## новвыня MAGAZINE

$\star$ FREE Design
Supplement

WiN Log FOR mava haums Eanharans" CLub

## Whatren faRDENS

lls NiATURE
DEL AND
MAKING

ETC. ETC.

(FOR GARDEN OR INDOOR USE)

Up-torthe-tainute idods
1000105


21st, Trafalgar Day - $2 / 6$ stamp d. used 1951 - H.M.S. Victory 29th, 1950, King Gustav V of Sweden ied - the King appears on Swedish stamps of 1920
ctober is a good month for trans. Slanting evergreen shrubs.
Stamps: Jugsilavia
magenta - Evergreens and Winter Landscape - $1 / 3$ mint. Ditto: 1996 Match Labels - set of 12 depicting
The Mo Fir

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CTOBER has preserved its ame ever since the time when it
as the eighth month of the ycar, as its etymology denotes. The Saxon pames for it were yni-Monath or winemonth, and Winter Fylleth
The month was usually represented as a husbandman carrying a sack over his shoulders, and sowing the winter grain. A Sower is depicted on a 2 dd . Irish
stamp of 1945 - ld. used.

## OCTOBER

 Hallowe'en, or All Hallow's Eve,(3l st Oct.) sometimes called Nutcrack Night, from the custom of cracking and eating nuts on that evening, was a season They dived for apples', and fiung nuts into the fire; used divinations to discover whom they were to marry, and passed the evening in laughter and tities of ale, apples and nuts. Other Oclober anniversaries, etc., 1 lst , 1881 , Red Cross founded. Stamps: Switzerland 1928,30 cent lue and red - J. H. Dunant,
founded the Red Cross - $1 / 3$ mint.


38
8


Match Labels: Czechoslovakia 1956 set ${ }^{\circ} \mathrm{o}$
mint.
10. 10th, 1913, Panama Canal com depicts Allegory of stamp of Panama depicts Allegor
20th, 1632, Sir Christopher Wren born - 1946 New Zealand stamp depic
mint.

Tavistock Goose Fair are October occasions.
Pheasant shooting begins; many angling contests are staged.
The Flat season draws to a close with the autumn double, the Cesarewitch and the Cambridgeshire.
shows a long bnd mard mast, it foreAn oak tree is depicted on American
stamps of 1935 .

## Peeps at nature

## THE MUTE

 SWANTCHE 'Mute Swan' is the swan commonly seen on park lakes and
rivers in most parts of this country, and must surely be familiar to everybody. It is characterized by its orange in the male (cob) knob at the base, larger In the male (cob) than the female (pen).
In spring, a nest is constructed of twigs by both birds on the bank and three to four eggs are laid, more by an old bird. Both birds take turns on the nest, which is guarded savagely by the male. and grass, and if fed on bread, plants like it wet and soft. The mute swan is not a native of this country, being introduced
about the 12 th century,
(P.R.C.) bout the 12th century.

## Instructions for making

## WHEELKDD TEA TBOLLEY

(ILLUSTRATED ON FRONT PAGE)

$\mathrm{A}^{\mathrm{T}}$
TEA trolley which is equally use
ful in the home or garden is a
desirable project for the handy man, to whom it should offer no difficulties in making. The one illustrated on the front page has been designed for collapsible if desired. This amendment will be detailed later.
It is intended to be used as a wheeled trolley for taking out refreshments for a pienic on the lawn or from the kitchen o. say, the TV lounge. Besides the tray handy compartment in which glasses and bottles can safely be carried withou fear of spilling.
The height of the trolley is approxi mately 29 in. and it is 35 in . long with a 18 in. by 0 in., the tray section measuring round rod in. Plywood, stripwood and Obviously the parts its construction. shown full size on the design sheet, but all relevant measurements are given there for casy marking off and cutting out. Each part is numbered on the design shect and in Fig. for quick cros tions.
Preventing Waste
All the necessary wood and materials are contained in Hobbies kit for making he trolley as a fixture. When working
with 36 in. lengths of stripwood, care should be exercised in marking out the various pieces. For instance, it is necessary to cut one piece 12 (measuring $19 \underline{i n}$.) and piece 2 from the same 36 in. length of stripwood, thereby eaving no
waste. Similarly, piece 9 and the other piece 12 can be cut from one length of stripwood. Before cutting out, therefore, study the measurements carefully and mark them all out on the wood, making
sure that every piece is allowed for before cutting. It will be seen that the 24 in . by 18 in . panel of plywood will provide the two pieces required for the tray and bottle compartment. The trolley is made up in three are shown on the design sheet. They are numbered separately for easy reference to the side view.
Start by making up the tray and handle (section 1) by pinning and gluing. Pieces
1 and 2 are cut from $1 \frac{1}{2}$ in. by ${ }^{\text {an }}$ in. stripwood, pieces 3 from in. thick wood,


Fig. 1
pieces 4 and 5 from $\ddagger$ in.; plywood and piece 6 from $\frac{1}{2}$ in. round rod. The ends dowel handle. Section 2 is similarly assembled from stripwood and dowelling to the measurements shown. A halving joint is used for joining the cross braces (13) in section 3 and the
construction is clearly explained in the diagram on the design sheet on which is also shown the type of joint to use.
Pieces 14 and 15 are glued underneath the tray as shown in the side view. Piece
14 measures $16+$ in. by 12 in . by $¥$ in. and
 The three sections are assembled by screwing the ends of pieces 7 and 11 to the tray, section 2 going inside section 3 .
Where these two sections cross, secure with countersunk or round-head screws. If a folding trolley is required, the width of the tray and the lengths of picces 14 and 15 should be cut scant or later planed. Similarly the width of
section 2 should be scant. Pivot at points P shown on the side view with roundhead screws and washers, and use wing nuts and bolts where indicated.

For finish, paint is recommended for an article of this type. It will stand up to he weather better and can also be more
casily renovated. If desired, one of the many available plastic coverings can be used for the tray. When the inish has shown in the detail on the design sheet.

## KIT FOR 33/-

Hobbies Kit No. 3332 for making the Tea Trolley contains all the necessary wood, rubber-tyred wheels, etc. Kits from branches or by post from Hobbies Limited, Dereham, Norfolk. Price 33/- (post free).



21st, Trafalgar Day $-2 / 6 \mathrm{stamp}$ o 9d. used.
29th, 1950, King Gustav V of Swede died - the King appears on Swedish stamps of
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Stamps: Jugoslavia 1951, 3 dinar Landscape - Evergreens and Winter Match Labels - set of 12 depicting Evergreens - $2 / 6$ mint
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## SWAN

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## Making a Multimeter

## OHMMETER \& MILUAMMETER

W:
E can now deal with the ohmmeter section. For this we
need a 4 -pole 2 -way switch otentiometer, a resistor and a battery. The resistance range we can measure
depends on the voltage of the battery. With the voltmeter, voltage values rise from left to right of the scale, but
with an ohmmeter the reverse is the ith an ohmmeter the reverse is the case. The higher the resistance to be
measured, the lower the needle falls to

the left of the scale. At this end the readings are very crowded and so readings Fairly easy reading the extreme left. 2or - 1 on the scale but no further. use of a this limit ( $\cdot 1$ on the scale), the to read to 13,500 battery would allow us would take us to 27 K ohms. A 4.5 volt to $40 \cdot 5 \mathrm{~K}$ ohms, a 9 volt to 81 K ohms. A 36 volt battery would read 324 K ohms at 1 on the scale.
The choice is a resistance range and the semise between battery the cabinet can hold. A the case will allow the use of a bigger bistance values to be measured. Te
reader can make his own choice, and need not accept our choice of a 4.5 volt battery. This can be a flashlamp type, or made up of U2 cells in series. (Fig. 3) should be 3.9 K and the potentiometer (V.R.) should be 1K ohms. This

Tak panel of the voltmeter section. Take centre tag A to the negative socket on this same panel

## The milliammeter

The milliammeter section can now be
made. The purpose of such a section is

Arrange it so that only $q$ in. of wire Scrape the enamel from these ends. The shunt $F(50 \mathrm{~mA})$, has $181^{\circ} \mathrm{in}$. wire. Bare $\frac{\text { in. at each end as above. }}{\text { a }}$. The shunt $G(100 \mathrm{~mA})$, has 97 in . The shunts are fixed by glue into a wooden cradle (Fig. 6), made by boring sawing down the middle along the dotted line, as in $5(b)$. The cradie itself can bo glued or nailed to the base, in the position shown in Fig. 4.

The test prods must be made now These consist of thick stranded wire, lead and blatation (red for the positive ead should have a negative). The red attached to one end, while the negative must have a black plug.
The other end of each lead is passed The end of the wire is or cbonite tubing. length of 16 gauge tinned coppa 2 in. Insulating tape is used to cover the joint, then the ebonite tube is pushed
own into position, leaving $\not \geq \mathrm{in}$. of the lubing is bound round at bothe ebds with insulating tape to secure it firmly to the lead.
2 ft to 3 ft . long, in full length, can be 2 ft . to 3 ft . long. To avoid mistakes, the
ebonite tubing of the positive lead should have a red Sellotape (or red Tubber) band at its bottom end.
The black test prod is plugged into the panel of the test meter and fron

(a)

occupies this position. The red prod initially, occupies the red (positive) socket. The concluding article will describe the setting up of the scales and the operation
of the multimeter.
resistance arrangement is to 'sel' the meter and its use will be explained later. (The valves must match the voltage of
the batter:.) The baite of the case by means of a metal strip and First fix in secure it. First fix in the 4-pole 2-way switch as Shown. Oin centre tag B to negative terminal meter Jousing soldering tag on to the positive terminal. Join $C$ to the meter positive terminal. Join outside tags 2 and 4. Join RS from tag 6 to tag P on the
potentiometer. Join tags $Q$ and take to positive $(+)$ of the battery Take the negative ( - ) pole of the battery to $\operatorname{tag} 8$ on the switch. positive (plus) socket on the voltage
to increase the range of the milli-amp meter so that it can read up to 10 mA , or up to 50 mA , or up to 100 mA . These
ranges will be found very userul in ranges will be found very useful in
ordinary radio work, and were chosen ordinary radio work, and were chosen is increased by means of shunts, but before making these, fit in the 3 -pole 4 way Fwitch as shown in Fig. 4.
For making the shunts, 28 gauge Eureka wire (enamelled) is needed. One The wire is wound on pieces of dowel or Paxolin tubing about in. diameter and about $2 \underline{1} \mathrm{in}$. long. Paxolin or cardboard or plyboard washers or cheeks are glued Two these, about $\$$ in. from each enc. (at the edge) through which the ends of the wire are threaded. See Fig. 5(a). For shunt $\mathrm{E}(10 \mathrm{~mA})$, wind on to one of the formers 29 yd. of the Eureka wire.

## An excellent Paste Rait

ALL anglers should be interested in
how to make a very good paste how to make a very good paste
bait. This one has the advantage that it stays on the hook and does not go hard in the water.
That it will take fish, and good ones,
too, I have ande too, I have ample proof from my own paste, but with a difference in the way it is made. This is it.
For three slices of bread you will require one of the small triangular sections of cream cheese (any brand). Spread
this on one slice of bread, and then put a further slice on each side after first cutting off all the crust. On no account must you add water. Knead together antlil the cheese has worked its way into all the bread. You will know when this crumbly pieces of bread.
For the next operation you will need a small saucepan and a basin which will go inside. Put sufficient water in the pan so that there is enough to ensure that your
basin does not float. Bring to the boil on the gas-ring and then simmer. Now tic the ball of paste in a clean piece of cloth
and place in the basin. For a quantity as
stated you should on, of course, for fifteen minutes, when on, or course, for fifteen minutes, when
the paste will be in the form of a glutinous mass right through.
It retains this consistency of sofuness, and you will be surprised how it really stays on the hook. It will stand up to
really long casting without falling of halfway across the water or on hitting the water.
I have taken carp, roach, bream, rudd tench and dace on this bait, and once had the surprise of my life when a com The paste is white, of course, but it can be coloured by kneading into it a litule maggot dye before it is steamed. Very often when sport falls off I have found
that the same paste, but of a different colour, attracts the fish back again. In conjunction with this use the ordinary groundbait, but from time to time This should be done sparingly, paste don't want the fish to get full on free samples!

## Ideal as gifts <br> MINIATURE PLASTEIR GARDDENS

ELIGHTFUL miniature gardens as shown in our illustration make
attractive gints and are easily made from simple materials, much of the modelling being done by hand.
All you need for the base is a piece of hardboard or
approximately 8 in . plywood measuring 5 in . and cut to an approximately inse by means of a fretsaw as inregular shape by means of a fretsaw as
shown in Fig. 1. There is no hard and fast rule about this size and any scrap piece of similar dimensions may be used provided it is large enough to make a
garden. Four wooden buttons, or beads, are attached with glue to the underside. 0 form feet.
The material used for shaping the crazy paving and the walls can be fillers such as
Alabastine or Polyfilla, mixed to a stiff, putty-like consistency. Pour a tablepoonful of water into a dish, adding the filler a little at a time and stir until oroughly mixed. Do not put too much antil the mixture is very similar to putty and can be handled as such. You may ind it an advantage to smear your hands FIG 1


Described by S. H. Longbottom
With any surplus mixture remaining a little of the filler itself if of a thinner make a seat or a shrub box. Take a pornewspaper with the and flatten out on newspaper with the aid of the side of a
knife blade until it is about thick. The purpose is to make strips of the material. A strip is prepared by
onsistency. The shrub box can be imilarly finished.
The flowers have to be planted on a in the illustration while on the garden have endeavoured to show the effect of
with a litue Vaseline to prevent the mix lure from sticking to the fingers.
Our first task is the laying of the
paving on the base. First dampen the whole of the top side of the base - but
be careful not to be careful not to apply too much mois-
ture. Lay the mixture on to the base with any convenient tool such as an with table knife or even a celluloid set square. Press the material firmly on to the base, smoothiag out until a layer about $\ddagger$ in. minutes, and before the material has set, the seams in the crazy paving must be impressed. Press a suitable tool into the material to divide it up appropriately. Do not attempt 20 a

pressing the knife edge into the mixture to form the top of the seat, and two smalLer pieces are required for the legse pieces aside (Fig. 2) A box is formed by cutting out the mard. ial as shown in Fig. 3. Hold a matervertically on the centre, but without
pressure, fold pressure, fold up the sides while still with the fingers, laying aside the corners When the base has thorountil dry. the edges should be smoothed off with rasp, file or glasspaper. This will not only the finish. The top particles but improve can also be squared up legs of the seat odges on glasspapaper. The legs may the fastened to the top by means of glue be

42
making a wall with individual bricks. You may either make a mound or build wall for the display of flowers whics' The latter can be bought quite cheaply in small bundles be bought quite cheale Alternatively, you may be able to find some discarded, artificial flower trimmings which would be very suitable for this
purpose.
Once again filler is mixed to a putty-
like like consistency and the area of the two parts. The mound is gradually built up to a height of about 1 in by applying portions of the mixture, trom

- continued on pago 43 Wordr वion मisom


## MAKE A BALLDON PUMP

YARDBOARD and paper are the main materials required to make used at party time when large numbers of rubber balloons have to be inflated. 9in. length of mailing tube, the outside of which is rendered smooth by the complete removal of paper labels and postage stamps. From fairly stout cardboard prepare a neat cylinder loins. long mailing tube. Do this by rolling the cardboard on to the mailing tube and securing the edges together with a quick acting

> By A. E. Ward

Make the air exit valve from a 1 in . Cuth of the same diameter mailing tube. making their diameters stout cardboard, external diameter of the mailing tube. In he centre of one disc bore a hole łin. in dameter. Holes can conveniently be bored in cardboard with sharp cork he lin. length of mailing tube. Bore two maller holes in the other dise (A). bout $\frac{1}{2}$. from the centre of the dise and opposite one another.
Cut a strip of greaseproof paper (B) good margin all round, but not so big that it overlaps the edges of the disc. Place the paper strip so that it covers both holes evenly and then secure it in position by pressing a narrow strip of a manner that cach hole will be covered by a loose flap of paper. Glue this dise on to the other end of the short length of mailing tube, with the paper flaps Glue the the tube.
Oin. long cardboard valve just inside the single hole side level with the cylinder
$\qquad$ Cut out another stout cardboard disc tube and make diameter as the mailing paper flap valve in the manner already escribed. This wi,l oe the air entry valve mailingst be glued on to one end of the inside. Put
the cardboard cylinderer by telescoping of the mailing cylinder over the open end ir inside the appara. As you do this the ant oi the air exit eutry valve remains closed. When you

draw the two tubes apart the exit valve admit air into the lower part of open to Insert the neek of a balloon into the fin. diameter hole above the air exit valve and let the balloon be supported in position by the rim of its neck pressing balloon by lengthening and shortening he pump so that ai is forced through th xit valve. It will no is not a hundred per cent efficient as long as the pumping airly quickly. When the balloon has been ully inflated it is an casy matter to pinch its neck and dis pump.
You will probably
wish to decorate


Continued from page 42

## Miniature Plaster Gardens

Ning smooth the inside, outside and top he crazy paving at both ends.
It is best to have a variety of colours planting in clusters to give splashes
colour, with an odd 'shrub' or two. If you prefer to build a tiny wall it necessary to flatten out the material to a thickness of $\frac{3}{7}$ in., cutting off strips $\frac{1}{2}$ in wide, and making the individual brick shaped to the curve of the base while in heir plastic condition and are built up brick by brick. There is no need to apply any cement' between the course s the bricks will adhere quile firm For finish, you may use water poster colours so long as they are not too vivid. For the model shown emulsion paint was used. The wall and mound are
in ivory, while the crazy paving is treated in ivory, while the crazy
your pump in attractive colours. This white paper and then painting all with with poster colours. An alternative is 10 paste on brightly coloured papers.


CARDBOAGB
VALVE
a GREASERSCO
C SELOTARE
eSPIN IN SPACE GAME
By T.S.R.


Cut (A) and (B) members from tin. plywood to pattern. Arrows indicate direction of outside laycrs of wood grain. ed to large cotion-recl (C), the top 'spring-board' may be flicked at open end.

$T$ AKING a young baby on a long rip in the car is no problem when fitted in a few moments and can be used for playing or sleeping. Since it is hinged it will take up the slope of your car seats and at the same time will be easy to fix and remove.
Overall si
upon the actual pattern course depend and it will only be neccssary to of car thicknesses. Fig. I shows low the playpen should fit nicely between front and seats. The back and front should be bottom from. or $\&$ in. plywood and the The side bars. plywood.
The side bars are cut from strips of plywood as shown in Fig. 2. Use roundhead screws for pivoting and slip a washer under the screw head to save
wear on the wood.

The diagram in Fig. 2 also shows how he bottom is hinged to the ends to allow butt hinges will be heavy enough for this purpose. They should be about $1 \frac{1}{2}$ in
vide.
The $p$
the pen is held in place by means of
two hooks made from mild steel. The hooks are bent roughly to the shape of or screwed to the plywood back of the pen. The hooks should not be fixed until fter the pen has been painted. owing to the transmission, a semi-ciccle of wood must be cut from the front as indicated by the dotted lines in Fig. 2 . The pen can then be placed to one side
as in A (Fig. 3) or centrally as in B. as in A (Fig. 3) or centrally as in $B$.
To finish of the playpen, round off all sharp edges and give one undercoat and two top coats of lead-frec paint. It is young children are concerned.
For slecping purposes a small matiress may be made from foam rubber and the sides could be lined with material. (M.h.)


Cut i, in. ply pancl (G). Mark out 'orbit' rings with pair of compasses and drill nine 'planet' score holes to accept spindle end of spinner top. Make up sides (H) and end member (J) with thin plywood and glue and nail to the score board. Paint target sides dark blue enamel.

Paint score board pale bluc. Colour in the orbit circles and paint 'planet' rings direct or Colour in the orbit circles and holes. Add numbers to score rings. Indicate corner holes with "Comet', "Satellite', 'Shooting Star' and 'Meteor'. Competitors try their skill at spinning satellite tops into numbered
planets io obtain highest planets io obtain highest scores.



A BRAND-new appliance from Arcoy Products, Knowsley Road, 1 Bootlc, Liverpool, 20, is the
COY RABBETTER, for use with ARCOY RABBETTER, for use with any standard portable drill, and costing
only $£ 1.19 .6$. The Arcoy Rabbetter is a boon to all home handymen. It rebates for picture frames, greenhouses, panelling etc., in a matter of minutes; it slots
drawer bottoms, sliding glass doors; it drawer bottoms, sliding glass doors; it
strips for laths, garden sticks, fillets, and strips wood; it tongues and grooves for floors, table tops and outbuildings; it
fillets for floors, etc., all very profillets for floors, etc., all very professionally and very quickly




## 年）

N
$T_{\text {fringe }}^{0}$ pool is complete without a ringe of the attractive rushes，
ris，and other marginals，which make a graceful and natural setting for the serene beauty of the water lilies． The marginals filourish either in shallow
water or in soil which，although above water level，is permanently moist．In this sense，the marginals can be de－ scribed as amphibious，and are well adapted to cope with the fluctuating
water level often found in natural ponds and lakes． In artificial pools provision can be
made for the marginals by having made for the marginals by having
shallow sloping sides or by constructing a shelf a few inches below the surface． 2 in．or 3 in ．of loam is sufficient，and no manure of any kind is needed．Over the
soil there may be any depth of water up soil there may be any depth of waty up
to 6 in．Marginals will grow equally well in boxes，pots or chip baskets．If there is no shelf or shallow margin，these can be stood on bricks to bring their tops to the
necessary level．As another alternative to the shelf， 4 －or 5 －inch．pots can be their rims not more than 6 in ．from the surface．
All marginal plants are perennial， dying down in the autumn and re－ apprearing．The planting season extends from April until July．Once planted， they noed no attention apart from thinning of any vigorous growth． Here are detailed some of the more popalar varieties．All the plants named
（1）above water level provided their
roots can reach plenty of moisture and in shallow water
（2）in shallow water．
the description， 6 in．of water is the thimit．

## mairginal plants

Acorus Calamus．Swect Flag．A reed－
ike plant with aromatic sword shaped green foliage． 2 to 3 ft ．
Alisma Plantago．The Water Plantain has large，dark green leaves and tal pikes of small pink and white sing Butomus Umbellatus．The Flowering Rush has been deseribed as the most eautiful of our native plants．It has oold stems bearing large clusters of rose ink flowers．Up to 12 in ．deep． owers of the Bog Arum are white spicuous，but are followed on in the utumn by pods of show scan une and July．9－12 in
Cyperus Longtrs．The Sweet Galingale is a charming Sedge with gracefu slender stems that terminate in feathery chestnut plumes． 3 ft ．
Glyceria Aquatic Variegata．A very
pretty and conspicuous plant and con－ sidered the most showy of the marginals． Strap shaped leaves，striped with green， white and yellow，and suffused with 12 f in the spring and autumn． $1 \frac{1}{2}$
Iris Laevigafa．A glorious bluc almost violet，flower，faintly lined with gold makes this one of the treasures of he water garden．Juno－September． $2 \AA$
Juncus Effusus Spiralis．This Juncus
Eoffusus Spiralis．This quaint
cush has the picturesque character found in Japanese garden plants．The stems，growing corkscrew ashion in a wide spiral，certainly mak Lobelia Cardiualis Qucen Victoria． Although normally regarded as a＇damp soil border plant，the brilliantly scarle fowered Lobelia is included here be in 2 or 3 in．of water．August－October in 2 or
3 ft ．
Men
Mentha Aquatic．The Water Mint，in addition to aromatic foliage and whorls of lavender flowers，has a reputation for helping to keep the pool clear and pure．
Auguist－September． $9-12 \mathrm{in}$ ． Pontederia．Cordata．A first class marginal with shining dark green

## 

Scirpus Zebrinus．A particularly strik ing and attractive plant．The quill－lik stems are brightly marked with alterna tive bands of white and green．3－4 ft． Typha．These are the plants that are so the name correctly belongs to the Scirpus family．The correct common names for Typha are Reed Mace or Cat－Tail． Veronica Beccabunga．An attractive
little marginal of crecping habit， ticularly useful for tubs and sunken sinks and for softening the hard outline of a concrete pool．It has shiny dark green foliage and light blue flowers．
6 in．
Only a small selection of plants have been detailed above．Many of them are amily groups containing many varieties within the group．Among these are the
Callia，Acorus，Iris，Mimulus，Scirpa Callia，Acorus，Iris，Mimulus，Scill be familiar with plant stockists．

lixuriant foliage and clustered light
blue flowers similar to Delphinium spikes． 2 ft ．
Sagittaria Japonica Plena．The very double flowers，reminiscent of white Stocks and the bold arrow shaped
leaves，make this one of the most desirable marginals for tubs or pools． July－September． 2 ft ．
Sagitraria Sagitifolia．The Common Arrowhead，with its lush profusion of long－pointed arrow leaves，has all the
characteristics we expect of a pond plant， plus an exuberant rate of growth tha may need to be curbed occasionally．It produces spikes of three petalled whit
flowers and will flourish in water up to 18 in．deep．July－September． $2 \downarrow$ ft．


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it will be no different to any other; full of photographs and, unless the standard is very high, rather monotonous.
break up the various sections of to album with something really unusual. Have you ever tried making pen-and nhe sketches from your pictures by using he bleaching out process?
first class results. Simply take get selected picture, eniarged to a workable size (no smaller than half plate), and with a pen and waterproof indian ink graph, using a ruler where straigh edges are required.
Keep an eye on sunlight and shadows, hading in the shadowed areas exactly a black should be marked lighe areas ond until the end of the process to be painted in with a brush.
Bleaching ourt
Once the pen work is dry, the next graphic image, in order to leave straight black and white drawing. There are several ways of doing this,
but the most convenient is to the complete picture with ordinary tincture of iodine, obtainable from any chemist. This should be applied eithe
with a brush or a pad of cotton wool.

The print will now turn deep yellow in colour, and the image will begin to fade
away. Rinse in clean water and transfer quickly to a solution of Acid hypo fixer.

> By M. Bowyer

## The image will now disappear completely, leaving only the drawing on a Whiter than white background. Leave the print to fix for $10-15$ minutes, and finally wash in running water for about half an hour.

Final hints
The whole operation can be carried out in normal room light, and the finished picture will be the same,
whether the original was taken with a simple box camera or the most expensive reflex. Although the sketches illustrated were made on glossy paper, using a paper with a matt surface.
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Caravel. The Galleass was the developsails and also using oars for propulsion (Fig. 3).
The Caravel was a development from the carrack type. The Caravel was a first lateen rigged on all masts,
foremost mast being square riged the the remaining masts lateen rigged (see Fig. 4).

With the development into the Galleon we enter on rather better ground in regard to availabe indual ships are not available we do have plans and details of the type that were contemporary and as we progress into the 17th century, draughts and drawings began to be kept
of all ships built for the service of the British Navy.

## WOODEN SHIP

 BUILDING - 3By ‘Whipstaff'

We now turn to the early writers for details of the methods of building ships of this period, 16 th to 18 th centuries, and make a start with writers on the The or the Galicon type
already outlined are timber, tree-nail and ironwork.
The timber consists of straight timber, compass (curved) timber knee timber
and planks, 4 in., 3 in., 2 in., and $1 t$ in and planks, 4 in., 3 in., 2 in., and trenails were in reality wood dowels or cylinders in five lengths, 1 fl ., $1 \frac{1}{\mathrm{ft}}, 2 \mathrm{f}$., 2 ft ., and 3 ft . long. By ironwork is meant mainly the bolts used for fastening the timbers to give added
In part 4 of this series we will follow out the progress of the actual building in order from laying of the keel.

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