

Hobbies

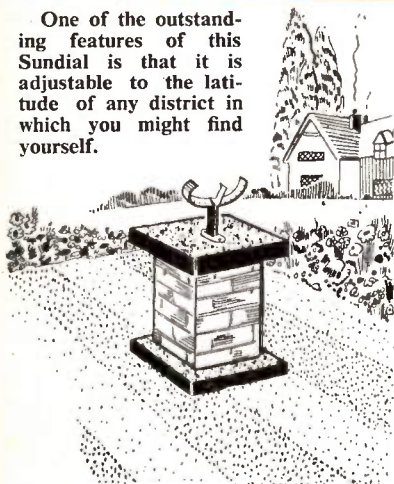
WEEKLY



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One of the outstanding features of this Sundial is that it is adjustable to the latitude of any district in which you might find yourself.



THIS somewhat unconventional design of sundial is capable of being adjusted to the latitude of any district, so has the advantage of what may be termed, portability. This is very handy when a change of residence takes place, as one can take the sundial also, and refit it to suit the new district. It is of metal construction, and any reader with some little experience of working in that material can well make it. A non-rustable metal is, obviously, the wisest choice, but if iron or mild steel has to be employed, it could be enamelled to stand the weather. A fairly stout sheet metal is desirable, but not too stout, as difficulty may be experienced in the work of bending it. A thickness of $\frac{3}{16}$ in. to $\frac{1}{4}$ in. would suit nicely.

First cut the dial plate (A) in Fig. 1.

Just right for your garden –

AN ATTRACTIVE SUNDIAL

At the exact centre cut a slot $\frac{1}{4}$ in. long and as wide as the thickness of metal employed. The remainder, right and left of the slot, is accurately divided into twelve equal divisions. Along the middle of the strip scribe deeply, two lines, $\frac{1}{4}$ in. apart, and crossing these, scribe the ten lines to mark the divisions plainly. These are the hour lines of the dial, and can be subdivided, as shown, by shorter lines to denote the half hours.

Straightedge Needed

A straightedge will be needed for this job, and a graver, or other tool suitable to score the metal. In the

absence of any proper tool, a piece of hacksaw blade will do the work fairly well. It might also be employed for putting in the numerals, if Roman figures are decided on, or the ordinary figures could be legibly impressed by tiny dots, marked on with a centre punch. Of course, both lines and figures could be etched in if the reader has any experience in such a method.

This part of the job done satisfactorily, the dial strip must be bent to a half circle. A good guide for this is a piece of board, cut to the half circle, as at (B). Bending should not prove a tough job if the metal is not too thick; it could probably be bent by hand, and a little careful hammering over the wood shape should ensure a reasonable degree of accuracy.

The gnomon, which casts the shadow on the dial is shown at (C), Fig. 2. The shape could be scribed out on to the sheet metal, and mostly cut with a hacksaw. At the top, cut out the slot shown, similar to that on the dial strip, and drill the hole, $\frac{1}{4}$ in. or more, to suit a fairly stout brass or steel bolt, for fixing the dial to its stand.

Now fit the dial to the gnomon, the slot in the former dropping into the slot

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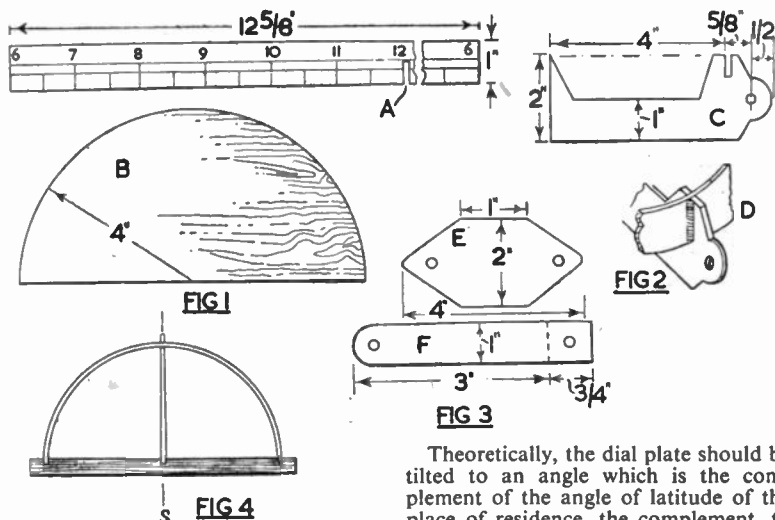
THE MAGAZINE FOR MODELLERS,
HANDYMEN AND HOME CRAFTSMEN

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in the latter part. It is essential firstly, that the top edge of the gnomon, which casts the shadow, should be level with the tips of the dial, and secondly that it should be exactly midway between them. Test with a straight bar of wood for the first essential, and correct with a file any unevenness. Then, with the same strip of wood if you like, cut two grooves, about $\frac{1}{4}$ in. deep for the tips of the dial to fit in, and a third groove, exactly in the middle for the gnomon, as in Fig. 4. Hold all firmly and solder the dial to its gnomon, at the rear, as shown in detail (D).

The stand of the sundial consists of a baseplate (E) and two verticals (F) in Fig. 3. Cut all three out of the metal and shape up to the patterns. At the top of parts (F) drill bolt holes for the fixing bolt, as done for the gnomon. Bend these parts at rightangles across at the dotted line, and drill for a screw. Be careful, when bending these, not to make too sharp an angle, or the metal may fracture. Now place gnomon between the verticals, and fix all three with the bolt all ready mentioned. Stand the whole on the baseplate, and scribe inside the screw holes at the bottom to mark their position on the baseplate. Centre punch and drill the holes; countersink these underneath, as the screw heads must be flush with the surface.

Fix with suitable screw bolts from underneath the plate, then drill two



more screw holes in the baseplate at the ends, to fix the plate to the pillar later on. The top of the pillar, on which the sundial is to be mounted, should have a chalk line drawn across, pointing N. and S. On this line fix the baseplate with screws, the concave face of the dial facing S, as shown in Fig. 4. As the top of the pillar will probably be of stone or concrete, rawlplugs will be needed for the screws, so that the sundial can be easily removed when necessary.

Theoretically, the dial plate should be tilted to an angle which is the complement of the angle of latitude of the place of residence, the complement, to the uninitiated being the difference between that angle and one of 90 degrees. For example, latitude $62-90=28$ degrees, that being the angle, should the reader live within that latitude, the dial is to be tilted to. For all practical purposes this can be easily done by the aid of a cardboard home-made set square of the degrees stated. When the dial is tilted correctly, be sure to fix it firmly in that position by screwing the bolt up tightly. (469)

WORKSHOP NOTES AND HINTS (10)

How to Prepare Circular Pieces

A WHOLE article could be written on how to improvise ways of making wooden wheels and such circular pieces as small coffee-table tops and the like. The proper workshop way, of course, is to use a lathe, but few amateurs have a lathe at all, let alone one large enough to take large pieces.

Worth Consideration

The following method might, therefore, be worth considering. Fig. 1 shows the work laid out directly on to the wood, but it might be better to make a cardboard template, especially if two or more identical pieces are required, and then mark the wood from this. First draw in centre lines *a* and *b* and then diagonals *c* at 45 degrees. If you have no set-square giving this angle, just take a piece of paper, fold it in half, then in half again, squarely across, the other way, taking care to fold accurately and then fold again as in Fig. 3. Draw in a circle *d* to the size required, and at right angles to the centre lines draw in lines *e f*, etc. You will thus have an eight-sided figure

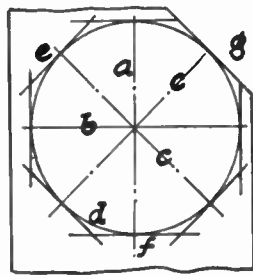
drawn around the circle and you can cut the wood to this outline with straight cuts of a tenon saw, as at *g*.

Chisel Corners

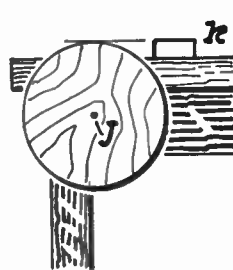
Corners can then be chiselled off until a fair circle is obtained. A hole is drilled through the centre and with a large screw, the work is held to the side of a bench or table as in Fig. 2. The wood should turn on the screw. Now with a rasp, the work may be smoothed

up. It is not a bad idea to have a block of wood *k* exactly the height of the projection of the disc over the table top, so that it can be applied from time to time as a check on filing. As drawn, it is to one side of the disc. When actually being used, it will be behind the disc. In this way one can make an almost perfect circle.

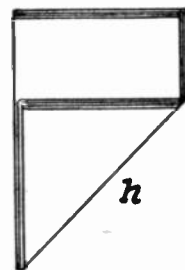
If the disc is required for the wheel of a toy, make 'tyres' from strips of metal nailed round. (318)



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③

A Novel Barometer

BAROMETERS, that is instruments that give some idea of whether it is going to be wet or fine, are always interesting and here is how to make one of quite a novel kind.

In most barometers the foretelling is made possible by measuring carefully the weight or pressure of the air, which alters with different types of weather. In the mercury instrument it is atmosphere pressing on a column of this fluid that gives different readings, while in the aneroid the air presses on the lid of a box from which all air has been exhausted, the lid bending in more as the atmosphere becomes heavier. Other weather-indicating instruments depend for their action on the contraction of certain materials when the air gets moist. But these are not true barometers, being rather more for reading humidity.

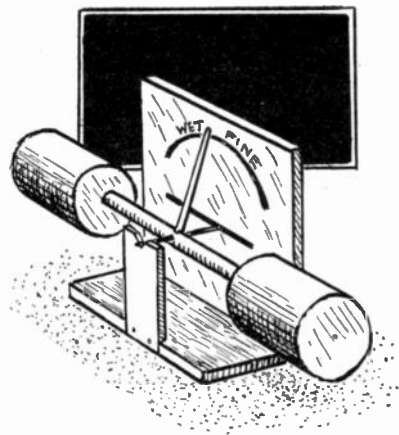
The instrument described here is in a sense a cross between a mercury type

and aneroid and inasmuch as it records the weight of the air it is a true barometer.

To make, we require two tins of the cocoa kind and of equal size, a 12in. length of $\frac{1}{2}$ in. to $\frac{3}{4}$ in. dowelling, some pieces of wood and a few screws with two rubber and two metal washers.

Fixing the Tins

First fasten the tins (A) Fig. 1 to the ends of the dowel (B) using long small-diameter screws and drilling first to prevent splitting. It is essential that the holes through which the screws go in the bottom of the tins shall be air-tight, so rubber or soft leather washers are located as shown, Fig. 2, the screws being taken home very tightly. A better job is made if the screws are soldered in the bottom of the tins. This makes the openings through which they have gone quite air-tight and means that the tins can as a whole be screwed on to the dowel ends and readily tightened up should they ever work loose.



The tins attached, their lids must now be soldered on so that they are as air-tight as the screw-holes. With clean new tin the running of solder round the lower edges of the lids will be found very simple. Finally, as far as these

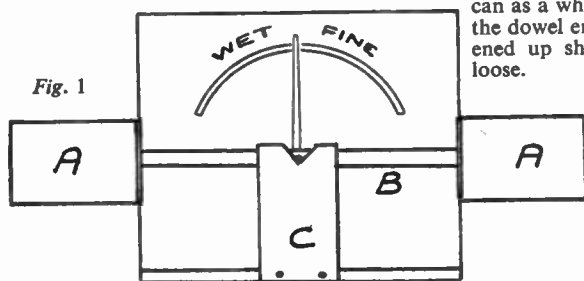


Fig. 1

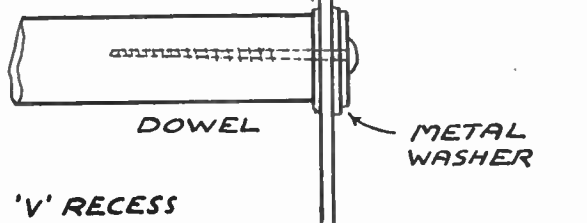


Fig. 2

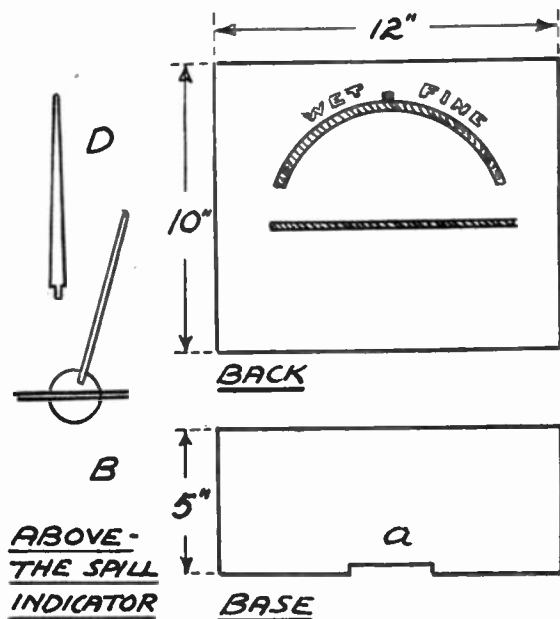
items are concerned, pierce a minute hole in the lid of one of them, the other being left as a completely sealed container.

The Wooden Frame

Now make the wooden frame. This comprises a back 10ins. by 12ins. of $\frac{1}{2}$ in. plywood, a base 5ins. by 12ins. of some thicker material and a small upright (C) 5ins. by 3ins. which can be from any suitable piece of scrap (see Fig. 3). Make a small V in the middle top edge of this later and fitting to a recess (a) in the base, note the point on the back (temporarily put in position) right opposite the V, so that when a wire axle is laid in the cut, it will be able to enter a hole made at this point.

Next paint the back white or bright yellow and through the point just found, draw a horizontal black line, and about 6ins. above it a part circle with the

(Continued on page 244)



'V' RECESS
TO HOLD
THE WIRE
'AXLE'

UPRIGHT

Fig. 3

Before you go camping you should GET TO KNOW YOUR KNIVES

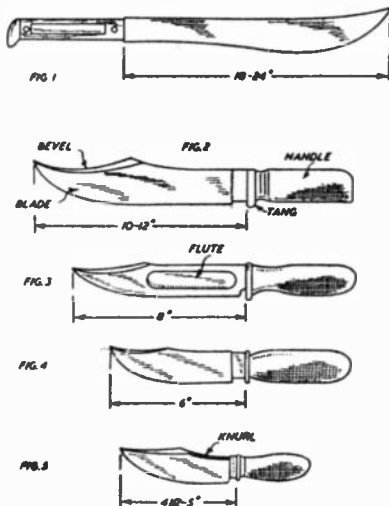
THE ideal knife for clearing a camp site, chopping firewood and the thousand and one jobs associated with woodmanship is, undoubtedly, the *machette* (sometimes spelt with one 't'), which is a heavy knife with a long curved blade—Fig. 1. The length of this blade averages about 20ins., and the weight of the knife something like 1½lbs. It is an awkward knife to pack and carry, and many woodsmen are, therefore, content to make do with a compromise *trail* knife, which has the advantage that it can be carried in a leather sheath.

'Sheath Knives'

Now almost any knife which fits into a sheath is usually called a 'sheath knife', for obvious reasons. In actual fact this term does not mean very much. There are many different types of 'sheath' knife available, from the stiletto type of knife with thin narrow blade (just about useless for general woodmanship) to the long heavy trail knife, which approximates closely to the machette and is intended for exactly the same purpose.

Trail Knife

A true trail knife is shown in Fig. 2. The blade is some 10ins. to 12ins. long (just about half as long as the machette), and is stout in proportion. It weighs about 1lb. It is most effective when used with a swinging or slashing motion on account of the fact that most of the weight is concentrated in the blade. It is a tiring knife to use for 'hand' work such as chipping where the majority of the movement comes from wrist action. It is still a 'sheath knife', but rather too large and heavy to carry with comfort.



Next in order of size is the heavy general purpose knife—Fig. 3—which has a shorter lighter blade than the trail knife, deeply fluted to preserve rigidity. The blade is roughly twice as long as the handle and it is still essentially a slicing or swinging knife.

A Rival

Rivalling it in general usefulness is the small trail knife—Fig. 4—which has a stubby wide blade and is better balanced for all types of cuts. Choice between the two is largely a matter of personal preference, with an eye on the main task to which the knife is likely to be put. The small trail knife is likely to

be more tiring than the general purpose knife for really heavy work, but is a far more compact form of 'sheath' knife.

Best All-Rounder

About the best all-round 'sheath' knife is the one shown in Fig. 5. This has a stout heavy blade like the trail knife—just about the same blade width and thickness, but about one half the length—and a handle only a little shorter than the blade. Balance point is nearer the tang which makes it a well balanced knife for chipping, carving and similar work. At the same time the blade is stout enough to be used for chopping, hammering the back of the blade with a piece of wood, if necessary, to compensate for the shorter blade length.

For slicing and similar cuts the all-round knife has a thumb grip, a knurled section on the back of the blade just in front of the tang. This is a very important feature of a knife of this type where the blade length is short. Without this thumb grip it would be difficult to apply heavy hand pressure on the blade, and this would severely limit the usefulness of the knife.

All Good

All the knives mentioned are good and useful, but put to the choice, it would seem that the logical first selection would be the small all-round knife. It weighs less than ½lb., is compact and will be better suited to a variety of general duties than any other type. If weight and size is not considered all that important, then the heavy general purpose knife would be a good proposition. (448)

A NOVEL BAROMETER

(Continued from page 243)

centre at the hole for the wire. On the left-hand side of this curve print in clear and not too small letters the word 'WET' and on the right-hand side in similar letters put 'FINE'.

Now back to our tins. These should be painted bright contrasting colours and the point on the dowel where they balance fairly carefully found—fine adjustment in relation to the weather will have to be made later.

At the location found drill a small hole from side to side and cutting a 6in. length of stiff wire pivot the arm as shown—with the one end of the wire in the hole in the back and the other

resting in the V of the upright.

Holding the tins level now put in the upright strip of wood (D). This can be quite a fine piece gripped in a small hole drilled in the top of the dowel and at such an angle that it leans over towards the back board. The top of this must just reach to the curved line and when the tins are level be indicating the mid-point—which should be marked on the arc by a short cross line.

The barometer is now complete and works by the fact that while the weight of the air in the sealed tin remains constant, that in the one with the hole varies according to the density at the

moment. Thus the arm see-saws on the pivot and the upright indicator points to one side or the other.

Now, obviously, the balance of the two must be set when the weather is steady and an ordinary mercury barometer or aneroid reading at about half way between SET FAIR and VERY WET. Keep an eye on an ordinary barometer, therefore, and when such a time arrives set your tins at a dead level. We do not want to add extra weight, so this is best done by cutting small notches out of one side of the dowel till perfect balance has been obtained. The pivot should work very easily.

Our tin barometer must, of course, be set in some place where it feels the effect of the outside air but cannot be affected by wind. (460)

Some Hints for Young Anglers

WHEN you set forth on a fishing trip during the summer holidays be sure to check up all items of your outfit—don't leave anything behind. Never go without the needful baits; it's easy to overlook things. Take a supply of spare hooks and gut-bottoms, in case of breakages. And test all your tackle—to avoid the loss of a good fish through some flaw in line, cast, or hook. Leave nothing to chance!

Be sure you have your fishing licence with you; also your ticket or permit wherever it is necessary to have one. Some waters are free, but these are few indeed. Some can be fished on payment of a small fee, others are in private ownership, but often permission is accorded to *bona fide* anglers. Make sure you know just where you stand in these matters before commencing to fish. Of course, on some rivers persons under fourteen years of age do not require a licence. Remember, too, that the possession of a Fishery Board licence does not mean that you can fish just where you like—such a licence gives the holder no right to fish anywhere except where he has permission to do so. Anglers infringing the bye-laws and statutory regulations are liable to prosecution. Read the instructions on the back of the licence.

At the Riverside

A few things to remember. Don't forget to shut all field gates behind you after passing through. Don't trespass, and avoid trampling on crops. Keep to the paths until you are on the river bank. Don't make a lot of litter. Clear up at the end of your day.

Be courteous if approached by any person of authority demanding to see your licence, ticket or permit. Never make an enemy of river keeper or water bailiff, or the farmers in whose fields you have to go. It just doesn't pay.

Once settled at the spot you intend to fish, put all your things ready to hand—keep-net sunk in the water, landing-net placed ready for use when required, baits all handy, and so on, thereby avoiding all movements more than necessary. Don't mess about on the bank, or throw things into the water. In this respect *don't take a dog* with you when going fishing—dogs love to splash at the water's edge. Don't stamp about on the bank—ripples are set up by vibration, the fish sense them and scoot for deeper water.

When you catch a fish and intend to retain it to take home, see that it is of

the required size limit—these particulars are shown on the licence form. It is a misdemeanor to kill fish under the prescribed sizes.

If you take a keep-net and put the fish you catch in it and then return them to the water at the end of the day—as most anglers do nowadays in order to conserve the stock of fish in the water—be sure to put them back carefully. Don't just *throw* them in, or they may be injured.

Don't break fences, and don't light fires on the bankside. Don't scatter broken bottles, cartons, paper, and such litter on the banks. Keep out of mowing grass. Don't interfere with cattle in the fields.

We can hear the beginner saying: 'Good lord! What a lot of don'ts!' We could add many more—and a few we must not omit. For instance, do not despise local anglers—they can help you if you are in doubt. Ask courteously if in trouble about anything, and you'll get a courteous reply.

Don't leave maggots or worms exposed to a hot sun; it does not agree with such wriggly baits. Carry your maggots in a tin and keep the lid on. Put some moist sand in the tin to help maintain the maggots in good condition during hot weather at the water-side. Worms should have a receptacle half-filled with damp moss.

Don't neglect your fish after catching them. Keep them fresh. If intending to take some home, place them in a bag or basket after wrapping them in either a wet cloth or in grass; newspaper is another good thing to use. Whilst fishing keep the bag or basket in the

shade as much as possible when it contains fish—in hot weather especially.

When you hook a big fish, don't get too excited while 'playing' it. Keep cool—if you can. Don't 'swipe' at the struggling fish with the landing-net in your eagerness to make sure of it—lower your net into the water, draw the captive over it, and then lift him out. Carry him in the net well away from the water's edge before attempting to unhook him.

When fish are 'biting' fast and furious, don't allow yourself to be over-hasty and so become flurried.

On Your Return

When you reach home at the end of the day, don't just sling your equipment down any old how. See to it straight away and then put it in its proper place, all ready for the next time out. Never leave a good rod in a wet rod-bag. If, owing to rain or being put down in wet grass, the rod-bag has become soaked, take out the rod joints on arriving home, and wipe them dry. Then hang up the rod-cover to dry before replacing the rod. Always have a loop of tape at one end of the rod-bag to hang it up; never allow a rod to *lean* against a wall for a long period—if you do, then the joints may become warped.

Dry the line properly. Pull it off the reel and stretch it out in some convenient place, let it dry and then grease it and re-wind on the reel ready for the next outing. Tidy up all the various items of your outfit, and put everything in order again. Keep your tackle in a box or drawer with each item in its proper place. (452)

The Barber Off Duty

MOST people who run any kind of shop like to relax with a hobby that takes their interest away from their work. Not so Mr. Charles de Zemler, who owns a barber's shop. When quite young, he was barber to Lord Kitchener in Egypt, and whilst in that country became interested in the history of hairdressing from the many relics and wall drawings he saw in the ancient relics then being unearthed. He was so enthralled with what he saw that he decided to make a hobby of collecting any relics or pictures, books connected with his profession. From then on he has never wavered in his interest, and he is the proud

possessor of many hundreds of hairdressing articles of historic interest and value. His collections range from the very earliest times, through the Middle Ages, right up to the present day. There are shaving bowls and mugs, razors, shaving-knives, brushes, barbers' chairs, barbers' poles, hairbrushes, hair-oil bottles, mirrors and many more strange things, as well as countless books and pictures, all of which have some connection with hairdressing and shaving. If he wanted to, Mr. de Zemler could open up a barber's museum tomorrow, and his collection is still growing. (280)

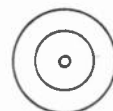
Building a Miniature Estate Car



Easily made
from odd
pieces of
wood

THE TOP EDGE
SHOULD BE ROUNDED
ON ONE SIDE
SEE FRONT VIEW

HEADLAMPS
CUT TWO FROM
THIN CARD

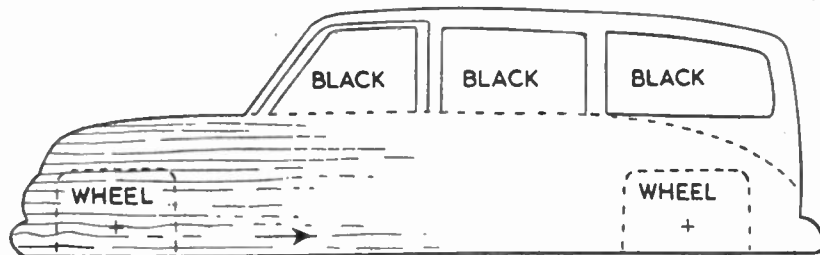


WHEELS
CUT FOUR
FROM 1/2 IN.
DIA. ROUND ROD

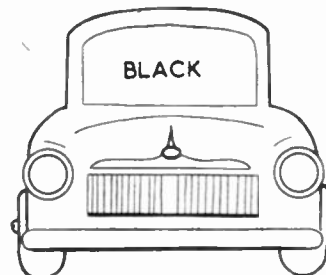
PAINT



THE WINGS. CUT TWO 1/4 IN.



THE BODY. CUT TWO 1/2 IN.



FRONT VIEW
SHOWING HOW WINGS, BONNET
AND ROOF ARE SHAPED

WITH a fretsaw and a few pieces of $\frac{1}{4}$ in. and $\frac{1}{2}$ in. wood this little toy can be made and painted in an hour or two. It is another in our series of miniature toys and forms a companion for the saloon cars, the milk van and the farm run-about.

If you are thinking of making up these toys for sale we suggest that you cut one set of parts and use them as templates for marking out the rest. Get them as perfect as you can because any inaccuracies will show on each successive set of parts.

When making up in quantity you will find it quicker to cut all the parts, clean, assemble, and paint, rather than make each car separately.

The car is made up of two shapes and they are shown actual size. Trace them on to the appropriate thickness of wood and keep the grain in the direction shown

by the arrows. Glue the two body pieces together and round off the bonnet, windscreen and roof. Cut out the two 'wing' pieces and round off on one side only as indicated in the picture of the finished car and in the front view. Glue these on each side of the body. For a car of this size it is only necessary to get an approximate shaping to represent the real thing.

Our illustration shows how realism can be obtained by the addition of painted lines to represent doors and handles, radiator grill, etc., but these details will be left to the discretion of the worker. Even without the details the little toy will look quite realistic. Smooth off the bumpers so that they appear to be all one piece.

The wheels can be drawn on to $\frac{1}{4}$ in. wood with compasses, or can be cut direct from $\frac{1}{2}$ in. diameter round rod. In

either case, be sure to drill a hole exactly in the centre of each before fixing to the body by means of a slender $\frac{1}{4}$ in. roundhead screw.

Note that when the wheels are being cut the round rod should be held in a mitre block and the $\frac{1}{4}$ in. lengths cut off with a tenon saw. When the wheels have been shaped they can be laid aside for painting.

Paint the whole of the car with a glossy green or cream enamel. Match the wheels to the body colour and paint the rims dark grey to represent tyres. The windscreen and windows should be black.

The door handles, lamp rims and radiator grill can be light grey or aluminium and the lines added in pencil. Glue the lamps in position after painting. To complete the car, screw the wheels in the positions indicated. (463)

Here's how to enjoy HAPPY HOLIDAY CAMPING

NOWADAYS camping is a popular form of spending the summer holidays and also for week-ends on a more or less permanent site. How to be happy when under canvas is an object to be organised for properly. Of course, it will depend upon how many chums are joining in the adventure.

There are many big camping sites, commercially run and fully equipped, and also camps run for club members, and others established in national forest parks. These are all very good in their several ways. But, if you prefer to test the joys of the open-air life under canvas without being too much of a crowd, you will arrange for a site well away from the crowded centres, and organise a nice little party of friends to share the fun.

Many people nowadays want their camping in perfect comfort, not to say luxury, which is all very well if you possess unlimited spare cash to get all the necessary gadgets. So many like to be 'spoon-fed' and coddled. Yet camping was never intended to be developed into a perfectly cushy holiday. Much of the fun of it lies in 'roughing it' a bit. Some ardent advocates of the more rigorous form of camping take parties of selected friends right away into the wilds, where they have to do everything for themselves, and in some cases even have to depend for their supper or catching their own trout—and cooking them over a wood fire. Well, you need not go to extremes, though it is really jolly good fun to get far, far away from the crowds, and live close to Nature for a short while.

However, there is a happy medium. There are camp sites available in many country places, on farms, in crofts and odd nooks, and although such sites have no special services for campers, it is part of the fun to organise your own facilities.

Choosing a Tent

Camp gear can be hired from various firms all over the country, but it is cheaper in the long run to purchase your own, if you intend to go camping frequently during holidays and week-ends.

When choosing a tent it should be remembered that it is the most important article of the camp equipment. It is best to pay as much as you can afford and get a really strong waterproof and weatherproof one. Then consider the type. The best big tent is the ridge pattern or 'cottage' shape, with

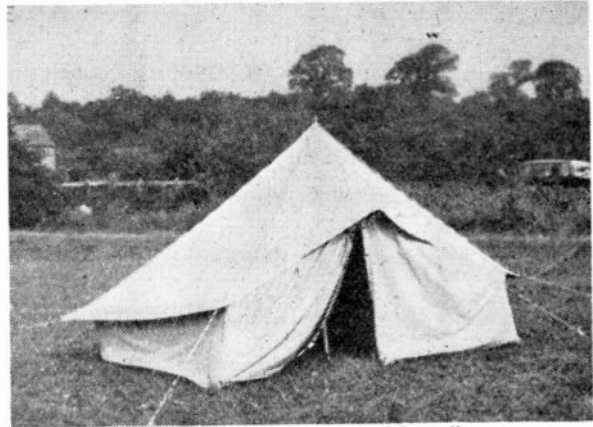
low walls at the sides and with plenty of head room inside. 'Bell' tents are appreciated by many young fellows who have had training under canvas. But they are not recommended for family camping. There is not sufficient headroom, especially when the whole party is confined indoors on a wet day. For a small party of friends prepared to make the most of their camping with as limited a cost as possible, such a walled type of tent as the 'Wanderlust' is a good proposition. It caters principally for two persons, but by a little adjustment can be made to accommodate four quite comfortably. This pattern can be used as a 'hike' tent.

See that the guy-lines are firmly attached to the tent, the rings well fixed so that there is no risk of them pulling out should the guys be tightened up too much. The doors should have sufficient overlap to exclude draughts. Metal parts should be rustproof. The higher the walls of a tent the better the

headroom. When choosing a new tent make sure that it embodies guarantees as reliability, space comfort, headroom, weatherproof and rot-proof qualities.

Bedding Essentials

At least one groundsheet and two



The 'Wanderlust' type is a useful small tent

warm camping blankets per person will be needed. But warm, down-filled sleeping-bags beat everything. If you do not fancy sleeping on the turf, you can obtain kapok-filled mattresses, also air beds; or, if really camping in luxury, a proper camp-bed with metal frame.

Other Items

To ensure happy camping, the inner man must be considered, and someone should be deputed to attend to all matters concerning cooking, etc. Pots, pans, utensils, crockery, and so on will be needed, but many of these accessories can be brought from home. A primus stove or similar is a useful type for boiling kettles and doing much of the cooking for you. All crockery and pans should be kept scrupulously clean—always wash them in really hot soapy water.

All kitchen rubbish and 'left-overs' not needed should be burnt. Refuse left lying around attracts flies and other insects—bury it. No litter of any kind should be around the place. Camp is a place where everyone is obliged to exercise self-discipline.

Look to the sanitation arrangements take the usual precautions. When camping for a week or longer a proper latrine must be erected.

Don't forget a few necessary tools—



The popular 'bell' tent

(Continued on page 249)

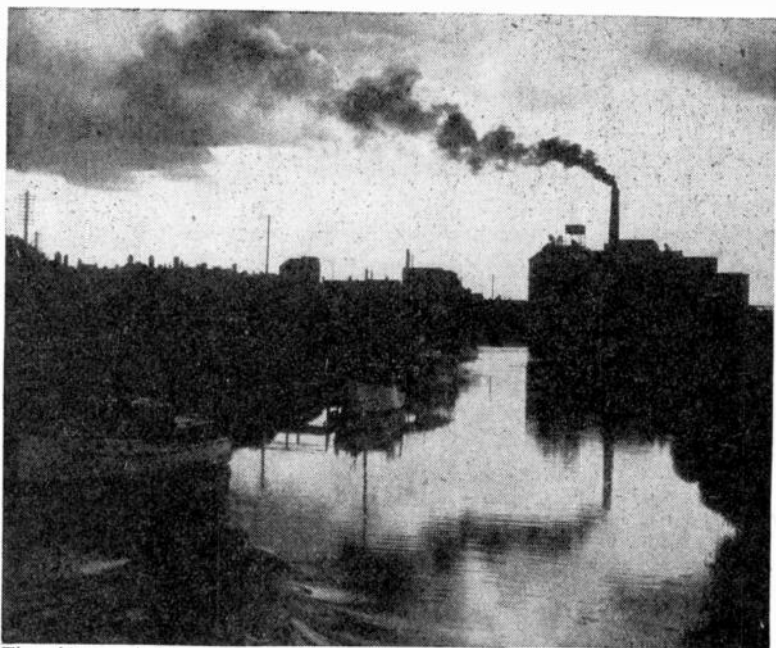
You Need Patience For Pictures

AT this time of year, camera triggers are clicking all over the country, yet out of the thousands of negatives produced there are but few which arrest attention. The majority have a mark of similarity, yet with a little thought and patience you could easily raise your snapshots out of the rut to achieve something better than you have been content with in the past. This will give additional pleasure and possibly a prize winner or two.

Interest is Essential

Technical excellence is to be aimed at, but above this there must be interest. There are certain pictures composed nine-tenths of inanimate objects, one-tenth animate. They may be composed mainly of fields or sky or mountain. The remaining part shows, perhaps, a horse and plough or a tiny group of climbers. Here lies the interest—that little extra which raises the mediocre out of the rut. The appropriate figures doing something are so strong that even though they are so small, they balance huge masses of mountains, trees or buildings. Contrast, too, plays its part. If these figures show up well against the background, this will cause the eye to be attracted to them and rivet the attention.

But what of those beautiful landscapes which compel interest without including animate objects? These compel interest through their artistic excellence. Their separate parts are so interwoven that a pleasing result is obtained. There is usually a main idea, with other parts



The chimney belching black smoke tells its own story. Reflections add to the interest, but take away the smoke and you are left with a rather dull and lifeless picture

essential but subsidiary to it. The interest may be more spread over than our examples above, but the eye finds satisfaction in the arrangement of the parts. Moreover, these pictures are not just a collection of trees and farms and fields. They tell a story or catch a mood. The lazy drifting of chimney smoke from the country cottage in the trees suggests something more than would the same cottage with no smoke issuing. The strong shadows and big billowy clouds may suggest the warmth of a summer's day, or the windswept

tree a barren land and a cold grey mood.

Often a beginner's attempt at a landscape is a bare field and sky, the interesting bits having apparently receded far into the distance. So use a filter to bring out the clouds and make sure the foreground is broken up. This can be done in the following ways:—

1. By careful choice of viewpoint to include natural objects in the foreground.
2. By choosing the right time of day to make the best use of lighting.

At certain times shadows may be thrown across, so breaking up an otherwise bare foreground.

3. By the inclusion of animals or figures.

A little thinking on these lines will enable an interesting landscape to be built up.

Overdone

Monuments, churches and old buildings come in for a big share of trigger pressing, but it has all been done before, and there are probably better results in the local picture post-card shop. There is nothing original in making a straightforward record of them, unless they have some peculiarity,



Interest in the picture on the left is provided by the gypsy girl selling heather, and the picture was secured by foresight and patience. The photographer was aware of the building, and the gypsy girl was at the top of the hill. The photographer hurried down and took up his position, and, while waiting, snapped the inn when trippers stopped to look up at the sign—just in case the gypsy didn't come down the hill. But it was a profitable street for selling heather, and in due course the photographer got the picture he had been waiting for.

or help to tell a story; but a comparatively commonplace building may be raised out of the rut by including an appropriate figure.

Often Dull

Street scenes are often dull when empty. Introduce a slice of life that fits the surroundings. Animals, children and adults are more interesting when doing something, or at least in natural poses—not standing stiffly, camera conscious.

Port scenes are enhanced by some old salts in the foreground. The little tug belching forth black smoke, forcing the water away from its bows, tells a story of power, which is absent from the mere record of an ocean liner at rest.

Be Prepared

How, then, can we get that little extra that means so much? The answer is first in being prepared. Have the camera with you whenever possible. The finest masterpieces always present themselves when you have left the camera at home. Secondly, patience is needed. Patience to wait for the correct lighting, or to return again another day. Patience to get those sheep in the best position possible. Patience to run off some of the dog's energy, so as to keep him within bounds for a picture without chaining him up. And patience to do it all over again when you find there has been a technical hitch. Thirdly, foresight. Foresight to anticipate the position of a useful figure, or foresight which tells you that the boat being made ready will, with a bit of luck, be sailing out of the harbour mouth when the sun

is just beginning to set.

In Your Home Town

Many of the most interesting snapshots will be found in your own home town. Being acquainted with it, you know the spots that have some claim to be worth snapping. Then, when there is any special event, you can plan ahead. Whether at home or away, you can get advance information. On market days

you know there is a chance of seeing animals in certain places. Parades take place at certain times in certain parts. And what of those pictures that crop up every year, but always interest—the little girl gathering flowers? Obviously, you take a little girl to gather flowers on a bright and sunny day. The little girl will have a happy day, and you should, too, taking natural pictures of that most popular subject—the very young. (455)



A lot of patience was needed to creep nearer and nearer these gulls to get them as more than mere dots on the film. Picture was taken as one gull prepared to fly

HAPPY HOLIDAY CAMPING

(Continued from page 247)

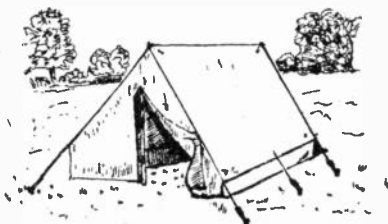
a wood mallet, a small hatchet, a few spare tent pegs, a coil of strong cord or rope—just in case of breakages of guys—and also remember some form of lighting for the tent at night if necessary.

Pitching a Tent

For camping sites, avoid fields where horses or cattle are grazing; they are often very inquisitive creatures, and sometimes too friendly. Sometimes the opposite. They can be a nuisance.

Avoid low-lying ground too near lakes or streams; such a spot is sure to be damp and often misty in the early mornings in summer. It is much better to choose high-lying ground, where you get a bit of breeze. Make use of hedges or walls to provide some natural shelter; but don't pitch your tent

directly under trees, as you will get drippings from the branches after a shower. Neither should a tent be erected close up to a woodland or you'll be driven to saying bad words about the nuisance value of wood-flies and numerous other insects that delight to 'suck your blood'.



A lightweight tent with walls

Don't erect the tent near a lone tree, nor under dead branches which may crash down if a rough wind arises. Indeed, remember that although it is wise to camp within a reasonable distance of trees which serve as a wind-break, never camp beneath their shade. Fields flanking rivers or ditches, by the way, should always be avoided as they are often very wet.

If you are a novice at camping, get hold of one of your pals who may have some experience, and get him to assist you in preparing for the contemplated camp. Better still, join, if you can, a small party. Later, you can yourself organise a camp outing with confidence. Remember when in camp that unselfishness, self-discipline, a sense of humour, a ready smile and a laugh if things go wrong, a cheerful outlook and real 'chumminess', in addition to good organisation, all combine to ensure a happy holiday. (454)

A USEFUL FILE HOLDER

THERE are many workmen who use a file without a handle. This is a very bad practise and should only be resorted to in extreme cases.

It is not possible to use much pressure by this method, and there is also the risk that the tang of the file may pierce the hand and cause serious injury.

Whenever possible a file should be properly fitted into a wood handle, but if this cannot be done, a very useful holder can be made quite easily. It is only necessary to make one holder, as it can be quickly changed over to fit quite an assortment of files, and once you have got used to this new gadget, some really useful work can be done with its aid.

Best Material

A piece of sheet iron is probably the best material to use, although a stout piece of tough brass will do almost as well. The holder may be made in any size, but for general use a piece of metal $6\frac{1}{2}$ ins. long, 1 in. wide at one end and tapering off to $\frac{1}{2}$ in. at the other will answer very well, and this is shown in Fig. 2.

Bend this into a nice even curve which, in order to give the best results should be nearly a half circle. The shape and size of the dovetail cut made at the wide end and which grips the tang of the file is clearly shown in Fig. 3.

If made to the sizes shown it will be found to accommodate almost any average size and shape of file, but if not quite right it can easily be amended to suit individual requirements.

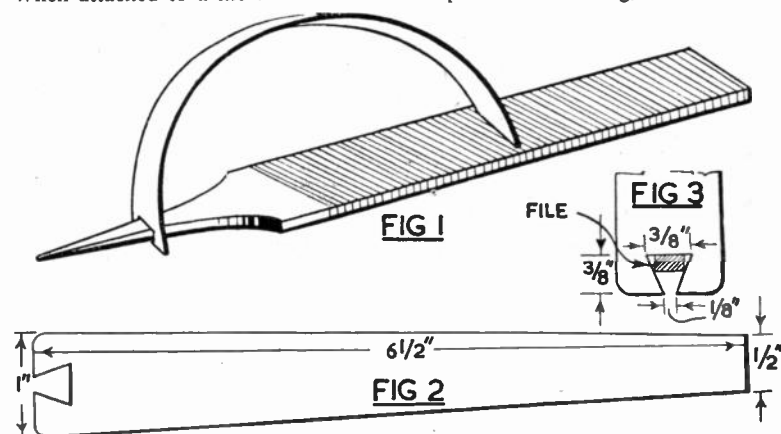
A small triangular file will soon cut this dovetail piece and then the whole handle can be glasspapered to give it a nice smooth finish.

When attached to a file the curve of

better results without it.

Many workmen agree that this type of handle is better and easier to use than the old wood handle. The curve of the handle does not interfere with the action of gripping the top end of the file when it is required to apply more pressure on to the job.

Sometimes a file is found that has a sharp end to its tang, and if it is a



the handle should be such that the narrow end presses firmly on to the back of the file. Unless this happens the handle will be useless and we should get

nuisance, it can be broken off and ground smooth, or a piece of cork may be pushed on. (418)

Bread Knife from Hacksaw Blade

IN these days of fantastic prices, it is nice to get something for nothing and some readers may be interested in this suggestion for converting a scrap machine hacksaw blade to a very efficient bread knife.

A 12 in. blade will be found to be

garage—it might be as well to buy some petrol first, of course!

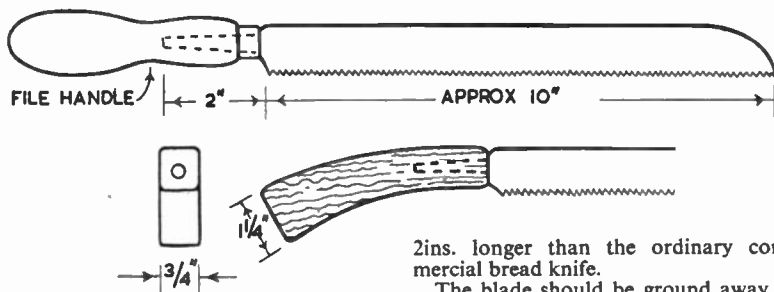
A fairly coarse blade—about 12 teeth per inch—should be chosen. The 12 in. blade, when adapted, will give about 10 ins. of effective cutting edge and this will be found just right, although about

sectional view like an ordinary knife to a keen cutting edge. It had better be finished by honing on an oil stone. The result will be a cutting edge with all the advantages of the serrated blade bread knives which are so popular nowadays.

The blade should be nicely polished with emery paper and it will then be found that, if not quite stainless, it will be free from any tendency to corrosion, as it is made of high-speed steel.

The Handle

As regards a handle, there is ample scope for ingenuity. The easiest way is to use a file handle and polish it up. Those who have a lathe will, of course, turn a nice handle in any suitable material. The lower view shows a shape which will be found to give a nice grip and which can easily be made in teak or mahogany. This should suit those who have no facilities for turning. (423)



about right for our purpose and a suitable discarded blade can, as a rule, be obtained for the asking at any

2 ins. longer than the ordinary commercial bread knife.

The blade should be ground away to form a tang as shown in sketch and the other end should be nicely rounded. The sides should be ground as in the

You'll find plenty of uses for A NOVEL TABLE-CHAIR

THE back of this general-purpose chair can be folded over to form a table of generous area, thus making it a very useful item of furniture for the home constructor to attempt. There is nothing difficult about the actual building, except that a certain amount of care is called for in making the frame joints, which are mortised for additional strength.

Main Parts

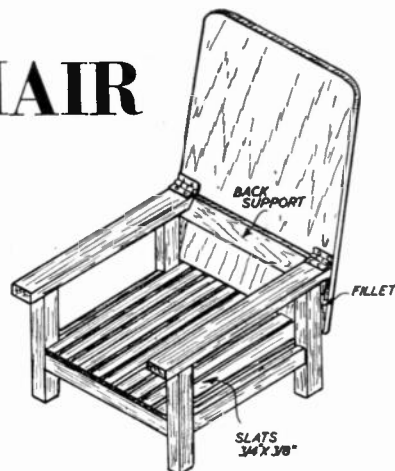
The main parts are detailed in Fig. 1. Arms are cut from 2ins. by 1in. stock; legs from 1½ins. square stock. The frame members are also 2ins. by 1in. stock and the slats forming the seat are ¾in. thick by ¾in. or 1in. wide. For the back, ½in. plywood is recommended as being tough and durable. The back support is cut from similar material. Note that the corners of the back are nicely rounded off. Apart from this, and marking off

the hinge line position, there is no other work to do on the back.

The main frame assembly is detailed in Figs. 3 and 4. Slots are cut in the legs, as indicated, to take the prepared frame members. The assembled frame must be truly parallel with the ground and 6ins. above it (to the bottom of the frame members). The insides of the frame members should come flush with the insides of the legs. All the relevant dimensions are given on the drawings. All joints are well glued.

When the basic frame is assembled, and checked for squareness, check also that the tops of the legs are level. These are housed in the arms to a depth of ½in., as in Fig. 4. Make an accurate job of these joints so that the arms rest securely in place. The actual joints are, of course, glued.

Two views of the complete assembly are given in Fig. 2. The backs of the



arms overhang the rear legs by 2½ins. The ends of these arms are also finished

(Continued on page 252)

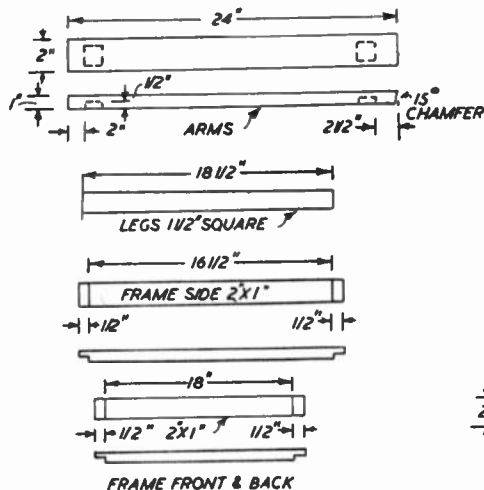


Fig. 1

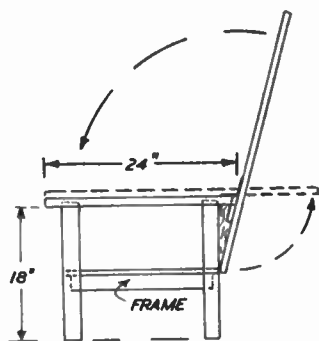


Fig. 2

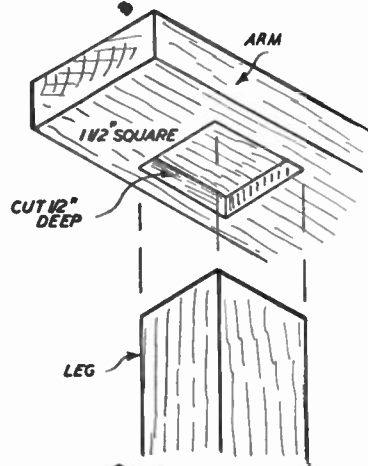
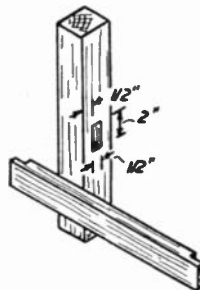
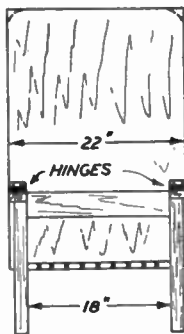
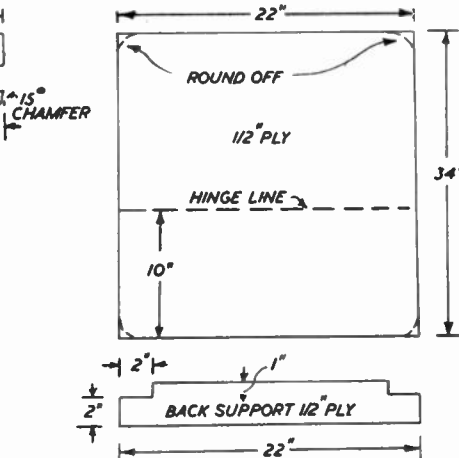


Fig. 4

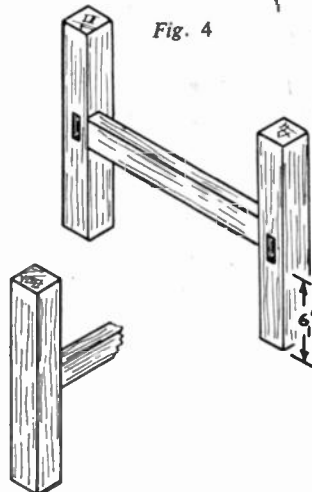


Fig. 3



Tile Cement

PLEASE tell me what cement and consistency thereof I would have to use to replace some tiles which have come away from a fireplace. Actually I would like to remove all the tiles and reset them with fresh cement. (J.H.—Putney).

TILES around a fireplace are usually fixed with ordinary plaster of paris (superfine quality). It is used in the form of a creamy paste, is made by putting cold water in a bowl, gently and slowly pouring in the powder plaster, and stirring gently but continuously. It must be used at once—it cannot be 'knocked up' or used again once it has nearly hardened. The addition of water will make a softer solution, but it will not set properly, so only mix as much as can be used at once. Wet the tiles thoroughly before setting them. A few tiles can most readily be fixed by the use of one of the proprietary brands of tile cement on the market. These are paste-like in consistency and ready for use.

'Squared' Drawings

PLEASE give me some information on the 'square' method for enlarging. (D.C.—Swardston).

THE system of squaring a drawing to enlarge it is quite simple in theory. For instance, if a drawing is published in *Hobbies Weekly* and it says underneath it that the squares are 1in., it

merely means that you have to draw out the same number of squares as in the reproduced drawing, but making them 1in. in size. You then carefully draw the outline of the original into your new squares, noting where the lines of the article dissect the lines in the reproduced drawing, and making sure that your drawing is exactly the same. You will find when you have finished that you have, in fact, an enlarged version of the original.

Repairing Armchairs

THE armchairs in our house keep coming undone as the dowelling will not keep in place. We have tried glue but without success. Can you tell me another way of dealing with this? (B.D.N.—Sutton).

RE-GLUING the joints of your armchairs can only be done by first stripping most of the upholstery, and entails a troublesome job. What you can do is to employ furniture brackets and plates, and screw these in the angles or across the joints. If the seat of the trouble is the side and front horizontal rails, the brackets could be screwed in position without any disturbance of the covering, screwing them over it in fact. They will be almost invisible from the front. The brackets can be bought from hardware stores or oil shops, and range from 2ins. upwards. The plates are oblong or T shaped and will close any break in the joints

beginning to open. All patterns are quite cheap and easily fitted.

Wiring a Chandelier

I HAVE made a four-light chandelier; could you tell me the correct way of wiring this from an ordinary light point, 250 volt mains. Also the voltage and wattage of the bulbs, to give a light equal to an ordinary 100 watt bulb? (A.W.P.—Nuneaton).

ALL the bulb holders should be wired in parallel, and any twin flex of good quality can be used for this purpose. The free end of the flex should be equipped with a proper mains plug of the type which is needed for the power-supply point. Four 25 watt bulbs will give a similar degree of illumination to one 100 watt bulb, so four such bulbs can be used. Actually, the light obtained from the four small bulbs will normally be somewhat greater than with the single large bulb of similar wattage. The 25 watt bulbs should be for 250 V mains.

Transformer Windings

I WISH to re-wire a transformer for 6, 12 and 24 volts and 4 amps output; do I have to wire three separate coils in secondary, or will one winding for 24 volts do with tappings for the other two? (J.B.—Foulness Island).

WHERE different outputs such as those mentioned are required, it is usual to employ one winding, tapped for the lower voltages. In your case, this would be a 24 V 4 amp winding tapped at $\frac{1}{2}$ and $\frac{1}{3}$ the total number of turns for 6 and 12 V respectively. Separate windings are only required when the external circuits require to be kept separate; e.g. when more than one unit will be operated simultaneously, and must be electrically isolated from each other.

A NOVEL TABLE-CHAIR

(Continued from page 251)

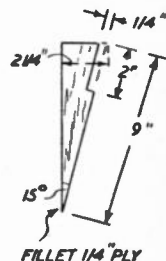
off with a 15 degree chamfer, and a $\frac{1}{4}$ in. ply gusset, cut as in Fig. 5, is glued between this overhang and the leg on each side. The back support can also be glued and pinned in place at this stage.

In the upright position the back is located as indicated by the hinge line and attached by two hinges directly to the arms. Further backward movement is prevented by the bottom portion of the back bearing against the back support, and the bottom edge of the back contacting the back of the legs. At the same time the whole back is free to be swung forward into a horizontal attitude to turn the chair into a table, giving an overhang of some 12 $\frac{1}{2}$ ins. beyond the rear legs.

If the back is to lie truly horizontal in the folded position, then the two hinges must be inset into both the back and the arms. Particular care should be given to the hinge assembly, in any case, for the success of the complete assembly as a chair depends upon the hinge fixing being strong enough to resist pressure, tending to tear the hinge screws out of the back. If in any doubt on this score, secure the hinges to the back with bolts, backed up with large washers, but this will spoil the appearance of the 'table' when folded, as the nuts and washers will stand proud of the surface.

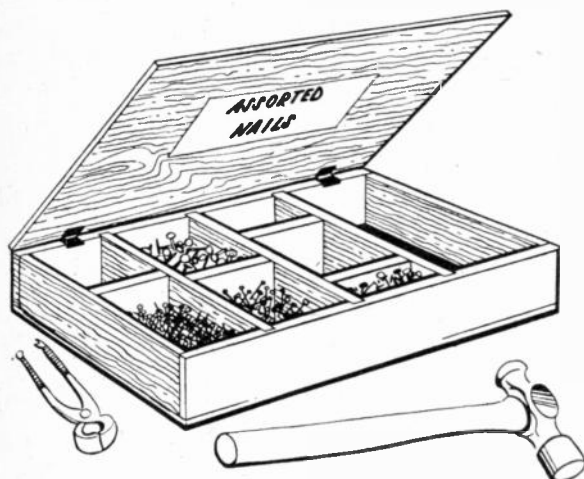
The seat is formed by a number of slats pinned between the front and back

Fig. 5



frames. The actual length of these slats is 19 $\frac{1}{2}$ ins. Two cushions will be required, one for the seat itself and one secured to the back. This latter cushion is necessary, or the back support will cause discomfort. Semi-permanent fastening can be employed for both cushions and will be well out of the way when the back is folded over. (449)

Keep your nails tidy in A STURDY NAIL BOX



Why have your nails and fretpins lying about in paper bags or all mixed up on your work-table? Save yourself a lot of time and trouble by providing them with a proper container.

wood for the partitions and sides, but $\frac{1}{2}$ in. will do almost as well. The partitions are housed into the back and front.

If you are always losing or mislaying your packets of fretwork nails, you will appreciate the handy 'Nail Tidy' shown on this page.

Fig. 2 gives a close-up view of the housing joint. The diagram in Fig. 3 shows how it will look during assembly. The base and lid are both cut from

$\frac{1}{2}$ in. plywood. They will each measure 12 ins. by 7 ins. The base is pinned or screwed in place and a few pins put through into the partitions for extra strength. Notice that the hinges for the lid are slightly recessed to allow them to fit flush.

An ordinary catch could be fitted on the lid, but this is not absolutely essential.

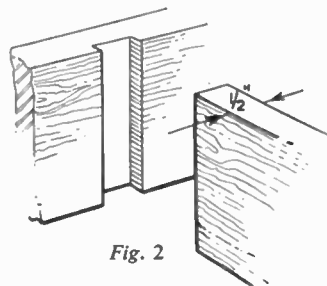


Fig. 2

To finish the box we suggest a light stain and varnish. Clean the wood thoroughly with glasspaper and then apply the stain. Allow to dry and then give two coats of clear varnish. (466)

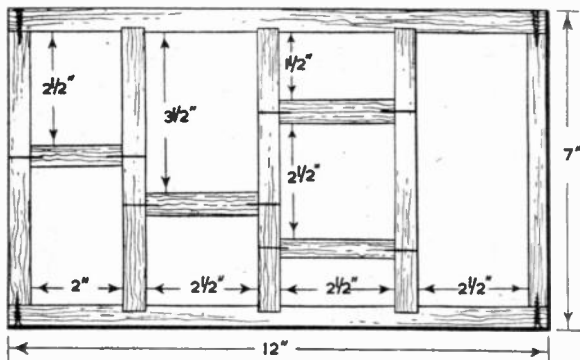


Fig. 1

The various compartments could be labelled with their respective sizes and one or two of them could be used in a similar manner for screws.

On this page you will have noticed a printed label—ASSORTED NAILS. This should be cut out and pasted on the box lid.

Before commencing work you should see how many compartments you will require and decide upon the size of the box. The size shown in Fig. 1 should be sufficient for general requirements. You could put in one or two extra partitions if necessary.

Construction

The general layout and measurements are shown in Fig. 1. We have used $\frac{1}{2}$ in.

HINGE RECESS

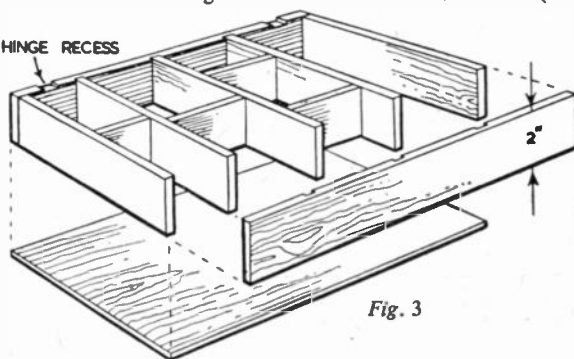


Fig. 3

ASSORTED NAILS

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KUKLOS Annual. Indispensable cyclists' handbook. Tours, resthouses, money saving hints, 2/10, post free.—Burrow, Publishers, 2 Imperial House, Cheltenham.

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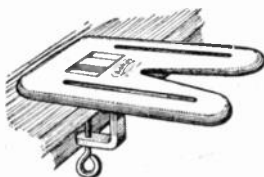
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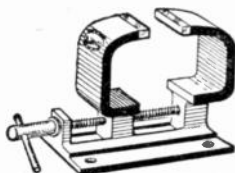
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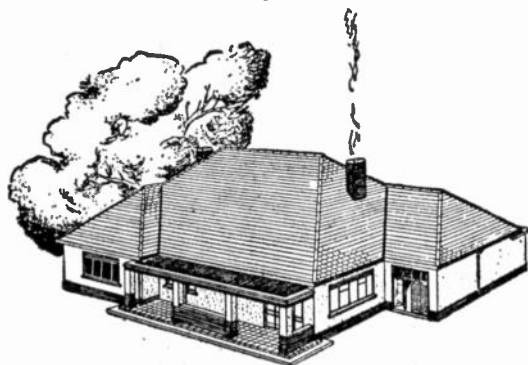
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