WITH LARGE FIEEE DESIGN DF A BOSTGN BOMIBER


THE time is fast approaching when we shall be thinking out new games and pastimes for the winter evenings. Anything that requires our usual amount of wood or other material must first receive careful consideration, because supplies of these essentials are strictly limited.
It will, therefore, be advisable before commencing to make a new game or model, to ascertain if certain parts can be made up from cardboard instead of wood, or again, from card


## NOVEL SHOOTING GALLERY GAME

this is the "gun" which is to shoot them down. This gun is mounted upon a circular pivoted base so it can be turned in any direction, and is also made to rise and fall, thus allowing for long or short distance firing.

It may be stated that the base with the men on should stand about 4 ft .

6ins. from the "gun,"' but this distance may well be increased as accuracy of aim is gaincd. In that case, of course, the muzzle of the gun must be raised for firing to allow for the drop of the "Shell" on to its target.

## The Background

The back and the two side walls are suggested in the illustration as being made from $3 / 16 \mathrm{in}$. or $\frac{1}{\mathrm{in}}$. wood, but there is no reason why these should not consist of stout card. Or they can be made from strip card glued together with a facing of stout paper.
The base piece should measure about 10 ins. by

There must be many workers who have some odd pieces of wood by them, and these must be reserved for the more vital working parts of the game or model in hand where cardboard would be inappropriate. These remarks apply in the case of the simple little game which we are about to describe, and which we illustrate here.
The game consists of a three-sided backgraund wherein stand several German soldiers. At a distance from


8ins., the back piece to the sizes shown, while the two side walls may be cut economically from one square of stuff measuring 8ins. by 7 ins. The squared diagram in Fig. 1 shows how this is done.

After setting out the 1 in . squares shown, run the curved line through them, following each square carefully. Then cut through with the
the plunger and the barrel, the four parts which go to make up the latter should be glued round it, no glue being allowed, of course, to touch the surfaces of the $\frac{3}{8} \mathrm{in}$. stuff during the process, only the edges of the "casing" being brushed with the glue. After the glue has hardened, glasspaper up all four outer surfaces of the barrel and see the plunger works

fretsaw or, in the case of cardboard, with a keen-edged penknife. Nail and glue the parts together, and glasspaper the sharp edges to make the whole thing safe and convenient for handling.

The outline for the soldiers is shown full size in Fig. 2. This should be traced on to thin paper and then transferred to the $\frac{1}{8} \mathrm{in}$. wood or the card ready for cutting out. Each soldier must have a square of wood as a base for standing up, and the tenon on the feet of the figure shown, should be let into a corresponding mortise in the $\frac{1}{8} \mathrm{in}$. or $3 / 16 \mathrm{in}$. wood.

## The " Gun "

The firing mechanism is a very interesting little piece of work, but it is easy to make up and odd thicknesses of wood may well be used in its construction. The gun consists of a barrel $\frac{3}{3}$ in. square in section and made up from four pieces of $3 / 16 \mathrm{in}$. thick wood as shown in Fig. 3.
The plunger which slides up and down in the barrel, and which throws the "shell," consists of a piece of $\frac{3}{8} \mathrm{in}$. square stuff measuring $4 \frac{8}{4}$ ins. long.
To get a good and easy fit between
freely in it.
Draw a line round the barrel as shown by the dotted lines in the diagram and cut off the section with the fretsaw. Then glue this smaller section to the end, or at least $\frac{3}{2} \mathrm{in}$. in from the end of the the plunger to form a "stop." This leaves sufficient to form a.grip for the fingers. The end is afterwards shaped slightly to the outline shown in Fig. 4.

On each side of the " barrel," and half-way along, there must be glued and pinned a $\frac{3}{4} i n$. dia. disc $B$ to fit into corresponding openings in the two upright supports for the gun. These supports, are shown also in Fig. 3 with measurements for drawing out on to the $3 / 16 \mathrm{in}$. wood.

The discs must work freely in the holes made for them, and in the centres of the discs are roundheaded screws. These are later intended to hold one end of the elastic band which form the spring for throwing the "shot." Similar screws are put in each side of the end of the plunger to take the corresponding ends of the elastic.

## The Turntable

The turntable for the gun (Fig. 5 ) is

## Selling Inlaid Work

HAVE just completed four Inlaid pictures, and $I$ wish to sell them to friends. Can you advise me how to price these articles? (R.S.-Belper).
$\mathbf{Y}$ in should have no trouble 1 in selling your Inlaid pictures if they are nicely made and finished, although, of course, it largely depends on the range of friends or shops to which you may be able to offer them. There is a chapter on "Disposal of Work" in a book, called the "Art of Fretwork,"
obtainable from Hobbies Ltd. for 1/1 post free.

## Glossy to Matt

TELL me the best method of changing an enamel paint with a glossy finish, into one with a matt finish. (E.R.L.-Burwell).
A NY glossy enamel or lacquer and uniformly rubbing it with very fine glasspaper and finishing the surface by rubbing with pumice powder and water.
a disc of either $3 / 16 \mathrm{in}$. or tin . wood 3 tins. in diameter. It is pivoted to a square base 4 in . sided with a screw in the centre as shown in the sectional diagram.

Before screwing the disc to the base, however, the two uprights with the barrel between them must be glued and screwed on. One or two screws should be run up through the disc into the uprights to make the fixing quite secure. For it must be remembered that the pull on the elastic band is considerable at this point.

With the addition of the elastic bands the little miniature "gun" is complete and when in action it should be held simply by two clamps on the edge of the table as depicted in the sketch of the completed article.

Little squares of wood made smooth with glasspaper serve the purpose of "shells," or these may be more realistically represented by cutting off short pieces of dowelling and pointing one end.

In load. ing the gun, the barrel must be tilted to raise the muzzle for inserting and dropping in the shell, the plunger at the same time being withdrawn. Hold on to the plunger end until the barrel is lowered and "sighted," then let goanother German down!

With a little practice you can soon be quite adept at the firing, and will then find that the game prorides a splendid Fig. 2-Full-size pattern pastime for
 two or three to play in competition with one another.

This is just the sort of game to make for a birthday or as a gift for Xmas. Indeed, given sufficient odd pieces of wood and card, you should have no trouble in selling them privately to your friends or to shops locally. If you can find a box in which the whole game can be packed, it will add to the attractiveness and convenience in handling.

## Hints how the handyman can SOLDER ALUMINIUM

ALUMINIUM household utensils are now so scarce that they must be taken care of and any leaks or cracks repaired at once. The use of a soldering iron is essential in this as well as in the odd jobs which the model maker in metals may come across.

In the first place, it is useless to try and join pieces of aluminium with ordinary solder as used with tin. First get a stick of aluminium solder from the ironmonger and then try out your next job on the following lines. The first thing to do is to file all solder off the soldering iron or bit, and make the copper faces and tip slightly rough by scouring a few narrow cuts with the edge of the file. The reason for making the copper bit rough will be explained later.

## No Tinned Bit

The first mistake which is made by many is to tin the bit with the aluminium solder in the same way as in ordinary solder work. The bit should on no accoun tbe tinned. In fact this is quite useless, since it has to be brought to a dull red heat before the stick can be melted.

Having prepared the copper bit in the manner described, place one of the pieces of aluminium to be soldered down on a piece of some non-heatconducting material, such as a sheet of asbestos. It is a good plan to hold the work down with the aid of a small clamp.

Now, it is time wasted to get the surface of the aluminium bright with emery cloth, since a coat of oxide will form at once. This part of the work must be done with the aid of the copper bit on applying the solder. Hence the need of a"slightly rough bit,
as explained before. Bring the copper bit to a dull red heat, and melt some of the solder on the surface of the aluminium at the required point, as shown in Fig. 1.

Immediately you have got some solder on to the metal, work the bit on the surface, as indicated clearly in Fig. 2. The rough copper will scratch the surface under the solder which, of course, will keep away any oxide and thus allow it to stick. The other piece of aluminium which is to be joined, is treated in the same manner, and then the final joint is made as follows.
The two pieces are placed together (Fig. 3) with the solder on each piece in contact at the point of the joint. Now heat the soldering bit to a dull red heat, and hold it on the joint (as indicated) until the solder between the pieces is melted.

Provided the work has been done in a thorough manner, the joint will be quite strong and should last for many years. It is a good plan to insert a piece of asbestos between the clamp and work in order to help prevent the heat from spreading away when the bit is being used.

## Blow Lamp Use

A blow-lamp may be used in place of the soldering bit, and this will be found more convenient when dealing with large pieces of work. First melt some of the aluminium solder on to the work at the point of the joint with the blow-lamp, and then scratch the surface with a small file or a wire brush.
The surface, of course, must be scratched whilst the solder is in the molten state in the same way as done with the bit as already explained. The pieces are then placed together and heated with the blow-lamp until the


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## A Dissection Poser

OLD Jones had a beautiful side being 3 feet long. He wished to cut it into 4 pieces so that these four would fit to form an equilateral triangle. How did he do it?

## A Counting Problem

HERE you see the numbers Lrom 1 to 14 arranged round the sides and corners of a seven sided figure so that the sum is 19 .


Can you by a simple method rearrange these same numbers so that every side sums to 26 ?

## Catching Fish

AN you discover just how -many fish this man actually caught?

Ten fish I caught without an eye
And nine without a tail,
Six had no head and half of eight I weighed upon the scale.
Now readers dear, as I ask it,
How many fish went in the basket ?

## A Rent Question

A FARMER rented a field on Acondition that he gave a certain amount of the crop as the rent. Now the first year the yield was 40 bushels and he paid $2 / 5$ ths. of this as rent. The next year the yield was 80 bushels and he paid $\frac{1}{2}$ of this as rent. What rent did he pay the next year when the yield was 60 bushels ?

## A Day's Sport

A FRIEND of mine gave me difficult puzzle, and told me I must not use algebra for its solution. Here it is.
"In a field were birds and rabbits, 2 score heads and eight dozen feet. How many birds were in the field and how many rabbits?"

# Add to your convenience by making a corner EMERGENCY WARDROBE 

WHERE wardrobe accommodation is absent, or limited, as often happens when so many readers are lodging billeters, etc., the emergency wardrobe illustrated will prove a help. A few pieces of wood and a length of curtaining material are all that is needed to make it-. most economical when one considers what a lot of wood is required to construct the conventional wardrobe.

## The Framework

The frame, Fig. 1, is made of two pieces of 1 in . by 2 in . wood, and one of lin . by 3 in . wood, joined together to form a triangle. The lin. by 2 in . pieces are cut to length given and their ends trimmed to 45 degrees.
They are joined with glue and nailed together, with a small block of wood in the angle, to strengthen the joint. The front piece lin. by 3ins., is cut to length, but the ends are not mitred. It is then nailed and glued on to make the triangle. The inside angles are also strengthened with small blocks, as before (see Fig. 2).

Note, in fixing the front piece on drive the nails through the back pieces and so avoid any nail heads showing where not wanted. Also, drive a screw through each block into the front as well. Leave for awhile for the glue to set hard.

Bore a $\frac{3}{8} \mathrm{in}$. hole in the back block and also in the front board, and here glue in a wood rod on which to suspend coat hangers, and in each side piece drive in a wardrobe hook for the same purpose.

## The Fancy Top

A simple form of pediment is suggested, to finish off the front. Fig. 3 shows this, drawn over lin. squares. Saw it out of preferably thinner wood than that used for the frame, say $\frac{1}{2}$ in. thick deal.
It is fixed on top either with dowels or strips of wood nailed to the back.

Dowelling is neater. A dust cover should then be nailed over the top of the frame.

To economise in wood, a piece of stout cardboard can be used for this, or lining material can be utilised if drawn taut and well tacked down.

Though not essential, the plain appearance of the front can be greatly improved by a length, top and bottom, of simple moulding, or even" a plain slip come to that.

Also, where the end of the rod shows, a diamond or other shaped ornament, can be glued on to hide it. A tiny piece of fretwood, cut diamond shape and with its edges bevelled would be effective.

Give the whole work a good clean up, stain it inside and out oak or mahogany colour and to the front only apply a coat of varnish.

## The Curtain

For the curtain, any suitable material can be used. This is best left to a lady member of the household.

It should, of course, be wide enough to cover the space, and about 4 ft . long. Sew rings at the top, about 4 ins. apart, for hanging purposes. A spring curtain rod is fixed behind the front board, as shown in Fig. 2 for, the curtain to hang from.

The completed wardrobe can be fixed to the wall with nails, or screws, driven in through plugs. Coat hangers can usually be Bought cheaply and. at normal times are certainly not worth the trouble of making. But now, if difficulty is experienced in getting them suitable hangers can be made at home.

## A Useful Hanger

Fig. 4 is a sketch of a good pattern of hanger, holding trousers and waistcoat as well as coat. The curved top part is cut from $\frac{1}{2} \mathrm{in}$. wood, or thereabouts, and is joined across the bottom with a length of $\frac{3}{8} \mathrm{in}$. dowel rod.


Cut the ends of the rod to butt neatly against the curved ends of the upper part and there fix with glue, and a single nail each side.

Bore a hole in the centre of the top, and fix in a hook, bent up from stiff wire. Hangers can be stained, but are best left unvarnished.


Fig. 1-The corner framework and supportirod


Fig. 2-The back corner joint


Fig. 3-The shape of the pediment


Fig. 4-Details of the clothes hanger

## MATERIALS FOR THE BOMBER MODEL

Additional copies of the Design Sheet (No. 229 Special) presented free with this week's issue are obtainable for 6d. (post free 7d.). A parcel of planed boards of the sizes to suit all the parts
required is supplied by Hobbies Branches for 2/8 or sent post free from Hobbies Ltd., Dereham, Norfolk, for 3/3. Details of the boards needed are given on the Design Sheet itself.

# Make yourself comfortable and happy with a BED LAMP AND BOOK SHELF 



Fig. 1-Picture of completed article

HERE is a particularly attractive piece for the bedroom. It is a bed lamp intended to be hung on the wall just above the head of the bed to throw a light for reading. Above the. lamp is a useful size shelf for containing a few favourite books.

The electric light bulb is fixed to the left-hand end of the article and the light inside can be switched on and off by the rod which stands away just outside the end. The bulb is entirely enclosed to give a soft diffused light sufficiently bright for reading by.

## With Light Switch

The illustration, Fig. 1, shows the completed article and how it should appear when hung on the wall. It might be mentioned here that a length of flex might be connected to the socket of the lamp and brought down over the bed-head to be finished off here with a pear push so that reaching up to switch on and off will be unnecessary.

We recommend oak as being the most appropriate wood from which to make this lamp and rack, but of
course mahogany would answer equally as well; especially if mahogany is the predominant wood used for the bedroom suite.

The ends A (Fig. 2) will be the first pieces to set out and cut. Two pieces of $\frac{3}{8} \mathrm{in}$. thick stuff measuring llins. by 5ins. will be wanted, and on one of the pieces a series of lin. squares must be drawn and the curved outline drawn in through them as in Fig. 3. It would be well to add on the piece to the three dotted lines which indicate the positions of shelf $C$ and the backng rail B .
Using a fretsaw cut round the outline, not forgetting the recess or open mortise in the upper part of the straight back edge. This mortise is to take the end tenon on rail B which is again seen in detail in Fig. 4.

## The Back Rail

When cutting is done, clean up the edges of the wood and bore two holes between the two cross dotted lines to take the screws which hold the shelf C secure. The back rail, $B$, is 12 ins. long, $6 \frac{1}{2}$ ins. wide and $\frac{3}{3}$ in. thick.

From the length given set in zin. from each end which will give the width of the tenons, and which will leave 10 ins. as clear width between the shaped ends when the shelf is fixed. Glue the tenons neatly into their recesses and add two countersunk screws in each. Then cut the shelf C -a plain board measuring lotins. by $4 \frac{5}{8} \mathrm{ins}$. See the ends of the shelf are cut to right angles to make a neat and accurate fit with the ends.

Next prepare the lower rail D.


Fig. 2-End section Fig. 8-The ends


Fig. 4-Details of construction


Fig. 5-The lamp in ploce

This will also be 10 ins. long but only lin. wide. The intervening space between this rail and rail B above is filled with a piece of spare thin plywood or ordinary $\frac{1}{8}$ in. wood.

## Removable Back

This latter piece is shown as H in Fig. 2, but it will not be fitted and fixed until all the rest of the work is finished. It really forms a removable panel for getting to the lamp inside, as once the curved front is fixed, this

## CUTTING LIST

2 Pieces A-11 by 5ins. by Hin .
1 Piece $B-12$ by 6itins. by in.
1 Piece C-101 by 4 ins. by fin.
1 Piece D-10iting. by Iin. by iin
2 Pieces $-6 t$ by 2ins. by jin.
1 Piece $F-10$ iths. by iln. by tin.
2 Pieces G-41ins. by $\frac{1 i n}{}$. by in.
1 Piece $\mathrm{H}-10 \mathrm{t}$ by ayins. by in.
back panel will form the only access for renewal of bulb or for repairs.

Fix the rail D by running screws through the ends into it the same as the shelf above. The next pieces to mark out and cut will be E and G. There are two each of these, and they may be of some soft wood if desired, as they really only form a fixing frame to which the curved front and the back panel are fixed.

## Carved Front Formation

Piece E, before being cut to shape, should measure $5 \frac{3}{2}$ ins. long by about 2ins. wide and $\frac{8}{8} \mathrm{in}$. thick. The curved front stands. $\frac{8}{8}$ in. back from the face of the main end $A$, so this curve can easily be set out on a piece of thin paper first with end $A$ as a guide.

The back edge of piece $E$ is cut away anglewise to allow for room for the electric bulb fitting which is at one end only, of course. Pieces $G$ are $4 \frac{4}{2} \mathrm{ins}$. long and $\frac{1}{2} \mathrm{in}$. wide, and these and the pieces $E$ are glued and screwed to the ends as shown in the sectional diagram Fig. 4.

To form a fixing for the top edge of the curved paper front of the lamp, a strip of small section wood such as $\frac{8}{8} \mathrm{in}$. by $\frac{1}{\mathrm{in}}$. must be fitted between the pieces E and glued to the underside of the shelf. The strip is seen as $F$ in the section Fig. 2 and again in the detail Fig. 5.
(Continued on page 17)


Fig. 6-The shade fitting


Gun Port Covers

WHILE building my "Royal Sovereign" galleon, I found I had a hard job on hand to cut out all the 46 small Gun port covers, so I tried to find an antidote for it. I now take a piece of fairly thin cardboard

and cut the required number of tiny pieces. Then I take a needle and pierce two small holes and thread a small piece of thread through as in the illustration. This thread allows it to hang over the gun and gives a very realistic appearance.-(W. Worth, Plymouth).

## Filled-in Inlay

IHAVE found a little trick I call Artificial Inlay, which comes very useful for inlaid lids, etc., for those who do not trust themselves to ordinary inlay cutting. The design is cut out as an ordinary interior fret. It is then filled in with plastic wood, say, of a dark shade. When quite hard, this can be glasspapered off to the level of the wood. If more than one colour is required, some of the plastic wood is cut away and once again filled in with plastic wood, this time of a light shade.-(H. Cohen, Ilfracombe).

## Home-made Vice

N the absence of a vice I found this idea most useful. Take two pieces of wood, one lin. by lin. by 6ins. (A), the other 2 ins. by lin. by 6ins. (B). Screw A tightly to your

bench and cut B diagonally so as to form wedges $B$ and $C$. (See sketch). Now screw B down as shown. Place wood to be held-at A and force wedge between wood and B. This will grip wood tightly.-(D. Massingham, Sherwood).

## Ink Saver

IN the open type of inkwell it will be found that a fair amount of ink is lost by evaporation. This can be remedied by placing an ordinary glass marble in the hole in the top, which makes the inkwell airtight. When the pen is being taken from it, the marble simply moves back, again closing the hole.-(R. Parkinson, Padiham).

## Cleaning Coins

PLACE the coins in a jar of Vinegar and whitening. Leave for about an hour and rub with a soft cloth.-(S. Curran, Carnlough).

## A Reading Lamp

ONE that is both decorative and original is a welcome addition to any Hobbies reader. It is quite simple. All you want is a nice clean flower pot, a lamp shade, a

bulb bracket, and a couple of yards of flex. To make the hole for the bulb bracket, use a hammer and a small chisel, and to make the hole for flex, use a small drill. Paint the pot with a small jar of enamel, then decorate the pot, and the shade with transfers.(John Price, Bellingham, S.E.6).

## Staining Tip

HERE is a good way to finish off new wood such as deal and other soft woods. First apply a thin coat of yellow paint, when dry apply stain, leaving streaks of yellow showing. Furniture, etc., finished off in this way looks very attractive.(R. J. Mortlock, Eye).

## Gluing Light Coloured Wood

WYHEN edge-gluing light coloured wood such as sycamore, satin walnut, etc., rub the joints with ordinary white chalk before using the glue. This will prevent the glue showing a dark line along the joint of the white wood, and will not interfere with the setting of the glue.(S. Curran, Carnlough).

HERE'S an interesting letter, and a good suggestion too, which came recently from Petty Officer J. Cardingly of H.M.S. Cumberland. Talking about the Tank design given with the Handbook, he says "There was quite an argument on who was going to make the model, but it was overcome by making carbon copies. There are so many things being made aboard here that we are having a handicrafts exhibition in a month's time. Everybody is hard at it, and I think it will be a great success. The copies of Hobbies Weekly you sent are being read from cover to cover in search of new ideas." The Navy is always interested I know, and I hope to hear about the Exhibition in due course.

HE reference to Hobbies
Weekly relates to an offer
I have made before which still holds good. I shall be pleased to send a batch of back numbers to anyone in the Navy or Merchant Service if any reader will let me have the name and address. Such copies will, I know, provide interesting reading and means of whiling away many hours in a helpful way.

THE hobby of collecting Army badges has increased considerably and now, I hear, many are extending their work to all the services, and even to the other nations in the War with us. As you may imagine, there is a very large range. Apart from the County and National Regimental Badges, there are many unusual and lesser known ones which are interesting-such as the Army Catering Corps, the Royal Army Veterinary Corps, the Army Educational Corps, the Army Dental Corps, etc.

IN this connection, Mr. C. Busby, a well known Sandhurst resident, has, by virtue of being in the centre of things, been able to get an imposing array of nearly 500 badges. They are representative of almost every regiment of the British Army, as well as of the Dominions and Allied Forces.

THIS is the solution to the novel circular Cross Word Puzzle in last week's Hobbies.

Did you gét it right?


## A Simple Garden Rake

ARAKE is used in "combing " loose soil and getting it evenly distributed. It is also handy for combing away freshly-mown hay or loose grass, weeds, etc., and in " turning " up a gravel path or drive. A rake is, to the small gardener, a kind of cultivator; it is one implement he must have, if he does much planting.


Now, while a rake is a cheap thing to buy, there is no need to go to the expense of purchasing one if a temporary sort of rake will serve. In any case it will be worth making, even if you have one already.
Whilst looking at a worn floor brush the other day, the writer hit on the idea of making a rake out of it. It was only a matter of trimming away the worn bristles and fitting dowel pegs in the head.
Although only a makeshift, it served its purpose excellently and will continue to give good service for a long time. Owing to the weight of the brush head, there is very little " leaning" to do.
Moreover, instead of using wooden pegs, one could remove the heads from heavy 4 in . wire nails and use them as pegs. These are simply hammered into the wooden head at an
even distance. If desired, suitable holes could first be bored and the blunt ends knocked into them so the points project.

Furthermore, there is no need to let everyone know just how the rake has been made. You could remove the shaft from the brush head and then plane the latter a different shape, as shown in our diagram, perhaps.

The main thing to watch against,
if you adopt this idea, is to avoid planing too deeply so that the bristle holes would become exposed. If the finish of the brush head is fairly clean, why worry about what neighbours may think; they will, at least, see that you have been resourceful.

So, leave the brush head as it is and, if possible, bore the wooden peg holes in the central row of bristle holes. Use a twist drill of about $\frac{3}{8}$ in. diam., as you will likely be boring into pitch which is apt to mess up a decent dowel bit.
The dowel pegs, about 3ins. long, are glued in place, the ends being either pointed or rounded or just left as cut. An old floor brush is the best thing to use. A yard brush is rather heavy and cumbersome.
If you have a block of wood lying about measuring 12 ins. long by 2 ins. wide by $1 \frac{1}{2}$ ins. thick, a good rake head could be made out of it.

## Home-made

IT is easy to tell whether a cyclist uses trouser leg clips or otherwise. The fellow who does not use clips usually has dirty grease marks on the trouser flaps owing to coming in contact with the chain.
Apart from dirtying one's trousers, there is a great deal of danger in not using clips. On a windy day, the trouser flap could be blown against the drive-whee! and become wedged with the chain, i.e., if there is no cover over the chain. Such could lead to serious consequences, probably just torn trousers or a sudden spill on the road.

## Home-made Clips

The few cyclists who do not use trouser clips are in the minority, however. But, there are quite a lot who use one clip only. Why? Probably because the other clip has been lost or never purchased.
That is an unwise sort of policy. Two clips should be used, even out of respect for one's trousers. Fortunately, clips are things easily made. The usual bought variety are shown at Fig. 1, with two home-made ideas.

To make the circular style of clip you need a piece of an old alarm clock main spring or the steel rib out of old corsets. The flattened spring type of corset rib is especially ideal, for you can bend it easily and the ends, which are fitted with protective metal coverings, can be removed and fixed to the clips.
To make clips out of a clock spring, curl off a piece giving a 3 in. circle and a couple of bend end tabs. The tabs can be easily bent into shape if the ends of the spring are heated and the temper of the steel softened as a result.

## Cycle Clips

One of the tabs could be curled in, as shown, with the other sticking out. This is merely for the sake of appearance and nothing else. The plain sort of clip could also be made from the clock spring or corset rib.

An adjustable leg strap is shown, leather or hat felt being used. The width of the strap is $\frac{1}{2}$ in. or thereabouts. A shoe button is sewed to one end, then button holes made in the other end, as depicted in the drawing.

## Elastie Clips

Very simple leg bands can be made from an old car air tube. It is just a matter of snipping off a $\frac{1}{2} \mathrm{in}$. wide band, thus slipping over the foot and up and around the fold made in the trousers.

At least, such a band is better than nothing. Another idea-perhaps the easiest and most convenient of the lot-is to use......well, as you may have guessed, a couple of safety-pins !


Fig. 1-Commercial and home-made types

# How to use a worn-out wrist watch to make a DOLL'S HOUSE WALL CLOCK 

READERS who make dolls' houses and take great pride in realistic furnishings in miniature will, we know, be interested in the simple little wall clock shown at Fig. 1. It is made from an old wrist watch and a few scrap pieces of fretwood.

It is far better than a " dummy " model and the sound of the ticking gives the model room a homely atmosphere. It does not matter, of course, whether the wrist watch keeps good or bad time, and even if it does not work at all, it provides a realistc frontispiece.

## A Real Model

However, you would like to be able to hear admiring friends say, with surprise, "Why, even the clock works!" So, if possible, try and fix up the old watch so it ticks. A child would go crazy over such an innovation as the wall clock we describe; the


Fig. 2-Size and shape of a typical wrist watch suitable
hand in our illustration will give you some idea of its size.
The dimensions of the case parts suit most gent's wrist watches, such as the type detailed at Fig. 2. It is just a cheap make of watch. If smaller wall clocks are, perhaps, desired, a lady's wrist watch could be incorporated easily enough into the design.

Two designs of watch cases are shown at Fig. 3. You can use one or the other, which ever suits your watch the best. If you have not the chusion shaped type shown at Fig. 2, it is possible to design a suitable type of case for circular or square or oblong shaped wrist watches, the same construction applying.
Having marked out the outside shape of the back piece of the case on


Fig. 3-Views of two simple shopes and sizes
tin. wood (an lin. thick front overlay piece goes on the face of the back piece, as shown in the illustration), cut the central watch hole in it to take the back of the watch fairly tightly. The fin. by $\frac{1}{1} \mathrm{in}$. notch at the left side of the hole is to provide space for the winding knob.

The front piece is cut exactly the same in the centre. The outside shape is the same as the back shape, being circular in one design and hexagonal in the other. The two parts are glued together evenly and neatly glasspapered.

## Completing the Clock

The wrist watch fits in on the front side. Test it in place before finishing off the case. If rather tight, the inner aperture can be glasspapered or filed. The watch must not be too tight as it requires to be taken out in order to wind it up.

To complete the work, stain and polish it mahogany or oak or ebony black. If the case has been cut from these natural woods, the case could be waxed and polished with a soft rag or with a brush.
Quite a good ebony black finish can be obtained by staining the wood with blue-black or jet black ink and rubbing in ordinary boot polish which, when it has been allowed to dry



## Fig. 1-The realistic finished article

slightly, is brushed up into a shine. If stained brown, use brown boot polish or lino polish.

For hanging purposes, make a small "eyc" from an old hairpin, safetypin or paper clip as shown at X, Fig. 3. A small hole is drilled for the stem of the eye in the back of the clock-case near the top and the eye pressed in; the eye fits over a small nail in the wall of the doll's house.

## A Grandfather Clock

If you possess two old wrist watches it is possible to make a striking grandfather clock out of one of them. The case is made much the same, except that you make it longer in length and fit a suitable sort of base so it stands up on the ground.

The top part would look better if shaped hexagonal and made quite plain down the sides. The "case" could be cut from a piece of wood measuring about $5 \frac{3}{3}$ ins. long by 2 ins. wide by $\frac{1}{2}$ in. thick. The base would be 21 ins. long by 1 ins. wide by $k$ in. or $\frac{3}{18} \mathrm{in}$. thick. It should be glued on to be flush at the back and show $\frac{5}{8} \mathrm{in}$. margin at the front and sides.

## From Two Pieces

You will find it more convenient to cut the case from two pieces of $\frac{1}{i n}$. wood. The watch aperture and winding key slot would be cut in one piece only, the plain piece being affixed to the back, with a $\frac{1}{2} \mathrm{in}$. hole in its centre (where it covers the back of the watch) so the movement can be pushed out for winding up purposes.

Now, in our illustration at Fig. 1 you will notice a small disc overlay on the pendant part of the case. This is merely ornamentation and is just a $\frac{1}{2} \mathrm{in}$. disc of wood or white celluloid glued on. If desired, you could tap in a large, roundheaded brass upholstering nail. No need to add anything like this to the grandfather clock as it would look rather out of place.

# Now is the time to make yourself useful in REPAIRING TOYS 

WE shall have to be many months yet before we are able to buy new toys, but there must be quite a surplus of existing toys which could be renovated to once again take their place in the hearts of the children. Toy repairs are not difficult and the hobby worker should need little instruction in carrying them out. Here are a few hints.

First of all, do not tamper with a broken doll. The legs, arms and head are all on one set of elastic and the expert will charge you more if he thinks you have had a hand in an

Mechanical toys are often discarded with just slight damages. Bright coats of non-gloss paint will bring the toy up well again and dents in the tinwork can be remedied if you lay the damaged part on a bench and hammer out with a mallet and a piece of wood.

## Pull-along

If the toy was a spring propelled type and this is now beyond repair, knock a hole in the front and add a length of string to make it a pullalong variety. It is difficult to replace wheels, but the writer makes up some very strong ones from the ends of


Fig. 2-Shape of paper for alphabet block

Fig. 1-A wheel attempted job which has failed miserably. Even if the eyes stick, it is better to get advice than to dig them in and smash the sockets and the eyes which now cannot be replaced.

## Soft Toys

The most worn and bald looking Teddy will look quite smart if you give him a light bath with a lather of soap and water, doing just a small section at a time and wiping away the surplus soap with a damp cloth. Teddy can then hang on the clothes line for the final touches.

Furry animals, if not too dirty, will look better if you rub them over with some bran warmed in a moderate oven. Work the bran in with the finger tips and then finish off with a fine comb.
cotton reels of the spool shape and shown in the illustration at Fig. 1.

Children take to certain shades, and if you can use any of the following, you will find they appeal immediately. Use blue, yellow, white, bright red, orange and bright green and for contrasts, black on yellow, green on white, blue on white and white on blue.

## Alphabet Blocks

Alphabet and picture bricks get very scratched although they are seldom damaged in any way.


Fig. 3-Making toy fort walls
you have beheaded them.
If the building part is worn, try the use of thin glue with a coating of silver sand or some plaster powder and this will be found very effective. How it is put on is shown in Fig. 3.

The rockwork may be broken away and this might be replaced with a neatly cut section of tree bark which should be daubed over with brown, fawn and green paint.

Avoid using any bright surfaced paints on the fort, as this only makes it look too new. If the drawbridge is broken and you cannot get a hinge, you could mend this by using a strong piece of linen as a hinge. Glue this firmly and allow to dry well before using.

Use wide tape and stretch taut when gluing in place across the joint.

## Bed Lamp-(Continued from page 13)

The latter diagram also shows how the paper is glued to the strip and held securely by a fixing bead nailed on underneath the shelf. A small wood strip could also be put along and pinned to the rail $D$ to hold the parchment here securely.
Stout parchment paper such as is used for lampshades is most suitable in this case, but being of a greasy or oily nature, a few tiny fret pins should be put in in case the glue does
not hold firmly. The front fixing bead, however, should greatly reinforce the fixing.

In Fig. 6 we include a sectional view showing how the electric bulb is installed. Assuming that the panel H has not yet been fixed, the electric bulb socket is fitted to the end upright of the lamp, a hole being previously cut in this piece with the fretsaw to receive it.

Push the lampholder through the
before they are stuck on with thin glue. Copal oak varnish is ideal as a finishing touch.
Skittles are splendid when there is a crowd of kiddies, and split ends can be bound up with adhesive tape and painted over. If you are short of paint and only have oddments, paint the skittles in all manner of colours and, if you are artistic, paint some impudent faces on them. Cartoons of Axis leaders will give you some ideas and the children will need little encouragement to knock them all down.

## Fort Repairs

Toy forts are always an attraction and a few hours spent on the most dilapidated one will be worth while. Possibly the pins which hold the sections in place on the fort base are bent. Pull these out with the pliers and insert some lin. panel pins after
polish with furniture cream is a good plan, but if you care to make the bricks some new paper covers shaped as shown in Fig. 2, you will find these make a great improvement. Little pictures could be put on the covers
hole and screw on the milled-edged metal ring. This will hold the socket rigid and ready for the bulb to be pushed and twisted in place.

The wire flex will, of course, have been connected to the lamp holder before this latter is fixed in the wood end of the article. The panel $H$ screws on to the two uprights $G$ at the ends.

Make all joints secure and thoroughly clean the article before finishing.


THIS is the time of the year that people who wisely pursue hobbies think about changing from an outdoor summer hobby to an indoor winter one. Consequently those firms which cater for the philatelists have their new catalogue ready for sale, and we find the 1943 catalogues already on the market.

The war has affected the publication of these just as it has any other book, and if you have in years gone by asked for a stamp catalogue as a Christmas present then this year you must ask anyone who is good enough to give you one to get it without the least delay. If they do not do so then you will be disappointed, because the number printed is very much less than in former years.

## A New Catalogue

Messrs. Whitfield King \& Co have just issued their 42 nd annual catalogue at the usual price of $7 / 6$. Unlike their previous catalogues, which have been whole world editions, they have restricted this one to the stamps of the British Empire, with a foreign supplement to the 41 st edition.

This means that all the stamps of the British Empire issued to date are catalogued, but to have a complete record of the foreign stamps you need to refer to the 1942 issue.

There are 376 pages and over 1800 illustrations with over 16,000 British Empire stamps mentioned. Paper is becoming so scarce now that it is by no means certain that you will see another catalogue next year. So make certain of one this if you can.

## Recent Issues

Of the stamps which have been issued lately and which we are able to describe one must mention the South West African set. We described the South African War issue recently so this will serve for the description, as the stamps are really the same, with the overprint S.W.A.

Fiji has a new 2d. value, and it is illustrated here. This is the third 2d. stamp that Fiji has issued during the reign of King George VI. The first had a map of the islands, but it only had the 178 degree East marked on it. Then, for the second printing, they added the 180 degree marking and now they have the stamp illustrated as a third. The building which you see is Government House.

The New Zealand stamps, the $\frac{1}{2} d .$, 1d. and 3d. values all appear to have the same design, but a closer look at the two illustrations will show a slight
variety. These two would do well to test the sharp eyes of anyone. Ask what is the difference between the two stamps other than the values?

Probably you will have to point out to them that the figures of value vary. In the penny stamp you see two figures, one on either side of the name tablet at the bottom. Also the line at the bottom of the portrait has a kink in it over the symbol " $\&$ " of Postage and Revenue. The threepenny stamp has only one figure of value, and the line is quite straight. You might test one or two of your friends with this illustration. The $\frac{1}{2} d$. is similar to the penny.

## The States of Aden

New pages will have to be found in the stamp album again for the States of Aden-"Shihr and Mukalla "and the State of "Seiyun." The lowest values of each state, the $\frac{1}{2}, \frac{3}{3}$, and 1 anna all show portraits of the native ruler.
Three values, the $1 \frac{1}{2}, 2$ and 3 annas,

NOTES AND
NEW ISSUES

# Any housewife would be delighted to have A SIMPLE SALT BOX 


on the scullery wall. The lid acts as a make-shift shelf on which pepper tins, cocoa tins, etc., may sit. If, therefore, you are searching around for something to do to pass the time, this salt box would be time well spent.

## Construction

The construction, as with most salt boxes, is quite straightforward. First of all, find a couple of pieces of $\frac{1}{2}$ in. wood that will make the ends of the box; the size is 9 息ins. long by 3 ins. wide.

Plane both sides nice and smooth, then scribe the shape at the top with the compasses and shoulder off by means of a set-square, then cut with a coarse fretsaw. For the front of the box, you need a piece of thinner wood, such as. 3in. thick, measuring 9 ins. by $6 \frac{3}{8}$ ins.

HERE is a novel, easily-made salt box that will be appreciated by most housewives. It holds about two packets of salt. The writer made one, exactly as detailed, from pieces of old boxes broken up for fire-wood.

When made and glasspapered smooth, the work was coated with a brown enamel paint and the word "SALT" painted on (by means of a card stencil) in yellow stone paint of the yellowish or creamish colours usually applied to window sills.

You are almost sure to have some of the kind of paint required left over from other jobs that would finish the salt box. Of course, almost any sort of paint may be used, but the brown and cream go well together.

The salt box hangs on a roundhead screw fixed at a convenient distance

Attach this to the front of the ends, then add a back piece measuring 9ins. by 9 gins. as shown at A. A base piece (when the bottom ends of the work, so far, has been planed evenly) is attached, this measuring 9ins. by 3 角ins.

## Use Thin Nails

It is wise to use slender nails, not the usual wire nails, as these are liable to split the thin wood. Oval nails lin long are ideal, including lin. or $\frac{3}{3}$ in. panel pins.
By the way, if you cannot find pieces of wood wide enough for the front and back, remember that half widths could be used. For example, two pieces 9 ins. by 5 ins. would give you the back piece: In fact, you could use three pieces 9 ins. by 3 ins.

## Lid and Rest Bar

The lid piece, as shown at $C$, should rest on a bar of wood, the lower face edge of which should be rounded over. The reason for this is obvious, as a sharp edge would be liable to scratch the back of the hands.

The bar is screwed to the inside of the box on a level with the top edge of the front piece. Not only does the bar act as a rest for the lid, but also prevents dust getting into the salt, or alternatively, prevents any likelihood of the salt reaching into the hinges and causing them to rust or corrode.

The lid is cut to the size and shape shown by the top view at D. Try and make the lid a neat fit between the ends. A tight fit is not desirable, as some allowance must be made for the application of enamel. Round the front edge of the lid as shown

## Hinging the Lid

The lid is hinged in place with two $1 \frac{1}{2}$ in. brass butt hinges, or metal ones, according to the kind available. Set the lid in place, then atatch the hinges to it, keeping them lin. in from the ends. The loose flaps, are then screwed to the back of the box.

Bore a lin. hole in the centre of the back, near the top, for hanging purposes (see B). The large hole allows a cup-hook to be used, if desired.

Regarding the stencil, this is marked out on thin card as shown at E. A sharp penknife is used in cutting out the letter spaces. This should be done neatly, without ragged edges or torn edges.

## Cutting the Stencil

The cutting out should be done on a flat, smooth piece of wood. A ruler will keep the cutting straight and true. The size of the lettering is shown at $B$.
When the application of brown paint has dried, place the stencil over


Fig. 2-Vorious views and dimensions of parts required for the box
the face side, approximately in the centre, then apply the cream paint. This is best done with a stiff, shortbristled brush.

## Stencil Work

It can be done with an ordinary paint brush, but great care must be exercised so that the stencil is not "blocked" up entirely with the paint. The latter will "seep" behind the stencil and thus spoil the letters.

Failing a suitable kind of brush, get
a piece of linen rag and roll it into a ball so that there is a smooth end. Apply the paint to this, then carefully squee-gee (press, by rocking movements) the paint against the stencil.

Do not have the rag soaking with paint, incidentally, otherwise it will "run" just the same. The rag must be fairly dry of paint and, when dabbing, be careful not to allow the stencil to shift about.
The writer waited until the brown paint had almost dried. It was
slightly tackly when the stencil was laid upon it. The tackiness served to hold the stencil down securely and prevented any chances of an excess of paint seeping behind it.:

An hour later, the stencil was carefully lifted off and a neat wording was the result. As the enamel paint used rather "dried" in the wood, leaving a streaky, unshiny finish, an application of varnish remedied the trouble. The inside of the box, including the inside of the lid, must not be painted, of course.

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