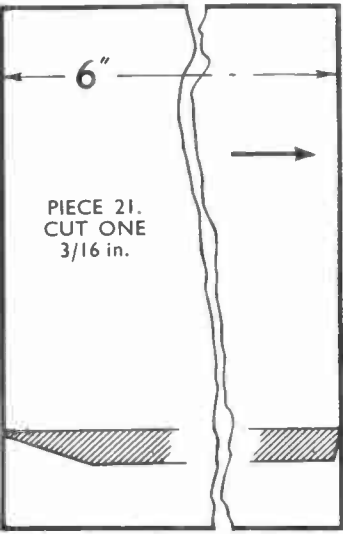
PIECES 8. CUT TWO 3/16 in. SHAPE TO SECTIONS.



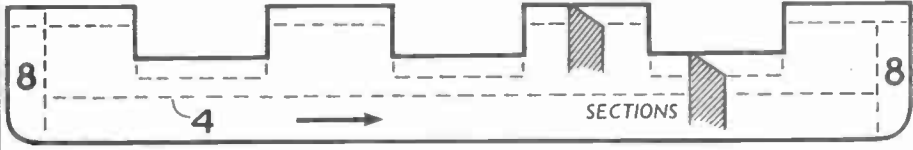
PIECES 15. CUT FOUR 3/16 in. SHAPE TO SECTIONS.



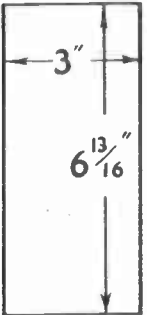
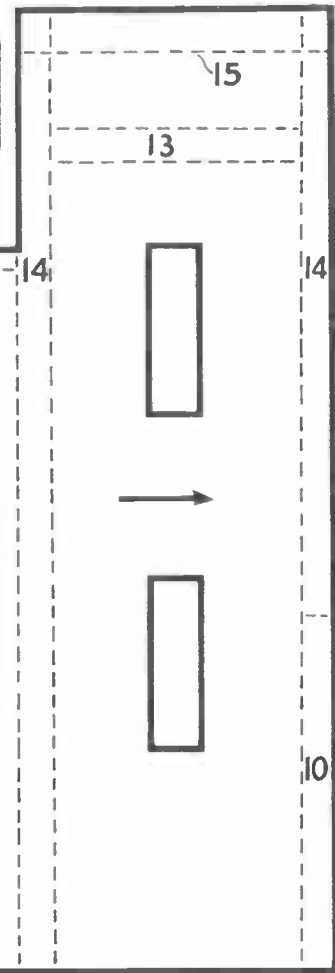
PIECES 16. CUT FOUR 3/16 in. SHAPE TO SECTIONS.



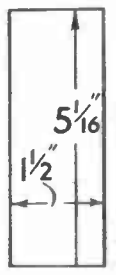
PIECE 21. CUT ONE 3/16 in.



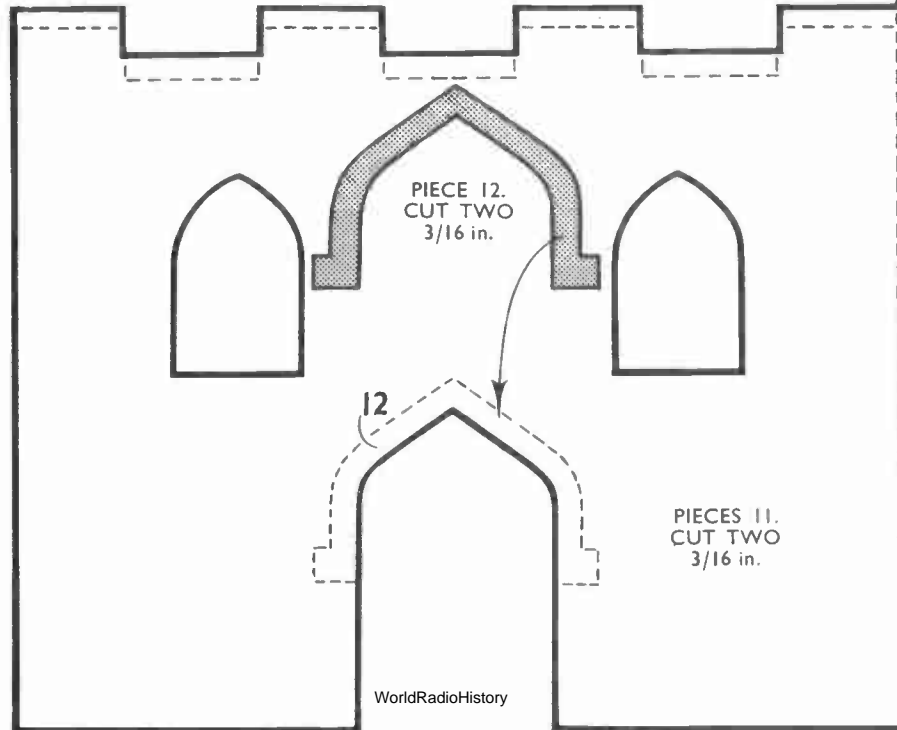
PIECES 7. CUT TWO 3/16 in. SHAPE TO SECTIONS.



PIECES 5. CUT TWO 3/16 in.



PIECES 14. CUT FOUR 3/16 in.



PIECE 12. CUT TWO 3/16 in.

PIECES 11. CUT TWO 3/16 in.