

the thin plywood sides. A tlance at Fig noed 12 zeparate fillets (four each of
pieces 3, 4 and 5), six being for the face
piece and six for the back. Fig. 2 shows pioce and six for the back. Fir. 2 shows how the patterns should be laid out on order to obtain economical cutting.
Blocks and fillets
Two end blocks of wood (10 and 11) are required. Their sizes are shown on
the design shoct. They are cut from $3 \mathrm{in}$. by tin. stripwood and are squared
up true before gluing in place. Note that up true before gluing in place. Note that o the curve of the body at that point. Theso blocks are glued to the inside surface of the back piece, being inset
fin, as shown on the design shect. The fillets are glued round up to the blocks, being also inset yim. to allow for the adrition of the thin plywood sides as



FIG. 3



FIG. 5


Mark the positions of the biocks on the fillets round this as for the back piece. Next shape the bridere before fxingea it on to the face piece, It consiats of a 2 lin. frume moulding. This is shaped and cut as shown in Fir 3. The height is reduced to ${ }^{\text {jin. and }}$ four cuts are made where

indicated to take the strings. The The ends aridge chamfered off for effect. indicated by the dotted lines on the design strength should bo inserted from ander neath the face piece and into the bridge.
Now glue the face pieco on blocks, ensuring of course that the usembly is in true alignment.


While the glue is drying. It is essential
that these plywood sides are fixed firmly to the fillets and workers can use their own ingenuity for binding. For instance, cut-off sections of motor inner tubes are
found to be quite handy here. The use of found to be quite handy here. The use of
wedged in appropriate places under the binding will appropriate places under the becping the sides firmly in position Trim the plywood sides to the cen of the top block. Glue and pin the ends oo the block as in slarting, again ensuring whole casing until satisfied that the the is thoroughly dry and that the desired Thape has been maintained.
The neck is made from a solid block of hardwood such as mahogany or beech, mark the side view on the thickness of the wood and then saw to shape, working rom each end. Keep the saw perfectly in a vice if possible, securing the neck Now mark out the plan of the neck and cut as before. Final shaping can be done with a Surform file or a wood rasp to the section and shape shown in Figs. 4 and 5 . Finally plane and glasspaper the nock give a comfortable hold. Those who are working with a Hobbies kit of materials will, of course, have the neck practically
shaped as required and only finishing is дecessary.

## Fret positions

The neck can now be glued to the of the neck (Fir. 6 , and desien sheet) and a matching hole in the block (pieco 10) of the body. Pins which have boen inserted for fixing the thin plywood sides should be removed if they foul the dowel position. Note that the face of the nock
is in line with the for pice of the body

Next mark off on the neck the positions of the frets. Make a cut across these with a fine tenon eaw, small back saw,
hacksaw or fretsaw, and tap the fret wire in position. The fret wire is inset 1 in.
from each side of the neck and should be cut accordingly. The addition of plastic
wood or glue will ensure a tight fit for wood or glue will ensure a tight fit for
the fret wires if the saw cuts have been made too large.
The nut at top of the neck is a The nut at the top of the neck is a
piece of in plastic material or bone, the side view on the design shoet. the side view on the design shoct. find the pegs have to bo shortened, as shown in Fig. 7, and holes drilled for the insertion orthe strings.
The positions of the holes for the pegs
are shown on the design sheet. These holes are drilled from the underside, ensuring a tight fit in order to obtain
correct tuning. It is advisable to drill to correct tuning. It is advisable to drill to taper carefully with a reamer, round file or the tang of a large file, checking constantly the fitting of the pegs in their holes ensure a to thit.
bridge, head and underside of the neck can be stained black and polished or

painted cbony black, with the rest clear rench polished. Individual workers will, of course, use their own ideas as to finish and quite a good effect can be obtained ions. Shapes of the pearl acetate overlays (6, 7,8 and 9 ) should be traced and cu with scissors, the interior portions being cut away with a sharp knife. The posi-
tions of 6,7 and 8 are shown on the design sheet. Overlay 9 covers the join in the thin plywood at the bottom of the instrument. The overlays are added by gluing, and fret pins can also be inserted sut strings are added as shown in Fig. 3
A good tutor will deal with many

questions, such as tuning and playing this popular instrument.

Hobbles Kit No. 3260 for making 2 Ukulele contains suitable ply and other wood, partly shaped neck pegs, fretwire, strings and decors tive plastic material, etc. Kits obtuinable from branches or Hobbles Lid., Dereham, Norfolk, price $26 / 11$ (post free).

## Screen for Beach or Garden



By A. F. Taylor

MANY uses will doubless be
found for this lightweight screen Its chief use will be for those on its chief use will be for those on either 2 sun or a wind-screen. For bathers who wish to undress on the
beach it can very quickly be made into a beach it can very quickly be made into a
small tent, while if caught in a sudden shower very little alteration is needed to turn it into a shelter.
on the a wind-screen it can make sitting members of the family will have lots of fun with it in many ways.
It is lisht to carry about and when dismuntled can be stowed away in a very averagpascreen, but theso may be altered
to suit your own particular requirements. The screen consists of a length of material with pockets into which
bamboo canes are inserted at equal distances. The projecting ends of these canes can then be pushed into the sand or soil in a straight line or arc to form a
wind-screen, or to form a square for a
About $3 \frac{1}{2}$ yards of canvas or similar naterial will be needed to make the screen as shown in the 8 ketch and the
width may be between 36 ins. and 48 ins . or more if needed. It is not advisable however to exceed these measurements otherwise it will be rather cut.
Five bamboo canes between 5 f . and 6 ft . long should be procured before sewing up the ends of the canvas and fixing the other three pockets. You will then be them, but do not make them too tight. It is only necessary to fold over the ends not forgetting to turn in the rough make a neat pocket just large enough for the cane to slide in easily. Close the top by scwing across socurely to keep the anes from pushing through.
formed by sewing a narrow strip of the formed by sewiag a nurrow strip of the
canvis or a piece of upholstery webbing canvas or a piece of up
$\mathbf{3 8}$
or binding across the canvas and closing the top ends as before.
To turn the tent into a shelter you will ed another piece of canvas about a yard square which can be slung over the top and secured at the corners with
tapes or hooks. It is also a good idea to sew one or two large pockets on to the canvas into which many odds and ends can be
slipped. Food for instance could be slipped. Food for instance could be when on the beach.
The canes are removed and the canvas
folded up or the entire gad get could be folded up or the entire gadget could be
rolled up and tied with a cord or straps rith a handlo between.
For use on hard ground the canes may need pointing but when these are rather large and hollow they should first be
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is in line with the face pioce of the body


Constructors' Radio Guide- 2

## DUAL-WAVE COILS

MLong Waves may be tuned, in Long Waves may be tuned, in
addition to Medium Waves, so It is very useful to be able to tune It is Very userul to be able to tune arranged.
One method, often used, is to have
entirely separate coils for the M.W. and
compact piles. For the lin. diameter giving piles, each having 90 turns, for this L.W. section
If the M.W. section is wound upon a tube with a diameter of other than lin as previously explained, then the number Dillows:
Diameter of
Diameter of

Number of
 Tube

## Turns

Tube
liin.
1 iin.
1inin.
inin.
2in.
few turns
210 ( piles of 70 ).
A rew turns more or less will make no s.w.G. wire may be used.

Switching
The L.W. section is switched out of by wiring an on/off type switch from Flg. 1-Dual wave cofl point 2 to point 3 . When this switch is


FIs. 2-One-valve circult
L.W. baids, and to select the appropriate coil by means of a switch. Another metwod abie to tune both wavebands. This
coilse of coil is shown in Fit type of coil is shown in Fisebands. This ansily be used to replace the M.W. type of coil fitted in the crystal detector The is for medium wetween points 1 and 90 turns of 32 S.W.W.G. enamelied wire, on aind diameter former. Afer ending the in. is left. The long-whe of about on. As a large number of turns will be required, thin wire ( 36 to 38 S.W.G.) it employed, and the turns are wound in


Fis. 4-Dual wave coll with reaction
closed, the L.W. winding is shor M.W. section Point 1 is taken to the fixed plates of with crystal sets). Point 3 toes detector, ~~~~,

## By F. G. Rayer

(The moving plates tag of the condenser, and one wavechange switch tag, will also out the coil must be in the turns through as shown, and point 2 consists of two wires, one from each winding. Any of the forms of aerial coupling already described can be used to give more
selective tuning. Valve detectors

## Valve detectors

Crystal detectors can only give low used instead. The transistors are often


Fig. 3-Coil with reaction
detector, or 1-valve receiver, appears in
Fig. 2. The condenser, remains exactly as for the crystal detector. Point 1 is connected to fixed condenser of $\cdot 002 \mu \mathrm{~F}$. The radiorequency signals pass through this conThe valve itself the valve grid. is heated by current from a $1+\mathrm{V}$. or 2 V . battery. The beated filament emits
elecrons lectrons which have to pass through the
grid to reach the anode, to which they are attracted by a positive voltage derived from the High Tension battery. As a result, an amplified signal appears in the
anode circuit, to operate the phosés. The anode circuit, to operate the phones. The
2 megohni resistor allows the small
voltage arising fication, to leak away. For this reason, this resistoris onten termed a 'Grid Leak'.
An additional benefit also the additional benefit also arises from requency signals are present at the valvo anode, and are prevented from passing
to the phones by the high-frequency choke. (his chooke allows the audible R.F. signals thus have to pass through the coil winding shown between points 3 and 4 , and through the variable $0003 \mu \mathrm{~F}$ condenser, to earth. in passing R.F. signals induce stronger currents in the main section of the tuning coil. This effect is known as 'Reaction' and gives a great increase in volume. The advantage is so great, that reaction is always pro-
vided in simple receivers of this kind.
Reaction coll
The crystal set cannot use a reaction winding, but it is easily added, as shown oot critical, but about two-thirds the number used on the tuned winding will be satisfactory - that is, 60 turns, for a 90 turn coil. In Fig. 3 then, points 1 and 2 go to the tuning condenser, exact be as
before. The reaction winding may be of very thin wire, to save space (38 SWG is satisfactory). Point 3 goses to the reaction condenser, and point 4 to the
valve anode. It is important that these valve anode. It is important that these

viewing valve from below
induced in the larger winding will be of wrong phase, solume, instead of increasing it For the same reason, both windings musi be in the same direction, as shown. A solid dielectric condeaser is usually tween $.0002 \mu \mathrm{~F}$ and $.0005 \mu \mathrm{~F}$ bein normal. As this condenser is closed, volume increases, until the valve com mences to oscillate. This sets the limit to the amount of reaction which can be in building up the volume of weak stations.
Dasl-wave with reaction
Reaction is also provided with dualrange coils. So as to obtain a fairly equal coupring on both M. W. and L.W. bands he reaction winding is generally situated ends boing points 5 and 6 in Fig. 4. With this coil, 1 goes to the fixed plates of the tuning condenser, 2 to aerial, 3 to wave
change switch, and 4 to earth. Lead 5 Valve connectons

"iin

REACTION CONDENSER TUNING DIAL ON OFF SWITCH Fig. 6-Wiring plan of circult in Fig. 2
goes to the reaction con-
be used, if no accumulator is available Pin connections for this type of triode
appear in Fig. 5. It is very simple to appear in Fig. it only has 4 pins. valve anode. The turns wound between large card washers glued to the tube, and this lis a convenien mexhers must be cut. But winding the L.W. section in 2 piles instead of 3 does not materially infuence Once again it is essential that all the L.W. sections) be in the same direction. It is simplest to wind the M.W. section, leave about tin: space, and wind the reaction section. The card washers can near the reaction winding. The coil can then be finished by dividing the LiW.
turns between the spaces provided, filling turns between the spaces provided, filling
the top space before passing the. wire over the centre washer to bottom space.

The valve in Fig. 2 is called a "Triode' because it has 3 electrodes - filament, grid, and anode. Valves of this kind are not now regularly manufactured, but are casily obtainable from surplus sures, which can be obtained from an accumullator, or from a dry battery. With the latter, a resistor of 10 ohms must bo added, when using a 2 -cell dry battery,
to reduce the voltage from 3 V . to 2 V . Alternatively, a single $1 \frac{1}{2} \mathrm{~V}$. dry cell may

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Modern valyes have more pins, and
usually more electrodes inside. Fig. 5 usually more electrodes inside. Fiz.
also shows connections for one of these, also shows connections for one of these,
which will be suitable for a 1 -valve receiver - the 1T4. This type of valve is not intended for use with a 2 V . accumu lator. Instead, a 11 V . dry battery should be used, for filament supply. It will be
seen that an additional electrode (the scen that an additional electrode (the be used exactly as a triode, by wiring the screen grid to the anode. This is always done when using screen grid valves as
triodes. When triode operation is not triodes. When triode operation is not to H.T. positive. The screen grid is no necessary in a 1 -valve set, but will serv
useful purposes in complicated circuits. A H.T. battery voltage of aboul $60-65 \mathrm{~V}$ is usual, with a 1 -valve eet. It should be noted that this is very much
greater than the $1 t \mathrm{~V}$. or 2 V . filamen greater than the $1+\mathrm{V}$. or 2 V . filamen
supply. The H.T. voltage must therefore supply. The H.T. voltage must therefore
never bo allowed to reach the filament for any reason whatever, or the valve wil be damaged. Wrong valveholder connections, shorted leads, or similar errors
should thus bo looked for, before inserting the volve. The sional from detector (valve o The signal from the detector (valve or
crystal) can bo increased in streasth by crystal) can bo increased in strensta can then bo operated. Anpiner aredeal


Jig Quiz-No. 8
AIRCHEATM SIPOTTTINTA


HHLS month's purzie spotights an aircrift which is used solely to
familiarise would be pilote with Chmiliarise would-be pilots with the characteristics of jet powered neroplanes. These types of zapachines are not mances in spood, altutude and endurance
but their role in training pilots is vitally but their role in training pilots is vitally
important. This ain
piston-engined triner which bears similar name nud which is in service with the Air Forces of Rhodesia, Burma Force as its busic jet trainer, the Mk version is now in full-scale production. It has the distinction of being the world's first military Jer training aircraft in which peginning of their flying clroer. In fact the R.A.F. has adopted a secheme with this aircraft whereby pilots are given an
all-through' jet training and the firs ing carcer from scratchon start their fly pleted their course twelve moncrat comdeley Viper by a single Armstrong Sid. dation Vor a crewt of it has accommoinstructor), seated side-by-side (pupil and type seats. Unlike most of the presenday jet aircraf, there are the present estrictions placed on its performance
details and we know the maxiter speed to be 437 m. p.h. mpximum desiga has a range of 580 m. miles and an endur ance in excess of 24 hours. The time it minutes. There is also 30, is twenty one for a variety of asmaments to bodation or training purposes. Two be fitted machipe-guns can be fitted in the nosc, plus two standard reflector sights, nose in
front of cach seat. Various under in
stores could be carried such as six 60 lb . two 250 lb . general pumpose bombs A prototype of the Mk. 1 powered by engine flew or thiddeley Viper ASV 3 Singine that date considerable in June 1954 a development prosramme havo taken place, resulting in the Mk. 2, which has and is fitted ling g-gear than the Mk. Viper ASV 8 engine. The first of these Mk. 2's, on which the production types are based, made its first fight in tho The min 1955 .
the main feature about this aircraft is back wings or streame dined fairings, but a straightforward rugged design capable Air Force. Solution next week

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mind however that the law of copyright makes this an offence if the projects made from them are intended for sale
unless permission is obtained. Articles made up as suggested in the accompanying strip should prove popuscope for those who are not too proficient
finish.
(T.S.R.)
(T.S.R.)



I'M GLUING THE ATTRACTIVE MAGAZINE CUTTINGS ONTO ODD PIECES OF WOOD.

All the family can Join in making many NOUELTIES AND USEFUL ARTIClES FOR THE HOME USINC COLOURED PICTURE'S CUT FROM YOUR MAGAZINES. SOME SUGGESTIONS:- PULL-ALONG TOYS



ELECTRO-MAGNETIC CRANE


ACRANE is always a popular toy with so on account of its very attractive feature. The usual crane picks up the
goods with a hook, whereas this model does it by means of electro-magnetisme When the current is switched on the magnet will pick up any iron or stee objects, transport them to where re the current is switched off. All this is accomplished without any. handling or
having to hook the objects on and ppeal for the boy have a very special oves a novelty.
The power to operate the electro-mag
net is supplied by a two or three cell ash lamp battery which is housed in the
base of the crane. A push buten is the easiest and quickest to operate an this is also placed in the base.
Quite a load can be pike Quite a load can be picked up with the
small magnet used in this model, but if
it is needed to pick smail magnet used in this model, but if
it is needed to pick up larger objects the
size of the bobbin can be increased finer wire wound on and the amount of
current increased somewhat when current increased somewhat. When iner wire is used so as to get more turn be bumed out.

Substandial baseboand
The bascboard is made as substantial opple over when a heavy object is being orm of a box to bouse mane in the beshlight batteries. It could, of course, fitted with wheels for moving it about
but these can easily be added later if Cut two pioces of wood, either ply or hardwood 6ins. long 4ins, wide and tior Complete the box by otlom of the base. strips 1 in . wide and tin. thick round the
sides - two picces 6ins. long and the
two ends 3 tins. long. The bottom must of course be screwed on so that it can be removed easily when a new battery screws will do the job very countersunk screws will do the job very well.
The two strips of wood for the crane arm (A) are 15 ins. long, tin. wide at the top and lin. at the base. The arms may may taper off from tin of it in. or the tin. at the top.
The crane arms may be raised or
lowered at will and for this purpose are swivelled at the base on the two sup-
ports (B) cut from ports (B) cut from 1 in. square wood
tin. thick. These are glued and tacked in the position shown on the base plan. The pivots for the arms are thin round head
screws. A small block of wood $\ddagger$ in. thick is glued to the top of the arms to separate About tin. diameter is for the pulley. this but do not have it much smaller. well to winding mechanism ( $C$ ) is fitted consists of a length of tin. dowel mount ed between two supports with a handle



on one end. Near to the other end is
contact disc which transmits the cu from the battery to the magnet.
Start by making the two supp Start by making the two supports (D)
and fixing them securely to the glue and panel pins. Cut them from with wood to the sizes given and when drilling the dowel holes make them a good fit but not too tight. You should be able to turn the handle fairly easily and yet it released without letting the load fall

## By A. F. Taylor

Altematively, the winding spindle may be made to turn easily either widy with the engagement of a ratchet pin in the serrated edge of dise $(\mathrm{H})$.
Fix the supports 24 ins. apart measuring from the insides. The length of the supports is which goes through these this in position you will need two wooden discs, one for each end on the inside of the area on to These are for controlling wound and both have a diameter of fin is wound and both have a diameter of lin.,
the one near the handle being tin. thick while the other one, which is also the ontact disc is fin. thick.

## Ensure smooth contact

On to the contact dise are fitted two
metal bands each tin. wide and spaced in. apart. These may be of brass o soldered flush bo a tight fit and the join contact when revolved against the concact levers.
Glue both discs on to the dowel rod play, then cut out the very slight sid hown at (E) from thin. wood and glue his in position. The handle itself is ahort length of $i$ in. dowel.
Make two
$3 / 4$ Mass two contact levers from sheet
 Drill a small hole in the base of each
and screw to the baseboard to make and screw to the bas
contact with the disc.
contact with the disc.
Now we come to the actual 'pickingNow we come to the actual 'picking
up' mechanism or the electro-magnet.
You may be lucky and have one already You may be lucky and have one already
made, but it is quite casy to wind it yade, but it is quite easy to wind clectrich. The magnet bobbill do very well, but it must
be a fairly large one so that it will be heavy enough to keep the lifting line
taut. Modern bells with
bobbin are useless and it is much bette - make a substantial one yourself. iece of soft iron such as a nail of large nail of tin. diameter and cut it to bout leins. long, leaving the head on which will be at the bottom, and form a arge lifting surface. On to this wind it as you go - make this just over lin wide and leaving the nail projecting a each end.
Cut two dises of thin ply tin. diameter and glue on to the paper to form holes near the edge of the top one to ake the lifting line as shown at ( G ). We are now ready to wind on the wire, and trength of the magnet. For ordinary work use 24 S.W.G. cotton-covered copper wire and wind on about 8 to 12 ayers. A stronger magnet would require more layers and the size of the w
be decreased to say 30 S.W.G. Before starting to wind, the end of the wire is pushed through one of the holes the top disc leaving about zins. protruding, then when the winding is
complete the other end is threaded hrough the remaining hole.


## Try Forecasting the Answerr

HERE is another simple arithmetic rick where you supply the It sounds something lik putting the cart before the horse, but le us first explain the presentation.

## By S. H. Longbottom

giving a result as shown in Fig. 3,
where you will find that the correct answer to the sum of these numbers was originally given in Fig. 1 , although you have added some like your friend. You will be no doubt wondering how we
could possibly forecast the answer could possibly forecast ter answer unknown to you.
The solution is quite simple. From
the first number written down by your
down and when subtracted from 999 we are able to add 843. The same proces If you wish to try the trick with fou digit numbers remember add 20,000 and to subtract two in exactly the same way tions by subtracting from 9,999 instead of 999 (See Fig. 5.) Occasionally you may come acros some smart person who will write down
about a yard should be enough. One end is fastened to the contact discs by drilling to the metal bands. The other end is threaded through the two holes of the magnet bobbin, made secure and joined to the two wires already pushed through Now you can switch on the current after connecting the battery in the base and see how large a load it will lif. A coat of paint will give the crane a but this is not absolutely necessary.

Hand your friend a piece of paper and pencil, asking him to write down any with three number, as shown in Fig. 1 Take back the paper, and, after allowing
sufficient space for the addition of four ufficient space for the addition of four
ther numbers underneath, write in the nswer. This sounds impossible, but with a little more patience and the aid of the accompanying diagrams you wil
soon learn the solution. At this stage the paper will appear exactly as in Fig. 1 and you may return it to your friend for him to add the
second three-digit number, underneath the first. Taking the paper again, you the first. Taking the paper again, you
write in the third number and this operation will now produce a result as in
Fig. 2. Finally, the paper is returned for a
ourth number and you add the fifth,

| 432 | 432 | 432 | 000 | 7865 |
| :--- | ---: | ---: | ---: | ---: |
|  | 156 | 156 | 253 | 6692 |
|  | 843 | 843 | 746 | 3307 |
|  |  | 679 | 891 | 7619 |
| $\overline{2430}$ | $\overline{2430}$ | $\frac{320}{2430}$ | $\frac{108}{1998}$ | $\frac{2380}{27863}$ |
|  | $\overline{\text { FIG } 2}$ | $\frac{\text { FIG } 3}{\text { FIG }}$ |  | FIG |

friend you add two thousand, and subhas inserted the second number a small calculation has to be made before you
can add the third number. This third number which you have to add, is the result of subtracting the second number
from 999. In this case 156 was written 41
some peculiar figures in an effort to remember the formulae quoted, ad 2,000 and subtract 2. In Fig. 4 we show the result of such a person writing down
000 , but if we add 2,000 to this, and 00 , but if we add 2,000 to this, and cubtract 2 the correct answer of

$T$ gre United States is a country of 1 great diversity - vast cities and churches for meditation. Geographically, there is variety, too - lakes and deserts; prairics and mountain ranges; rocky sealabels are likewise varied.
American matchcover collectors hold
anoual conventions and outstanding covers are exhibited. The outstanding presented with a plaque and his or her name is engraved on the annual honour plaque

Several collectors who specialize in the 'Girlies' have written up an index or
ckeck-list of all the poses of each set. ckeck-list of all the poses of each set.
Other popular designs include Scenic Views of America, Hilly-Billy Jokes,
Safety Slogans, Dogs, Wild Animale, Sarety Slogans, Dogs, Wild Animals,
Game Birds, etc. American tobacco merchants issue some of the world's most attractive cigar
bands. A set coveted by collectors, por to Eisenhower is very rare Washingto Club members should sa cigar bands for exchange with U.S. friends. Non-collectors can trade them for stamps or other items.
America is a paradise for hotel label
collectors. Many are in colour and depic the particular hotel, or some scene characteristic of the name. For example the present label of the Desert Inn at
Palm Springs shows a desert scene, and Denver's Brown Palace Hotel - 'Where the World Registers' - a world map. It takes a fast train, travelling a mile cross the Nation. Leaving from to castern seaboard, it must first negotiate he Appalachian Mountains, then drop down to the broad, fertile central plain Great Lakes. Continuing fingers of the winds through the 'Rocky Mountains, called the 'backbone of the continent' traverses the high tableland beyond

AMERICA
-By R.L.C.
Monthly meetings often end with a
Shucking Contest, a contest to seo who can remove the smanli staple from the neatly place the matches in a continer.
The one who finishes in the shortest time
is declared the winner and recelves a is declared the winner, and reccives a prixe, plus all the matches shucked. introduced by the 'Chicaso Match' Corp.
of America' in 1938 are the most popular of the "Standard Designs". Theso desigus are printed up in lare quantities in advance - With the spuce for the advert-
isement jeft blunk and stored flat
without the matches in them. Theso aro without the matches in them. Theso aro as small as one case or 2,500 matches. used is limited but it permits the small advertiser to get a series of matches at a monll inventment.
Most American manufacturers insue one or two 'Girlie' sets each year. These to the set dopending on the type of press on which they are printed. What would appear to be sets of four, ten, sixtoen, etc. are actually potace.

3c.green - The White House-3d. used.'
Millions of Americans take part in sports. About 3 million ski. Golf claims 5 million players. And some 20 million bowl at thousands of bowhing alleys. American boys and girls. play many games. 1939. 3c. violet - Baseball- 4d. used. 1950 . 3c. brown - Scouts and Badge - 3d. used.
The Stars and Stripes (American flag)

## Advertisers' (1fiers

ITS FUN COLEECTING mps the Themazic way (i.e. by subbecta) such a Cowers, fish, music or railway engines, I pleke fany, of tho above sent on approve. This month
 mummed. price 10d. poss free.
. Lennard Eutete, 83 Thamee Stde, Stainew, Mlddx
100 Different Stamps FREE!! Request id. upwards disocust Approvals.
British Colonids or Porelgn. Oon't dalay-Writa today, enclodng 3d stamp c. T. BUSH (H), S3 MENEWLYN WAY,
appears on a centenary stamp of 1945 Rare stamps worthy of note includ 847. 5c. brown - Franklin - $£ 22$ mini, 16 used; 10 c . black - Washington Jefferson - $£ 110$ mint $£ 35$ used; 100 green - Washington - $£ 22$ mint, $^{\text {£ }}$ used. The above issues are imperforated. 1861 . (perf.) 5 c . bistre - Jefferson -
$£ 55$ mint, $£ 12$ used; 15 c . black - Lincoln

10 CANADA (Cat. 311) $1 / 6610$ Australis memoratives. Super mixture Sl. Posit 3 d . extra. -
A. J. McKenna, 19 Mount Rd., Fleetwood. $\mathrm{F}_{\text {Bargain Approvals. Colonials, Enclose }}^{\mathrm{RE}}$ 3d. Gor Cone, Halifax. STAMP BARGAINS at 1d. cach Commemore
 Acte. 100 Free. Request ap provalis: STAMPS FREE - Empire Packet Including
 ROYS STAMP SERVICE - Beetancrs and

£ $£ 6$ mint; 24c. blue - Washington Members of the League of Hobbyists requiring thematic help or any further information on American stamps and Raymond Cantwell, 48 Fourth Avenue Slade Park, Headington, Oxford. Please enclose S.A.E. for reply aide labels are
'Space agc' tip
The 'Space Age' is here. Stamps and labels are bound to appear soon depic ing Sputniks, rockets, launching ramps, press reports and take notes. Then, when the first rocket lands on the moon you will be able to stampevise the story of the
century entitled "Conquest of Space'. Astronomy is already a popular subject among stamp designers. The following check-list should prove useful. 'Argentine 1946. 15c. green on green -
Astrolabe - 3d. used. Austria 1937. 12g. green - Signs of Zodian - 3d. used.
Brazil 1890.20 v . green - Southern Cross - 4d. used. Bulgaria 1936.1 leva violet - Meteorological Station - 1 -
mint. Observatory - 2d. used. Japan 1949.8y. green - Floating Zenith Telescope -
4d. used Monaco 1955. 200f; blue Stars and Rocket $-6 /-$ mint.




## Profitable pastimes

## A JOBBING IIANIDYMAN

W
ITH tradesmen's bills soaring
to such heights it is not surprising that more and more people each year are becoming reluctant
to employ tradesmen to carry out their home repairs. There are, however, many
people who, for various reasons, still pike to have their odd jobs done by others, particularly by spare-time employment. A good job done at a reasonable price is all that they expect. If you of working with tools then why not cash in on this and become a jobbing handyman? If you are capable of turning out

By Finlay Kerr
a sparo-time business which would give you much
a man it is not essential to have served an apprenticeship at a trade although if you have had some training in one of the building trades this would be an advantage. The various jobs expected to tacke include laying lino; reylaring windows; dealing with broken door locks; repointing concreting garden paths; erecting garden
gates; zeneral decoratios, etc. Informagates; zeneral decorating, etc. Informaothers can be obtained from a good 'Do-
It-Yourself' book or from magazines. The best tools
handyou intend becoming a jobbing handyman then it is essential that you
should possess a kit of tools. There is no
need, however, to purchace a full kit need, however, to purchase a full kit the jobs can be tackled with only the get the best quality you can possibly afrord. The initial cost may be a little
hinh but you will be amply repaid in
service anerwards. Donit be misled by service anterwards. Don't be misled by the alick appearance of the cheaper
brands of tools for you will find that
cheap tools will not give you good cheap tools will not give you good service. Remember, it is more economical
to buy quality' tools. treat them with the utmost carce. Tools which are given proper care and attention will remain serviceable for many years. Always store your tools tidily in
proper tool box or chest.

Many readers will no doubt already possess a kit of basic tools but for the a kit from scratch here is a list of the basic tools which should be included in a handyman's tool kit: handsaw; tenon (fin., zin. hin.); screwdrivers (large and smail); files (half round and flat); steel plane; oilstone (medium and coarse grained); wood scraper; brace and bits; spanner; pointing trowel; soldering iron; decorating brushes; pliers; blowlamp; bradawl; putty knife; plugging chisel; marking gauge; and wire cutters.
In addition to the above-mentioned tools, the following materials will also be required: assorted sizes of nails; screws, nuts, washers and bolts; glass paper; putty, linseed oil; fuse wire; plastic wood.
It will be necessary for the jobbing
handyman to have a workshop in which handyman to have a workshop in which done at the customer's home but some jobs will require a little preparation require some place to require some place to store your tools ment room having a bench and a vice would be ideal for this purpose. It is issential, however, that your workshop s weatherproof and dry otherwise yo
will be constantly troubled with rust. Having dealt with the practical side the job, here now are a few hints on the business angle. First of all, it should always be remem. bered that the best way for the jobbing recommandations. Give good service at
a reasonable cost and you will be sura reasonable cost and you will be surto you. To obiaini the first customers on
your jobbing book, ask your local hard your jobbing book, ask your local hardhis counter outlining your services or window of any local shop running such service. Shop window advertising is very popular nowadays and the cost is week depending on the district.

## Keep a record

Always keep a record of your cus your customer to koep you job as your customer to keep you in mind
should he or she require otber repairs
carried out at a future date. One person I know who has a successfull sparentime I know who has a successful spare-time
business doing house repairs always
44 44
leaves a stamped addressed postcard with his customers. By doing this, if his he postcard is sent to him asking him to call. He claims to have doubled his business by adopting this method. Why not try this idea also, or if you have
telephone, leave a printed card with your phone number. Remember, once you are in business. always be businesslike. You will offen be asked to supply these should always be given (free of charge of courṣe). When building up you price, you should include a charge for your labour, a charge for the cost of the expense you may have to ancounter Since your overheads are practically nil you will find that your charges will be well below those of the professional
tradesmen. radesmen.
A 'regular'
When buying materials for your jobs, plifer. Once you becolth the same sup pier. Once you become known to hin 'regular' and allow you discount on the goods you purchase from him. This disIf you are doing a job and you find that your customer requires further work done which is outside your scope then offer to find someone to do the work. favourite contractor, and, if to you businesslike, you will arrange to be paid a commission on all work you obtain for him.
bear in mou follow along these lines and good job done at a reasonable price yo will be surprised how quickly you will be able to build up a spare-time business as
*
*** $\begin{gathered}\text { t } \\ \star\end{gathered}$
Noxt weel we shall describe fow to make a handy cabinet $\star$ $\star$ for storing tools. Also part $1 \star$ * of 'Learn to Swim' besides $\star$ $\star$ other usual features for Clab'.
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