Hobbies WEEKLY

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You'll find it easy and cheap to make these UTILITY COFFEE TABLES

ONLY small pieces of wood, lengths of dowelling such as that provided by old broomsticks and curtain poles, and a few screws are required to make the two attractive coffee tables shown herewith—hence the reason for the word "utility." Not only are the tables designed for simplicity and quickness in construction, but you will find you can make them very cheaply.

Quite small pieces can be used up and some of these pieces will give you other pieces that can be used. You will, in order to make up widths, have some rub-joining to do; this extra work is inevitable.

The tables are circular and hexagonal in shape. One or the other can be adopted. The sizes are general and the finish can be either enamel paint or french polish or just merely stained and waxed.

The Circular Table

The top of the table is the first thing to make. You need a piece of wood 16ins. square by ½in. thick. Such a size can be built up from two pieces of wood 16ins. long by 8ins. wide, or four pieces 4ins. wide by the length, being rub-jointed together with glue.

When dry, chisel away the excess glue, then clean both sides with a smoothing plane. Scribe the diameter (with a piece of cord tied to a nail in the centre, the pencil being held the required distance at the other end), then cut away the waste with a bow-saw or similar implement.

Spokeshave the edges smooth and flat, then picking the worst side of the wood, mark out the circular leg railing (14ins. diam. by 2ins. wide) as shown at Fig. 3. This rail is built up from four shaped segments of wood; you need eight of these segments in order to build up the thickness of 1½ins. the segments being cut from ¾in. wood.

It is, therefore, worth making a template for marking out purposes. Note, by the way, how the grain runs with the length of each segment. This ensures strength and also prevents any likelihood of chipping the joins when you spokeshave and glasspaper the railing.

One ring of four segments is laid upon the reverse side of the table top in the manner shown, gluing and nailing (or screwing) them in position. The other four segments are fixed down, similarly, on top, but do not have the joints all corresponding, i.e., the four joints in the ring underneath should not come in line with the four joints in the ring above it.

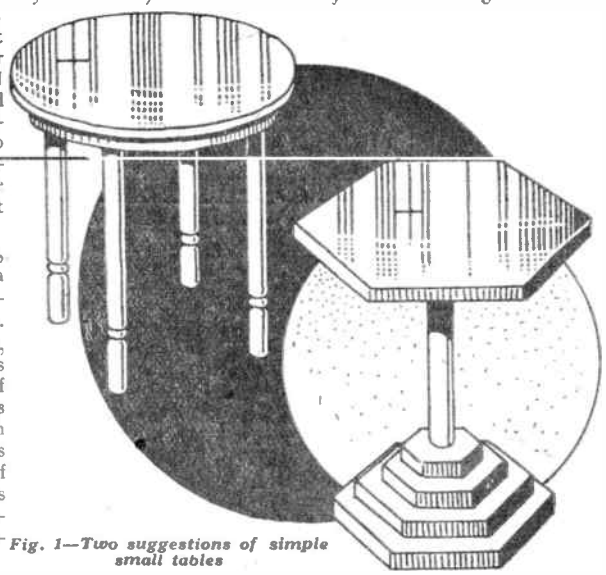


Fig. 1—Two suggestions of simple small tables

This increases strength and prevents the tendency of the table top from warping or developing any waves. When the glue has dried, proceed to bore the four leg holes, keeping them in the middle of each segment, as shown

If you use 1in. diam. broomstick for the legs, bore 1in. by 1½in.deep holes. If you wish, you could bore

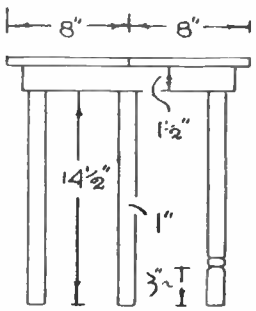


Fig. 2—Side elevation and detail of a leg shaping

⅞in. holes and cut shoulder pins on the legs to fit tightly.

Before gluing the legs in the railing, they would look less plain if you cared to rasp a bead on them, near the bottom ends, as shown in the elevation at Fig. 2. The beads are very easily shaped, chipping with a penknife giving you a good start.

Testing the Legs for Trueness

The important thing about a four-legged piece of furniture is to see that the legs are equal in length so they all rest on the ground evenly. To find out whether it is the legs that are uneven get two laths of wood and set them across each pair of legs and look over the top edges of the laths.

If not meeting parallel your line of vision, the fault can be easily traced to the uneven legs ; the laths must be true in their width, otherwise you cannot tell correctly which legs are at fault.

The Hexagonal Table

The top of the hexagonal-shaped table is made up the same way as the circular one, except that ¾in. thick wood is used. When cleaned up with a smoothing plane, strike out a 16in. diam. circle, then rule a straight line across the centre.

Where this line crosses the radii (circle) line, set the compass point and scribe two semi-circles, one at the top and bottom of the straight line. Where the semi-circles cross the circular line, you get the six hexagonal points ; it is only a matter of ruling straight lines from point to point. Being six-sided, you can cut the wood easily with a panel saw.

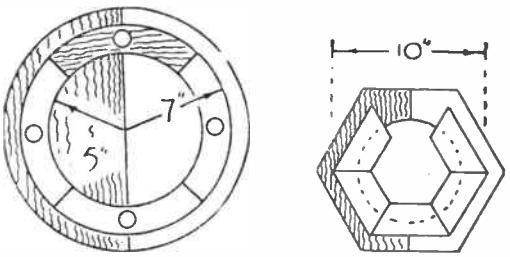


Fig. 3—How bases are built from small pieces

A 10in. diam. disc of ¾in. wood is screwed to the underside of the table top, in the centre. The edge of the disc could be rounded over, if desired. You could make the disc out of two 5in. wide pieces of stuff. A hole is bored 1in. deep in the centre to suit the column, or post, this being a length of curtain pole about 1½ins. in diameter, the length is about 14ins.

The Pyramid Base

The base of the table is built up like a pyramid, only it is hexagonal in shape. You need four layers of ⅞in. wood. To build the base, cut out the bottom piece first.

You need a 12in. square piece of wood, so glue two 6in. wide pieces together, then mark out the shape. An 8in. disc is cut out of the centre of the bottom piece. From this disc you cut the topmost layer piece, this being detailed in the side elevation at Fig. 4.

To the bottom piece glue and nail six segemnts of ⅞in. thick by 2in. wide pieces of wood, as shown at Fig. 3. We have removed one segment to show the bottom piece more clearly.

Having attached the segments, attach four more, these, like the former, being kept in from the edge to show an 1in. margin. When attached, add the topmost piece, then bore a 2in. deep column hole, the column being glued into it to complete the work.

Glasspaper Thoroughly

As you will understand, all nail

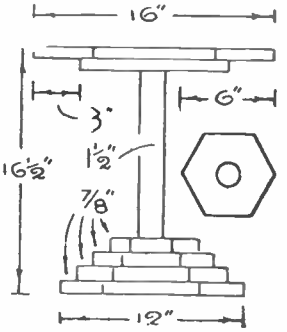


Fig. 4—Side view of built-up base and table

holes, plus screw holes, must be stopped with putty, wax or plastic wood, then the wood thoroughly glasspapered to be quite smooth. You must be particularly careful to get the end grains quite smooth. If you have used deal, you should, after glasspapering the wood, rub over it with a damp cloth and allow the wood to dry. The dampness will have raised the grain, so rub it down smooth again so that, when a stain is applied, very little grain rising will result.

If you polish the work, apply a coat of polish with a soft brush, allow to dry, then rub down. Apply a second coat, allow to dry, then finish off by using a rubber.

If you apply enamel, raise the grain as stated previously, then apply a thin coat of enamel. Allow to dry hard, then rub down with fine glasspaper and apply the second—and final—coat, sweeping the brush across in long, even strokes. The strokes could be in the same direction as the grain of the wood, but it is not vital that you should restrict yourself to this suggestion.

Washing Board—(*Continued from opposite page*)

the board. The rounding is best done with a small iron shoulder plane, but it can be carried out with an ordinary wood chisel, the paring being done gradually and then the roughness removed by glasspapering.

When you have shaped the ribs, both ends of the boards must be trimmed to form a ½in. wide by ⅜in. deep tenon, as shown by the detail at Fig. 2. The two boards are fitted in the leg groove together so that the broadest ribs are at the top and bottom, as seen by the frontal view.

To assemble, get the boards glued firmly and neatly between the legs, including the top cross piece. If you own a sash cramp, it will be a great help in pressing the parts together, but hammering on the legs with a mallet will put the parts firmly together, just the same.

To keep the work held true and firm, a back board piece is nailed to the back, at the top, this measuring 12ins. by 5¾ins. by ¼in. Not only does the piece of wood serve as a holder for the soap, but also provides a means for hanging.

For this purpose, bore a 1in. hole in it at the centre, near the top, as shown. A few nails (about four each side) are hammered through the sides of the legs into the boards, for it must be remembered that glue is not sufficient.

No need, of course, to think of finishing off the board in any way. It is left in the white state. You should, however, see that there are no sharp, ragged edges, so remove any corners by glasspapering.

It is usual to have semi-rounded edges on the face edges of the legs and the top cross piece. Be sure to cut a bevel at the ends of the legs, as shown, as this allows the legs to rest properly in the bath.

Get in the housewife's good books by making

A WASHING BOARD

GOOD washing boards, like most other household articles, are hard to get these days. If you have the odd pieces of wood lying about, you will find it quite an easy task to make a washing board.

The washing board illustrated is simply constructed, yet will stand up to constant, hard usage for a long time. The dimensions given are usual. A feature with the board is the soap rack, this being formed at the top end.

When the soaked clothes have been well rubbed with the soap, the cake is set in the rack, any suds and soapy water adhering to it dropping away from the opening at the bottom of the rack and falling into the washing bath.

You will no doubt feel undecided about the wooden rubber, i.e., the half-round wooden bars running across the board. The bars, however, are easily formed, being actually cut in the board as shall be fully described.

The Side Legs

The side leg pieces are cut from pieces of wood, such as deal, measuring 22ins. long by 1¼ins. wide by ¾in. thick. The top end piece measures 12ins. long by 1¾ins. wide by the same thickness as the legs. The top piece is fixed to the legs by means of a single dovetail.

The dovetail should be cut in the legs first. To do so, scribe the thickness of the top of the board around the leg tops with a marking gauge. Cut the dovetail shape with a tenon saw, removing the waste by cutting at the side to form the shoulders.

Mark, in pencil, one dovetail A, the other being marked B. To make a true receiving mortise for the dovetail, set one leg against the end of the top piece, keeping it flush at the bottom side edge (see side view at Fig. 2), then mark the outline shape of the dovetail on the end of the wood, using a scriber point or sharp pointed pencil.

When cutting down the lines of the receiving mortise in the top piece, keep slightly inside them. The dovetail tenon must be a good, tight fit. To remove the waste wood (after cutting down the lines), set the wood flat on the table, or bench, and chisel it away, working from both sides.

Having fitted one leg, put a corresponding mark (A or B, as the case might be) on the top piece, this prevents any doubt or confusion as to which leg is the proper one when you come to assemble all the parts together.

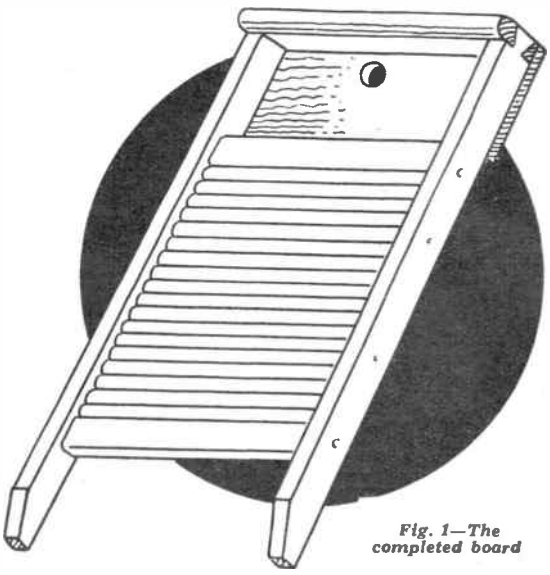


Fig. 1—The completed board

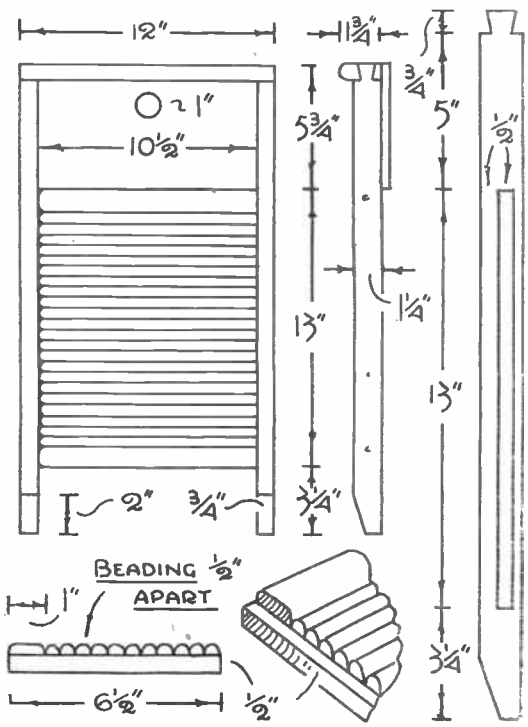


Fig. 2—Various details of parts and construction

The Groove

A suitable groove must be made along the inside sides of the legs to receive the prepared ends of the rubber board. This groove, as shown by the enlarged side piece, is 13ins. long by ½in. wide and ½in. deep.

The best—and proper—way to cut the groove is to first scribe its length and width with a marking gauge. Bore a ½in. hole at each end of the groove-to-be, the depth being, of course, ½in.

Then, with a ½in. wide wood chisel, and a mallet, the waste wood is cut away, bit by bit. To prevent any likelihood of spoiling the edges of the groove, the marked lines should be cut deeper with a 1in. wide chisel, turning the bevelled side to the inside of the groove.

When you have cut to a depth of about ¼in., the ½in. wood chisel is held at an acute slant in the hand and pushed into wood to "hack" the rest of the waste away. Have the bevelled side resting on the wood.

The proper way to clear out the groove is with a tool called a router, or "old woman's tooth" This implement can be set to cut no deeper than ½in., thus assuring an even "bed" in the groove.

Making the Rubber Board

To make the rubber board, you need two pieces of deal (a fairly hard wood is preferred) 11½ins. long by 6½ins wide by ¾in. thick. Both pieces are prepared in the same manner so we shall deal with one of them.

Having cut and trued the wood to size, mark a 1in. wide margin across the wood at one end, doing this with pencil and set-square. The rest of the board is divided into ½in. wide lines, ticking them off first, then ruling them across.

A saw guide strip of wood is now wanted, this being a strip 12ins. long by ½in. wide by ¼in. thick. The strip is pinned (with a small nail at each end) across the board.

A tenon saw is then held against the strip which, by the way, is a fence for it. By pushing and drawing the saw across the wood, a kerf is cut exactly on the line. The depth of these kerfs, or cuts, is ¼in. so it would be wise to mark the depth at both ends of the board.

Having cut all the kerfs, the next procedure is to form the "ribs" of

(*Continued foot of previous page*)

The tank method of developing a film properly in HOME PHOTOGRAPHY

THE previous photographic article showed you how to proceed to develop your films by the least expensive method. In this chapter we want to take you a step further in this very fascinating branch of your hobby. It entails buying a special piece of apparatus and means the outlay of about 20/-. You will, however, find it very worth while, because it will last many years, will do hundreds of spools, and save an extraordinary amount of work. Further, it will put you on the track of developing by the most scientific means, reducing the possibilities of failures to a minimum.

Types of Tank

Tank development is the method employed by your local chemist or dealer when you take a spool to be developed, but his tank is one which might hold quite a number of spools. That which we suggest only holds one and therefore it is possible to give special treatment if necessary.

There are several very excellent tanks for amateurs on the market and one is the Johnsons Tank. It is simple to use, it can be adjusted to take different size films and the film can be loaded into it quite easily in the dark. It consists of three main parts, the body or tank, the film holder, and the light-tight lid. In order to describe it as fully as possible let us describe how it is manipulated.

Inserting the Film

The lid is first removed and the film holder taken out and adjusted to take the size film in use. This is done by moving the top section up or down as the case may be, the two parts being gripped by notches carefully cut in the stem. On the outer edge of each part a pair of guides will be seen and the film is inserted between these and gradually and gently forced into the groove.

The gentle pressure leads it along the grooves until the whole is wound in and then the end is drawn back slightly to allow it to rest in the stops. These prevent it leaving the grooves when agitated during development.

The film carrier, with the film in position, is now placed in the body and the lid fixed on the top and given a slight turn to cause it to grip and make it light-tight. This part of the work must, of course, be done in the dark or with the red or safe light only.

You should soak films before developing. So place the tank under the tap allowing a flow of water to pass through the hole in the centre of the lid. When it is full then take the stirring rod and give the holder a few turns and then empty the water away. Having prepared the developer beforehand ($17\frac{1}{2}$ ounces for a $3\frac{1}{4} \times 2\frac{1}{4}$ film) make certain that the temperature is 65 degrees.

How to operate

Everything is now ready, so the solution is poured gently in an even flow as quickly as possible through the same hole in the lid. Insert the stirring rod and give the film holder a twist in order to remove any air bells which may have occurred while pouring the solution into the tank. This stirring should be done about three times a minute during the first two minutes. Then twice for each subsequent minute.

If you are using a Selo H.P.3. film and Azol, then the correct time is $8\frac{1}{2}$ minutes, but whatever developer or film you are using try to ascertain the time of development. For it is only by correctly developing a correctly exposed film that you can hope to get perfect results.

When the period of time has elapsed return the developer to the stock bottle for using again and if convenient fill the tank once more with water. Do not, however, remove the lid of the tank. After emptying the water away fill up with the acid fixing solution and give a similar stirring as during development.

Wash off the Fixing

If the fixing bath is a freshly made one ten or twelve minutes will suffice, if the solution has been used before you will have to allow longer. At the end of fifteen minutes you can remove the lid. Then place the tank with the film in position under the tap and allow the water to run into the open tube of the holder. By so doing you will disturb any fixing solution which may be at the bottom and thoughly cleanse the film in about half-an-hour.

The holder should now be carefully lifted and the top section removed to free the film ready for hanging in a suitable place for drying.

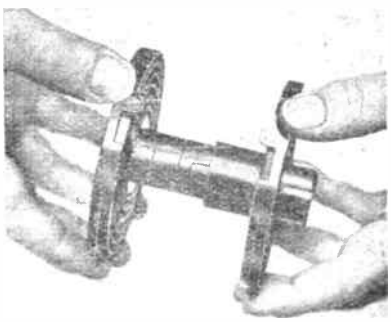
You will have gathered that after loading the film into the tank and fixing the lid the remainder of the work can be done in daylight and if you have used the right temperature and given the exact time then you can be quite certain that your negatives are the best possible from the exposures.

Time and Temperature

This is the most scientific method known. It is termed the Time and Temperature as applied to Tank development and is the one which is employed by all firms engaged in mass development of amateurs films. It is extremely simple and economical because it is not necessary to have a number of dishes or other apparatus for the work.

One word of caution is perhaps necessary. See that the tank is well washed and dried before attempting to place another film in it. You can do several films in the one evening but the tank must be dried after each, otherwise you will find that the film is inclined to stick to the sides of the grooves.

You will have noticed that you



How a tank can be adjusted for different size films

were advised to return the developer to the stock bottle for use again. When doing a second film you must remember that some of the power of the developer has been used, so it is a little weaker. This can, however, be counteracted by giving the second spool about 10% longer time and the third film a further 10%.

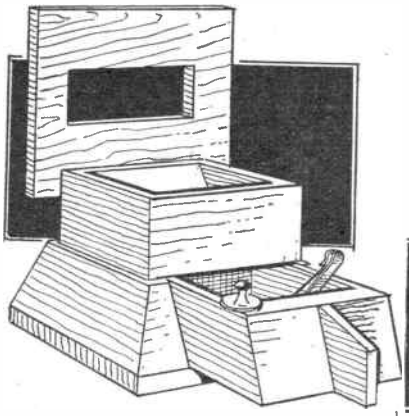
Deterioration

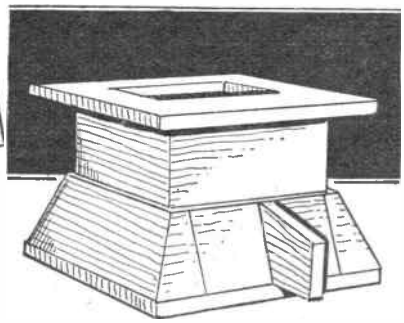
We should be rather dubious in advising the use of it for more than three, especially if the solution has been kept for more than three weeks and even for this time it must be in a well-stoppered bottle and a full one at that.

You know that all developers are known as oxidising agents and if they contact air they must start to oxidise and deteriorate.

The times mentioned in this article refer to the dish strength of Azol. It is a very popular one with amateurs but a more dilute solution can be employed if desired, as shown in the tables. When using a weaker one however, it is necessary to remember that the more dilute the solution the quicker it will oxidise and wear itself out. It is a great mistake to try to economise on chemicals after making them into solutions. You take a risk of spoiling more valuable material and getting inferior results.

Handy, compact and practical is this new style of
NOVEL STUD BOX





MOST readers are painfully aware of the trouble caused by a lost collar stud. Probably it is the most elusive article in existence, for when dropped it simply disappears like the watch in a conjurer's hand. This is where the stud box illustrated will be a help.

It is a useful novelty, helping to keep the collar stud in safety. It can be dropped in the box at night-time and lifted out in the morning—no trouble, there it is when wanted, tie pin as well, if the reader uses one A small drawer is provided for extra studs and pins.

Its use is not, however, confined to the male sex, it would be a handy receptacle for ladies to put rings and pins in; in fact, any of the small articles used by the female sex.

The First Work

Fretwood, 3/16in. thick, is used for making it, plus a small piece of some thicker wood, say deal. First make up the body part shown in Fig. 1 from the fretwood. Cut the four sides and fix together with glue and fretwork nails.

The middle floor piece is cut to be a tight fit and is glued and nailed in also. It will be seen from the diagram that two of the sides are shown with the grain of the wood vertical instead of being horizontal as is usually the case.

This is not imperative, but it has one advantage, it avoids showing end grain on the face side of the box.

For the base and lid, cut two of Fig. 2 to dimensions given. In the piece to be the lid cut out the rectangular opening. This might be bevelled outwards a little, it gives a neat appearance.

Now glue the body to the base, and get it central. It would be wise to draw pencil lines on the base, ½in. from the edges, as a guide to this.

Cut two strips of wood, ½in. by 1in., to fit inside the box, plane them to a bevel and glue them inside, as at A in Fig 3, a cross section of the box.

Corner Pieces

These should be glued in the corners each side to facilitate picking up the studs or pins, which have a habit of hiding themselves in awkward corners. See these pieces run the same way as the long sides of the opening in the lid.

The section, Fig. 3, also shows the planed and bevelled strips of wood, deal if you like, glued in the angle between the body of the box and the base. Cut a strip of the wood long enough to reach all round easily, and ½in. by 1in. section, and plane it to the shape.

This is then cut into four pieces, each as long as the base, and neatly mitred at each end. Three of these are glued round first, the fourth, that for the front part where the drawer opening comes, is cut into three pieces.

One piece should be as long as the opening and is to be afterwards glued to the front of the drawer. The two bits left are glued either side of the opening to complete.

A fine tenon saw should be used to cut these, or the wood removed by the sawing will leave a rather conspicuous gap when the drawer is in place.

No fine saw available, it would be safer to cut and fit end bits separately getting them level with the drawer opening, and then to saw a separate piece for the drawer front itself, taking care it makes a good fit between.

The Drawer

The drawer, Fig. 4, is made of fretwood, like the box. No dimensions are given as it will be made to fill the drawer opening. The drawer front will then be level with the body of the box.

Its construction is clearly shown and is put together with glue and nails. The piece of the bevelled wood, already mentioned, left over from the front, should be glued to the face of the drawer, as at B, and bring it level. Try it in place.

Readers having to buy the fretwood for this box, can get a Hobbies panel, H3, of 3/16in. wood, 14ins. by 7ins. which will be ample for the job.

All being right, give the whole work a good rubbing with glasspaper, especially the front of the drawer, when the latter is in its place.

It is important for appearance sake that the drawer front should be level and close fitting with the side pieces, otherwise the work looks slovenly.

The handle, C, is made from a square inch of the fretwood, cut sloping at the top, as shown by the dotted lines. In the centre of front, B, cut a slot for the handle to fit in, and there glue it.

The lid should have its outside edges rubbed smooth with glasspaper It is then hinged to the box, with a pair of small brass hinges, as shown in Fig. 3.

The box can be nicely finished with polish or varnish. It could also be treated with art enamel, which can be bought in as many shades.

Leave the inside plain, and stain the outside deal parts, if necessary to tone down with the remainder

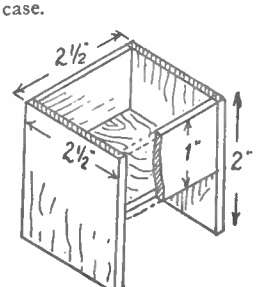


Fig. 1—The body work

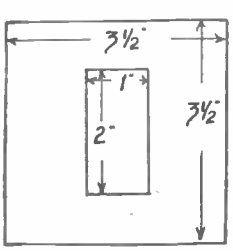


Fig. 2—The top piece

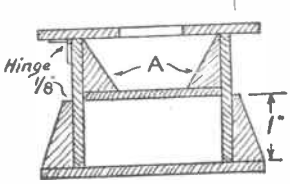


Fig. 3—Section through box

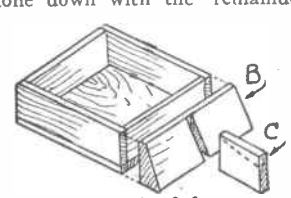


Fig. 4—Detail of drawer

Following last week's article you can complete

A SPINNING WHEEL

THE front bearing, B, has a hole bored (leather bushed preferably) to admit the thick end of the spindle which is ¼in. dia. Glue the bearing in the front slot.

The spindle, Fig. 9, is turned from iron or mild steel, ⅜in. dia. Turn down 1½ins. from one end to ½in. dia. leaving a flange, as shown. Bore a ¼in. in the end to a depth of 1½ins., and a second hole in the side at right angles to it to provide an outlet.

The thread passes through these holes and so sharp edges should be smoothed off with file and emery cloth. Now, for a distance of 6¾ins., reduce the rod to ⅜in. dia. and the remainder to ¼in. dia. The last inch of the ⅜in. post is filed square

A Substitute Spindle

If difficulty is experienced in getting this spindle, a substitute one can be made. Fig. 12 shows this, it is a length of ½in. dowel rod, to which a piece of ½in. brass tube is firmly fixed to one end.

Bore an outlet hole through the tube, as explained for the metal one. The flange can be cut by hand from a piece of stiff brass and be soldered on. The holes in the pulley, reel and bearings must be amended to suit, of course.

The square hole in the pulley must be replaced by a round one, and to key the pulley on the spindle, glue a disc on it, say 1in. dia., as shown at G.

Bore a small hole through the edge of this, and also through the spindle, and fix the pulley with a wire pin, so that it is easily removable.

The reel and pulley, Fig. 10, is made up in this fashion. For the pulley, D, cut two discs of ¼in. fretwood to diameters given. Bevel the inner edges and glue together. In the centre cut a square hole to fit the squared part of the spindle.

The Reel

The reel, E, consists of two cheeks, with a pasteboard centre. The left cheek is also a pulley. Cut the two discs and bevel as before. Bore a ⅜in. hole in the smaller disc and a ⅝in. one in the larger, and glue together. The right cheek is also made of two discs.

The larger one is bored ⅝in. and the smaller, which should be 1in. dia., bored ⅜in. Note, the larger disc is bevelled off to its edge. The centre of the reel is brown or other stout paper, glued together round a ¼in. rod to make a tube.

Cut it 4ins. long and glue to the cheeks. See the paper tube is thick enough to fill the ⅝in. holes in the cheeks, as at F.

Making the Neck

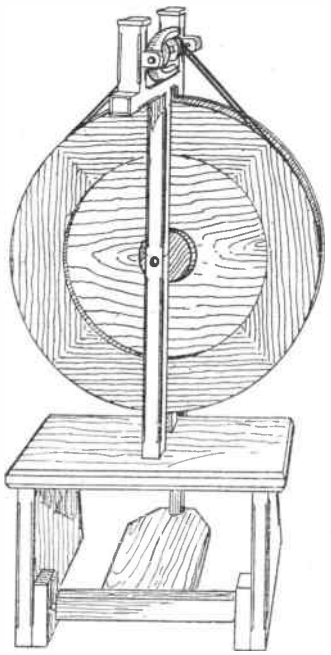
The last part to make is the neck, shown in Fig. 11. This should be cut from 1in. thick hardwood, but if this is difficult to obtain now, thinner wood could be glued together to make up the thickness.

Cut it to an oblong of the dimensions given. Draw a line across the centre, and on this at the distances shown, describe the arcs. The rest is easy. Bore a ⅜in. hole through the back part to fit the spindle.

From the back of the neck plane the wood to ½in. at the front and round off and shape up, as shown, removing all sharp edges.

On one arm drive in 9 pins (thin wire nails will do for these) and bend the tops over outwards to make hook shape.

Now slide the neck on the spindle until it butts against the thicker end part, and secure it there by drilling a hole through it and the spindle and driving a pin right through, as a rivet.



Slip the reel on, then the pulley, and push the spindle in its bearings. Connect both pulley and reel to the wheel with a stout cord, or gut band.

Using the Wheel

In use, the cotton, washed and combed, is laid on the lap. The thread is drawn out, twisted between the palms of the hand and then passed through the hole in the spindle.

It is drawn out through the outlet hole, passed over the first hook on the neck and tied to the reel. As the reel, owing to having a smaller pulley revolves at a greater speed than the neck, it winds the thread up, the neck doing the twisting.

As one part of the reel becomes full, pass the thread over the next hook, and so on. To remove the reel, when full, pull out the pin in the near bearing.

This allows the spindle to be pushed back until free of its front bearing. Remove wedge and lower rear bearing until the spindle can be withdrawn and the reel taken off.

Having completed the wheel you will naturally be anxious to put it into service. At first the combination of treadling and spinning is apt to be awkward. A good plan is to master it from the first.

Get used to the movement of the treadling—it will not take long—so you can control the wheel as desired. Do not attempt to go fast at first, but try your feet in different positions to obtain the most comfort.

Cutting Substitute Balsa

NOWADAYS you will find that aeroplane kits contain substitute woods instead of real balsa wood This is very hard to cut with a razor-blade. But it can be very easily cut with a fretsaw with a 1st. quality sawblade in it, which cuts the wood quickly and easily. The archimedean drill is also useful in drilling holes for interior cutting with the fretsaw.—(B. Allerhad, Dorking).

Electric Nightlight

DO you remember the Owl Calendar Design shown in the Hobbies Handbook? It can be made into a nightlight to save electricity. It is worked by a twin-cell battery with a switch fitted by the side and the bulbs fixed as eyes.—(G. Finlayson, Glasgow).

A fascinating pastime can be enjoyed with
HOME-MADE PRINTING BLOCKS

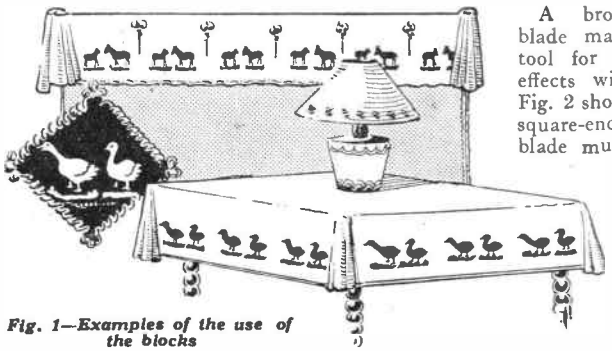


Fig. 1—Examples of the use of the blocks

THIS is the way to make interesting printing blocks which may be used on almost any fairly absorbent material. Quite a lot has been written about lino cuts, how, when using this material the background is cut away and the raised portion which is left coated with ink or colour and pressed on to the material.

The method suggested here is somewhat similar to this but, instead of the design background being cut away, the background in this case is whole and in one flat piece with the raised part made separately and glued to it.

Features to Make

This then, is where the fretsaw comes into its own. Almost any kind of design or portion of design is suitable. Animals, birds, floral sprays, etc. all can be adapted and either drawn or transferred on to the wood and cut round.

Many of our design sheets contain highly suitable and easily-drawn subjects which may be traced and put on to the wood with very little alteration.

Very amusing and simple figures may be used to decorate window pelmets, table cloths and small articles as kettle-holders, just as is shown in Fig. 1.

The tools for making the blocks are simple and few in number. The fretsaw, of course, is the essential tool, all the outline cutting being done with this, while certain interior markings may be carved in with an ordinary pocket knife or a vee shape chisel.

A broken pocket-knife blade makes an excellent tool for carving in extra effects with the wood as Fig. 2 shows, but the actual square-ended portion of the blade must be kept very short so as no ragged top-edges are left.

A completed block ready for printing is shown in Fig. 2 and it consists of the horse shown in outline in Fig. 3.

To get certain markings it will be seen that the fretsaw cutting is carried up into the design as it were, taking as an example the line of the jaw of the horse and the line of the muscles of the nearside leg.

The off-side legs and the tail, it will be seen are cut independently, that is, right out and are then glued to the backing board a little distance away from the main body of the design.

Using a Knife

By this, a definite outstanding feature is made of these parts, while the less conspicuous lines may be put in with the carving blade. The markings of the mane, etc. of the horse, are put in in this way.

Two examples of suitable group subjects are given in Fig. 3, and in this it will be noted how the "ground" is divided so each single item may be used independently as desired. A fine fretsaw must be used when cuting such figures as these, and great care must be exercised to keep strictly to the line or the whole idea and spirit of the subject will be spoilt and lost.

When the various parts have been cut out they must be coated evenly with the glue and pressed on to the prepared backing board which obviously must be chosen for its flat and even surface. No piece of wood which is inclined to warp or twist should be used as a backing.

After the pieces are glued on, the top surface should be rubbed down on a board covered with fine glass-paper. Thus, an ideal printing surface is obtained.

Having made the "blocks" we can proceed with the printing. An ordinary stamp inking pad can be used for some cases where an actual coloured effect is not desired, but proper printing colours such as can be obtained from artist's colourmen or stationer's may be used with better effect.

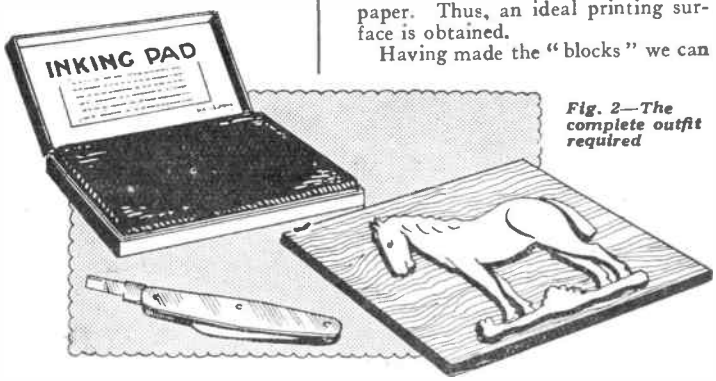


Fig. 2—The complete outfit required

Using the Colours

The latter are supposed not to run or fade when the printed material is washed. Have handy then, a sheet of glass and on this squeeze out a little of the colour from the tube. Smear it evenly and thinly over the surface of the glass. Place the printing block face downwards in the colour and apply a little pressure so the colour is distributed over all the raised portions. Now lift the "block" and lay it again face downwards on the material in the exact position made out for it. Press hard upon it leaving it on for a quarter of a minute or so to allow the colour to settle well.

Hints to Remember

It should be mentioned that three of four folds of blotting paper should be laid beneath the material before the block and pressure is applied. In making a repeat pattern as on the pelmet shown in Fig. 1, the spacings must be carefully set out beforehand and a simple little motif made perhaps as a dividing design between each dual-print.

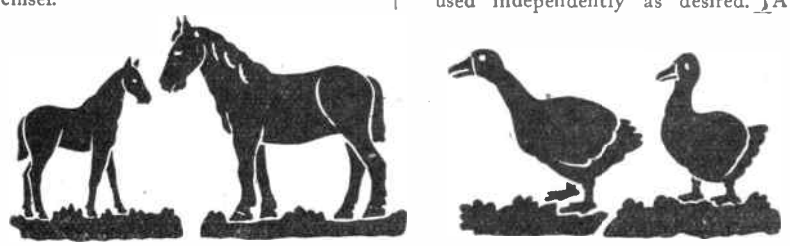
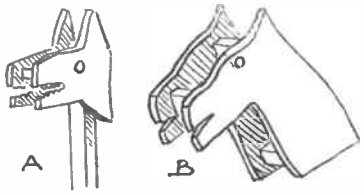


Fig. 3—Some suggestions of figures from fretwork designs

Some various and interesting ways of making STAGE ANIMAL HEADS

PROPERTY animal heads seem to be often in demand for amateur dramatics and pageants and the very simplest way to make these heads is as the Wolf Cubs make their "totems."

Two side views of the desired head are cut to the same size, getting in as much detail as possible round the edges, in the mouth, etc.



The outer sides of these are now painted in strong colours and the two profiles are fastened together (but about 6ins. apart) with distance pieces, the whole being mounted on a pole.

The head of any animal can be made in this way and considered finished, as for instance a horse as shown in (B), but the method is, of course, very elementary and should be used only where the roughest impression is required. The scheme, however, can be employed as the basis for much more realistic models.

Adding Thickness

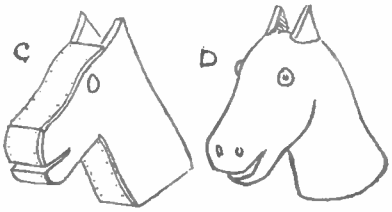
The drawing (C) shows an improvement on (B). The cutting of the profiles and joining with distance-pieces has again been effected, but here the space between the two sides of the head has been filled in all round with some pliable material, such as thick card or linoleum. This is secured to the edges of the profiles with short sprigs run in close together.

This finish, it will be found, is much superior and if nicely painted does not give at all a bad impression, especially if attached to a more or less realistic "stage" animal. In both examples the eyes may either be painted on the profiles or be suitable rings of card glued into position.

A Realistic Head

From (C) it is not a far cry to (D) which can be a correctly modelled head. Using (C) as a base, the whole head and neck is covered roughly at first, with any brown material which at a distance will resemble horse-hair, pulling it fairly tightly and securing with stitches in un-noticeable places, such as under the lower jaw, etc.

Leave some parts of the seams open and when the material is pretty well in position begin to model the head by ramming packing (which may be stuffing from an old chair) between the cloth and the wood wherever it is desired to make a bulge or give roundness.



By combining the working in of the packing and the pulling tight with extra stitches and generally using a little bit of "gumption" a very realistic head can be worked up.

Modelling should start from the nose and then proceed steadily up the face and down the neck at the end of which the material can be pulled very tight with cross stitches. Although a horse only is shown in the sketch any animal head can of course be made up in this way.

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