

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

Make it for my lady's dressing table ★ FREE Design inside

AKING a jewel casket is an interesting project for the handyman, and is a subject which makes an ideal gift at any time.

Apart from the attractiveness of our design with its 'swan' overlay, this is also in the nature of a trick box. Anyone not in the know will have quite a time finding out how to raise the lid.

Hinges are provided, 'tis true, but the lid is not a normal straight lift as is usually to be expected. There are also handles on the two sides, which are movable, but no amount of manipulation of these will secure the opening of the box. To add confusion, the two end handles are fixed.



JEWEL CASKET (WITH A 'TRICK' OPENING OF THE LID)

The hinges, in fact, are dummies, being screwed to the tops of the sides only. And the movable handles serve merely to further mystify the would-be opener.

Actually the lid is removed by a halfturn which releases it from its locked position provided for in the makeup. But only the maker need know this. If carefully fitted, the opening of the lid will create a problem for those not in the secret. Another novelty is added in the form of a musical movement which starts its tune when the lid is raised. The rest of the compartment provides space for my lady's jewels and trinkets. Alternatively, the musical movement can be omitted, in which case there is no need for pieces 8, 9 and 10, or the hole in piece 5.

Make a start by transferring all the parts from the design sheet on to their appropriate thicknesses of wood. Cut out with a fretsaw and clean up thoroughly. When working on the 'swan' overlay, piece 11, cut out the internal frets before cutting the outline. Fig. 1 shows the position of the grooves cut on the insides of pieces 1 and 2 into which will slide the ends of piece 12 which operation locks the lid.

Glue and pin together the sides, pieces 1 and 2, and ends, pieces 3 and 4, to the bottom, piece 5, as shown in

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Fig. 2. While this assembly is allowed to dry, make up the lid from pieces 6 and 11, adding piece 12 on the inside as shown in Fig. 1.

The base, piece 7, can now be pinned and glued to the underside of the box. At this stage, pieces 8 and 9 of the compartment containing the musical movement can be glued in position. Then screw the musical movement in place with the winding screw protruding through the hole in piece 5. The musical movement is activated by a wire plunger as detailed in Fig. 3. Make sure that this protrudes freely through the slot when piece 10 is finally added to the musical movement compartment.

A Kit for 6/4 Kit 3210 for making the Jewel Casket contains all wood and materials. Price 6/4 from branches or Hobbies Ltd., Dereham, Norfolk (post free). Samanan

The handles on the ends of the box are fixtures, being glued in position as shown on the design sheet. The two movable side handles are made up as shown on the design sheet. Jin. holes being bored part way through pieces 13 to take the dowels, pieces 15, which are then inserted through holes in the sides, and glued to washers 14 inside the box.

Now add the mock hinges, screwing them to piece 1 only, and the box is complete.

The interior of the box should be padded and lined with suitable material. and a fine finish can be obtained by giving the exterior several coats of enamel paint, rubbing down between each coat.



Hobbies' Crossword No. 5

Note: Figures in parentheses denote the number of letters in the words required. DOWN:
Possible power (5).
Indian lady who comes to a sticky end (5).
Dry as dust (4).
This vehicle gets on with a mon strous result (4).
No bore can be a fairy king (6).
The area of a one time shelter (6).
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It. It is won back! (3). DOWN

- ACROSS:
- Where nurse's uniform is kept? (8).
- Maybe a bright thought (4).
- Maybe a origin thought (4).
 An illuminating wire (8).
 The visitor may find it adds a little bite to the occasion! (5, 3).
 A fishy beginning (3).
 Flanted (4).
 A planted (4).
 They are carved out by the successful (7).
 An all to service (4).

GIVEN NEXT WEEK

- An aid to service (4).
 An aid to service (4).
 The path of truth (3).
 Maybe a man of high degree (8).
 This animal disturbs the lean poet (8).
 A feature of the chinchilla (4).
- 29. A learned work (8),
- 18. A narrow passage (6). 19. These animals have another anima at their head (6).
 - 21. We all like a good one for our mone
 - (3). 22. On which material may be turned to SOLUTION WILL BE good use (5). 23. This feast consists of one vegetable

and nothing more (5). 25. This clue is more than enough (4).26. Imitates in beastly fashion (4).

DOWN: 1. Possible power (5).	1		5		3	4	T	5	T	6	T	7
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 The heart of this bone is a bird (5). Cottage for a famous scientist (5). It is won back! (3). 									14	Γ		
14. A sign of great distress (3). 15. It follows the sun every week (3).				Б		16	1	17	T			
16. A man of colour (5). 17. The deer is upset about nothing, so	18		19	T	1	1	T	1	1			
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Handyman's project

HANGING BOOKCASE



HIS useful little book-rack was made to fit at the back of a desk. mounted on the wall, and so leaving a larger area of the desk top free for working. It is, obviously, equally suitable for hanging on a wall by itself, either as a bookcase or as a stand for vases, etc. The narrow lower shelf can then carry small ornaments.

K. H. Warring

The two ends are identical in outline shape, and can be cut from a 27in. by 6in. panel of in. ply. These ends are, however, 'handed' in the manner in which they are grooved. The top fullwidth groove carries the top shelf. The lower blind groove takes the 3in, wide bottom shelf, whilst the back inside edges are to allow the hardboard back to be inset flush and so give a 'clean' end appearance. All these grooves can easily be cut with a small stiff-back saw and a chisel. Plywood is easy to work in this respect since groove depth is readily apparent from the colour of the veneer layer exposed when chiselling out.

The two ends should first be as- rounded off where it protrudes, and the sembled on the shelves. Standard 3in. on the original, so that the top shelf con-sisted of two separate lengths. The shelves were glued in place and also pinned through from the outside, driving the heads of the pins below the surface of the ply with a nail set and filling the resulting small holes.

The back panel is cut next, taking care to get it exactly square, so that when fitted, it trues up the whole THE cold water method of dyeing assembly. This also is pinned and glued in place. The top edge of the back, incidentally, can be straight or curved. as desired. If the top shelf is to be used for books, a straight-edge can well be used, since this will be hidden. On the other hand, if the fitting is being made to take vases, etc., a curved back outline will look better.

The top shelf is reinforced along its length at the front, and also across the middle with \$in. by \$in. strips, pinned and glued in place. This will prevent the shelf from sagging even under a full load of books. The lower shelf is only intended to carry oddments and does not require bracing.

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COLD WATER DYEING

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Thoroughly wet the article before immersing in the dye bath, and use a bowl large enough to allow it to be stirred freely with a clean stick.

After dyeing, rinse the article in cold water under a running tap until free from all loose dye. If this is not done, the dyed article will be patchy. Do not dry in very strong sunlight.

Remember it is useless trying to dye an article to a lighter shade; and by the way, strong coffee may be used to dye The front edge of the top shelf is well white articles a light brown. (R.L.C.)

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							T	14	1	1	1
			Б	T	16	T	17	T	T		
18	1	19	T	T	T	T		1			
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SIMPLE SCIENCE **EXPERIMENTS**

HE ordinary method of filtration is slow and can be speeded up by improvising a filter pump as shown in Fig. 55.

Take a piece of narrow bore glass tubing, and after heating it in a bat'swing flame, bend to shape (A). Take another piece (B), heat it in the flame near one end, and draw it out until it is very narrow near this end, then bend it slightly as shown. Break off the end of (B) on the narrowest part. (C) is a straight piece of wider glass tubing. You will also require a bottle with a twoholed rubber ring, a short piece of wide glass tubing with a two-holed stopper to fit one end and a one-holed stopper to fit the other end. Assemble your apparatus as shown. Make sure that all the rubber rings fit tightly.



COTTON

Place a filter paper in the funnel and

pour into it some muddy water. Con-

nect the tube (B) to a water-tap with

B

rubber tubing and fix this to the glass tube and the tap with clips, wire or string. Turn on the tap and adjust the position of the tube (B) until the water drops most rapidly from the funnel into the bottle. Can you say how it is that this apparatus speeds up the process of filtration?

A Simple Syringe

A syringe can be used for lifting and transferring small quantities of liquid. Heat a piece of glass tubing near one end in a Bunsen flame, and when it becomes plastic, draw it out to form a very narrow portion. Break the tube in the narrowest part, after making a mark with a file, and then make this ragged edge smooth by holding it for a short time in a Bunsen flame, taking care not to melt the glass so much that it closes up the hole. You will now have a glass tube as in Fig. 56. Push a rubber-teat

over the wider end of this tube, and you have an excellent syringe for placing drops in ears or eyes or for other purposes.

Model Suction Pump

You will require a short piece of wide glass tubing, a cylindrical piece of cork,

ILTER PUMP

two pieces of fairly stout iron wire, a rubber ring with one hole, a narrow piece of glass tubing, a small piece of sheet rubber, small brass tacks, cotton and a cylindrical piece of cork with a hole down the centre.

This experiment shows another method of removing air from the inside of a tube, so that when the open end is under water, the water enters the tube. Push the ends of the iron wires through the cork (A) as shown in Fig. 57, and bend them over. Twist the two wires together to make a handle. If the cylindrical piece of cork is not a good sliding fit inside the wider glass tube. wind some cotton round it and soak the cotton and cork with water.

Place the lower end of the narrow tube (B) in some water and move (A) upwards. Water will rise up (B) and enter the wide glass tubing. If (A) is now kept stationary, this water will gradually escape. To prevent this, make a valve to cover the upper end of the glass tube (B), using a small circular piece of rubber sheet and a small brass tack to fix it in position as shown.

Remove the cork (A) and fit the cork with the hole. Over this hole fit a rubber valve and you now have a model suction pump.

Can you answer these questions:-(1) What causes the water to rise up (B) when the piston is moved upwards? (2) A suction pump will not lift water from depths greater than about 30ft. Why is this? (T.A.T.)

A new hobby for collectors

O you want to pioneer a brand new hobby? To be the first meter postage stamp collector in your class — or even in your school? Perhaps you would like to know more about it before you decide!

More than sixty years after the first adhesive postage stamp was used, a machine was invented which reproduced the picture of a stamp upon documents to be sent through the post. This saved



Fig. 1-Great Britain. Pitney-Bowes. Fixed value. First used 1922



Fig. 2—Great Britain. Neopost. Limited value. O.E. II dies first used 1.5.53

time and money, because large business firms post many hundreds of letters each day, and the buying, licking and sticking of stamps can be an expensive piece of office work.

The first franking machine was in Norway, and by 1912 you could have found such a machine in London - set up in a Post Office where customers put their money in a slot, then held their documents to another part of the machine to be stamped. By 1922 a machine had been approved which would be the property of a business house, and the type of stamp it printed on letters is seen in Fig. 1.

Thirty-five years have passed, thousands of businesses have their own franking machines, and a wide variety of designs can be found. Payment is made to the Post Office on the amount a machine is used, so there is always a meter attachment to record the value of marks made on posted documents.

Meter machines are of three main types. The oldest machines made their mark with fixed-value dies, the design incorporating the price of the stamp in figures and words (Fig. 1). Then we find

several kinds of limited-value machines where the price is contained in a small part of the die which is automatically changed by moving a small lever - a choice of four or six prices being available to the operator (Fig. 2). Finally, there are multi-value machines which print any price up to a given amount --say, 19/11+ (Fig. 3).

IETER MARKS

Designs which came into use in 1926 feature the royal cypher and we find

to your collection, particularly if you can find local or dated references in the slogans or mis-prints in the town-marks. Then, of course, you must keep space for foreign meter marks - most countries have their own designs and

upwards over the whole country.

'H'). The method of numbering varies

with the make of machine, for example

'M' machines number I upwards in

localities but 'U' machines number 1

Town-marks and slogans add colour

you will occasionally come across them. Are you ready to start your collection? The best way is to ask grown-up friends to save franked envelopes out of their business post. You will have to explain exactly what you mean by 'meter marks', because postage paid stamps are quite different and should not find a place in this particular collection.

Do not try to save every franked



Fig. 3-Great Britain. Universal. Multi value. K.G. VI dies first used 14.6.37

> envelope that comes your way - be selective and see how many different types, reigns, identifying letters and prices you can find. Keep your collection in a post card album, or a shoe box, and remember to give your duplicates to your friends, telling them how to launch a meter postage stamp collection. (R.W.)



secure with paper clips. For a permanent basket --cover with leathercloth or similar

material, secured with upholsterers' solution. The handle should be a length of leather strap, or plastic sheet. (R.W.)

Some insects make these holes or intricate network of passages for homes, where they may hibernate from the weather and their enemies, though the wood-pecker has a way of finding them!

Others not only cut the wood but use the chips for food.

Raise up the bark of an old tree and break off clumps of the decaying wood to see the variety of insects that scurry away, terrified by the noise and sudden blaze of light. You have probably disturbed the 'village' with its winding streets and here and there a nath 'across the lots', a shorter route for the inhabitants than 'round the road'.

Often one finds perforations of such extraordinary form that they look like tiny palaces built by fairy architects. Sometimes the channels lie just beneath and partly in the bark so that when it is peeled off the work of the tiny woodcutters has the appearance of fanciful etchings.

The insects which indulge in this curious and sometimes destructive practice (the 'death-watch beetle' once did thousands of pounds worth of damage to the interior of St. Paul's Cathedral) are called 'engraver beetles'. There are others which make holes not by their jaws but by a long proboscis shaped like a drill. (R.L.C.)

Homes Under the Bark

HERE are insects with sharp jaws for cutting into wood and those which trace intricate and beautiful patterns beneath the bark of decaying tree trunks, or bore smooth round holes about the diameter of a lead pencil, deep into the tree.

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small hold-alls. Smooth any irregularities with glasspaper and then For a temporary 'gift' basket --cover with decorative paper, such as coloured crepe or metallised paper, attaching with rubber gum. Cut a handle from stout card and

69



ND

1 XII 56

K.E. VIII dies are quite rare). The machines used in Great Britain

are manufactured by one of three firms, Universal Postal Frankers, Ltd. (identifying letters 'M', 'U' and 'S'), Roneo-Neopost, Ltd. ('N'), and Pitney-Bowes Postage Meter Co., Ltd. ('P', 'PB' and

A NEAT GIFT BASKET



Sleight of Hand CHANGING ACES INTO KINGS

FAKES

everything he orders.

HIDDEN

METHOD of making trick cards has already been described in our issue of April 17th, and you are recommended to refer to this for full details, but here we have another set of trick cards to make by soaking in water and fitting together again.

From the old pack you used for the other trick, extract the four aces and the four kings. We shall need all the eight cards for our trick, but it is only necessary to immerse three aces and three kings in water, reserving the others until later.



When thoroughly soaked, peel off the faces of the six cards, laying the backs aside to dry.

Allow all the pieces to dry, then take the face sides and make into a small stack. Lay these on a piece of cardboard, cutting diagonally as shown in the diagram. Note from Fig. 1 that this cut is not exactly on the diagonal but from in. to in. from the edge. This is done so that the join cannot be detected at the base of the cards. Use a sharp knife to produce a clean cut.

We shall now need three of the backs for making our trick cards.

Fit neatly

Take a back, half an ace and half a king, applying a thin coating of gum to the two half portions, sticking them on to the back. Try to fit them as neatly as possible without any overlapping of the joint or over the edges. Follow the same procedure with the two other sets giving you three faked cards, showing half ace and half king, plus a normal ace and a normal king. You will have some halves remaining which may be used in case of a mishap or for preparing duplicates.

When the cards have dried, any surplus showing at the back of the card should be neatly trimmed away and we are ready to explain the new trick.

Take up the cards in your left hand, arranged so that all the aces' halves of the three fake cards are showing, but the joint of the third is covered by the normal card. This is shown in Fig. 2. You may count the cards for the benefit of your audience, placing them on the table one at a time to show that you have only four, or reveal the backs to show that there is nothing on the reverse side, and explaining that you are to attempt changing them into kings.

Cover up the cards with a handkerchief or a box, after placing your kine card on top of the three fake cards, then ask your audience to be perfectly quiet. so that you can hear the king giving his orders, and actually hear the cards changing!

The magic tap

Here you have to assume that you can hear the changes taking place, tapping the table with your wand with every 'change'. Perhaps you can use a little patter by saying 'This chap is being a little awkward. Come on your majesty, show him that you are the master card'.

When all three cards have been changed, you may remove the handkerchief, take up the cards in your left hand and fan out to reveal to your audience the four kings. Quite simple, isn't it?

The main points to remember in performing this little trick are as follows : when the cards are laid on the table. they must be face upwards, and laid in exactly the same formation as they appeared to your audience. When the top ace is replaced by the king," the cards must be either turned round, so that the kings will be revealed, or when they are picked up after removal of the handkerchief, take hold of them by the edge away from you.

A little experimenting with this aspect of the trick a few times before presentation to your friends will reveal the best way of this manipulation, and when you reveal the kings to your audience, you may still count them out to prove that there are only four cards, revealing the backs once again to show there are no aces there. (S.H.L.)

Period Furniture Designs

by Charles H. Hayward

THIS book with its numerous dimen-

L sioned drawings and constructional

sketches provides a wealth of authentic

detail for home craftsmen, desiring to

make their own reproduction pieces.

A wide selection of furniture in oak,

walnut and mahogany, is dealt with

and a lover of the genuine antique

will find much in these pages that is

absorbing, at times exciting. Published by Evans Bros. Ltd., Montague

House, Russell Square, London, W.C.1-

World Radio Histor

Two Books to Read

Price 15/-.

The Home Electrician by F. J. Camm

Fig. 2

on the table, pick up the top ace, reveal-

ing to your audience, along with the

untreated king. Here you should say

that this king has very powerful in-

fluence over all his subjects who must do

To do this, lay the cards face upwards

THIS is essentially a home textbook I for the non-technical man who prefers to undertake all the household electrical upkeep and repair jobs himself. Its range is most comprehensive - from elementary principles to the installation of electrical water-heaters and, in the hands of any intelligent householder, should prove a big time and money saver.

Published by George Newnes Ltd., Tower House, Southampton Street, Strand, W.C.2-Price 12/6. 70

Delightful Hall Lampshade

VERY pleasing hall lampshade may be made quite easily from a few feet of brass valance rail as supplied by multiple stores for a few pence per foot. The cutting list is not formidable. Odd ends of rail, if available, can be used as the longest piece is only 13ins. long and only two are required. Four pieces each 8ins. long and four shorter pieces at 31ins. long complete the requirements except for a few tin. countersunk copper or brass rivets and three pieces of perspex, one 124ins. by 61ins., one 41ins. by 11ins., and one piece about 24ins, diameter.

If desired, aluminium, copper or even coloured perspex may be used for the 'metal work'.

Make up as shown, rolling the longest two pieces of rail into rings each 4ins. inside diameter, riveting through the kin. overlap as necessary, with the countersunk inside. Bend and rivet all other pieces to place. Heat the two rectangular pieces of perspex in boiling water and roll round while soft and fit to place. The perspex may require trimming at the edge to make a good fit inside the frame. Turn perspex round so that the joint is hidden by the framework. The disc must be drilled for riveting to place and for taking the lampholder.



OSITIONED on the fire hearth. this attractive looking spill holder will be found to be very handy for holding those much used spills. Softwood or hardwood can be used as desired.

The only tricky operation in making the framework is the joggling of the vertical straps to clear the rings, but this may quite easily be done by placing the straps across another piece of the



valance rail and hammering down with the joggling tool shown in Fig. 2. The tool is just a piece of {in. thick steel

with a shallow slot filed in the bottom. The width of this slot must be equal to the width of the strapping plus twice its thickness, e.g., if the rails are jin. by hin. section, then the width of the tool slot must be jin. plus hin. plus hin., equals \$in. The depth of the slot must equal the thickness of the strapping. Taper the sides of the slot as shown for clearance for the bend in the strap.



To use the tool, hammer lightly till joggle is complete. Do not hammer too heavily, or the brass may be permanently damaged.

Unpolished brass valance rail with matt surfaced perspex and a clear glass bulb gives a very pleasing effect. The matt surface can easily be produced on perspex by lightly rubbing with a felt pad and some pumice powder. This should be done on the inside before bending. (T.H.M.)

Project for young woodworkers Simple Spill Holder

The thickness of the wood should be inserted inside the holder and fixed at lin. Using your fretsaw, start by cutting the sides to the shapes shown, two of (A) and two of (B).

Once the sides have been cut and glasspapered smooth, they should fit snugly together to form a square box having 2in. sides.

A piece of \pm in. thick wood 2ins. by 2ins. is next cut for the base. This is

Arrange the base piece so that the spills project about 3ins, beyond the top of the holder. Once in position, the base is securely nailed by panel pins inserted through the sides. Finish off by staining and varnishing or by applying a coat of french polish.

any desired height from the bottom to

suit the length of spills you intend using.



Shapes A and B (lin, squares)

To make your mouth water

HOW CHAMPAGNE IS MADE



A 'carpet' of thousands upon thousands of grapes is formed by the neatly stacked baskets. But soon the grapes will be going into the giant wine (Photo - Mercier Champagne) presses.

TN answer to several requests, articles dealing with the preparation of home-made wines have appeared in recent issues of *Hobbies Weekly*. The subject is apparently a very popular one with our readers, and, although champagne can never be reduced to the home-made standard, we feel sure the following facts regarding the making of the Queen of Wines will prove of great interest.

An extraordinary amount of time and trouble goes into the making of this famous wine. To begin with, only the wine from a small part of France is allowed to be sold as champagne --that from the vineyards in the Champagne country in the neighbourhood of the River Marne.

In Roman times

The wine from this area enjoyed a high reputation as far back as the days of the Roman emperors, but in the 17th century a Benedictine monk, Dom Perignon, worked the miracle that gives developed by Dom Perignon are still those of modern champagne.

In the gently undulating chalk hills of the Champagne country, the climate and the soil are peculiarly suitable for the production of the best type of grape. The cultivation of the vine, the harvesting, the processing, require the constant application of the champagne maker's art.

From early spring the vines are pruned and cultivated, and finally in May the dramatic moment arrives when the vines bloom, for on the flower the quality of the harvest greatly depends. After months of back-breaking care

comes in the autumn the harvesting, when hundreds of people from near and far come to help.

There is an atmosphere of light-hearted galety as old friends reunite. The gatherers, who cut the bunches from the vine, are mostly women and children. The grapes are gathered into wicker baskets where they are subjected to a minute examination. Such is the quality aimed at, that any grape not up to standard is rejected.

Four tons of grapes are placed on the flat surface of the press, and will normally yield approximately 572 gallons of juice. The grape juice is stored

first in casks which generally contain about 44 gallons.

Many of the great names in cham-pagne have tunnelled into the chalk hills to make vast underground storehouses where the wine can be kept at an even temperature. One of the best known is that of Mercier at Epernay, which supplies one in every three bottles of champagne drunk in France. Here there are twelve miles of underground cellars with electric trains to facilitate handling - and also to take parties of tourists to see the 12 million bottles of wine stored there.

In these cellars the casks lie while the first fermentation takes place during the latter part of the year. Around Christmas time this first fermentation is finished and the clear wine is drawn off, to go through a further series of processes which give champagne its unique character.

'Marrying' the wine

Experts and tasters of long experience set about the task of blending, or 'marrying' the wine. The blending is done in great vats. If the wine of a par-ticular harvest is of exceptional quality and character, it will be preserved as a 'vintage wine' to be remembered.

After blending the wine is bottled. Now the second fermentation of champagne begins, and it is this which gives champagne its sparkle and life. The bottles are stored in racks at an angle of 45 degrees, neck down, in the under-ground cellars, the temperature being constant at 10 degrees centigrade.

As a result of this second fermentation in bottle a sediment is formed: in order to facilitate its removal each bottle is turned daily and slightly shaken by expert hands, so that the sediment gradually gravitates down on to the cork. This process takes approximately six months, after which the bottles are taken from the racks and stored vertically, neck down, to mature for several years.

Finally the bottles are taken - still neck down - and the neck is iced: when the cork is released the natural effervescence explodes the cork from the bottle, together with the frozen wad of sediment.

After this the bottle is topped up with a liqueur of old wine and cane sugar. All that remains is to recork and re-wire, and the bottle is ready for despatch to all parts of the world — for all great occasions.



FOR the beginner in leatherwork this library book cover is com-paratively easy to make. Little material is involved, consequently the beginner has hardly any outlay which is an advantage that will be appreciated by most amateurs irrespective of their hobby.

Approximate measurements have been given, but it will be realized that these may be varied to suit individual requirements. The measurements supplied in this article will be found to be suitable for the average book.

Begin by making paper patterns of the various pieces needed; these include

THIS BOW IS SAFER - AND MORE FUN

0

line.

PLAYING Robin Hood with bows and arrows can be exciting fun, but, without wishing to appear old fashioned 'spoilsports' we must confess to sharing every parent's anxiety when the youngsters wage war against the Sheriff of Nottingham and the arrows begin to fly. Here is a way to have all the fun and excitement of Sherwood battles without the risk of pointed arrows and the great damage they can so easily cause to young 'outlaws'. Make this safe but equally thrilling Potato Bow. It is a weapon which any wearer of the Lincoln green will be proud to own. Pare away a stout ash branch to make

a bow 31ft.-4ft. long, 2ins. wide in the centre and tapering to 1 in. wide at the ends. Thickness at the centre should be in. diminishing slightly as the bow narrows (Fig. 1).

World Radio History



Project for the beginner in Leatherwork By J. MacIntyre

one large piece to cover the back, front and spine of the book and one flap. From the one pattern of the flap four pieces of leather are cut, one for each corner. Once you have made the paper patterns lay them over the leather and cut out the various pieces. This may be

scissors. When you come to stitching you will find that strong contrasting thread is ideal. Place each flap lengthways in a corner (see illustration), so that the flap edges lie along the edges of the corner. Now stitch through the two thicknesses

of leather at the corners. Then proceed to stitch round the cover in the same manner. Not only will this method add to the decorative qualities of the book cover, but it will also prevent the leather from stretching out of shape.

done with a sharp knife or a pair of

For further decoration a few paper stud fasteners could be pressed through the leather, so as to form an initial.



Says S. A. Rees for the distance from the notch to the

far end of the thick part to equal the distance from the string to the inside of the bow when strung (Fig. 2). Secure with glue and panel pins, driving heads well home. The arrow (which never leaves the bow) is now sharpened and passed through the hole in the bow itself. For ammunition use little potatoes, acorns or clay balls stuck lightly on the end.

A well-made bow will throw these remarkable distances. The 'ammunition' is safe to use, easier to procure than a number of arrows, and considerable skill will come with practice.

A simpler arrow can be made by whittling a piece of straight-grained tough wood to the required shape.

Drill a gin. hole fin. above the centre

For arrow, take a 1in. dowel 2ft. long,

and notched at one end. Drill a lin.

hole lengthways through a 3in. piece of

An exciting indoor game

N interesting and exciting game of cricket darts for two or more Aplayers that will give endless amusement for evenings or parties, can be made in a few hours for a shilling or two. It consists of a cork-faced backboard with a cork-faced cricket bat oscillating in front. Ordinary darts are



thrown at the board in turn in an attempt to hit the bat. Scoring is counted according to where the darts strike. The game is to score 500 points or as large a score as possible in a given time.

FIG. 2.

Scoring shots

A hit on the bat while it is in motion counts as marked either 5, 10, 15, 20 or 25 points according to the section of the bat which the dart strikes. A strike on the board causes the player to lose points, again according to the section in which the dart sticks.

A dart in section (A) or (B) loses 2 points, in section (C) or (D) loses 1 point, while a dart sticking in section (E) or (F) loses 3 points to the player. A dart striking in section (G) is caught by the wicket keeper and loses 5 points, and a dart in section (H) or (J) is caught in the field and so loses 4 points. If a dart sticks in section (K) it is a no ball and the player takes another throw. A dart sticking between the stumps is L.B.W. and loses a turn and a dart striking the stumps loses the player's complete score, and he must start again. If a player throws a dart and it strikes the RICKET DARTS

bails he is out of the game completely. If a player throws a dart and it sticks in the board in such a position that it prevents the bat from oscillating freely. it must be removed and the bat set swinging again before the player throws his next dart, the score for the throw being taken and counted in the usual way along with the other two darts for

that round. The game is not difficult to make. A board 18ins. square of \$in. or \$in. plywood or any piece of wood not less

FIG.3.

TO SUIT ROARD

than {in. thick may be used. A facing of

cork ‡in. thick is glued on. Soft yellow

pine free from knots and about lin.

thick, without the cork facing, would be

quite suitable. Two lin. by lin. battens

are nailed to the sides at the back to

give clearance for the balance weight for

the bat (see Fig. 1). Two eyes screwed into the top edge 12ins. apart are used

for fixing the suspending cord. The

board is hung from a nail in the wall at

the regulation height of 5ft. from the

A vee (see Fig. 2) is cut in the centre of the top and lined with a small piece of

tin, cut from a discarded fruit can.

face of the cork as shown in Fig. 3.

Each section is painted a distinctive

colour. The divisions can be clearly

defined with thin black lines or with

thin tinned copper wire held in place

with small staples or bent over pins. The

use of wire divisions obviates any doubt

regarding the section a dart has struck.

The sections can be coloured with paint,

or poster inks in bright colours, the

stumps and bails mid-brown, the spaces

between - light green; section (A) and

74

The board must be marked out on the -

nailed in place as shown.

10 20 25 15

FIG.4

floor.

(J) — red; section (C) and (F) — blue \cdot section (E) and (D) - vellow: section (H) and (B) - green, and section (G) and (K) - pink, or any other colours or combination of colours to suit individual taste.

The bat and its balance weight can be cut from any suitable piece of wood, the bat face being covered with a sheet of cork about Jin. thick. The bat and balance are held together at the top by a piece of wood, as shown in Fig. 4, about fin. thicker than the thickness of the base-board. This connecting piece must be cut to form a knife edge and covered with a piece of tin before securing in place. The completed bat must be able to oscillate quite freely in the vee slot in the top of the base-board.

Bat oscillates

The bat is painted red, yellow, blue, green and pink, starting at the bottom. with a yellow handle and black cap. Wire is used to define the various scoring sections. An added refinement is to paint the scoring figures on the various sections of both base-board and bat.

To play, start the bat oscillating. Each player in turn from alternate sides throws 3 darts at the bat from the usual 9ft. to 10ft. distance, as for ordinary darts. Play continues in turn according to the rules, and counting up the score for each side. Either the highest score at close of play or the first side to reach 500 points is the winner. If a side or player trying for the 500, scores more than is required, he is considered to have won the game. All other rules are as for ordinary darts

A single dart may be thrown to determine the rotation of play. (T.H.M.)

NEXT WEEK

Among the many interesting projects to be described in next Wednesday's 'Hobbies Weekly' will be a portable sewing box and handy shoe valet. Younger readers will be interested in an easy-to-make toast rack and a fretwork letter rack will have a Royal Crown overlay which will test your cutting accuracy.

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Defective Windowsill PLEASE advise me on repairing a badly worn windowsill. During heavy rainfall, rain seeps through and makes the wall very damp. I do not wish to remove the windowsill if it is avoidable. (E.B.-S.E.23.)

▲ SSÚMING your windowsill is of A stone or cement, to fulfil its function it should have a gentle slope away from the window and be flat - i.e. - no hollow where rain can collect. When worn it should be rendered with a lin. thickness of cement concrete, equal parts of sand and cement. Roughen up the surface first to provide a key for the concrete, by gentle chipping with a cold chisel. Dampen with water, then trowel on the concrete. Level off lengthwise then slope outwards. Ouite a gentle slope will suffice, and a straightedged slip of wood will, if drawn over the surface, do the job satisfactorily. If the wall surrounding the window has suffered from damp, repoint the brickwork with some of the cement concrete.

Painting New Concrete WTHAT treatment does one give concrete (new) when painting it? (F.S.-Billericay.)

FOUR or five coats of paint should be applied, the first and second coats of white lead, well thinned with linseed oil, and the later coats mixed with equal quantities of turpentine and oil. Every coat must be allowed to dry before the next is laid on, and on no account should the concrete be painted before it is quite dry.

Making Firelighters

T BOUGHT a packet of firelighters at a I local shop. They were simply made of chopped pieces of wood and shavings which had, so it seems, been dipped in an inflammable liquid and dried. I wondered if you could inform me of the formula of the liquid as I would like to produce a quantity of them. (A.W.-Liverpool.)

THE material needed is crude L naphthalene — also known as creosote salts - which is obtainable from gas works and tar distillers. The , THE best method to adopt in order addition of creosote oil in the proportions of 1 quart to 1 hundredweight of naphthalene is an advantage if the firelighters are to be stored for a long

time. While it retards the deterioration, it does somewhat slow up the combustion speed. The material is melted in a vessel surrounded by boiling water, or by a steam jacket, and the shavings stirred in until a paste results, after which the mixture is cast in moulds and bundled inside the sticks. Naturally, with so inflammable a material, strict fire precautions must be taken during the melting. That is why steam heating is to be preferred. The manufacture of firelighters for sale is governed by Home Office Regulations.

HOBBIES TIP * * *



TAPE DISPENSER

THIS dispenser for self-ad-L hesive tape can be made from * an old tin lid and a length of metal strip. The strip is bent to an 'L' shape and riveted to the Ild. as * shown. Attach a short length of + * dowel to the top of the strip to hold the tape spool. The spool fits * on this dowel. Serrate one edge of * the tin with snips or a file to give a * cutting surface for parting off the tape. (R.W.)

Bleached Effect on Wood **T** HAVE just made a guitar from ply-I wood and would like to know how to obtain that bleached effect finish - i.e. dark edges with a clear centre. (V.S .--Dagenham.)

L to obtain the effect desired, would be to apply the stain to the surround and when dry, blend the edges into the white unstained portion by careful

rubbing with a rag moistened with linseed oil, and dipped in medium grade pumice powder, finishing with fine glasspaper. Test out first on a spare piece of wood to get the knack.

Record Plaver

T AM most interested in your articles on building a radiogram, but for myself would like to make a portable model without the radio receiver - I suppose this would be called a record player. Can you furnish the necessary details for making the unit, as compact as possible? I have a Garrard TA. turntable and pickup and the cabinet I can manage myself. (L.C.-Mitcham.)

TF you wish to use the circuit as an Lamplifier only, omit tuning coils, variable condenser, 6K7 valve and all associated parts. No wavechange switching is required, and the 6K resistor is omitted. You will then have 6J5 and 6V6 valves as a 2-stage amplifier. A fairly small cabinet would hold the parts, and a small speaker. Small amplifiers for this purpose may also be purchased. For example, from Premier Radio Co., 207 Edgware Rd., London, W.2.

Stains on Stove

HAVE an Esse stove which is cream enamel, but rain came down the chimney and made black marks on the front — it is also badly chipped. Is there any way of covering this, please? (B.B .--Bradworthy.)

THE stove is probably painted with a I vitreous enamel to resist heat, and any discoloration may be difficult to eradicate. Try a good rubbing with a household cleanser with abrasive qualitics. If you intend to re-enamel the stove yourself, rub the surface down with silicon-carbide paper used wet. A good enamel is aluminium lacquer or paint, also Brunswick black. For a coloured effect you might try a heatresisting lacquer such as Starline.

Magnesite Flooring

HAS 'Magnesite' flooring a trade name, and who supplies it, please? (D.W.-Huddersfield.)

THE flooring in question is made up with a solution of magnesium chloride to which powdered magnesia is added. If Magnesite (a trade name) is not obtainable, any wholesale chemical manufacturer should be able to supply the above materials - for instance, Omeroid Taylor & Sons, Sun Vale Chemical Works, Walsden, Nr. Todmorden.



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Patterns for

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DECORATIVE CANDLESTICKS



THE main piece (A) is shaped from a block to the size shown. Bore a lin. diameter hole in the top to take the candle. The base (B) is cut from 1 in. wood and the block glued in place. Cut the 'wings' (C) and (D) from 1 in. wood and glue on either side of the block. (M.p.) 111

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