

19th JULY 1961

VOL. 132

NUMBER 3423

THE ORIGINAL  
'DO-IT-YOURSELF'  
MAGAZINE

# HOBBIES *weekly*

FOR ALL  
HOME CRAFTSMEN

## PATTERNS FOR A NOVELTY ...

Also in this issue:

FEATURE ON 'THE  
TEMPERANCE  
SEVEN'

COLLECTORS' CLUB

TWO-TRANSISTOR  
RADIO AMPLIFIER

START OF RAILWAY  
MODELLING SERIES

SHARPENING TOOLS  
AND SCISSORS

PHOTOGRAPHY

ETC. ETC.



## LITTER BIN

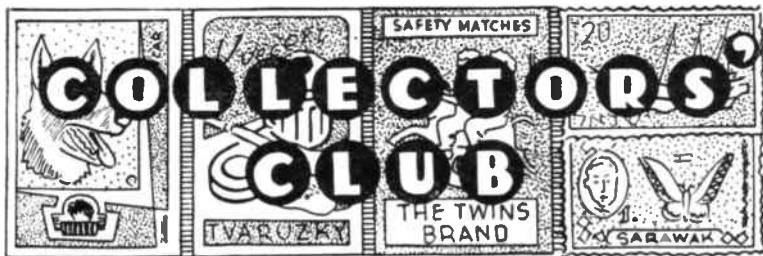


*Up-to-the-minute ideas*

*Practical designs*

*Pleasing and profitable things to make*

5<sup>D</sup>



ON 27th April Sierra Leone achieved independence, and to mark the occasion a new issue of postage stamps was released. Thirteen in number, their values are ½d., 1d., 1½d., 2d., 3d., 4d., 6d., 1s. 0d., 1s. 3d., 2s. 6d., 5s. 0d., 10s. 0d., £1. The designs, except that of the £1, appear on

## NEW ISSUES:

# SIERRA LEONE INDEPENDENCE

two separate denominations, and examples are shown in the accompanying illustrations.

### Palm fruit gathering (½d. and 1s. 0d.)

Palm fruit kernels, which are the principal agricultural export of Sierra Leone, are used in the production of vegetable oils and fats. The fruit is cut from the wild oil palm by climbing the tree with the aid of a cane hoop passed round the waist of the collector and trunk of the tree.

### A licensed diamond miner (1d. and 2s. 6d.)

These stamps depict the washing of gravel in a metal basin for the purpose of extracting diamonds, which is the simplest and most commonly used method although it is primitive and wasteful.

### Bundu mask (1½d. and 5s. 0d.)

The mask portrayed is the 'Soweï', a helmet type mask worn completely over the head of a person representing the spirit of 'Sande' (commonly called 'Bundu') the women's society of initiation into adult womanhood. The mask is carved direct from the round limb of a tree, nearly always a soft wood, using the most simple tools.

### Bishop Crowther (2d. and 10s. 0d.)

Samuel Adjai Crowther, a Yoruba, was born in Nigeria in 1806. He was captured as a slave in 1821, but in the following year was liberated in Freetown and sent to Bathurst Village. He was taught by John Weeks, who became the second Bishop of Sierra Leone. He was ordained a deacon of the Anglican Church at St. Paul's Cathedral in 1843 and a priest in the same year. In 1864, he was consecrated Bishop of Niger in Canterbury Cathedral, the first African Bishop of the Anglican Church in West Africa. Bishop Crowther died in 1891.

### Sir Milton Margai (3d. and 6d.)

Not only in the field of politics, but in the medical and cultural development of Sierra Leone, Sir Milton has played an equally important role. He will go down in history as the first African doctor to hail from the Protectorate of Sierra Leone: the first Sierra Leonean doctor to be knighted: founder of the People's Party: first Chief Minister and first Prime Minister.

### Lumley Beach (4d. and 1s. 3d.)

This is the best known beach in Sierra Leone, within five miles of the centre of

Freetown, and over two miles in length with excellent sea-bathing.

### Bugler (£1 value)

The design shows a bugler of the Sierra Leone Regiment wearing the colourful scarlet fez and Zouave jacket with yellow facings which is the dress uniform of the regiment. During the 1914-18 war the regiment took part in operations in the Cameroons. During the 1939-45 war the regiment fought in the Arakan campaigns in Burma as part of the 81st (West African) Division.

The Sierra Leone Regiment, with other ancillary forces, now forms the Royal Sierra Leone Military Force, having been granted the title Royal in October 1959.

## REQUEST FROM GHANA

JOSEPH K. DAMUAU, c/o Ghana Railways, P.O. Box 220, Tarkwa, Ghana, would like to exchange stamps with fellow readers.



Joseph Damuau

'I would be glad if you would publish my photograph on the pen friend page', says CHARLES JEFFERYS of 'The Gardens', Crathorne Hall, Crathorne, Yarm-on-Tees, Yorkshire. 'I am seventeen years old, and have been reading *Hobbies Weekly* since 1953. I am a keen stamp, cheese, wine, spirit, and beer label collector.'



Charles Jefferys



For use with crystal sets

# 2-TRANSISTOR AMPLIFIER

THE amplifier circuit is shown in Fig. 1, and is intended for OC71 transistors. Other kinds of audio frequency transistors will work instead, and can be used if to hand. It should be noted, however, that very cheap surplus transistors will not provide so much amplification and volume as can be expected from better quality transistors.

With the OC71 transistors, a red spot marks the Collector lead. The centre lead is the Base connection, and the remaining lead is the Emitter. It is essential that these leads are wired up correctly, and this must not be overlooked if other transistors, possibly with different markings, are used instead.

Referring to Fig. 1, the condenser

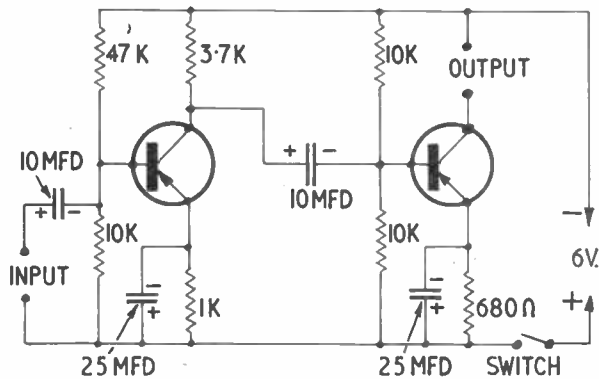


Fig. 1—Transistor amplifier circuit

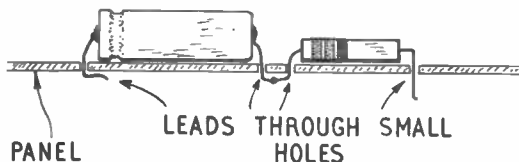


Fig. 2—How components are mounted

values are not very important, but transistor type condensers of about the values shown will be most generally suitable. Resistor values should be reasonably near those shown.

A 6V. battery is indicated, but about 4½V. to 9V. may be used. Torch or flash-lamp batteries are suitable, but it is very important indeed to connect these in the correct polarity. If a transistor receiver battery is used, polarity will be

shown in Fig. 2. Do not bend the wires too sharply, or too near the component, or the leads may break.

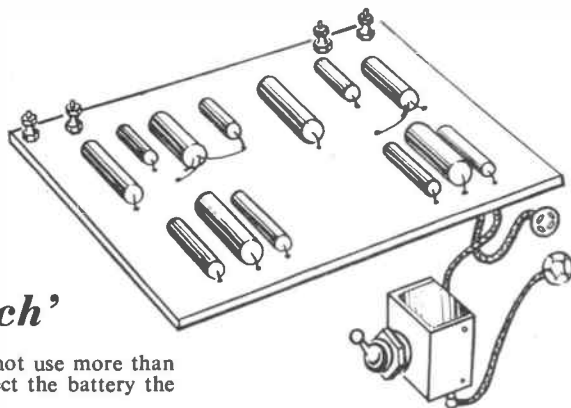
Condensers have to be connected the right way round. Some have positive and negative markings. Others have red to denote the positive end. With others, the small metal can may be marked negative, and the positive end may have a small ridge, as in Fig. 2.

Resistors can be connected either way

marked on this. Do not use more than 9V., and never connect the battery the wrong way round.

## Paxolin panel

The amplifier is most easily built on a thin Paxolin panel, and if small transistor type condensers and resistors are used, a panel 2 in. by 3½ in. will easily accommodate all the parts. Resistors and condensers are mounted by bending their leads down, and passing them through small holes in the panel, as



round. The value is usually shown by colour coding. When the colours are in bands, read these from the nearest end of the resistor. But if the resistor has its body one colour, with a coloured end, and coloured dot, read the colours in that order. That is, Body, Tip, Dot.

Colours for the various resistors are as follows:

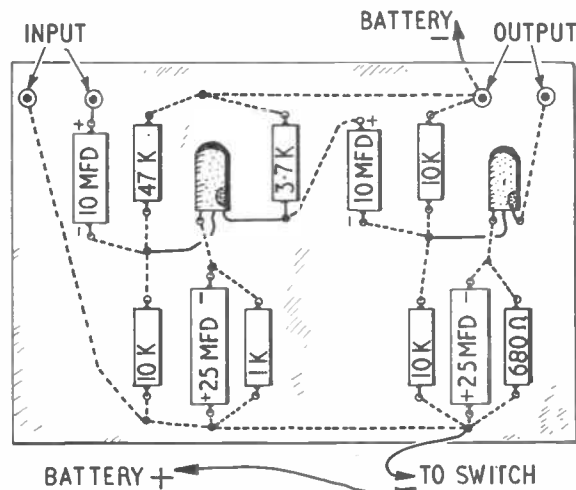


Fig. 3—Wiring up the amplifier

- 680 ohms: Blue, Grey, Brown.
- 1K (1,000 ohms): Brown, Black, Red.
- 3.7K (3,700 ohms): Orange, Purple, Red.
- 10K (10,000 ohms): Brown, Black, Orange.
- 47K (47,000 ohms): Yellow, Purple, Orange.

A little modification value, such as in using 45K or 50K instead of 47K, will be unimportant. But a large error, such as fitting 1K in place of 10K, or using 370 ohms or 37,000 ohms instead of 3,700 ohms, will prevent proper results.

Fig. 3 shows where the component

are placed, and wiring between them. Connections in broken lines are on the reverse of the panel, leads from resistors, etc, passing through as already explained.

The first transistor is wired as follows: Emitter to 25 mfd. and 1K. Base to 47K, 10K, and 10 mfd. Collector to 3·7K and 10 mfd. Connections for the second transistor are: Emitter to 25 mfd. and 680 ohm. Base to 10 mfd. and two 10K resistors. Collector to output terminal.

Do not bend the transistor leads sharply near the transistor, or cut them very short. Good soldered joints can be made easily if the leads are clean and bright, and cored solder is used. Apply the solder to the joint (not to the iron), and remove the iron immediately the connection is soundly made. It should not be necessary to hold the iron in contact with the joint for more than two or three seconds. Longer may damage components, especially the transistors.

The on/off switch can be placed anywhere convenient, such as on one side of a small box holding both the amplifier and dry battery. Small 6BA or 8BA

terminals are provided on the panel, for input and output connections.

### Using the amplifier

Amplification is sufficient to provide reasonable loudspeaker results, if the input is such as would give satisfactory headphone listening. The amplifier may thus be used with a crystal set, or similar input. The 10 mfd. condenser side of the circuit is taken to the receiver crystal detector, and the other input terminal is the 'earth' side of the circuit.

The amplifier may be used with phones, if really loud headphone reception is wanted. Medium impedance phones will work satisfactorily.

When a loudspeaker is used, it must either be of 30 to 75 ohm transistor type, or have a coupling transformer. The usual valve receiver has a 2 to 3 ohm speaker, and results will be poor if this is connected directly to the transistor amplifier. Except for this point, a battery valve receiver type of speaker will give very good volume. If such a speaker is to be used, remember that the transistor coupling transformer will be

essential. The transformer primary is connected to the output terminals. Its secondary is taken to the speech-coil tags on the loudspeaker.

It is not very likely that any faults should be present, but if results are unsatisfactory, the circuit may be checked with phones. First make sure that an input signal is available, by listening at the input terminals with the phones. If no signal is heard, the crystal set or other equipment used to feed the amplifier is faulty.

If an input signal is present, but no output, connect the phones across the 3·7K resistor. If amplified signals are heard, the first transistor is working. If amplified signals are not heard, the fault must be in the first transistor stage, so check connections here.

If an amplified signal is heard across the 3·7K resistor, but there is no output, the second transistor stage is faulty, so parts and leads here should be checked. If necessary, the transistors can be tested by wiring the phones across the 3·7K resistor, and trying each transistor in turn in the first stage.

## A construction kit from odd pieces

**A**FTER we have finished making a project in wood, we often find that many small surplus pieces

are left. It seems a pity to burn these, but their uses are limited.

However, these can be used for a simple construction kit which will appeal to younger children, and will keep them amused and entertained for hours. Cut left over pieces of wood into different shapes, squares, triangles, strips, etc, as shown in the illustration. Wood about  $\frac{1}{2}$  in. thick is best, but other available scraps can also be used.

Make holes with a  $\frac{1}{8}$  in. drill, every  $\frac{1}{2}$  in. (centre to centre) on all sides of the pieces. Drill holes on the edges  $\frac{1}{2}$  in. deep. Small pieces of wooden rod, with holes drilled through the centre, are also useful for funnels, wheels, etc, for models.

Smooth each piece of wood with glasspaper. This is most important as small fingers can be torn by rough edges.

Pack the pieces in a strong box, and add a generous supply of used matchsticks with which to

join the pieces together. If you wish, drawings of the types of models that can be made with the kit may be pasted on to the box lid to stimulate the child's imagination.

I have a large box of these drilled shapes, and youngsters consider it a great treat to be allowed to play with these, as all children love 'do it yourself' toys. (A.E.S.)

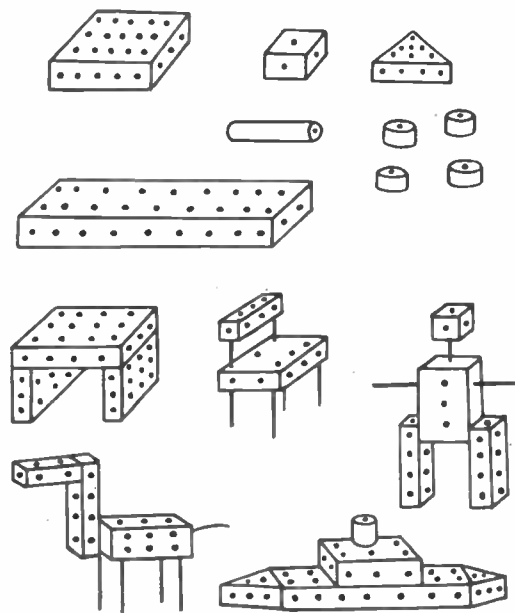
Learning Morse  
by H. F. Smith

**T**HIS newly revised edition will prove a helpful guide to all wishing to master the International Morse Code. The booklet gives methods of learning the code, key manipulation, and methods of practice. The code, which is given in full, includes the alphabet, accented letters, numerals, abbreviated numerals, punctuations, etc.

The revised 'Q' code as approved at the Geneva Telecommunication Conference 1959 is also included: this comes into operation during 1961.

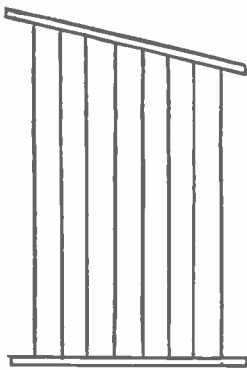
Another feature is the description of how to construct a transistorized morse practice set, complete with layout and circuits.

This is the thirteenth edition of this popular booklet, which costs 1s. 6d. Published by Iliffe Books Ltd, Dorset House, Stamford Street, London, S.E.1.





## FULL SIZE DRAWINGS OF A TRACKSIDE HUT IN THE VARIOUS SCALES



O GAUGE  
7 mm. — 1 ft.



OO  
4 mm. — 1 ft.



HO  
3.5 mm. — 1 ft.



TT.3  
½ in. — 1 ft.



OOO  
2 mm. — 1 ft.

*Comparison of scale sizes. Actual size is 3ft. 6in. wide by 6ft. 6in. high at front and 5ft. 6in. at rear*

and making them attractive by adding such features that will give 'life' to the entire model.

There are, of course, many other scales and gauges other than the ones I have mentioned so far, starting from the larger 15 in. gauge passenger-carrying railways, such as the famous Romney, Hythe, and Dymchurch railway which runs a regular timetable service. We also have other steam-hauled passenger-carrying railways of varying gauges such as 10 in., 7½ in., 5 in., 3½ in., and 2½ in. Examples of these can be seen up and down the country, sometimes at exhibitions or garden fetes. The little engines, perfect examples of their prototypes, chug along the track, pulling a few flat cars, with passengers. If any readers wish to go in for this type of work, their best bet is to join a local club or society, where the experts there will help them. Usually these clubs have workshop facilities, complete with lathes, etc. which are essential to the builder of this type of locomotive.

The only scale that has not been mentioned is 1 gauge, and there are still many examples left in the country, in fact there is a move to try to make it more popular. The scale is 10 mm. to the foot, and the track gauge is 1½ in. This is ideal for the garden, and any sort of power can be used to run the models — steam, electricity, and even clockwork. Once again this is really a job for the model engineer, as much of the stuff has to be hand built. It is, therefore, not for the person who is just interested in quick results.

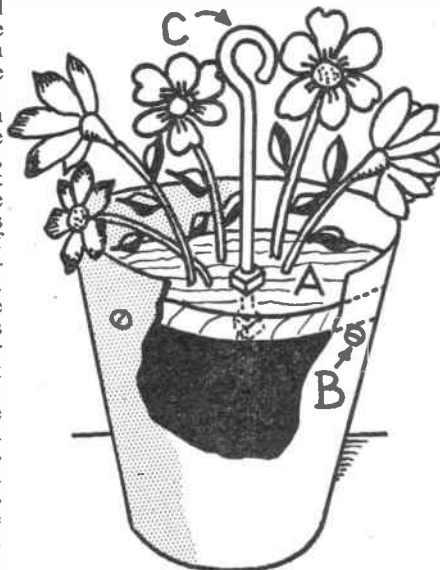
When deciding what scale you are going to use for your model railway you should keep in mind the space that is available. It is no use trying to put a quart into a pint pot: Once a person has been bitten by the model railway bug he will want to expand, and expand, and expand.

This leads to the thought that one should aim eventually at making a permanent layout. My small son has a lot of 2 mm. cast model railways, not mechanized, but just made to push along the track. We have from time to time bought him additions, more track, points, locomotives, and rolling stock, and now he has so much, and it takes so long to set up, that by the time he has it all laid out it is time to go to bed. Or

else the table is needed for a meal, and the poor little chap has to clear it all away before he has had a chance to play with it.

I am sure that this has happened to many of my younger readers, and later on I shall give a plan for a hide-away type of layout that will fit into a cabinet. It can be left permanently laid, and when closed up will not be in anyone's way.

## A NOVEL WASTE BIN



**T**HE tidy home has a waste bin in the lounge. The trouble is that the waste bin itself does not always look tidy! With the increase in popularity of plastic artificial flowers, the bin can be dressed up to look really attractive, besides fulfilling its functional duties.

First, cut a piece of wood to whatever shape your bin is, so that the wood will fit inside, at a point about 1 in. below the rim A. If the bin tapers, the edges of the piece of wood should be planed accordingly.

Prevent the wood from dropping too far in the bin or going askew, by fitting four small nuts and bolts as at B.

Suitable plastic flowers are held into the wood by tightly fitting into drilled holes. Choose flowers of a length in proportion to the height of the bin. It will look silly if you use short length flowers in a tall bin.

In practice, the flowers are lifted from the bin whenever any piece of litter needs to be placed in the bin, and obviously it would be harmful to the flowers to handle them too often. So a handle is incorporated as shown at C. It is made from ½ in. round bar, the top end being formed into a loop, whilst the bottom end is threaded so that it can be held in position through the wood with a nut on each side. (E.C.)

# PHOTOGRAPHS THROUGH THE LOOKING GLASS

**A**MUSING and interesting photographs can be taken by using a mirror to reflect your subject in. The technicalities of taking such photographs are quite easy, but there are one or two important factors which must be kept in mind.

What we are photographing is the image formed by the mirror, not the actual piece of glass which it consists of.



*The dim lighting of an amusement arcade made the use of a large aperture essential. 1/30th. f2-8.*

Optically this image is formed at a point the same distance behind the actual mirror as the object or model is in front of it. (Fig. 1.)

To obtain a clear photograph of this image we must, of course, focus our cameras on it, and not on the actual mirror itself. This means that the distance from our subject to the mirror

By  
*C. Robinson*

*'Two faces of the model.' The power of the flash permitted use of a small aperture to keep both model and reflection in focus. Exp. 1/100th, f16.*



must be doubled, then any distance the camera may be away from the model must be added on to this. In Fig. 2, for instance, the camera will be focused at 9 ft.

Once this distance is found the actual photography is straightforward. Difficulties begin to occur, however, if we require both 'reflected image' and subject to be in sharp focus. This can only be overcome by referring to the 'depth of field' tables to find at what aperture the camera must be set to give sufficient depth of field to keep both in sharp focus. On modern cameras this depth of field can be found by consulting the camera's own 'depth of field indicator', usually to be found near the other camera scales.

The aperture required is usually a very small one, which in itself may introduce another problem — that of having sufficient light to photograph with such a small aperture. Out of doors there is usually enough light to do this, but when photographing in a room, where

more often than not photography through a mirror is likely to be done, the only solution is to resort to flash. To find at what distance the flash must be from the subject, first ascertain the aperture to be used which will give the required 'depth of field'. Then from the packet of flash bulbs find the 'flash factor' for the speed of film you are using. Now divide the aperture required into this 'factor', and the result will be the distance in feet that the flash must be from your subject.

The flash gun should be positioned in such a way that the flash will not be reflected in the mirror. Firing it from one side of the subject, or 'bouncing' the flash from a light-coloured wall or ceiling, will overcome this.

When using 'bounced' flash it should be remembered that the intensity of the flash is reduced somewhat, and to allow for this the lens should be opened up by two stops.

This is a subject with which you can have lots of fun experimenting.



Fig. 1

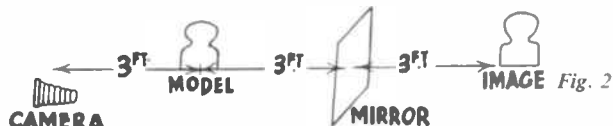


Fig. 2

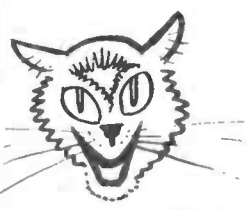
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# FELIX

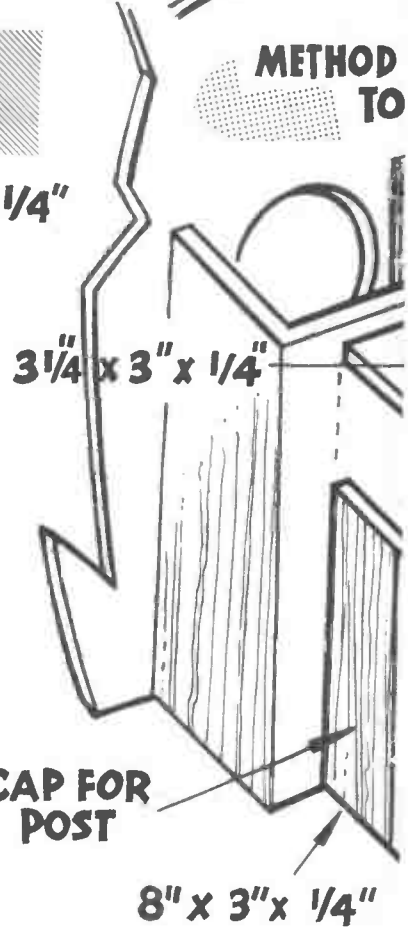
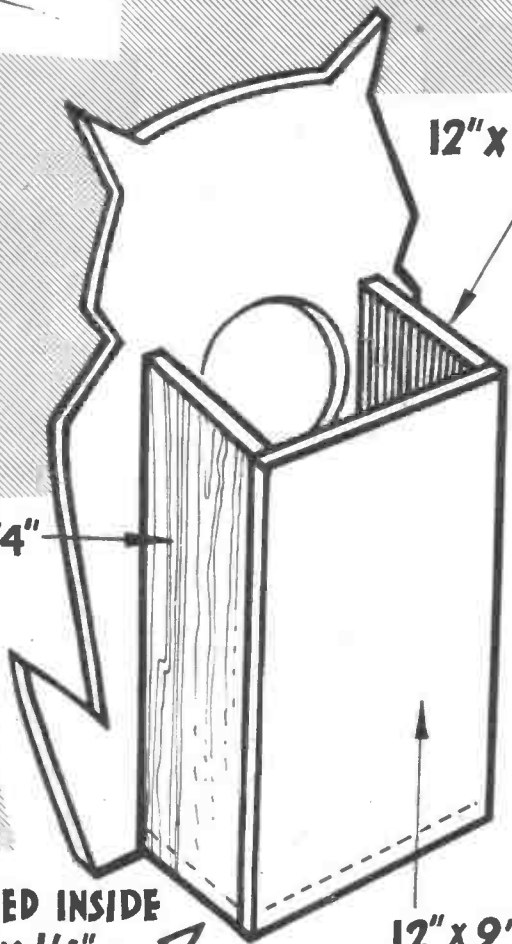
# THE ANTI-LITTER AD

FOR PARKS, GARD

\* NO "KITS" AVAILABLE



METHOD TO



FLOOR GLUED INSIDE  
6" x 8 1/2" x 1/4"



# LOCATE

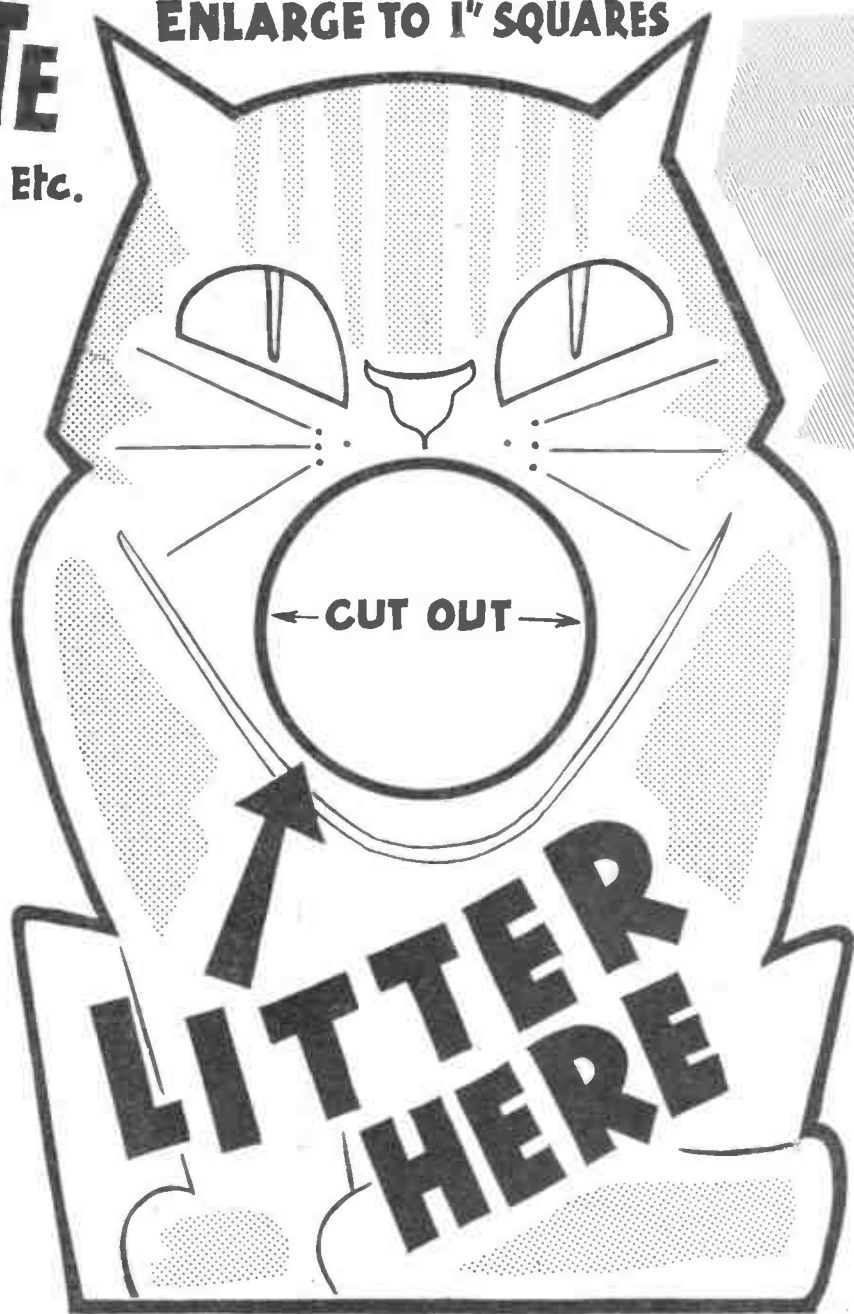
ENS, CLUBS, Etc.

ENLARGE TO 1" SQUARES

OF FIXING  
POST

SLIDE DOWN ON TO POST

1" x 3" x 1/4"



1 IN. SQUARES

CUT ONE 1/4" PLY & PAINT



## THE TEMPERANCE SEVEN

**P**RESENTING . . . the rage of radio, the terrors of television, the sensations of society, those popular gentlemen 'The Temperance Seven', who are now willing and able to conquer the world of the talking steam gramophone through the medium of their Parlophone recording of *You're Driving Me Crazy* and *Charlie My Boy* (45-R4757).

Let us first introduce individually the members of this remarkable ensemble, which owes its success to being forty years out of date — playing in the 'sixties the dance music of the 'twenties.

**CAPTAIN CEPHAS HOWARD**, leader, trumpet and euphonium. After a distinguished military career, during which he was awarded the Charing Cross (with bar), the Last Order (with bar) and the Alhambra Star (nothing barred), he was unhappily cashiered for gross misappropriation of five chassepot rifles and a billiard table.

**ALAN SWAINSTON COOPER**, clarinet, pedal clarinet, soprano saxophone, swanee whistle and phonofiddle. The only pedalling clarinetist still at large he is the holder of the tricycle record London-Brighton, 1903.

**SHEIK HAROUN WADI el JOHN R. T. DAVIES**, trombone, alto and personal bodyguard. Astronomer Royal to the late Kemal Attaturk and collaborator of Thomas Alva Edison. He has three times swum the Channel to the discomfiture of the Dover Customs and Excise Officers.

**PHILIP 'FINGERS' HARRISON**, alto and baritone. Renowned vegetarian and inventor of the clockwork hansom cab, steam harp and magnetic corkscrew.

**CANON COLIN BOWLES**, piano and harmonium. Formerly of the British Matchbox Label and Booklet Society, now unfrocked. Founder of the British and Empire Free-style Balloon Society.

**DR JOHN GIEVES-WATSON**, banjo. Formerly personal manservant to the Keeper of the Eddystone Lighthouse, he was chosen as Chief Druid and holder of the Bardic Crown, Llanfairfach Eisteddfod, 1902.

**FRANK PAVERY** (pronounced 'ffry'), sousaphone. An undischarged millionaire, famed for his feats on the high wire, the troop of performing sealions which he trained in three weeks, and his proficiency in the one-wheeled cycle race.

**BRIAN INNES**, grand jazz percussion kit. Professor Emeritus and formerly occupier of the Chair of Percussive Studies, Witwatersrand University.

**WHISPERING PAUL MACDOWELL**, megaphone vocals. Ambassador Extraordinary to the Outer Hebrides. A distinguished diplomat, sword-swallower and dancer, he is perhaps best known as an embezzler of international standing.

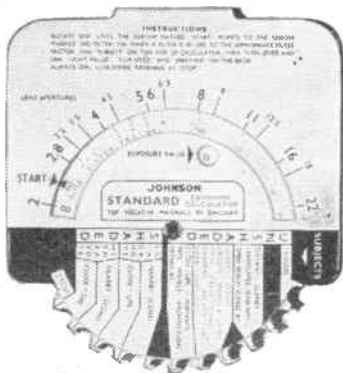
Having introduced the gentlemen of the orchestra, let us delve into the glorious past of the 'Temperance Seven' and draw back the shroud of secrecy which cloaks the days before that epic occasion at the Bournemouth Centenary Celebrations of 1910, when they were awarded the Prix d'Honneur for their original rendering of the new dance craze, *The Kaiser Rag*, following which they were hired for a record-breaking residency at the Balls Pond Cocoa Rooms.

Persuaded to remain serious for a moment, Brian Innes vividly recalls the band's formation:

'It was Christmas 1955, and I was at home doing nothing in particular when there was a tap at the window. I looked out and there was my friend Paul MacDowell. He talked me into allowing him in and announced that he wanted to form a band. He took me to meet Philip Harrison, the only other remaining founder-member, and with some other enthusiasts we became the Paul MacDowell Jazzmen — for one appearance only. By the time we played in public again we were known as 'The Temperance Seven'. Why did we choose the name? Well, I suppose it was



# PHOTOGRAPHERS!



## Get the right exposure every time!

Do your pictures ever come out over-exposed or under-exposed? You need a Johnson Standard Daylight Exposure Calculator! It's only 4/6d. With this calculator, you just 'dial' for the correct exposure. It's easy! You 'dial' the sort of subject you are photographing, the light conditions, the weather, and the speed of the film you are using—then read off the exposure details. Other calculators for colour cine, artificial light, and flash are also available. Ask your local photographic shop about Johnson calculators.



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is certain  
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MP.90.

Obtainable from all good-class  
Ironmongers and Hardware Stores

because we are usually one over the eight!

'At first we played a lively white style of jazz, something after the fashion of the Original Dixieland Jazzband. Now we have reached the stage of realizing that improvisation alone is not enough. So we spend a lot of time on rehearsals and working out arrangements.

'The progression to our present form of music has been purely natural and we try to present a picture of a dance orchestra of the 1920's. We are not deliberately copying, rather we are interpreting.

On public appearances the band dress in a variety of Edwardian sartorial

elegance, including frock coats, morning dress and smoking jackets.

In the beginning the band found work at jazz clubs, dances and parties, but have since been in demand for cabaret appearances at smart London night-spots such as Grosvenor House, the Dorchester and the Savoy — there they startled the audience by announcing, 'We are pleased to be back again after an absence of 35 years' and playing numbers made popular by the Savoy-Havana Band.

They have also had B.B.C. programmes broadcast on Saturday Club as well as appearing in several television programmes. On the L.P. *Peter and*

*Sophia* they accompanied Peter Sellers on *Ukelele Lady*.

Musically they admire the work of Duke Ellington, Clarence Williams, Bix Beiderbecke, Adrian Rollini and most of the early white jazzmen.

Hobbies include flying kites and model aeroplanes (Cephas is building a 15 ft. long Zeppelin), anything clockwork, snooker, pontoon, dominoes, toad-in-the-hole and roof-ball — which involves hitting a ball on to a roof and then scoring runs before it hits the ground or is caught, in which case the batsman is 'out'.

The story of this crazy team can appropriately be illustrated with stamps and labels showing musical instruments.

## The care of Records

THE average record collection of the serious music enthusiast can be divided into three sections — standard, 45 and 33 r.p.m. The idea that standard is now obsolete is ridiculous. Admittedly L.P.s have the advantage when it comes to the question of storage, but so much good music was recorded on standard, before the advent of L.P., and there is no reason to suppose that it will all be eventually transcribed on to the more modern medium.

Actually it is these archival 'standards' that are likely to increase in value. Not so long ago a disc jockey announced that there were only three copies in existence of the Caruso he was about to play. After I had heard it I wondered where the remaining one was.

Valuable (or what I deem valuable) standards, all breakable, I bind between sheets of corrugated cardboard, and only undo the precious package on special occasions, generally, for the benefit of interested friends.

Standards, I am convinced, can only be safely stored in cabinets or albums. This is not only to protect them against breakages, but also from heat: natural in summer, artificial in winter.

Paper covers are not the best; nor are the average cardboard covers that generally go with the records you buy in shops, for they carry much fluff. A good, smooth cardboard cover can be made quite easily from art pasteboard. From a sheet costing about 8d. two covers for 12 in. discs can be made, with quite a bit to spare for other purposes. Fold the sheet in half narrow-ways. Allow  $\frac{1}{4}$  in. to  $\frac{1}{2}$  in. on either side for stapling. To cut this cardboard the best implement is a sharp knife. Mark the centre by using the pivot hole in the disc. Cut the circle, through which the title of the record can be read, by using a cup or a

tumbler as a guide. Better still is a garden flower pot, which has a hole in its base to coincide with the pivot hole. In this way the cut-out circle will fit the labels perfectly.

Nothing wears a standard down so much as a steel needle. Those people who have old style players, and an all old-standard collection, and cannot afford to buy L.P. equipment and discs, should ensure fair treatment for their records by using fibre needles. These can be sharpened by special devices sold in practically all gramophone shops. Another innovation is bamboo needles, which can be sharpened by cutting them with a razor blade.

L.P.s are a different proposition. They are not breakable, and can be stored almost anywhere. However, their grooves are much finer, and have a greater

propensity to gather fluff and dust. Some record shops sell little brushes that clip on to the stylus bar, designed to sweep the disc as it revolves. Even so, dust will gather around the stylus needle. Never remove it with the fingers. Blow it away, or else use a soft typewriter brush.

Records can be cleaned with special fluid, applied with a sponge. Also special leathercloths can be used with good effect.

If the L.P. stylus needle breaks, get a new head. Do not turn your old one over and use the standard needle on L.P. There is a difference between the two needles however similar they may seem to the naked eye.

Above all, make certain your stylus head is perfectly vertical when your player is in operation. The needle rests on a little metal 'V'. A slight slant can put one of the ends of this 'V' into the groove. Remember, anything in an L.P. groove other than an L.P. needle will rip it to pieces.

(G.E.G.)



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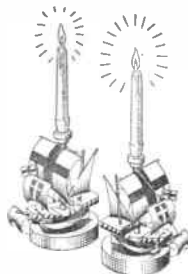
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# Scissors and Tool Sharpening

I STARTED sharpening scissors, knives and tools in British Columbia as a hobby, and found this kind of precision work fascinating. However, it was not long before the neighbours, who had been admiring the results, started bringing all their knives and scissors and tools to be ground. The volume of work grew so rapidly, and paid so well, that it soon developed into a whole-time business.

It has great advantages over most money-earning hobbies, in that the cost to start is very small, and space required, of no consideration. I did all my work on the sun porch, until I developed a machine for sharpening lawn mowers, which required more space. Further, there is very little competition, especially in the rural districts.

The diagrams are for the most part, self-explanatory. Any second-hand electric motor,  $\frac{1}{4}$  h.p. or  $\frac{1}{2}$  h.p., or an old washing machine motor, will do for power.

For scissors, the stone must be on the right-hand side of the machine (when facing it) as in Fig. 1. The base and the scissor sharpening platform should be well smoothed oak, as one has to slide smoothly on the other. For normal grinding the speed of the stone is not very important, but with scissors it should be about 3,500 r.p.m. As many second-hand motors work at about 1,750 r.p.m., for scissor work it is necessary to gear the wheel to run twice as fast. Fig. 3 shows the set-up for this.

Many motors have a spindle at each end, and a coarse stone for garden tools may be mounted at the opposite end to the pulley.

Generally, knives, axes, plane blades, chisels, garden shears, etc may be sharpened on a medium fine stone, and the speed is of little importance. The top and side of the stone is used. To do a professional job for scissors, however, a fine stone is essential. The scissor blade is brought into contact with the stone at

do not contact correctly, tighten screw or rivet, and where necessary tap with a light hammer on the centre of the inside of each blade, so the points show a tendency to come together when used. Always try to retain the original cutting angle when sharpening.

As the sharpening wheel gradually wears and becomes smaller, it may be necessary to raise the sharpening platform slightly to bring the wheel to the correct angle for the scissors. For this purpose I made several smooth pieces of oak the same size as the platform, and placed one or more beneath it as it became necessary.

Finally, a few important points to remember if you decide to use this hobby as a part-time business. Let's start with the 'don't's'.

## What to avoid

Don't accept badly damaged tools without first examining them thoroughly. Take garden shears for instance. In some cases it is necessary to take them apart. You may find that the nut has been riveted on by the owner, to keep it from coming loose. It may take time to loosen, and will have to be replaced, so don't quote a definite price.

Don't promise to have a job ready unless you are quite sure you can meet the time and date.

Don't undercharge for a good job — it's worth paying for.

Don't accept 'pinking shears'. This special kind of scissor is sharpened quite differently, although it can be done on this machine.

Don't take hand saws unless you have expert knowledge. In Canada I made very good money out of hand saws. We always charged the same price as a haircut!

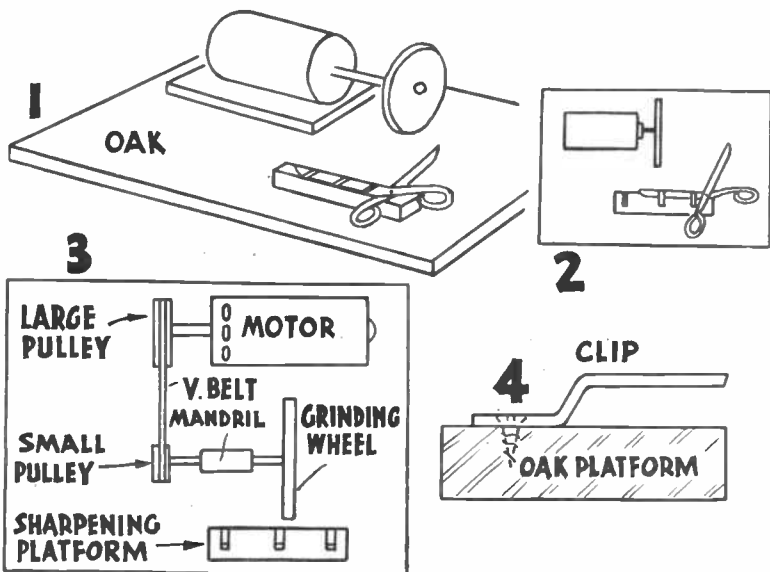
And lastly, I found that the use of small luggage labels (tie-on variety), printed with your name and phone number are best for identification purposes. Have them perforated half-way down, and numbered in series. Tie the top half with the customer's name and address to the tool, and tear off the bottom half, and give it to the customer as a receipt. I later filed the top half for record.

## By F. Corder

about one-third from the bottom. Then start at the top of the blade where the two arms are joined, and move slowly and smoothly across the stone in a right-hand direction to the tip of the blade as in Fig. 2. Hold the sharpening platform to the stone with light pressure. Slightly lessen the pressure at the tip to avoid burning the metal.

The scissors are held in position on the sharpening platform by one, two or three metal clips according to the length of the blade. (Fig. 4). Clips can be turned to one side if not required. Usually, once across the stone is sufficient, unless the scissors are in very bad shape.

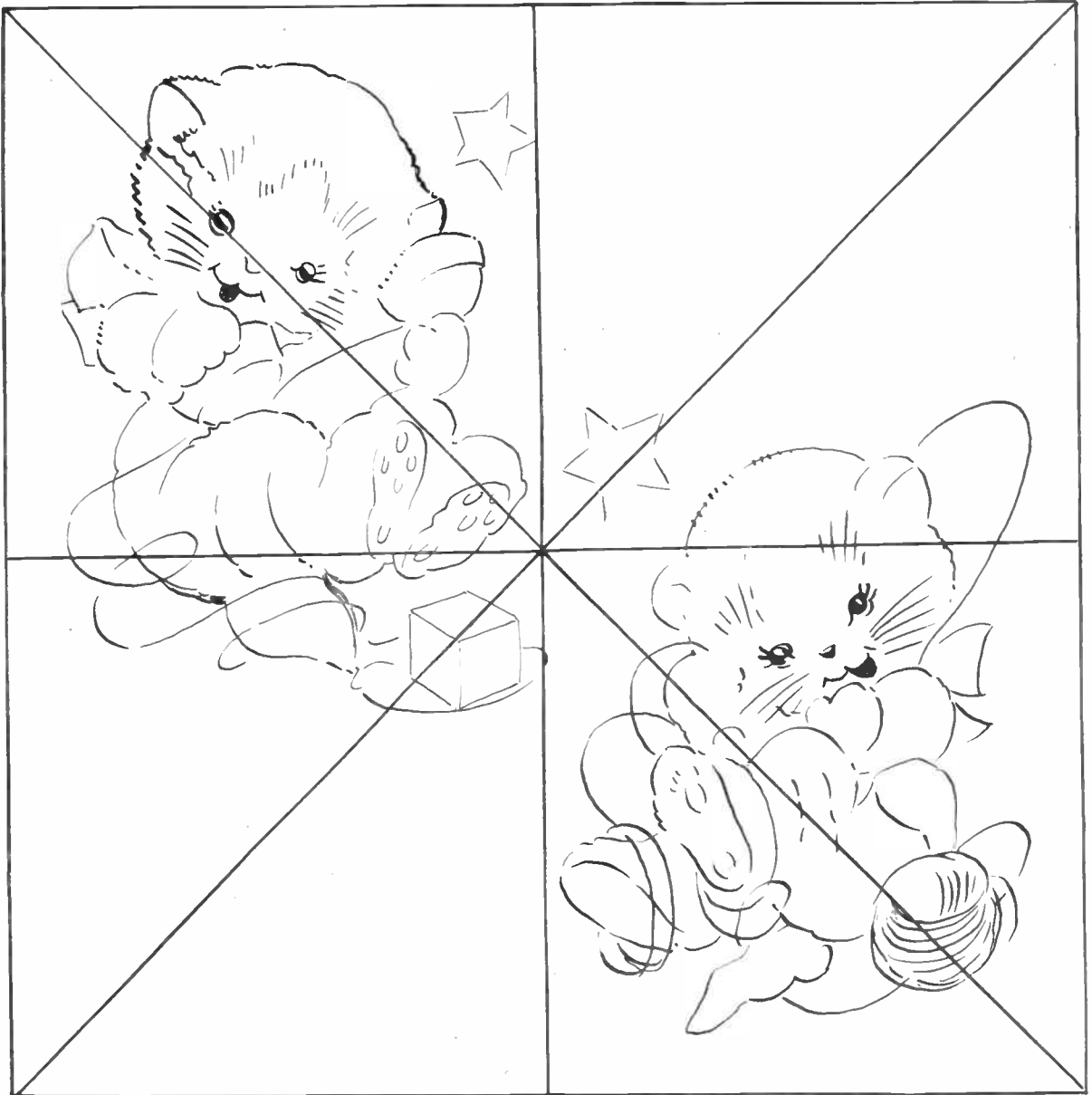
If properly sharpened, a burred edge will be found on each blade. This is removed by making a cutting motion with the scissors once or twice. If the blades



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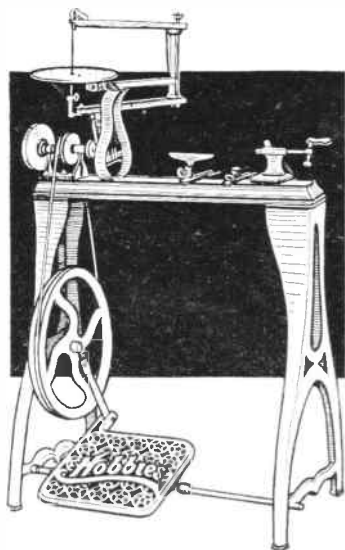
CUT a piece of  $\frac{1}{4}$  in. plywood, and paint it pale blue. Fix two Decorette transfers from the sheet of four (No. 223), and leave to dry. Now cut the wood diagonally into eight pieces. Clean up, and paint the edges blue. Decorette transfers cost 2s. 3d. per sheet, postage 3d. (M.p.)

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## WOODWORKING LATHES FOR THE KEEN AMATEUR



The 'Companion'

The 'Companion' Treadle Lathe. A marvellous combination for the amateur. Obtainable with or without fretsaw attachment shown. The larger driving wheel has two grooves of varying depths to give a change of speed. The headstock is provided with a 2 in. faceplate, a spur centre, and a screw centre for turning cups. It has also a solid emery wheel. The tailstock has a screw feed centre. The lathe is 14 in. between centres and is provided with two rests, designs, saws, etc. The fretsawing attachment is secured to the lathe bed by one bolt, and can be put on or taken off as desired. It is fitted with 19 in. arms and an 8 in. diameter tilting table. A well illustrated book on Wood Turning is included with each lathe.

Cash Price: £15 3s. 6d. (as illustrated) or without fretsaw £11 5s. 0d.

Easy Payments: £3 17s. 6d. down, and 6 monthly payments of £2 1s. 6d.

Without fretsaw, £2 17s. 6d. down and 6 monthly payments of £1 10s. 9d.

The 'Hobbies' Lathe. This lathe has similar features to the 'Companion' but is built for larger work. It stands 6 in. higher, and the distance between centres is 20 in.

Cash Price: £17 7s. 6d. complete. Without fretsaw £13 9s. 0d.

Easy Payments: £4 7s. 6d. down and 6 monthly payments of £2 7s. 8d.

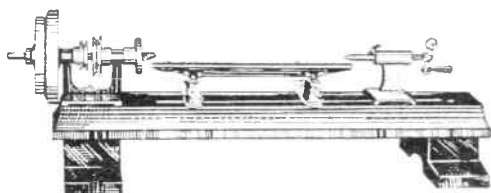
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**Handy Bench Lathe.** This machine is similar to the 'Companion' Treadle Lathe but without the legs, treadle, etc. The headstock spindle has two small 'V' groove pulleys for drive by  $\frac{3}{8}$  in. diameter round leather belt. The balance wheel is similarly grooved, so that three speeds are thus provided. An emery wheel, a spur centre and a screw centre are also included. Two centres obtainable.

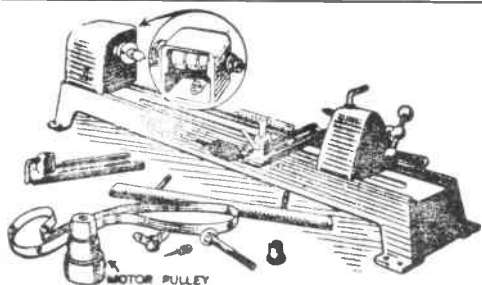
Cash Price: (14 in. between centres) £6 5s. 0d.

Easy Payments: £1 12s. 6d. down and 6 monthly payments of 17s.

20 in. between centres model, Cash Price: £6 12s. 6d. Or easy payments: £1 15s. 0d. down and 6 monthly payments of 17s. 11d.



Handy Bench Lathe



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