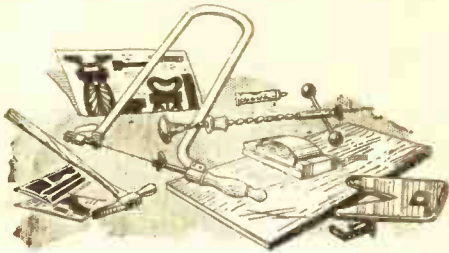


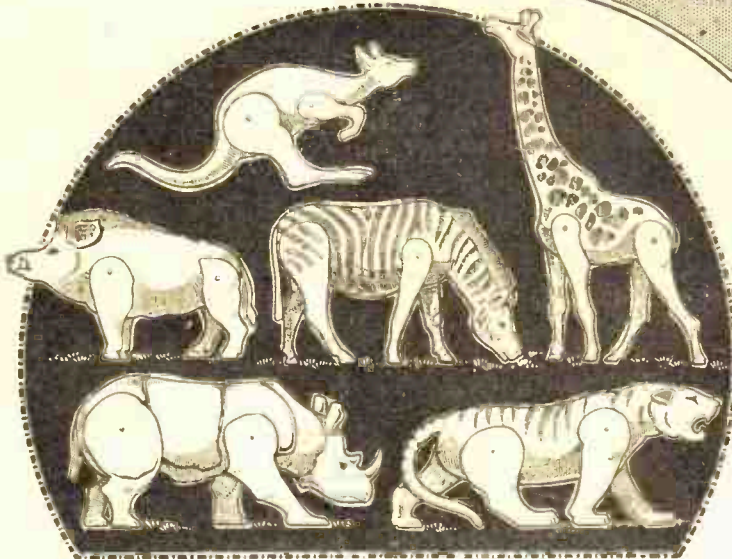
A VICTORY V PEN & PENCIL HOLDER

# Hobbies

WEEKLY



## Jointed Animal Patterns



November 26th, 1941

Price Twopence

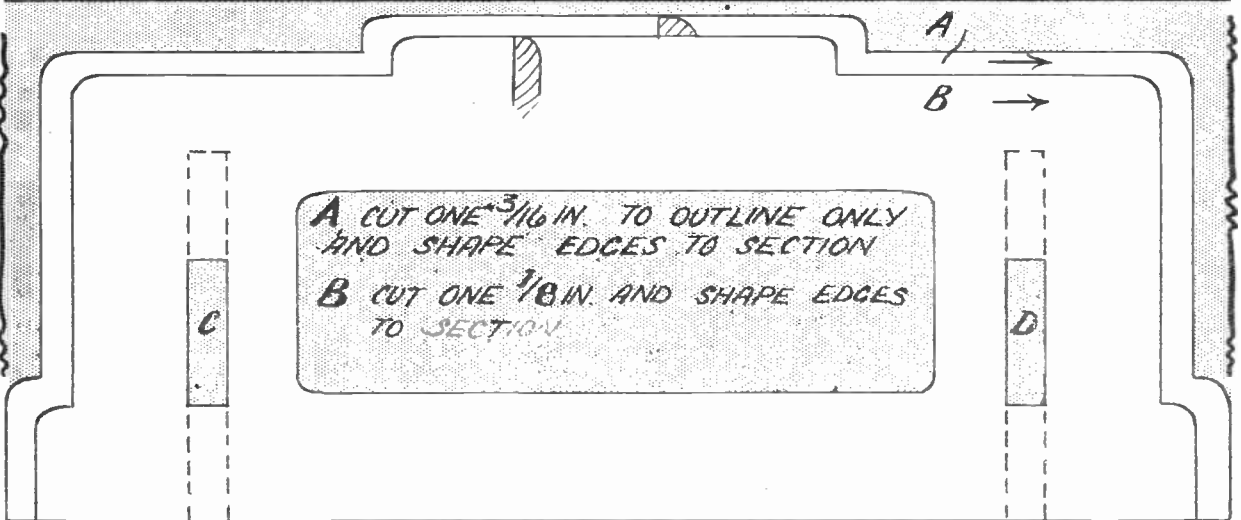
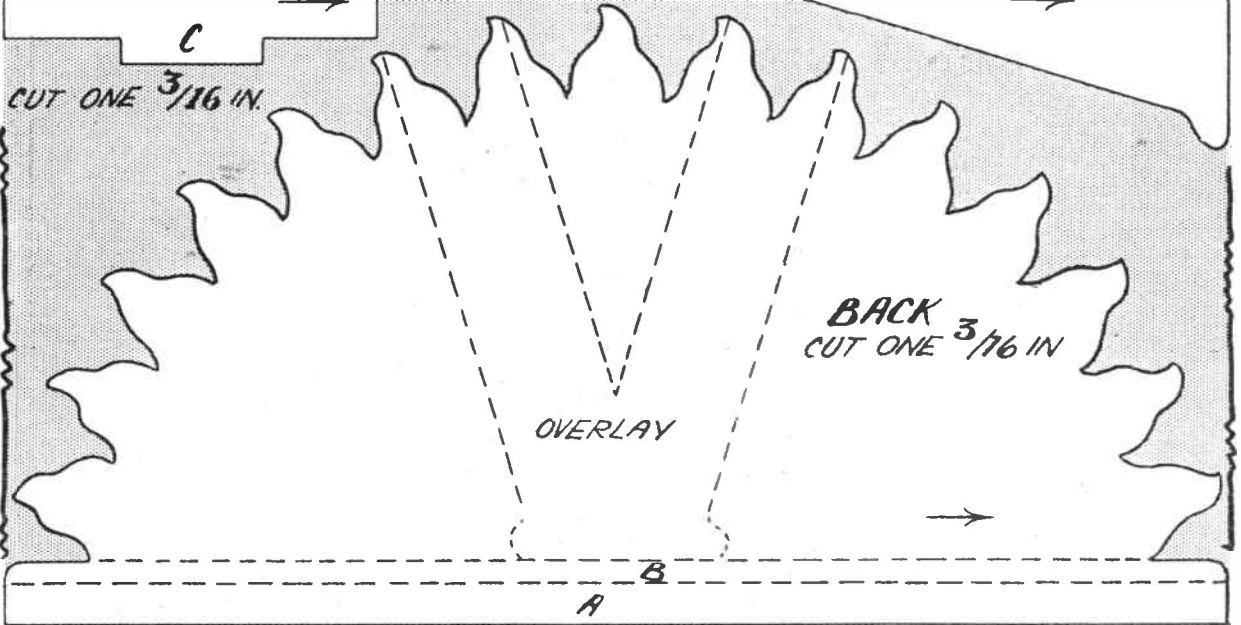
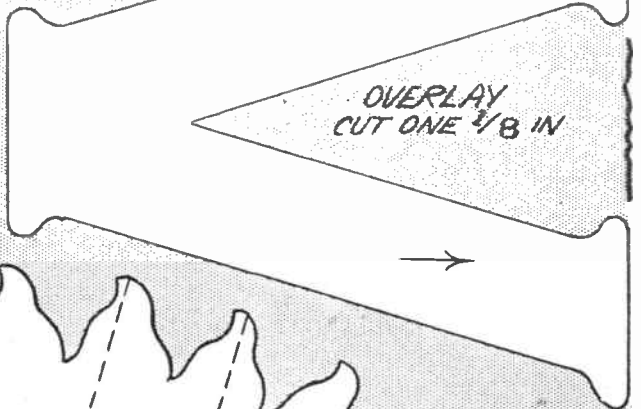
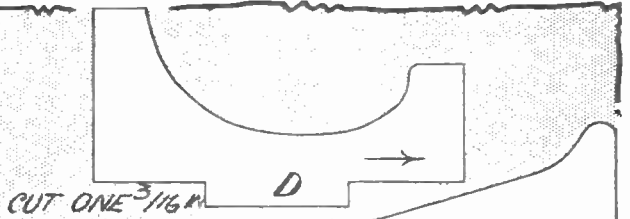
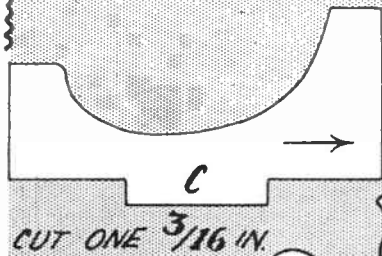


Vol. 93. No. 2406

♦ FOR THE FRETWORKER AND HOME CRAFTSMAN ♦

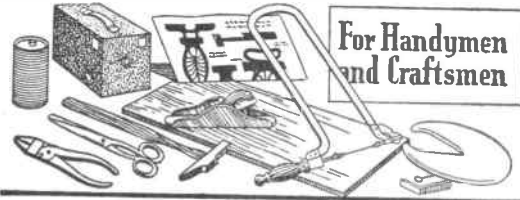
Patterns for making a  
**VICTORY 'V'**  
**PEN RACK**

See Cover iii for details



**A** CUT ONE  $\frac{3}{16}$  IN. TO OUTLINE ONLY AND SHAPE EDGES TO SECTION  
**B** CUT ONE  $\frac{1}{8}$  IN. AND SHAPE EDGES TO SECTION





## Our Gift Design Sheet this week is for making JOINTED ANIMAL TOYS

SOME time ago we published in these pages a design for some jointed animals (No. 2371) and these proved some of the most popular we have had in their particular type. We therefore have pleasure this week in offering another set of different animals but following out the same style.

### A Joyous Toy

As can be seen from the picture, half a dozen small animals cut in wood can be made as jointed toys which will provide a lasting joy for any youngster. This is undoubtedly just the time to make these ready for a Christmas present, and any reader can confidently make up more than one set and be able to dispose of them quite easily.

Indeed, they are just the type to sell to toy shops at a useful profit. Their making is quite simple and the work involved can easily be completed in almost one evening.

Several sets can be made almost as quickly as one, and with this idea in mind it is as well to trace the various parts direct on to the wood rather than paste the patterns down in the ordinary way. A fairly solid grained type of wood should be used, which is not likely to break in childish hands.

Each animal is fitted with the legs pivoted so it can be made to stand and yet altered in style in a number of ways. The six animals provided for are the kangaroo, the giraffe, zebra, tiger, rhinoceros and the wild boar.

### Simple Workmanship

The outline of all these is quite simple and involves only one complete cut. There is no interior work to be undertaken in either the body parts or the legs. The shape of the legs is different, of course, on one side from the other, but the actual position is clearly indicated on the patterns as well as the actual pivot point by which they are fixed.

Before commencing work it is as well to know how many sets you pro-

pose making in order that you may complete the work on more or less a mass production system.

Suppose you are going to make six each of the animals, then you should undertake all the six body parts first of one particular kind. Thus you would cut out the outline of the giraffe body one after the other. Trace off the outline from the sheet on to the wood and cut round the outline of the wood with a sharp medium grade fretsaw.

You can then use this piece as a template for the other five. Lay the cut-out piece on to the board again, and mark round it with a sharp hard

economising in wood can be undertaken with the legs.

### The Wood Needed

All the bodies are cut in  $\frac{3}{8}$  in. wood and all the leg parts in  $\frac{3}{16}$  in. In the parcel of wood supplied you will find enough material to complete one each of the whole six animals, but the necessary screws for pivoting must be bought separately.

The position of the legs is shown by dotted lines adjoining, and on the body patterns and the position of the screws to hold them must be pricked through with an awl or bit. It is advisable to complete one animal—or as many as you are cutting of the same animal—at one operation. If you cut all the bodies and all the legs you may then find trouble in sorting them out.

When the body and legs have been completed, clean up the parts with glasspaper ready for fixing together. If you wish, the legs can be glued in place to make a complete solid animal, but they are really intended to be jointed by means of screws.

For this purpose you will require two dozen  $\frac{3}{16}$  in. round-head screws No. 3 or 4 (the No. 3 or 4, of course, is the thickness of the shank). In fixing the legs, lay them in place and drill a small hole with an awl or bit through the thigh portion at the point shown, and just into the body.

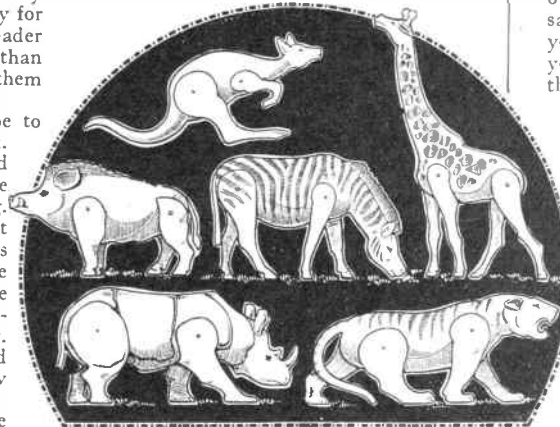
Do not make the hole too large or the screw will not grip.

Put two legs on one set in place first, then turn the animal over. Now put the other two legs on the reverse side but do not get the screw holes exactly opposite those on the other side. They must be very slightly away from the position, otherwise the screw points would possibly run together and foul each other.

Let the screw grip the wood and

### MATERIAL SUPPLIED

For making these Animals we supply a parcel of wood  $2\frac{1}{2}$ , post free 2/9.



pencil. This will save you retracing the outline.

Another method, and one which will save a good deal of waste wood is to mark out the half dozen or whatever number you are going to complete, on to the piece of wood, getting the shapes as economically placed as possible.

You can see by the drawing at Fig. 1 the manner in which this can be done to advantage. In this case, you will have to draw off all the bodies on to the board before cutting it off. You can easily do this by laying the pattern over a piece of carbon on the board, and then marking the outline through with a pencil or sharpened matchstick. The same method of

body firmly and be driven home far enough to prevent it working out. If you wish, you can put a very thin washer between the body and the leg, but this would necessitate a longer screw being used.

Apart from these main portions, the animals have ears and these are added as small parts carved and shaped as nearly as possible to life. The outline shape is given in each case and then a sectional drawing provided to show the shaping.

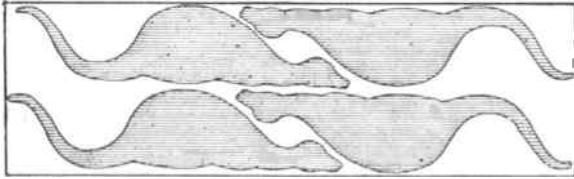


Fig. 1—Put the shapes on wood to save space

They cannot, of course, be glued on to stick out at right angles to the head, so a shaving must be taken off at the bottom edge to make them slope outwards. An example of this is given in the diagram at Fig. 2, which shows the kangaroo ears cut and shaped for fixing.

So far we have dealt with the animals as left solid and square, but some readers may like to round off the various parts to make them more real. The carving of the body can easily be done by rounding towards the under and upper side with glass-

The legs, too, can be rounded off as they would be in life. Of course, if you wish, you can go a stage further and make the body thicker and more suitable for rounding by gluing two pieces the same shape together.

### Painting the Toy

In any case, the finished animal should be painted up in colours as nearly as possible to the real thing. If you cannot undertake the painting,

then you should certainly put on the various markings as shown on the sheet.

In the case of the zebra, the giraffe and tiger, definite coloured patches of brown can be added to the markings given. In the case of the rhinoceros the joints of the body are a thick line in a darker grey than the rest of the "armour plating."

The little eyes can be added in black in each case, and the fold of the ear also represented by a little line of this colour. The matt enamels supplied by Hobbies are quite suitable for colouring the animals, but

remember to do each part separately. You can test out and screw on the legs to see they are correct, but take them apart again before painting.

### Filling the Grain

Then give the body a solid colour and leave it thoroughly to dry before screwing the legs on again. If the wood you have used is soft and absorbs the paint, a good plan is to put a priming colour on first to allow that to thoroughly soak hard before the second and final coat is added.

Do not be in a hurry with this painting because that will, after all, be the final result which will make or mar the little toy.

Before applying the paint you must see that all rough edges are taken away with a final rubbing of glass-paper and in any case, clean away any grease or finger marks on the wood. Remember, too, that the edge of the wood will require more paint than the flat surfaces.

### A Real Tail

In the case, too, of some of the animals, you may like to add a more appropriate tail of thick string or a strip of velvet. You can also make the zebra look much more realistic by cutting the fringe away from the wood and adding it again as a piece of thin material like green baize or American cloth glued on.

If you wish you can put the animals on a base with wheels.



Fig. 2—Example of shaped ears

## Two Pictures of Interest

HERE are two more pictures showing the wide interest in and use of the fretsaw. It is more than ever the means of providing happiness over a wide range of subjects and amongst people of every age and walk of life.

Below we have Air Commodore Chamier busy at his Gem Machine in an improvised workshop and providing a different litter of things to those usually



found in the bathroom. He makes a hobby of building model boats and here the famous fretmachine comes in very useful. The picture is reproduced by permission of "Illustrated."

The group of ardent workers with their models was taken at Harpsfield Senior School, Hartshill, Stoke-on-Trent. Here the pupils of the handwork centre, under Mr. H. C. Taylor, are enthusiastic ship builders. Their first model was the "Elizabeth Jonas," and after a few more they did a marvellous model from our "Cutty Sark" design. The plans were enlarged 5/3 of the original size and added numerous accessories. The sails were of linen correctly furled to the spars. In addition the lads have completed the "Bounty," "Ark Royal," "Revenge" and "Exeter" and some of the workers are seen in the picture with the praiseworthy results of their happy hobby.

# A popular "mystery" type of home-made NOVELTY MONEY BOX

NOVELTY money-boxes are always popular with our fretworkers, and here is another which we feel sure will please and amuse.

It should please because it is simple to make up and the cost of the wood is but a very small item. It should amuse, because the way into the box is artfully concealed, and there is a caption on the front which more or less draws attention to this.

## A Covered Slot

In our illustrations on this page, two views of the box are given. The lower and larger view shows the box "closed" with the fish, which forms the lid as it were, conveniently covering the slot through which the coins are thrust. In the upper view the method of opening the box is given and shows how and where the coin is inserted.

The fish is pivoted to the front of the box and is raised by pressing the tail downwards. This discloses the slot which is again hidden from view upon release, an elastic "spring" being so arranged inside that the fish is always held tightly down.

## Wood Required

A few pieces of 3/16in.; one or two pieces of 1/8in.; and a piece of 1/16in. fretwood are required to make this box.

Commence by marking out and cutting the base, a plain piece 5 1/2ins. by 2ins. 3/16in. thick.

The front and back of the box are identical in shape and size, and in Fig. 1 a squared diagram is given which will help in the enlarging to full size.

Draw an oblong on one piece of

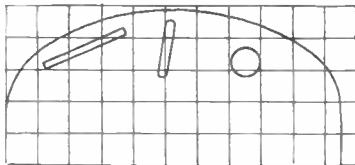


Fig. 1—Shape of front and back

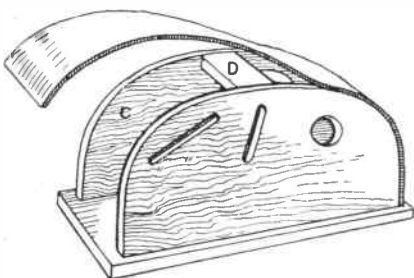


Fig. 2—The curved top being put in place

wood 5 1/2ins. by 2 1/2ins. and form 1/8in. squares as shown. Through these squares draw in the curved outline and add the two slots and the circle on the right. Cut this out with the fretsaw adding the slots and circle.

Now use this cut-out as a template for drawing round to form the back of the box without the interior openings. There will,



however, be a disc cut from this back piece which will be used for extracting the coins when the box becomes full.

## Assembly

After the edges have been cleaned with glasspaper, glue the front and the back to the base, leaving a clear space of 1 1/8ins. between the two pieces. A narrow stiffening piece (D) in Fig. 2, made 1 1/8ins. long and about 1/8in. wide will be glued in to hold the front and back rigid until the curved top is put on.

This top is of 1/16in. wood with the grain running crosswise to facilitate bending. It will not be fixed however until the elastic "spring" inside the box has been adjusted. Work upon the front of the box will at this stage be continued.

In Fig. 3 a squared diagram is given of the main front which takes the form of an overlay because it is

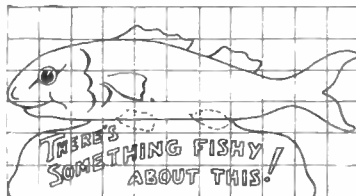


Fig. 3—Squared diagram of fish overlay

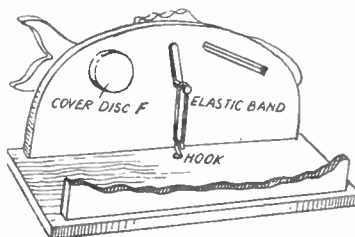
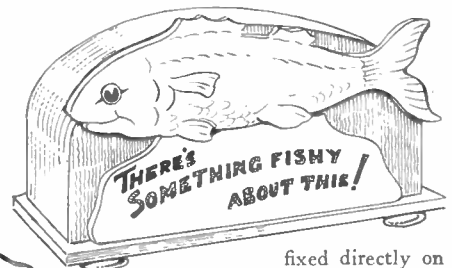


Fig. 5—The interior showing mechanism



fixed directly on the front.

Carry out the process of enlargement of this diagram exactly as mentioned for the front of the box and follow the squares very

carefully in outlining the fish as this forms the working part. Wood 1/8in. thick would be suitable for the fish and that part immediately below it.

When these overlays have been marked out and cut lay them in their respective positions on the front of the box and then draw round the hole on the right hand side on to the fish overlay. This, it will be seen gives the exact position for gluing the disc which forms the pivot.

## The Pivot Parts

The pivoting arrangement is best explained by the sectional diagram Fig. 4. In this the front overlays are seen fixed to the front of the box (E) being the disc of wood cut from the front of the box and re-inserted in the hole but glued to the fish overlay only.

Then, in the inside of this disc (E) a larger disc (F) is glued which will hold the overlay closely to the front of the box but with sufficient freedom to allow it to move up and down. Turning to Fig. 5 we see another useful sectional view showing how the elastic spring is arranged. A short small nail, or a screw would be best, is put through the centre slot in the front of the box and driven

(Continued on page 71)

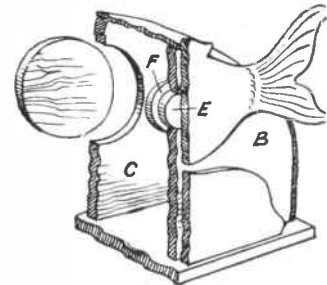
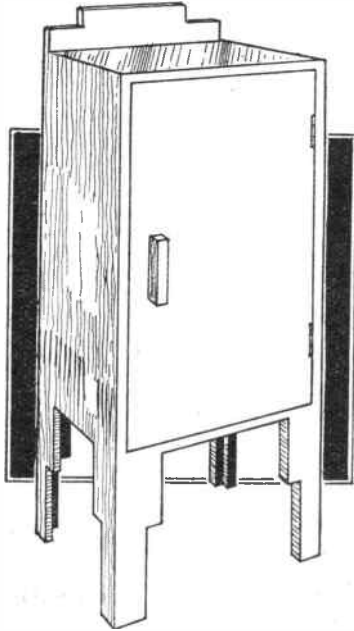


Fig. 4—Cut-away detail of how "fish" part is pivoted



# Shortage of timber should not prevent you making A MODERN CABINET



THOSE enthusiastic woodworkers who find a shortage of timber puts a temporary stop to their activities can often pursue their craft by reconstructing an old-fashioned piece of furniture to a modern design. Not only old furniture but even an old box or chest, can be made into a useful piece.

For instance, the modern cabinet illustrated can be made entirely from a wooden clothes box, or similar article, though it certainly does not look as if it sprang from such humble beginnings.

Many readers, doubtless, have such a box in their possession, but if not a search through the stock of some second-hand furniture shops may reveal one. They are worth buying for reconstructural work.

## A Useful Size

The box used to make the cabinet illustrated measured 24ins. by 16ins., and 15ins. deep, but almost any box within reasonable limits could be utilised in the same way. No other measurements are given as it is obvious the size of the cabinet must depend on that of the box.

Give the whole thing a thorough clean-out and remove the lid, as this will be needed to make the door. Run a gauge line round the box. 3ins. approximately from the top edges, and saw this piece off. Then plane the sawn edges of the box smooth.

The sides of the sawn-off piece will supply the material for the legs, as

shown in Fig. 1. The top piece will form the pedimental strip at the back of the cabinet, and the bottom piece the clamps for the door.

The pediment strip is cut away at each side, as shown, and is fixed on top of the cabinet at the back by dowelling it in place.

## Leg Pieces

The leg pieces are carefully sawn to shape and finished smooth. Each leg is made up of two pieces glued and nailed together to form an L-shaped member.

There is a point to be noted here though before the pieces are glued together. One piece (A), Fig. 2, will be as cut, the second piece (B) will have a strip sawn off equal to the thickness of the wood, so that both sides of the completed leg will measure the same. For instance, if the wood is  $\frac{3}{4}$ in. thick, (A) will be 3ins. wide and (B)  $2\frac{1}{4}$ ins.

## Fixing the Legs

When glued together, glue and nail in a block (C). The legs are then fixed by a single screw through (C) into the bottom of the box, or cabinet, as we can now call it.

The bottom piece of the sawn-off strip is sawn lengthwise into two, to make the clamps for the door. Each is grooved  $\frac{1}{4}$ in. deep and wide; an easy job if the worker owns a ploughing plane.

If not, then one fairly easy way to do the job is to run two lines down with a cutting gauge,  $\frac{1}{4}$ in. apart, and to remove the wood between with a chisel. Rough it out first in the way you would if cutting a mortise and finish it off to a uniform depth with paring strokes of the chisel.

The door is reduced in length so that the addition of the clamps will make it the correct size to fit the cabinet.

## Door Strengthening

When cutting it do not forget to allow for the  $\frac{1}{4}$ in. tongue at each end. These are easily cut by sawing down each side with a tenon saw and paring off the waste. Glue the clamps on and clamp up the door, if possible, until the glue is set hard. Fig. 3 shows how the clamps are fitted.

Fit the door in with 1 $\frac{1}{2}$ ins. brass butt hinges, sinking the hinges flush into the edge of the door. A plain handle, made from a 1in. sq. strip of wood, 4ins. long is fixed to the door with two screws from the inside.

The cabinet can now be finished to taste. As it will most likely be made from a deal, or pine box, two coats of enamel would be a suitable finish.

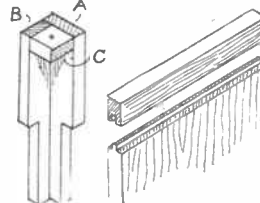


Fig. 2—Corners

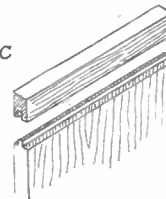


Fig. 3—Clamp pieces

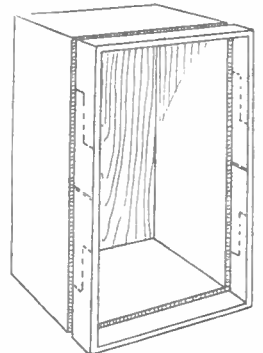


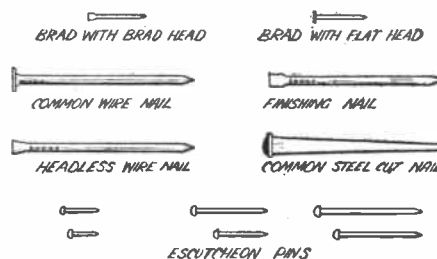
Fig. 1—Construction of Box

Try to present an unbroken face by filling any cracks between legs and box with stopping, and then glass-papering smooth.

Suitable stopping can be made by using putty or plasticine or woodfiller as specially supplied. Or you can make your own with glue and sawdust.

## The Craftsman's Need in Nails

THIS interesting collection of nails, brads, etc., gives some idea of the variety which the amateur can use to advantage.



All of them, you see, have long thin shanks which are less likely to split the thin wood used by our craftsmen readers.

Panel pins, of course, have very little head at all, but if these are unobtainable the kind here can be utilised just as well and the head nipped off.

The common fret nail as shown in *Hobbies Handbook* is very similar to the escutcheon pin shown here.

# How to make one piece of wood equal to two by ANTOFRET CUTTING

THOSE who have been readers for a number of years will probably remember the type of cutting with the fretsaw which we introduced, called Antofret. At that time it gained much popularity with readers.

There are now probably a number of newcomers to our pages who have not heard of this type of work, but who would undoubtedly be interested in the possibilities it provides, and the opportunity of undertaking something different with the fretsaw.

## The Principle of Antofret

The principle of Antofret is particularly useful just now in view of the shortage of wood, because one board can be made to do the work of two or three pieces. The principle involved is quite simple and was first introduced to us by an Italian priest who went to a great deal of trouble to experiment and prove the value of his ideas.

The ordinary fretwork tools are the only ones necessary, and when once the worker has got the "hang" of the process, the whole thing is quite simple and interesting.

Roughly, the idea is to cut the wood with the fretsaw at a slight

have more to say later.

The fretmachine user, on the other hand, has a very distinct advantage over the handframe worker. He must maintain an upright cutting saw, but he can tilt his table and so bring about the same result. Indeed, the work is ideal for the machine owner and can be undertaken with speed and economy.

Every owner of a machine should try out this simple work and then remember it on future occasions for a number of opportunities it provides. The cutting can best be done with the wood  $\frac{1}{4}$  in.,  $\frac{3}{8}$  in., or  $\frac{1}{2}$  in. thick. Boards under that have not essentially the thickness to provide a second part.

## A Specimen Piece

Let us take an example and show the whole process, and then the reader can make a similar experiment of his own. At Fig. 1 you have a piece of wood cut in the normal way with an upright saw. The thickness of the wood has purposely been exaggerated in the drawing to indicate what is meant.

At B you have the same piece of wood, but this time the sawcut has been made on the slope. In consequence, the size of the circle on the top of the wood is actually smaller than that underneath.

can make quite different types with the same sawcut.

Now go a stage further and you can see the effect in Fig. 2. You have here a piece of wood from which a centre panel has been cut and pressed upwards as a plain rectangle. A second step is made in the centre of this with an elliptical piece also taken out and pressed up. So you see, you actually have three steps from the one piece of wood.

## What is Antofret ?

A form of cutting wood with the fretsaw at an angle. Thus, interior frets can be pressed up or down in the wood, to stick and provide what is apparently another layer

Work like this can be greatly helpful, for instance, in the base of a stand lamp, or even a simple stand for a model. On the other hand, as you see in Fig. 3, a board can be inverted, the centre can be dropped into two layers and a suitable small tray thus easily completed.

The all-important point is to maintain the correct angle of cutting and perfect control of the fretsaw during the operation. Obviously, too, if you

get the saw too upright the piece of wood will fall out. At the other extreme if you get it too sloping the wood will not press through far enough.

Now naturally, this angle of cutting varies with each thickness of wood, and it is impossible to give any definite degree.

It can only be found by an experimental cut in whatever piece of wood you are going to use. Do not get the angle so it presses out too far.

There should be about a third of the wood left to stick in the main board and parts cut should be evenly pressed out. Obviously, too, it only applies to interior work and the diagrams at Fig. 1 are merely as an example. Those shown at Fig. 2 are what can be undertaken.

The drill hole, of course, must be

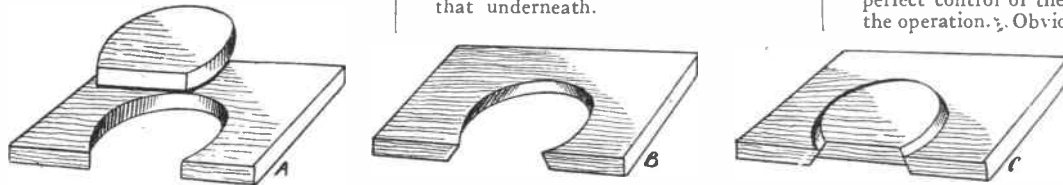


Fig. 1—The difference made by the upright and sloping cut

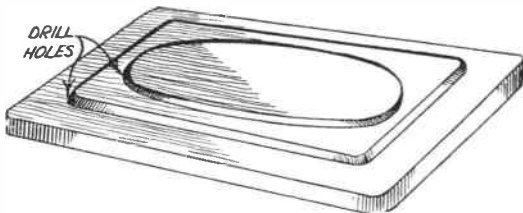


Fig. 2—How parts are pressed out in two layers

angle when interior work is undertaken. Thus, instead of the piece falling completely out from the wood, it can only be pushed part of the way through until it becomes stuck in the other portion.

This provides a raised piece, or if you look at it the other way, a sunken portion. Ordinarily, of course, the great point of the handframe worker is to maintain his fretsaw blade strictly upright.

In this Antofret work he has to keep the blade slightly at an angle and about this actual angle we shall

Thus, going a stage further at C, the piece of wood which normally would come out has been pressed upwards and there sticks just before it gets to the top. In this way, your same piece of wood will have two actual layers instead of one.

That is the general principle, so you can see, by sloping the saw inwards to the top of the cut, you allow the wood to be stuck. Of course, if you turn that panel over at C you have the cut-out piece recessed and in this way

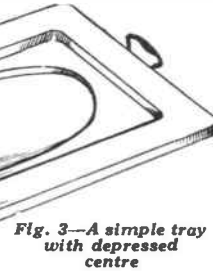
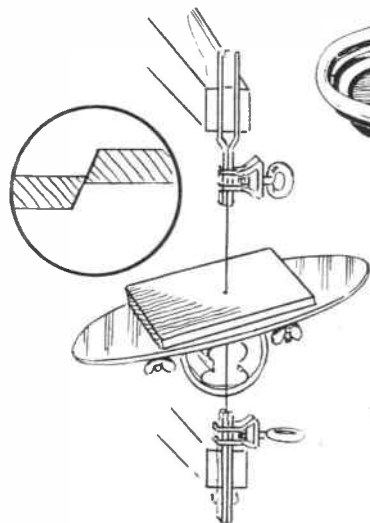


Fig. 3—A simple tray with depressed centre

made as small as possible to accommodate the saw and you must remember also that every cutting line will show. You cannot go back and start again if an error has been made. You have to keep to the cutting line until you get back to the drill hole again.

### You Cannot Reverse

Remember, too, always to follow the same direction. If you go the opposite way round then you will get the bevel cut at the reverse angle and the piece will have to be pressed downwards instead of upwards. You can make quite a pleasing combination in



*A front view of a machine showing tilted table and resulting cut*

this way, and we have seen some very fine work undertaken.

The machine worker must be careful not to rush his work too much for if he is going on a curve and the table is tilted, he is apt to let the saw sweep along and so increase the angle of cutting. This naturally will prevent the piece so cut being pushed out to its requisite depth. If a good cut has been made then the part will bind itself quite firmly in place.

Even so, however, it is advisable to run a thin ribbon of glue into the angle on the underside or where it cannot be seen. Get the glue right into the corner to make a little angle to stiffen the thing up.

### Useful in Larger Work

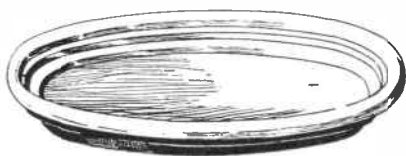
The same principle can be utilised on large work for bases, but if this is done, then when gluing lay a piece of string or cord in the angle and fix the glue round this like packing. When you first begin you may be apt to try and overdo the slope of the saw. Actually it is very slight and at Fig. 4 you see a machine table tilted about right for  $\frac{1}{2}$  in. thick work.

In the detail in the circle of the same figure you have a closeup of the cut showing how the second piece is pressed two-thirds of the way up before it becomes stuck.

If you are making an article like a tray with several rims to be pressed up or down, commence by cutting the innermost, and gradually work outwards. A good plan, too, is to run a pencil mark at right-angles from the centre of the work to the outer edge, thus if any of the pieces fall out or are taken away, they can be replaced in the same position and can be guaranteed to fit again.

### Shaping Edges

Then there is also the further step of shaping some of these edges as you see in the small card



tray at Fig. 5. The outer rim is shaped both inside and out, and then the second one is also given a rounded edge. This must be done with the ring taken away from the rest of the work.

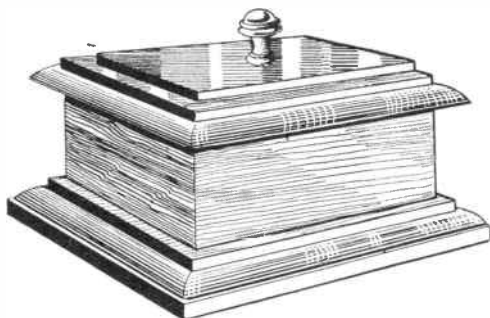
Be careful not to split the rim when you are doing the glasspapering, nor must you carry the shaping so far inwards that it takes away some of the board and prevents it becoming bound into the other part when replaced. With a little thought this ingenious method can be used in other directions.

### Suggestions of Use

The door of a small cabinet or cupboard can be given a raised panel or a rectangle of it can be sunk to take a mirror. You can make a bread board from a piece of thick whitewood, cutting an ellipse in the centre and pressing it up to form a raised platform. Small photo frames can be made in the same way, and a box can

frequently have a base and lid carried out in this way.

An illustration of one of these is shown at Fig. 6. Here the four sides are simply put together in the ordinary way, but the base and lid are formed by these Antofret methods. The three-tier base has its centre rim nicely rounded, whilst the lowest rim of the lid is treated in the same way.



The cutting is quite straightforward here, but when you get a rightangle as at these corners, be sure to turn your saw quickly without moving forward. Do not let it swing round the corner or you will not get the part pressed out correctly.

### For Panel Work

Obviously, the use of this principle cannot be carried into effect entirely in ordinary fretwork patterns unless one has a large amount of patience and great ability. On the other hand, of course, there is no reason why with experience you should not be able to cut out many of the fretwork panels with the sloping fretsaw to get a striking effect of raised and sunken work.

Generally, however, the use of fairly large surfaces is preferred, but these surfaces of wood can frequently be decorated by means of a matted panel or design, with the usual matting tools. Or, of course, a transfer in colour can be applied.

## Novel Board & Plug Puzzle

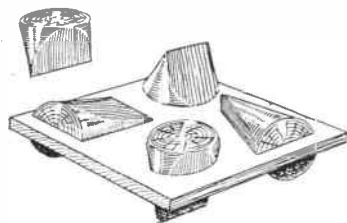
HERE is an excellent little novelty you can make with a penknife and small piece of wood, which will prove to other people how clever you are! You can try it out as a trick upon them by showing them a board and asking them to cut a plug to fit four different shaped holes—a square, a round, an oblong and a triangular one.

This at first thought sounds a bit of a problem, but the method in which it can be done is shown in the illustration here. Any little odd piece of wood will do, and the actual shape of the wedge piece is obtained by whittling down a small block.

In this way the four different positions are provided for quite

satisfactorily. You will, of course, have to be careful to get the shapes true in every case, but this can be easily done with penknife and glass-paper and frequent trials.

You probably will not be able to complete it first time, but those people on fire service or A.R.P. will be able to pass a little interesting time to get the desired result.





# There is very little cost, but lots of interest in making SIMPLE MATCHBOX TOYS

ONE of the many sad results of war-time curtailment of labour, material, etc., is the shortage of children's toys. Toy-boxes and cupboards are emptying fast, and the chances of refilling them from the shop, few and far between.

To meet this shortage, the home craftsman is lending a hand in his spare time, and A.R.P. Clubs and others are fashioning toys from odds and ends of salvage given to them for this purpose.

## A Model Plane

Here are a few suggestions for making toys out of match-boxes. Keep all the empties. As a rule they are all of the same size, and easily manipulated. Fig. 1 shows an aeroplane which would gladden the heart of a small boy and which is quite simple to make.

You will need the covers of 10 empty match-boxes. (Don't throw away the drawers. They will be of use in making other models). The forepart of the plane is made of five covers stuck together, the one in the centre standing on edge. The roof and underpart will need opened out covers. The tail is formed of three covers arranged in the same way.

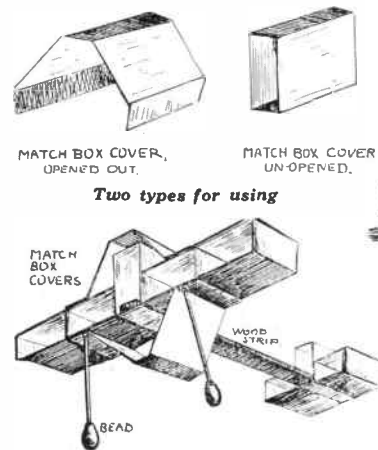


Fig. 1—A simple plane model

A narrow wooden strip connects the forepart with the tail, the ends being fixed to the inside of the centre covers. Two thin sticks with a flat bead on the end, or sealing wax shaped to a wheel are fixed to the forepart complete the plane, which can be finished off with a coat of aluminium paint.

The various parts should be joined together with strong gum or glue, and kept in position till quite dry. The underparts should be added last of all before painting.

Here is another suggestion for the use of empty match-boxes. Children love playing with bricks, and a box of bricks is always a popular present. With a little neat-fingered manipulation, empty match-boxes can be turned into building bricks, both the drawer and cover of the box being used.

## An Archway

The Archway (Fig. 2) is made of three kinds of bricks:—long and thin, short and thick and hollow frame bricks.

Five empty match-boxes are

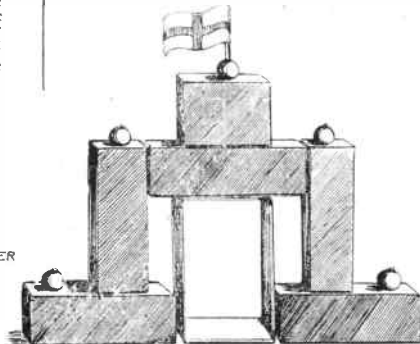
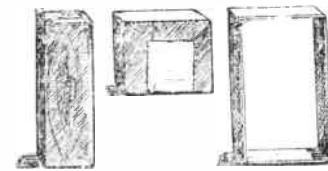


Fig. 2—The Victory Archway



The long, short and hollow frame brick

needed. To make a long thin brick cut a cover from top to bottom, and fix the two parts together with strong gum or paste.

To make a short thick brick, cut a drawer into two parts from side to side and join together. To make a hollow frame brick, cut the bottom right out of a drawer and use only the remaining sides.

## Suitable Colouring

When the gum is dry, the bricks can be covered with soft thin paper. Paste is best for fixing it. Any colour can be used, but light brown or cream resembles the colour of wood and is the easiest to get, as most things are wrapped in it.

Care must be taken in covering the ends of the long thin bricks, as they are hollow. Ends, hollow or otherwise, should have a small square of paper pasted on first of all, then a strip the length of the sides should be wrapped round.

When ready, the bricks can be fitted into a shallow cardboard box. The seven used for building the Archway will need only a small box. Odd corners can have screws of coloured paper filled in, or oddments useful for decoration, such as the beads and flag shown in the sketch.

The box of bricks shown in Fig. 3 used up seventeen empty match-boxes in the making. The lid is recovered with strips of bright paper and a suitable cut-out pasted on it. The result was most satisfactory.



Fig. 3—A box of bricks

**Money Box—(Continued from page 67)**  
into the fish overlay in its "down" position.

Over this screw put an elastic band and bring it down to a hook in the base. It will now be readily seen that when the fish is raised by means of the tail, the elastic will immediately bring it to its "down" position on release.

The working parts and the "spring" must be carefully adjusted and put in

order before the bendable top is put on. In Fig. 4 the large disc, cut from the back of the box, is seen removed. This disc will be held in place by gluing over a larger circle of stout paper.

When it is required to extract the money from the box the point of a penknife or any sharp instrument can be used for cutting round the disc.

The top of the box can now be

finally glued on and cleaned off at the edges with fine glasspaper.

The fish and the overlay beneath should be painted in enamel with the printing carried out in some contrasting colours. The fins, eye, mouth, etc., of the fish can also be painted in and the whole box given a coat of clear varnish. Small turned wood feet may be glued to the underside of the base if desired.



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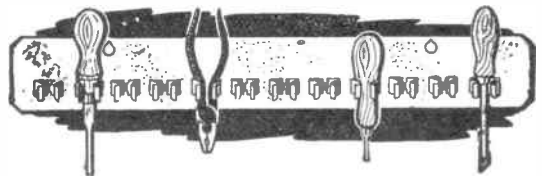
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# Patterns are provided for this simple article—the VICTORY V PENCIL HOLDER

**W**E all know the V sign and how it serves as victory propaganda for our Allies and here at home. Why not, therefore, make some practical contribution to the campaign by cutting out the useful little model herewith in a few odd pieces of fretwood with your fretsaw?

As can be seen by the picture, the article concerned is a little desk pen or pencil holder, to the back of which is attached the striking V sign.

## Full-size Patterns

The patterns for the parts are provided on Cover ii and are cut out in wood in the various thicknesses shown. You should select some nicely grained fretwood to get the best finish. This question of finish is a matter of individual taste and ability. If the work is done in mahogany or beech or some fancy wood of that kind, it can be left without further attention.

In either case, you should make the letter V stand out much more strongly from the back by painting it. Indeed, a good plan to make a striking finish would be to have the "sun" behind it painted a bright golden and then the V in red on the front of it. Or if you do not paint the sun portion the V at least should

be painted gold or silver or some bright colour.

The patterns are shown full size but in the case of the base a tracing must be taken of one of them because they are printed together to save space. Take off a copy of the outline part B so you can paste the pattern of the part A to the wood. Notice that the piece B has the slots C and D in it as well as the centre opening, whilst the other part A is to the plain outline only.

This larger piece A in  $\frac{1}{4}$  in. wood, is the lower base and the upper edge of three sides should be rounded:

In fixing this, be sure to get a right-angle using a square to prove its accuracy. Before fixing it to the back, however, the upper base B should be cut out and glued to A. Here again, the outer edge is nicely rounded off as shown by the shaded section drawing and the back edge left square. Get these two edges at the back level and glue the whole lot to the main back according to the dotted lines shown on the pattern of that part.

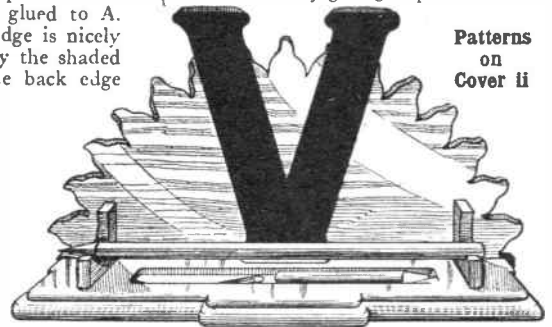
As a further support and also to act as the holder for the pens or pencils, two little shaped racks fitted. These

are slotted into the upper base at C and D with the taller part towards the back. Get them to fit nicely and glue to the right angle.

You should have all these parts cut and completed so they can be glued together one after the other immediately. That, is, do not let the base and back be glued together before you cut out the rack pieces because these parts will help you to fit all together at the correct right-angle.

The letter V is cut from  $\frac{1}{4}$  in. wood and then glued centrally to the back so that the upper portions of the shape project above the imitation rays.

If you are going to paint this letter, by the way, it should be done before finally gluing in place.



Patterns  
on  
Cover ii

## MISCELLANEOUS ADVERTISEMENTS, etc.

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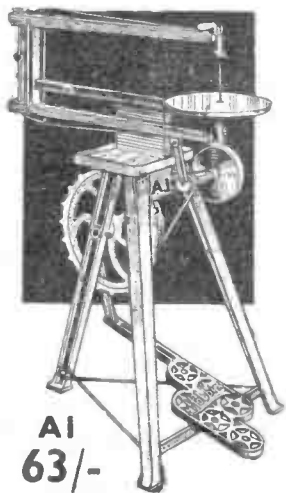
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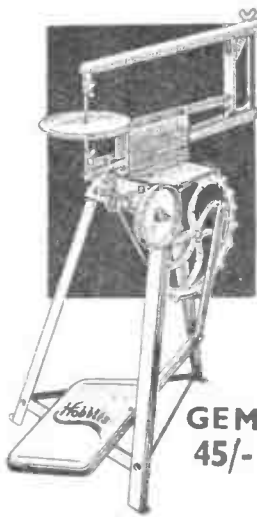
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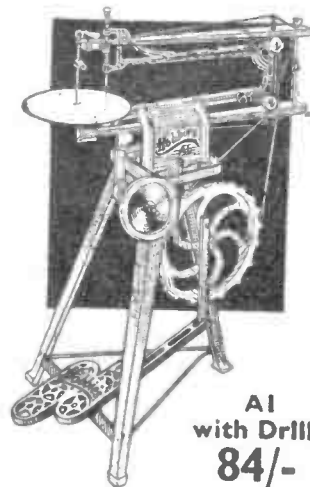
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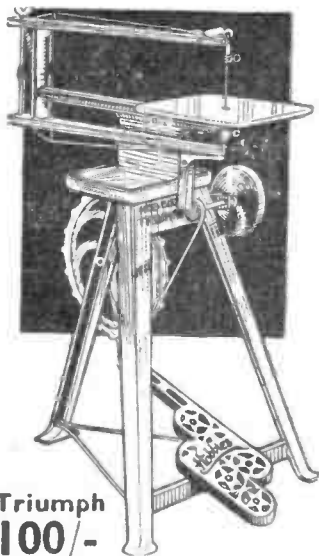
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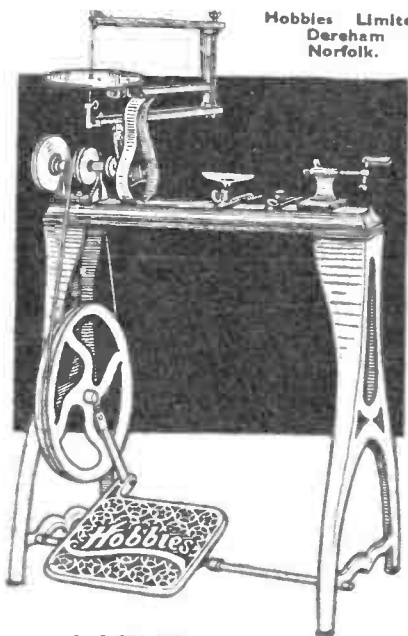
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