

ONE PENNY.

Hobbies

FOR AMATEURS
OF BOTH SEXES

VOL. XXIII.

OCTOBER 13, 1906.

No. 574.

This . . .

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"I am writing to you to give you a testimonial to the value of the famous Dr. Tibbles' Vi-Cocoa. I have had some very heavy work to do lately, and before it was half finished I used to get so tired and languid that I did not know what to do with myself. A friend recommended me to try some Vi-Cocoa, which I did, and in a few days I was much better, and now, after taking two packets, I can do a hard day's work without feeling tired a bit."

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GAMAGES FOR BILLIARDS.

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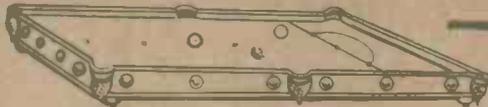
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HOBBIES, No. 576,
October 27, 1906,
WILL BE

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Hobbies

A WEEKLY JOURNAL FOR
AMATEURS OF BOTH SEXES

VOL. XXIII. No. 574.

OCTOBER 13, 1906.

Weekly Presentation Design.

SHAVING RACK.

A FRETWORKER, like everyone else, must shave. By growing a beard of course he may avoid it. But even if he does not himself shave, he has many friends who do. Now, advertisers tell us that shaving is a luxury. The luxury, says one, lies in the use of a certain razor, a second claims it for the soap, while a third will maintain that everything depends on the brush.

Personally, we agree with them all, for we have experienced the discomforts of bad razors, indifferent soaps, and brushes which habitually shed their hairs. But even with the best materials luxury is not necessarily secured. A clear mirror, for example, is not to be despised, and then one's pleasure depends to a certain extent on whether the light is in front or behind. With the possession of every comfort, however, what we have always missed is a bracket, or rack, for our brush and shaving pot. Razors, as a rule, seem to have a way of keeping themselves out of other people's reach. Even children learn in time not to sharpen pencils with them. Brushes and shaving pots on the other hand, are always getting knocked about. This is why we have designed a Rack, which will be used for holding the brush and pot and nothing else. We had almost added a mirror, but this would have made the article more expensive, and besides it is not always possible to hang an article of this description in exactly the right position

that a shaving glass should occupy. The Rack may be hung on any wall. It is ornamental—indeed, it is a beautiful piece of work—and it may be placed beyond the reach of anyone but its owner.

In order that the frets may not be hidden, the brush and shaving pot are shown out of position in the miniature. The brush slips into the little rack provided for it, the hairs hanging downwards, while the shaving pot passes through its circular rim and rests on the small shelf below. The whole arrangement is simple, and the finished Rack makes a particularly useful ornament.

The HOBBIES Presentation Designs are not given away with back numbers. Additional copies may be had from the publishers, price threepence each.

FRETWOOD. — Parcels of Padouk for making this Shaving Rack may be had for 19d. per Parcel, or post free for 1s. 2d.

SHAVING BOWLS AND BRUSHES. — Shaving Bowls (No. 6124) and Brushes (No. 6125), for this design, may be had for 1s. 6d. per set, or post free for 1s. 10d.

The Bowl is of white opaline, 2½ inches in diameter, and rests in a nickelled metal container. The Brush is 4½ inches long, with nickelled handle and superior soft hair. The Bowl rests in the space provided for it, while the Brush is made to fit the rack.



No. 574.—SHAVING RACK.
Size, 16 ins. x 9 ins.

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A Wall Mirror and How to Make it.

PICTURE-FRAME MOULDINGS can be put to a variety of uses other than to those for which they were originally intended, and the form of wall bracket which we illustrate, lends itself admirably to the use of picture mouldings for the outside frame, with a mount covered with velveteen or plush, which surrounds the central mirror. Gilt frames, with a dark plush mount, give, perhaps, the best effect, although polished wood mouldings can be used in conjunction with an inner gilt strip. As far as size is concerned, this must depend upon the space it is intended that the mirror is to occupy and also upon the width of the moulding, as very large frames would look out of proportion with a narrow moulding, and *vice versa*. The shape of the frame and also that of the mirror can be altered to suit individual requirements, while the candle sconces could, if desired, be omitted. Old picture frames can be used equally as well as new moulding, providing, of course, they have not become shabby, in which case they should, if possible, be renovated previous to putting them to their new use. If the worker has not an old frame

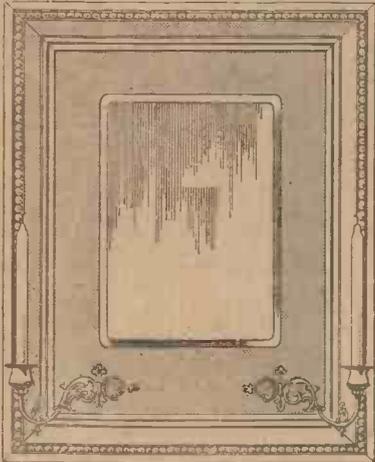


FIG. 1.—THE COMPLETED MIRROR.

handy, he will have to make one and for this he will require a mitre box in order that the corners may be cut true. A corner cramp is also a decided advantage, although where one or a couple of frames only have to be knocked up, it will be hardly advisable to go to the expense of purchasing one. Something will, however, be required to take the place of the

cramp and the best substitute for the right thing will be to knock up a wedge cramp on the bench, which is done as follows:—Cut a piece of two inch wood to an absolute square, measuring twelve inches, and a couple of pieces about 7 inches long, by 3 inches wide, and two inches thick; then get a good stout piece of stuff to



FIG. 2.—CORNER CRAMP.

use for a base, which may measure anything over 1ft. 9ins. square, or instead of having a board for the base, the bench top, providing it is level, will do. Our task now is to knock up an arrangement, which we shew in Fig. 3, in which A is the base, B the square piece, and C the two rectangular pieces, the openings between B and C being for the reception of the frame, which is held firmly in position by driving wood

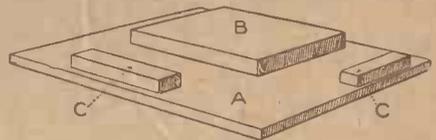


FIG. 3.—WEDGE CRAMP.

wedges between it and C, running a stationary piece of wood alongside the frame itself, so that it does not get damaged when the wedges are driven in. If two of the mitred corners are butted together and wedged up in position in the cramp, the fixing can be done and the next corner dealt with, until all four mitres have been fixed.

We can now return to the building up of the remainder of the mirror. As we have mentioned, the mount has to be covered with either plush or velveteen, this board having an opening cut out of it sufficiently large to receive the bevelled centre mirror. A rebate will have to be formed all round the mirror opening and if it is preferred to work this out of the solid, not less than half-inch wood should be used for the mount, but a far easier method will be to make

up the mount in two thicknesses, after the manner described in our pages a short time ago in the article on making plush brackets. The mount should be covered before being fixed in the frame and the mirror can have a piece of thin wood let in at the back to hold it in position, this being preferable under the circumstances to using glued blocks, as the opening can easily be cut to the exact size required and the necessity of preventing the glass shifting thus done away with. It will be advisable to provide the mirror



FIG. 4.—A SIMPLE WAY OF MAKING A REBATE, SHOWING MOUNT MADE UP OF TWO THICKNESSES.

with a backing, as is done in picture framing, but the wood used should be a trifle more substantial than that generally used. The whole of the back of the article should be covered with stout brown paper stuck on with thin glue and a couple of little rings or eyelets screwed into the outer frame to hold the cord from which the mirror is suspended from the wall. A pair of candle sconces can be bought at quite a reasonable figure, and these should be screwed on to the plush mount from the front.

The Welsh Industries Exhibition.

THE Welsh Industries Association will hold an exhibition and sale on Monday and Tuesday next, at the Mansion House, London, by the express invitation of the Lord Mayor, Sir Walter Vaughan-Morgan, a Welshman, of whose position all Wales is proud.

By sales and exhibition, such as the forthcoming, this association has made useful improvement in textiles, pottery, lace, carving (in stone and wood), basket work, &c. More than that, it has brought these Welsh products before a public, not only of this country, but abroad, who knew nothing of what Wales could produce; it has sent these same products to foreign exhibitions, and has secured honour for the home country in gaining with an exhibit of pottery a silver medal at the great World's Fair at St. Louis; and lastly, it has put some £25,000 into the pockets of the workers throughout the Principality, many of whom rely on the association as their means of support.

As this is the first occasion on which a national exhibition of Welsh industries has been held in the City of London, it is hoped that every Welsh man and woman in London (of whom there are some thousands), and in the home country, will make a special effort to be present.

THE inhabitants of Southern Chili are said to foretell the weather by means of a strange barometer. It consists of the cast-off shell of a crab. The dead shell is white in fair, dry weather; but, indicating the approach of a moist atmosphere by the appearance of small red spots, as the moisture in the air increases it becomes entirely red, and remains so throughout the rainy season.

THE DESIGN to be presented free with our Special Double Number on October 27th is a fine range of Christmas Fretwork patterns.

How to Treat a Horse.

NEVER go near your horse without speaking to him.

A horse can travel better and with less wear and tear with his head free.

A well-broken horse is much more graceful and easy in his motions without a check-rein.

Use a check-rein with the biting rig, and when training, but when the colt has completed his education and can be used for regular driving, take it off.

Breed horses with style and spirit enough to hold their heads up naturally.

Encourage your horses to lie down by making their stalls comfortable. The more they rest the better.

When driving on hot days give a few swallows of water whenever it is possible.

If heated do not let him fill up, but give a little at every trough.

Take a barrel of water to the field and give the work horses a few mouthfuls every hour or so. It will help them as much as it will yourself.

Low mangers are best.

Keep them scrupulously clean. Any accumulation in the corners will soon sour in the hot weather.

Do not allow the dried perspiration to remain in the hair over night. It will cause the coat to fade.

A good brushing will rest the horse and is almost as essential as the feed.

Take the horse out on the floor or out in the air and it can be cleaned quickly and thoroughly.

Pekin's Remarkable Transformation.

A REMARKABLE picture is presented by Dr. A. W. P. Martin, formerly president of the University of Pekin, to the readers of the "World's Work and Play."

On his return to Pekin he finds "China transformed." The streets of Pekin are being modernised, the houses are bound to follow, the railway comes to the gate before the palace, electric light and power and tramways are shortly expected; journalism has sprung up like Jonah's gourd, and is being pushed with the passion of propaganda.

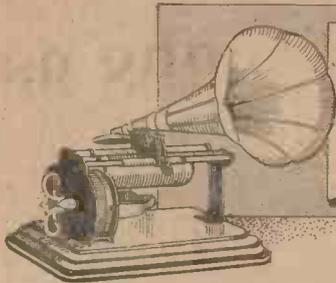
Numerous dailies are published, and in order to reach the masses, who are too illiterate to read for themselves, there are reading-rooms on the corners, at which the papers are read and expounded. A placard admonishes speaker and hearer that they are not to discuss the reigning dynasty, though, of course, they are free to thunder away against foreigners and foreign countries.

Schools for girls are greatly in vogue. A movement in favour of unbinding the feet of Chinese women is strongly favoured by the Dowager Empress. A new alphabet has been introduced, based on native characters, which will simplify the process of learning to read.

Formerly, 3,000 distinct characters were required for the reading of ordinary books.

The Chinese are pushing railways in all directions. The receipts at the Post Office are advancing rapidly, whilst the character of the people has changed, stolidity giving place to excitability.

WESTMORELAND is the most thinly populated English county.



TALKING MACHINES

PHONOGRAPHS OR DISC MACHINES ?

A

QUESTION of vital importance to the intending purchaser of a talking machine is whether the purchase shall take the form of a phonograph or a disc machine.

Too often, however, the question is ignored and because a friend owns either a phonograph or a disc machine, a similar one is obtained without any consideration of the comparative qualities of the two types. There is a very wide difference between the two machines, and while one may be exactly suited to the requirements in one case, in another it may be exactly the opposite. The body of talking machine users is strictly divided into two parties—users of disc machines and users of phonographs. And each party is absolutely convinced of the superior qualities of its own machine. One need hardly say in these enlightened times that for a phonograph the records are wax cylinders, while for a disc machine the records are flat, like a plate. The opinion of one who, constantly using both types of machine, is thoroughly familiar with their different qualities, may help to indicate to the intending buyer the type best suited to him. For every good point in a phonograph one can be found in the disc machine. While one company may turn out only disc machines and another only phonographs, one or two of the largest companies in the world manufacture machines and records of both types. The expert scientist is as busily developing and perfecting the phonograph as the disc machine, so the really up-to-date article can be obtained in either machine.

First as to the matter of cost. Phonographs range in price from a few shillings to fourteen or fifteen guineas. Some common machines, imported from the Continent, sell for about four and sixpence, but cheap machines of this type should be studiously avoided. Disc machines range from twenty-five shillings to as many pounds, though in the case of the latter figure the enhanced price is due to the elaborate finish of the machine. Taking an average, a really first-class machine, whether disc or cylinder, costs from eight to ten guineas. Thus in the initial cost there is nothing to choose. A really good and reliable machine, again of either type, may, however, be obtained for a few pounds less. In the matter of records there is a wide difference in price. Cylinders average one shilling each and discs three shillings each.

In a disc machine the volume of sound is very full and strong, which makes the machine eminently suitable for use in the open air, on the river, in public halls and large rooms. Disc

records, though rather heavy, can be placed one on top of the other and easily packed away in a cupboard or drawer. The management of the machine is an exceedingly simple matter and, given fair treatment, a disc machine, manufactured by a reputable firm, will keep in good working order for years. Disc machines, though provided with side handles for lifting about in a room, are never provided with a cover and handle for carrying from place to place, as is the case with phonographs. Their shape and weight are also distinct drawbacks to the machine.

A WINTER PASTIME.

The phonograph is essentially the machine for people of moderate means living in small houses. The disc machine is splendid for large rooms, but for rooms of less than about 20ft. by 15ft., the volume of sound is too much. For volume and fullness of tone, the disc is an easy first; for distinctness of utterance the phonograph bears the palm; for sweetness of tone there is little to choose. In the number of records published by the different firms, as well as in the variety and quality, both types of machine are equally favoured. In one or two cases the same company issue selections both as cylinder and disc records. The wearing qualities of both kinds of records are about equal and in the matter of breakages, perhaps more cylinders come to grief than discs, but this is more than counterbalanced by the fact that their cost is about one-third that of discs. Home-made records are possible with the phonograph, and this is an important factor in the popularity of this machine. Considerable fun may be got in the long winter evenings by record making and in this way a collection of voices of one's near and dear relatives may be formed. The phonograph is also a valuable means of communication between distant friends. Instead of letters, records may be made, and, if necessary, sent to the other side of the world. If the recipient be a phonoist, he will not only hear the actual voice of the sender, but, after shaving the record, can again use the cylinder to reply.

To sum up, if you have a small house and wish to provide an unending source of amusement for the family circle, invest in a phonograph, the small cost of the records making it possible to own a representative collection. Blank cylinders for home recording may be got for a few pence each and these can be shaved and used again and again. If, on the other hand, you have a tolerable income and fairly large house and are indifferent to the joys of home

HOBBIES.

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recording, then by all means give the preference to the disc machine.

Last, but not least, we would like to give a hint how to largely increase the pleasure derived from talking machines. The phonoist of the present day is entirely unacquainted with the value of hearing tubes in the reproduction of records. Hearing tubes should be part of the equipment of every machine for with their use one gets an infinitely finer reproduction than with the horn. The volume and clearness are increased fourfold, while the tone is so natural that one feels actually in the presence of the artist. The fact that experts always use hearing tubes when testing records speaks volumes for their worth. The tubes may, with little trouble, be used with all disc machines, having a removable trumpet. The tubes should be fairly long, say from one and a half to two yards. The length of tubing modifies the overtones and softens the volume, which, without such modification, would prove rather too loud and trying for the ear. Another advantage of hearing tubes is that they directly conduce to the longevity of the record. The weight of the trumpet being entirely removed, the consequent wear and tear are considerably lessened. To the student of language records their use would prove invaluable. The use of hearing tubes may also be recommended to admirers of talking machines who dare not invest in one because they are in lodgings or maybe the time they could devote to the machine would be entirely unsuitable to the other members of the household. Minus the horn and with the tubes adjusted, the sound given out is, except to the user, so weak as to be unable to penetrate doors or walls. Thus one's favourite records may be heard into the early hours without fear of either landladies or neighbours. It is impossible to give the price of hearing tubes, as, owing to an ignorance of their value, there is little demand for them. The price, however, would be no more than a few shillings and as one well-known company (the Columbia) supply them with their office gramophone, there should be little difficulty in obtaining them through a dealer in the trade.

ELECTRICITY is fatal to the discernment of certain colours. Yellow and pink, two totally different colours, look strangely alike by electric light. Heliotrope is also like pink, and subtleties of shade are quite lost in it. No light shows up shades and colours like candles did, when those commodities were made of wax. It is certain that all the modern artificial illuminants mix up colours and shades inextricably, and electric light is worst of all.

SNAKES are found to be attracted by certain noises. For instance, the whirr of the mowing machine, instead of frightening these reptiles, as might be supposed, seems to both allure and enrage them, and they almost invariably dart towards it, rearing themselves in front of the machine, a deed which, of course, ends in their destruction. In six months as many as 120 cobras alone have been found thus killed on one grass farm in India.

FRETWORKERS should book in advance for our Special Double Number to be issued on October 27th. It will be a number which will be sure to please them.



English Royal Heraldry.*

BY CYRIL DAVENPORT, F.S.A.

HERALDRY is largely the outcome of the almost universal symbolism which is found among the remaining traces of primitive peoples. Signs like the swastika and triskele, which were in all likelihood astronomical, represent a large group of these marks, and another large group can be found which owe their origin to natural forms, as, for instance, the Egyptian "Ouza," or sacred eye.

These signs were worn as personal ornaments as well as doing duty on rocks, buildings and works of art. But at a period when savage men gathered themselves together into families or tribes, we find tribal marks or Totems, and these I imagine are the prototypes of our modern heraldry where all members of the same armigerous family use the same coat-of-arms, supporters, crest, and motto.

Heraldry, as we know it, is a mediæval art, fostered particularly during the Crusades, when armour reached a state of development in which it entirely covered up the wearer. It was obviously necessary to have some outward and visible sign of the identity of such a warrior, and an easy way to obtain this was the addition of some personal badge on the top of his helmet, hence the crest, which is a personal mark, and should never be worn except by the person entitled to use it. A crest on a livery button is wrong; the proper mark on a serving-man's dress is a badge.

Besides the crest, the shield offered an obvious field for distinctive marks, but it had the disadvantage of being easily lost, so the crest on the helmet was originally the more important. Kings wore circlets of gold over their helmets, and many interesting adventures resulted.

At tournaments and on State occasions knights had the caparisons of their horses emblazoned with their arms, and also their own surcoats. At tournaments, knights not actually fighting had their shields carried by pages, who were often dressed in fancy costumes, often in the forms of animals, hence the heraldic supporters.

The traditional coat-of-arms of Normandy is "Gules, two lions guardant or," and it is supposed that this coat was used by our Norman kings with the exception of Stephen—who is credited with three centaurs with bows and arrows—Sagittaries. At the same time it must be said that there is no official authority for the existence of the two lions until about 1180, when they show on the seal of Prince John, Lord of Ireland (Fig. 1), in which case the Prince, on horseback and in armour, carries a shield on which are two lions passant guardant.

Henry II. married Eleanor of Aquitaine, and the traditional coat-of-arms of that country was "Gules, a lion guardant." St. George was, moreover, the Patron Saint of Aquitaine. On the second great seal of Richard I., the shield carried by the King shows three lions, and this coat has remained the coat-of-arms of England until the present day, that is to say, for a longer period than the royal coat-of-arms of any other nation. The only interregnum was during the Commonwealth. We have seen that Normandy was credited with two golden lions on a red ground, and that Aquitaine was credited with one golden lion on a red ground, and so we may presume that Richard combined the coats of his father and his mother, and so arrived at his three golden lions on a red ground, the oldest royal coat in Europe.



FIG. 1.
SEAL OF PRINCE JOHN, ABOUT 1180, SHOWING THE TWO LIONS OF NORMANDY.

This same coat was used by Richard's successors until the time of Edward III., but on his third Great Seal, made in 1340, he uses the coat-of-arms of France, "azure semée de Fleur-de-lys or," (Fig. 2), quartered with England. His reason for doing this, as well as for his assumption of the title "Rex Francia," was that he claimed the throne of France by right of his mother Isabella, daughter of Philippe IV., as her three brothers (Louis X., Philip V., and Charles IV.) died without any heirs. The French coat as well as the title was retained by our English sovereigns until the Legislative Union of Great Britain and Ireland in 1801. The crest of a lion statant shows clearly on the great seals of Edward III., on a cap of maintenance, but afterwards it is shown on a royal crown.

In early descriptions of coats-of-arms the animals shown on the English coat are described

* A Paper recently read before the Society of Arts and reported in the "Journal" of the Society.

HOBBIES.

as leopards. The reason for this is that heraldically a lion is a rampant beast, showing only one eye, one ear, and standing upon one foot. In any other position he was described as a leopard and considered to be acting the part of one. In such cases; however, the animal only bears that name as an heraldic title. A true heraldic leopard has spots, no mane, and an untufted tail. Our English lions have manes, no spots, and tufts at the end of their tails. Any lion not rampant may heraldically be called a "lion-leopardé." Golden lions on a red ground are "langued and armed azure," that is to say, they have blue tongues and blue claws.

Edward seems at first to have used the English coat before that of France, as Howes in his "Chronicle" says that "Touching the title and armes aforesaid the French king (Philip VI.) said to certain Englishmen sent to him, "our cousin" quoth he, "doth wrongfully beare quartered the armes of England and France, which matter notwithstanding doth not much displeas us, for that he is descended from the weaker side of our kin, and therefore, as being a bachelour, we would be



FIG. 2.

ARMS OF EDWARD III., FROM THE BLACK PRINCE'S TOMB AT CANTERBURY, SHOWING THE USE OF THE FRENCH COAT SEMEE WITH FLEUR-DE-LYS.

content to grant him licence to bear part of our armes of France. But whereas in his Seals and Letters Patents, he nameth himself as well King of England as of France and doth set the first quarter of his arms with Leopards, before the quarter of Lilies, it doth grieve us very much, making apparent to the beholder that the little island of England is to be preferred before the great kingdom of France." To whom Sir John Shoreditch, Kt., made answer, "That it was the custom of men in those days to set the title and arms of their progenitors before the arms and title of the right descending of their mother; and thus of dutie and reason doth my Lord the King prefer his arms."

Nevertheless, the protest of the King of France found favour in Edward's eyes, and he and his successors, until the time of William III., allowed the arms of France to remain in the first quarter.

We are told in manuscripts that Edward III. used as supporters a crowned lion guardant, or, and a falcon, or, but I expect these were only badges. Badges did, however, in many instances suggest supporters.

Richard II. used the same coat, and there is a sculptured coat-of-arms of his at Westminster Hall, beneath which is the badge of a white hart, the cognisance of his mother Joanna of Kent. Richard married Isabella of France, whose father, Charles VI., reduced the lilies semées of France to three only. Henry IV. at first used the lilies semées, but in 1408, in his Great Seal, he reduced them to three (the lilies semées are known as "France ancient," and, when there are only three, as "France modern") and this coat—"quarter 1st and 4th, France modern, 2nd and 3rd, England" remained unchanged until the time of James I.

Henry V. is credited with having a lion and an antelope as supporters, but over his tomb at Westminster he has an antelope and a swan. But still I think these are only badges.

Henry VI. shews the coat upheld in a coloured glass window at Ockwell's House, Maidenhead (the exact date of which I do not know), by two white harts, derived no doubt from the badge of Richard II.

Now I find a new authority for Royal coats-of-arms. Hitherto I have derived them chiefly from Seals, but from Edward IV. until Victoria (with the exception of Edward V.), there is a splendid series of Royal coats-of-arms on, or in, books which belonged to the sovereigns themselves.

At Westminster there is a loose cover of a book which bears the impression of a panel stamp showing the arms of Edward IV., supported by two lions, ensigned with a crown held up by two angels. Also in a manuscript which belonged to the King is the same coat and the same supporters. The white lions are doubtless derived from the white lion badge of the Mortimers, Earls of March, ancestors of the King. Willement says Edward V. had a lion and an antelope as supporters, but I cannot find any authority for this; he had no Great Seal.

The Yorkist badge of a silver boar is carved on the steeple of the church at Wolverhampton, and silver boars, armed or, were undoubtedly used for supporters by Richard III., and are shown in a manuscript which belonged to him. (Bib. Reg., 18, A. 12.)

On another manuscript (Bib. Reg., 16, F. 2), formerly the property of Henry VII., is his coat-of-arms with the same two white lions as supporters, but a little later he changed them and adopted a red dragon, supposed to have been the badge of his ancestor, the Welsh prince Cadwallader, as his dexter supporter, and a white greyhound as the sinister supporter. The white greyhound was a badge both of Henry's ancestors the De Beauforts, and of his wife's ancestors the Nevills. Henry VIII. used the same supporters until about 1528, when he gave up the greyhound and moved the dragon to the sinister side, adopting a lion as his dexter supporter.

(To be continued).

REMINDE your Newsagent that you many require more than one copy of the October 27th Special Double Number of HOBBIES. Unless you mention it now, he may be unable to procure an extra copy later on.

SCILLA SIBERICA and Snowdrops, if planted in alternate batches now, will make some pretty borders early in the spring. Plant two inches under the soil.



JEWELLERY AND TRINKET-MAKING

II.—SILVER PINS AND BROOCHES.

THE next stage in the work is to silver solder the join in the ring, and here is probably the most difficult of the various operations. Prepare some powdered borax by rubbing it into a paste with water, and then take a camel hair brush and paint both the surfaces to be joined with it. Next bind the ring up with thin binding wire so that the joint is just closed. It is not important that the two surfaces should fit exactly, for a small space should be left for the solder to run in. To prevent the wire ring from opening when the heat of the flame is applied, it will be advisable to bind it on the charcoal soldering block as well. We may now cut a small piece of solder into pieces about $\frac{1}{2}$ in. of an inch square, and place one piece on the joint after coating it with borax paste. Now take the soldering lamp and blow pipe, and with a steady breath blow the flame over that portion of the block surrounding the joint. Continue this until the borax stops bubbling up, and then direct a pin point of flame directly on to the joint and solder. Keep this up until the metal becomes red-hot and the solder runs. It is much easier to write this than to do it, and maybe the worker will not be able to command the blow-pipe flame sufficiently for the first two or three times, but with a little practice the initial difficulties will be overcome, and a gradual increase of the heat will result. It is most important that the heat is not applied too suddenly, or the borax will bubble up quickly and move the solder quite away from the joint. We will now suppose that the solder has run and filled up the joint, and if it has been well done, the joint will not budge anywhere. It will be advisable now to place the ring in a solution of hydrochloric acid (one part), and water (eight parts), this is called a pickle and will remove the oxide formed by the heat in soldering. After leaving the ring in the pickle for a few minutes take it out and wash it in plain water and dry with clean sawdust, and then true up to shape on a round piece of wood or a round ended stake with a mallet. Next place flat on the bench and file one side a little flat with a fine flat file. Care must be taken not to overdo this, just enough should be taken off to give a surface for soldering to the base. Clean up the metal disc first with pickle,

and then with file or knife scrape the edge where the ring is to be joined, and coat both silver plate and wire with the borax at the points of contact. Now place in position and carefully bind with wire and then cut up about six or seven small bits of solder, coat them with borax and place at intervals on the plate close to the ring.



BLOW PIPE.

Gradually heat up the work on the block and increase until all the solder is melted.

Those workers who have a large blow-pipe or a benzoline soldering lamp will find it very useful in soldering up a piece of work like this, for the whole piece of work may be heated at once. When the solder is seen to run remove the flame and place the work in the pickle when cool enough. If the solder has not run thoroughly, place some more borax in the joints and solder again, continuing until the joint is perfect, not forgetting to place in the pickle after each attempt.

To finish the work, solder a half round piece of wire underneath and then clean up with a piece of Water of Ayr stone, and water if necessary, scraping any small pieces of solder left, and polish with a fairly soft brush and rouge powder.

HOW TO MAKE A SIMPLE BROOCH.

When the amateur jeweller has successfully overcome the difficulties of silver soldering, he will be anxious to have some work on which to further try his skill, and to this end a design is given in Figs. 1 and 2 of a simple brooch, with a similar rim to the button, but containing, in addition, some soldered surface ornamentation in the form of silver rings. This method of decoration is taken first because it is fairly easy to do, and follows naturally after the wire work.

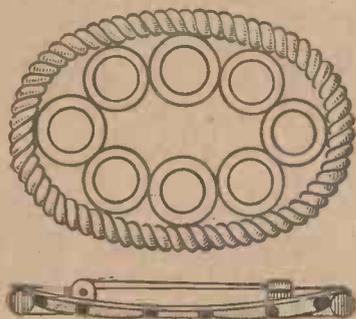
The dimensions are a matter for the choice of the worker, but a very suitable size would be $1\frac{1}{2}$ ins. long by $1\frac{1}{2}$ ins. wide. The silver plate should be about of the same thickness as the button, while the twisted rim may be slightly larger. Proceed exactly as described in the making of the silver button, and, when the rim is securely fixed, the rings may be soldered on. If the worker wishes, the rings may be re-arranged in a different manner, but for ease in soldering the method suggested will be found most straightforward. The rings may be made separately, but this is a long job and it will be better if they are made in the following manner. Find a short length of round rod of iron or brass and



SOLDERING LAMP.

HOBBIES.

twist some paper round until the diameter is equal to the inside dimension of the ring; next fasten the ends of the paper with binding wire and then cut off a length of wire, anneal it and tightly bind it round the mandrels, giving several more turns than are really required. Next hold the rod in the flame and burn away the paper so that the length of spiral wire will fall off. Place this length carefully in the vice and make a saw cut, with a fine blade in a fretsaw or metal frame, across them, and when the saw-cut is finished, the separate rings will fall apart.



FIGS. 1 & 2.—SILVER BROOCH WITH TWISTED WIRE RIM AND KING ORNAMENT.

Each ring must be soldered up on the charcoal block, and after being pickled and trued up, they are ready for soldering on the plate. It will be advisable to rub one side of each ring on a piece of fine emery-cloth, for this will give a flattened surface underneath and allow more hold for the solder. The method of soldering the rings is just the same, taking care that each ring is in its proper position before allowing the solder to run.

The work is now ready for fixing the pin, &c., and although there are several methods in everyday use, the one suggested in the diagram is the easiest for beginners. To begin with, take a small piece of silver, $\frac{3}{16}$ in. long and $\frac{1}{16}$ in. wide, and mark it out as shown in Fig. 3. Next bore a hole about $\frac{1}{16}$ in. diameter in each semi-circular end, taking great care that they correspond so that when the sides are bent up the holes will be in a straight line.

Another method is to bend up the sides first, place a piece of soft metal between and bore right through as if it were a solid piece. The latter method certainly ensures a true alignment, but a little adjustment with a small round file will soon true up the holes in the former method. The distance between the two sides, inside measurement, should be about $\frac{1}{16}$ in., or a little larger than the diameter of the pin. Carefully true up the piece and file the underpart true, ready for soldering in position. Fig. 4 shows a view of the hinge piece and before being fixed in position, the pin (Fig. 5) should be prepared and fitted. A stout piece of wire should be used for a rivet (Fig. 6) and one end bent over so that it may be placed in position like an ordinary rivet. Fit the rivet in position and leave enough projection to turn over and tighten up easily. Next take a length of stout wire for the pin, long enough to reach along the brooch and enough to spare for bending over as

shown. The inside diameter of the turn should be equal to the diameter of the rivet and, when correct, the joint should be securely soldered and nicely trued up with a file to a clean finish.

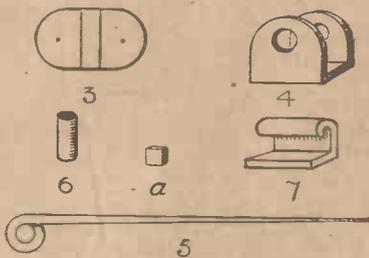
Next file off the end to a point and, if necessary, harden the pin by planishing it on a block with a smooth-faced hammer, continually turning the pin round and round to prevent it getting uneven.

Now place the end of the pin in the hinge piece and place the rivet in position and fit the small piece of metal (a) underneath the pin to keep it at right angles or parallel with the bench. This piece should then be soldered in position. The soldering may be avoided if a suitable projection is left on the piece when marking out, but as it is apt to be in the way when bending and is soon soldered on, the first method will be best.

The next step will be to solder the hinge piece in position, first binding it in place with binding wire. When this is done, fit in the pin and place the rivet in position and close over the end, placing the work on a suitable stake and using a small riveting hammer. Now find the position of the catch and, having bent a piece of silver about $\frac{1}{16}$ in. wide and $\frac{3}{16}$ in. long to the shape shown in Fig. 7, solder it in place, keeping the pin out of the way. When this is done, adjust the pin so that it fits into the catch with a slight amount of pressure and then place all the work in pickle.

The above method of fixing the pin allows of no spring, but the small piece of metal (a) soldered in the front of the hinge piece under the end of pin will prevent the pin going too far down and the catch will be found quite as secure as in the case of ordinary brooches.

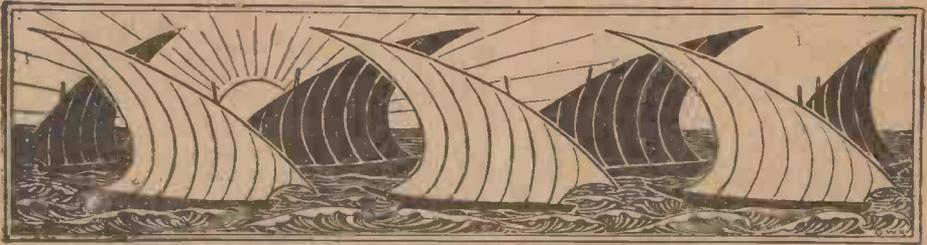
When the work has been in pickle sufficiently long, it may be washed, dried and then cleaned up with a scraper, which may be easily made from an old three-cornered file, ground and sharpened at the end. Every trace of solder on the surface should be removed, and then the work may be boiled in weak sulphuric acid in a metal pan. Make a solution of acid one part to water six parts, place in a copper pan and then apply heat underneath until the liquid boils;



FIGS. 3 TO 7.—PIN AND DETAILS.

allow the work to remain a few minutes and then cool off, and wash and dry in sawdust. The silver will now have a beautiful frosted appearance, which may be left as it is, or polished up with rouge and brush.

HOBBIES of October 27th (this day fortnight) will be a Special Double Number, price Two-pence. A fine series of Christmas Designs will be presented free.



Notes of the Week.

“**H**OBBIES” of October 27th—that is, the issue of this day fortnight—will be a Special Double Number, price twopence. We shall as usual print an extra number of pages, and the issue will in every way be a brilliant one. The design, or rather designs, will be more than double the ordinary size. Indeed, it is our intention on this occasion to present our readers with a series of very attractive Christmas fretwork patterns. Novelties for the Christmas season are always welcome, and many of our readers have long ago discovered that nothing is more acceptable as a present than a neatly-made fretwork article. If it is characteristic of Christmas, then so much the better, and the patterns we refer to will all be designed in what we may call the Christmas style. As several of our previous Double Numbers ran out of print during the week of publication, it is perhaps worth while to remind readers to give early notice to their news-agents.



A popular contemporary entertained its numerous readers the other day with this little joke:—

LITTLE BOY: “Father, what are wrinkles?”

FATHER: “Fretwork, my son, Fretwork.”

That fretting and worrying will bring wrinkles there can be little doubt, but that a hobby like fretwork can remove wrinkles is shown by a letter we have just received, and from which we give a few extracts:—“Fretwork has done me no end of good. In 1899 I had an accident—hurt my back and head—and for four years and more, although not unable to work, I had one long fit of the blues. I couldn’t get interested in anything, but just got the hump at everything and everybody. I felt quite old, and my face even began to get wrinkled up. People chaffed me about it. But one day a fellow showed me a neat bit of fretwork he had made. (Afterwards I found out it was your Cigarette and Match Car Design, No. 276.) He offered to lend me an old hand frame he had, and I had a shot at the Tommy Atkins Pipe Rack. Then I did the Japanese Shelf, No. 350, and fretwork so took with me that I ordered an Al machine. Since then I have never had a fit of the blues. I made both the Nelson Column and the Renaissance Overmantel this year, and am now finishing the Omnibus. In fact, I feel quite young again, and people never chaff me about being old and wrinkled.” So, when our little boy asks, “What removes wrinkles, father?”

we may promptly reply, “Fretwork, my son, fretwork.” After all, it was not merely fretwork that cured our correspondent. What he simply required was a hobby, and he has found one.



A year’s free subscription to *HOBBIES* has been awarded to Edward Bates, of Stokenchurch, Bucks., who obtained the first prize for fretwork with his model of the Nelson Column at the recent Stokenchurch Industrial Exhibition.



Speaking of Exhibitions, do fretworkers know our little handbook on “Fretwork for Exhibition, Competition and Sale”? The book has not been written for beginners, but rather for those who have already acquired some skill in the work, and who now desire to send specimens of fretwork to public exhibitions, or turn their hobby to a profitable pastime. No attempt has been made to take the reader through a course of instructions. Many directions and suggestions may be found in the descriptive references to popular patterns, but the handbook is mainly intended to be a guide to some of the finer designs published within recent years, and thus to be an aid to those whose ambition it is to make fretwork much more than a mere evening’s recreation. The price of the handbook is one shilling, but in order to encourage exhibition and competition work we will send a copy to any reader for sixpence.



We hope that numerous readers are going to follow the series of articles on jewellery making we are now publishing. This hobby, to many, will be a new one, and for this reason will be all the more attractive. Moreover, it is an inexpensive and comparatively simple pastime, and one which can be practised without annoyance to others. The series of articles will grow more interesting as it proceeds, and those in search of a fascinating hobby should carefully study the chapters.



Remember the date of our Special Double Number—October 27th.

Squirrels in London Parks.

RECENTLY a number of American grey squirrels have been let out of their cages in the Zoological Gardens for the purpose of testing whether they can live in a London park during the whole of the winter, as they do in the Central Park, New York.

If the attendant's opinion is authoritative, they will not. "Will they live?" he repeated, in answer to a question. "No"—emphatically. "There isn't any food in this park for them, except the bits of cake and biscuits which the public throw about. And in the winter they won't even be able to get that. I've been here a good many years now, and have never seen an English squirrel in the park; if they can't live here, it's certain the Americans can't. It's nuts they want."

An entirely different view was expressed by Mr. Thomson, the Assistant Superintendent of the Zoological Gardens.

"I think they will all be able to get a living," he said. "If they are not able to get food in the park, they will find their way back to the gardens here, where there is always plenty of food about. A large number are out in the gardens now; one or two have been free for as long as six months. These are chiefly animals which escaped from the cage when they were first brought here. They were sent by the Duke of Bedford from Woburn Park, where they have quite overrun the place. At frequent intervals others have escaped from their cages."

Technique in Music.

"UNLESS pianists put more imagination into their work, the mechanical piano-player will supersede them." Such was the warning given at the Trinity College of Music by Dr. John Warriner, in the course of a lecture on the art of teaching music. Choosing as his immediate subject, "The Causes and Cure of Defective Technique," Dr. Warriner explained that by technique was meant the ability to do what the mind wanted at the moment the wind wanted it done and in the way that the mind wanted it done. This could only be attained after careful practice with a definite object in view. When the movement of the fingers was correct, and at the same time almost automatic, the technique might be considered good. The whole secret was to be able to play practically involuntarily. Strange as it might seem, technique could only be inherited, and it was invariably found that the infant prodigy who played after little or no practice had the good fortune to be the offspring of a parent, grandparent, or even great-grandparent, who had spent a great part of a lifetime studying music. In conclusion, Dr. Warriner advised his audience to avoid the two extremes—the soulful amateur who was so full of soul that he had no technique, and the mechanical professional who had technique, but no soul.

WHEN a number of camels travel, they are usually led by a strong bull, which keeps the rest in order. If the leader should fall ill, or be absent from any other cause, the herd almost invariably mutinies. In Asia Minor, the duty of leading camel caravans is frequently deputed to donkeys. This may sound curious, but it must be remembered that in the East the donkey is an important animal.

Value of War Medals.

AT Glendining's auction rooms, Argyll Street, W., an important group of medals awarded to Captain A. W. Pascoe, of the Royal Marines, was presented for sale. It comprised Naval General Service medal off Tamatave, 1811, and a Turkish medal for St. Jean d'Acre. This was an unusual group, with both Naval and Military General Service medals. The group was well bid for, and realised £17 10s. Special interest was attaching to a two-barrel medal, the Atbara and Sudan, awarded to Lance-Corporal Knowles, of the 21st Lancers. This regiment, it will be remembered, made the celebrated cavalry charge at Omdurman. The souvenir of the battle realised £1 7s. A large number of Boer War medals were submitted for sale, but in most instances very poor prices were offered. One for the relief of Mafeking, Orange Free State, and Transvaal brought in two guineas. Another for the defence of Mafeking, with three bars, was appraised at the higher sum of £3. An Inchiquin Siege piece, crown, weighing about 19 dwts., realised the high price of £4 5s.

A Doctor's Talk on Food.

THERE are no fairer set of men on earth than the doctors, and when they find they have been in error they are usually apt to make honest and manly confession of the fact.

A case in point is that of an eminent practitioner. His plain, unvarnished tale needs no dressing up:

"I had always had an intense prejudice, which I can now see was unwarrantable and unreasonable against all advertised foods. Hence, I never read a line of the many 'adverts.' of Grape-Nuts, nor tested the food until last winter.

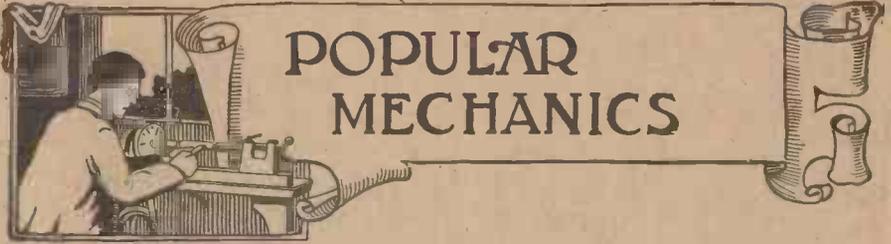
"While at the sea shore for my health, and visiting my youngest son, who has four of the ruddiest, healthiest little boys I ever saw, I ate my first dish of Grape-Nuts food for supper with my little grand-sons. I became exceedingly fond of it and have eaten a package of it every week since, and find it a delicious, refreshing and strengthening food, leaving no ill effects whatever, causing no eructations (with which I was formerly much troubled), no sense of fullness, nausea, nor distress of stomach in any way. There is no other food that agrees with me so well as this does. I am stronger and more active since I began the use of Grape-Nuts than I have been for ten years, and am no longer troubled with nausea and indigestion." Name given by Grape-Nuts Co., 66, Shoe Lane, E.C.

There's a reason.

A delightful breakfast dish is found in Grape-Nuts served direct from the packet with cream or milk.

THE Australian jungle fowl, instead of a nest, builds a huge earth mound, often fifteen feet in height, with a circumference of 150 feet. These mounds are under cover, and are so enveloped in foliage that, in spite of their size, they can scarcely be discovered.

IN Peru, when a man wants to break into a house, he often takes a sponge and a bucket of water, and moistens the walls, which, being covered with only a thin coating of mud, are easily dissolved upon the application of moisture.



POPULAR MECHANICS

How to Make an Automatic Flying Machine.

(Concluded from our Last Number.)

MAKING now our cork semi-circles No. 1 and No. 3, we place them facing one another at the flat sides, and having made in each a minute hole at about $\frac{1}{8}$ in. from each edge, we insert and glue into these holes the two skewer rods, which we had previously rounded, smoothed and sharpened. If this has been neatly done, we shall have a light frame, about 6 in. long, the ends of which consist of the rounded sides of corks No. 1 and No. 3, the sides being the thinned skewer rods (which should be quite parallel with one another and perpendicular to their cork basis, with a clear aperture of $\frac{1}{8}$ in. between the rods), as clearly shown at Fig. 6.

This little frame should be allowed to stand for some hours, so that the glue may have time to harden thoroughly. When this is the case, two small holes are made with a fine bradawl, at opposite side of the cork semi-circle No. 1, and into these holes, subtending at an angle of about 160° , are inserted and glued the ends of two 5 in. bows of thin cane last made.



FIG. 6.—**LIGHT FRAME WITH HALF CORKS TOP & BOTTOM.**

When the glue by which these are fitted to the cork is quite set, two light pongee silk wings, of the shape and dimensions shown at Fig. 7, are cut out, and glued to the upper cane, and side skewer rods, precisely in the same manner as was described in making the "propeller." This should be allowed to dry thoroughly, when we may proceed to assemble the whole together. To this end we begin by fastening in the two longer ends of the canes being pushed into and glued to the said cork, so as to make an angle of about 60° with one another. In gluing these canes in, it must be remembered that the propellers must have a certain amount of "pitch" or inclination given to them, to enable the machine to ascend, and that the *silked* side should show uppermost.

With the method and direction of propulsion we shall adopt, each propeller blade will be made to slope to an angle of 30° from the vertical, and each one, when facing the operator, should have its bowed portion pointing to the *right* ;

hence the further one will be looking to the left. This having been suitably adjusted, the protruding wire of cork No. 2 is put through the

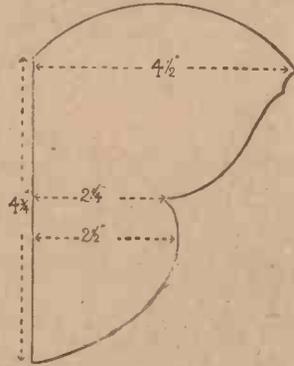


FIG. 7.—**PATTERN FOR ONE OF THE PONGEE SILK "WINGS" TO BE GLUED TO THE "BALANCER."**

bead and hole in cork No. 1, so that the two beads are in contact. The protruding end of this latter wire is now neatly bent by pliers into the shape of a hook, free to rotate between the

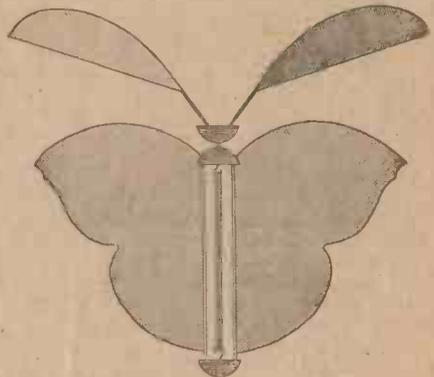


FIG. 8.—**GENERAL APPEARANCE OF COMPLETE FLYING MACHINE.**

two uprights of the balancer frame. We now take a length of our india-rubber thread, and having fastened it firmly to the lower hook, we

pass it round the upper hook, pulling slightly while so doing, so as to keep the individual threads fairly tight; and we continue thus winding the rubber thread between the upper and lower hooks, until some 10 or 12 strands have been wound on, when the finishing end of the rubber should be firmly tied with silk to the upper hook.

Our model is now complete. To cause it to fly, it is necessary only to hold the model in the left hand, by cork No. 2, between finger and thumb and then with the right hand to rotate the lower cork (No. 3) *clockwise*, some 35 or 40 turns, so as to cause the rubber bands to twist tightly. If now the flying machine be held upright, with the propeller blades upwards, and both hands be suddenly withdrawn, so as to free the machine, the rubber bands in untwisting will impart a rotary motion to the propeller, and the flying machine will rise in a most graceful and smooth-like manner. Fig. 8 gives an idea of the general appearance of the completed flying machine.

Home-Made Soldering Iron Heater:

A SIMPLE electric soldering iron heater, recently brought under our notice, consists of a bank of five 110-volt lamps, a copper plate bent at right angles, an arc lamp carbon 5.8-in. in diameter, and suitable connecting wires. The copper plate is mounted upon an ordinary fire brick, and the carbon is allowed to rest upon another, a fire-brick cap being placed upon it sufficiently channelled out to enable the end of the carbon to be well covered. The carbon is connected to the positive terminal of the trolley circuit and the copper plate to the negative, the lamp resistance being interspersed to cut down the potential.

The heater is operated by bringing the carbon against the copper plate, and withdrawing it, forming an arc which quickly heats the plate sufficiently to enable soldering to be done. The use of the gasoline torch is entirely dispensed with, and once the copper plate is heated, it readily stays hot with little attention. The cleanliness and convenience of the apparatus are notable. A small electric soldering iron for delicate work is also in use. It consists of an insulated handle carrying two terminals with sufficient spring to enable an arc to be established between them when they are pressed together and separated. Suitable resistance is interposed between the power circuit and the arc points to prevent undue rush of current.

A CORK TREE must be fifty years old before it produces bark of a commercial value.

REMEMBER the Special Double Number of HOBBIES. The date is October 27th—this day fortnight.

CASE AND INDEX FOR VOL. XXII.—A handsome Red Cloth Binding Case for Vol. XXII. of HOBBIES, with Index and Title-page, may now be had for 1s. 3d., post free. The Index with Title-page alone may be had for 2d., or post free for 3d. Indices for previous volumes (except for Vols. IV. and V.) may also be had. Bound Volumes of HOBBIES, XIII., XIV., XVIII., XIX., XX., XXI., and XXII., may be had, price 3s. 6d., each, post free. (The other volumes are out of print.) HOBBIES LIMITED, 12, Paternoster Square, London, E.C.

Correspondence.

STAMPS.

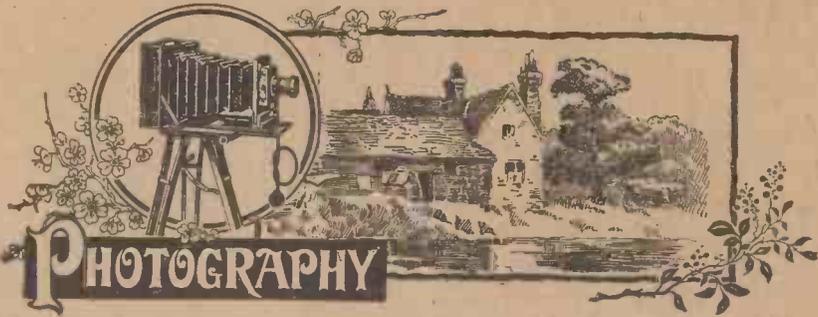
- MCCALIE (Gateshead).—The stamp is the first 1d. English stamp and is very common unless in unused condition or with a scarce plate number. This number is printed very small within the network to left and right of the Queen's head. Plate 9 is the scarcest.
- LOVENZ (Hampton).—"Stamp Collectors' Fortnightly," price 1d.; published at 63-64, Chancery Lane, W.C.; "The Stamp Collector" (2d. monthly), published at Constitution Hill, Birmingham.
- ARMSTRONG (Darlinton).—These stamps are all common. Average of value is below a half-penny. About 2s. 6d. the lot would be the utmost. The stamps of course are not at all improved by being stuck down to the sheets.
- H. (Barton-on-Humber).—The 1d. black stamps are worth from 1d. to 6d. according to condition. It is an advantage to keep them on the original envelopes. If you have a large quantity of these and other *early* English stamps they might be worth sending to us for an exact valuation, in which case please send per registered post with stamps for registered return.

BOOKS AND ENGRAVINGS.

- G. D. H. (Bridgewater).—We fear that you will not realise much, if anything, from the sale of a 1737 Matthew Henry's Commentary. This is of no real value nowadays.
- H. R. GOODLATTE.—"Vanity Fair" was first published in 1848. There is nothing special about the edition of 1871-2. Leech's "Pencilings from Punch," 1850-9 and Tenniel's "Cartoons from Punch," 1854-1862, are worth a few shillings each. You might offer all these to Messrs. Maggs Bros., 109, Strand.
- E. BURTON (Lydd).—Stockdale's edition of Shakespeare, 1784, is not of any commercial value.
- J. A. P. (Wigan).—In order to tell whether a book is of any value it is absolutely necessary to have an accurate transcription of the title-page with the date of publication. The particulars you give are too vague to enable us to help you. There are numerous editions of Ossian; we cannot identify the book of Paxton's or the book on Surgery.
- ADMIRER OF "HOBBIES."—The Poetical Epitome is not any value; neither is the Concordance.
- DAWSON (Chigwell).—The two XVIII Century Commentaries on Isaiah and Deuteronomy are of no value.
- C. WYTBROW (Forest Gate).—It is difficult to say what your picture is worth without seeing it. We cannot identify it from your description. Could you not get some local artist to look at it or the curator of the nearest Art Gallery? If you would rather go to a dealer, Messrs. Shepherd Bros., 27, King Street, St. James's, are a good firm.
- LESLIE SMITH (Lincoln).—We are not sure whether the copy of Bishop Hall's Works (1628) you mention is complete. There should be three folio vols. (1628-1652) in the complete edition. In any case it is of little value, worth anything from 5s. to 15s. Mr. Chas. Higham, 27A, Farringdon Street, London, E.C., deals in works of this kind.
- M. W. (Giltach Goch).—Reeves is not an engraver of any note. Coaching subjects are sought after by a good many collectors, but we could not estimate the actual value of your print without seeing it. You would find Rimell and Son, 53, Shaftesbury Avenue, as good as anybody to deal with. With reference to your query as to the distinction between an engraving and a print, it is difficult to define this in a few words. By an engraving is usually meant a print from an engraved wood block, or metal plate. A print may be a woodcut, a lithograph, a line engraving, an etching, a mezzotint, a photograph, and so forth.

CYCLING.

RYDER (Leeds).—The cause of the apparent "deadness" of your cycle might be attributable either to (1) your personal condition, or (2) the utmost ability of the machine. With reference to (1), we think that, from the particulars you give of your height, weight, and age, you might with advantage consult a medical man; but, in any case, cycling in *moderation* would be beneficial rather than harmful to you, while attention should be paid to diet. Avoid over-indulgence in spirits, ale, or tobacco, although neither is harmful if taken in moderation. Try shorter cycling spin at a lower speed, followed by a cold tub (if you are strong enough to stand it), and a brisk "rub-down." As regards (2) the machine, though of a reputable make, is certainly heavy, and could with advantage have been made eight or ten pounds lighter.



EARLY WORK IN BROMIDE PRINTING.

NOW that the days are drawing in, and the light during the daytime is becoming much weaker, we leave P.O.P. as often as not, and turn our attention to the printing papers which can be worked in the evenings—exposed, developed and so on in artificial light. Bromide printing is immensely popular at the present time, and is likely to become more so since the introduction of the simple but delightful method of sulphide toning which, as we shall see presently, enables us to get beautiful chocolate or sepia tones as an alternative to the black and white of ordinary prints.

Bromide paper is coated with a thin film of emulsion similar to that used for dry plates, only it is much slower. For this reason far more light can be used than for plates, and we strongly recommend having as much light as possible in the dark room, of canary yellow or orange colour, rather than red. Canary medium, or amber glass, can be used to prepare the light, and dark-room lamps fitted with these media can be bought cheaply enough.

There are various makes and classes of paper, but all require much the same treatment: there is platino-matte paper, giving greyish-black prints similar to platinotype, smooth and glossy, on either paper or postcards, and matt and rough, white or cream. The advantage in having so many surfaces to choose from is that one can adapt the surface to one's negatives. Thus you will find a cream rough paper eminently suited to large portraits, "broad" landscapes (devoid of fine details), and bromide enlargements. Smooth matt papers are best for small subjects and pictures rich in small details, and so on.

A paper having been chosen, it should first be tried with a plucky negative, as such will always most readily give a good result. It is much harder to deal with weak or flat negatives, though, as will be seen later, one can adapt the exposure to the negative to some extent.

In order to avoid the haphazard work which costs amateurs so many wasted prints, we recommend the use of an exposure board; this is simply a board about three feet long by four or five inches wide, marked with thick pencil lines across it every three inches, the lines being numbered 3, 6, 9, 12 and so forth. This is placed with the gas, or lamp, at the one end, and the printing frame is held on the board during exposure (see figure) either 3, 6, 9, 12 or 15 inches, &c., away as desired.

The reason for this is that a soft negative can be made to give a brilliant print by exposing with the frame two feet or more away, whilst a harsh negative can be made to give a nice, soft print by exposing with the frame very near the light. This is, in fact, one of the secrets of bromide printing. The farther away the frame is held from the light, the more vigorous or contrasty will be the print, and *vice versa*, but, the longer must be the exposure.

With a negative of average density, an exposure with a No. 5 gas burner, or its equivalent (using an average bromide paper), would be about a second six inches away, four seconds a foot away, nine seconds eighteen inches away, and sixteen seconds two feet away; in fact, each time the distance is doubled, the exposure must be squared. Exposure should never be longer than will enable you to carry on development for at least thirty seconds.



Now, as regards development, the two developers most suited to bromide paper are metol, hydroquinone and amidol. Most of the formulæ for the former are based on one standard, and will be found suitable; they can be bought ready prepared in powder form for two or three pence nowadays of any chemist or photographic dealer, or may, of course, be made up at home. A splendid amidol formula is as follows:—

Water	4 ounces.
Sodium sulphide	¼ ounce.

When this is dissolved, add
Amidol 12 grains.

If very rich blacks are wanted in the prints, the amidol may be increased to 15 grains. It should be allowed to thoroughly dissolve before the developer is used.

Do not make up more solution than you want at the time, as though a really excellent developer, it does not keep.

The exposed print is laid film upwards in a clean dish, and the developer poured over it with one sweep. Too little developer means that you will not wet the whole film instantly, and uneven, patchy pictures will almost certainly result. Development should take at least half a minute, and a whole minute if perfect, velvety blacks are wanted. Some amateurs think it an

advantage to "get the print out of the developer quickly," but this is a distinct mistake. Of course, if you over-exposed a print on purpose to get a soft picture, development may be much quicker, but prints so made will be grey and will lack the beautiful blacks which every bromide print should possess.

When developed to just the depth you want in the finished print, pour off the developer, and transfer the print to a fixing bath. This should be acid, and can be prepared as follows:—

Hypo	4 ounces.
Sodium bisulphite	60 grains.
Water to	1 pint.

Acetone sulphite is preferred by the writer to the sodium salt, but either works perfectly.

After fixing for ten minutes, let the prints wash in running water for at least half-an-hour.

We shall conclude by describing the method of toning fixed and washed bromide prints by the sulphite method. Briefly put, this is as follows:—Prepare two solutions, one of 80 grs. potassium ferricyanide in 4 oz. water, the other of 60grs. sodium sulphide in 6oz. water. First place a wet print in the ferricyanide solution, and rock the dish so as to ensure even action; if you want a warm chocolate tone, leave it here for twenty or thirty seconds; if a brownish-sepia tone be desired, leave it in a minute or longer. In this bath it turns a muddy pale yellow colour, and when removed must be washed in running water until the white portions are quite pure and not in the least yellowish. All you now have to do is to place the print in the sulphide solution for two or three minutes, when the picture at once regains its density, and in so doing appears of a beautiful and permanent warm tone. Fifteen minutes' washing completes the operation, and the prints can then be dried in the usual way.

Stereoscopic Sight.

In a back number of HOBBIES, in an article on Stereoscopic Photography, it was mentioned that the late Traill Taylor was able to see a stereoscopic picture in relief with his naked eyes, while other people needed a stereoscope to obtain that relief that makes stereoscopic pictures so beautiful and interesting. A Gloucester correspondent writes that he is also able to see stereoscopically, and believes that any person with normal sight may learn to view stereoscopic pictures in relief by observing the following directions: "I know but very little of the theory and science of stereoscopy, but I do know that practically one can get the relief on a stereoscopic picture by viewing it as though it were a distant object. Proceed as follows:—Cut two pieces of paper about one inch square, stick them with paste on a window pane of a room with trees, houses, or anything else in the distance; place the two squares on a line with each other, and not more than three inches apart. Now by looking at a distant tree or other object between the two squares, and at the same time keeping the *mind fixed* on the squares, it will be found that there are apparently four squares on the pane of glass. It may be found that there are only three instead of four squares; if so, one has made the two middle squares to meet and coalesce with each other, and this is what is needed. If there are four squares to be seen, move the head back or view something still more in the distance until

the two middle squares are seen to join into one. Practise this a few times until the effect can be easily obtained, and then hold a stereoscopic picture up in the same position and try to view that in the same way; it will soon be seen in relief. After a little practice one can take up a stereoscopic picture in any position and see it in relief by an effort of will."

Prize Competitions.

MOTOR OMNIBUS MODELS.

As many fretworkers will, during the coming season, be exhibiting Fretwork models of the HOBBIES Motor Omnibus, we offer:—

A special award of ONE YEAR'S FREE SUBSCRIPTION TO "HOBBIES" to all fretworkers who, before October 5th, 1907, obtain a prize at any Industrial Exhibition with a Fretwork Model of the Motor Omnibus, cut from the design presented with HOBBIES 1907 Catalogue.

The only conditions we impose are (1) that the Model is made according to the published Design, (2) that the value of the prize gained shall be not less than Five Shillings, and (3) that in the Fretwork section, in which the prize has been awarded, there shall have been not less than Five entries.

The award will, in each case, be made on receipt of a written statement by the Secretary of the Exhibition certifying that the prize-winner is entitled to the Free Subscription to HOBBIES according to the particulars given above.

FRETWORK PHOTOGRAPHS.

For the best Photographs of a Fretcutter at Work, we offer three prizes:—

- First Prize, Two Guineas.
- Second Prize, One Guinea.
- Third Prize, Half a Guinea.

The photograph may be that of a fretworker seated either at a treadle machine or at a bench or table with hand fretsaw. The size and treatment are left to competitors, but preference will be given to the pictures which most clearly represent the actual operation of amateur fret-cutting. Elaboration in surroundings and background should be avoided.

The name and address of sender must be legibly written on the back of the photograph.

Photographs cannot be returned, and the Editor reserves the right to reproduce any of those received in HOBBIES.

Photographs must be received not later than November 5th, addressed: Fretwork Photograph Editor, HOBBIES, 12, Paternoster Square, London, E.C.

PHOTOGRAPHY.

SUBJECT FOR OCTOBER:—Home Portraiture, Groups and Figure Studies.

PRIZES: First, £1 1s.; Second, 10s. 6d.; Third, 5s. 0d. In addition to these prizes, Hobbies Certificates of Merit of the First and Second Grade may be awarded, according to the standard of excellence.

Photographs must be received not later than October 30th, addressed:—Photographic Competition: Editor, HOBBIES, 12, Paternoster Square, London, E.C.

No Entry Form Required.

Not less than Three nor more than Six Prints may be sent in. These must be mounted on card mounts, and the title of the photograph and name and address of sender must be legibly written on the back. No print will be eligible that has been entered in other competitions. Photographs cannot be returned, and the editor reserves the right to reproduce any of those received in HOBBIES.



The Minor Varieties of British Guiana.

IN the scarce early issues of British Guiana there are minor varieties in which the rank and file stamp collector can take only an academic interest, for to be a "bloater" of such issues as these would call for the wealth of Cræsus, combined with the patience of Job. A "bloater," by the way, signifies, in the slang of Philately, a collector who is never satisfied with just "one of a sort," but must have rows and rows of specimens, illustrating every variation of printing and gradation of colour, and even showing "states of the plate"—a refinement of specialism dear to the heart of the connoisseur of prints and engravings. Still, scarce as they are, we shall include these varieties of the early British Guianians, if only for the sake of completeness.

Those very "homely," but exceedingly scarce labels, the circular stamps of the first (1850) series of British Guiana, show certain varieties of colour and paper. The 4 cents is known in



orange and in yellow, and of the latter shade there is a variety on pelure paper—a tough, almost transparent tissue. The 12 cents blue of the same series exists, also in pale blue and indigo. Most of us, however, would be only too happy if we could secure a normal set of these scarce old stamps, without bothering about varieties. A fairly reasonable price for the set of four at the present time would be £500. A curious feature of the use of these stamps, by the way, was the practice of initialling each specimen before issuing it to the public. This was done either by the Deputy Postmaster General of the colony, or by one of the clerks in the Post Office at Georgetown. The initials known to exist on surviving specimens are E. T. E. D. (Dalton), H. A. K. (Killikelly), W. H. L. (Lortimer), G. B. S. (Smith), and E. D. W. (Wight).

Of each of the two stamps of 1852, the 1 cent and 4 cents, there are two types, which may be identified by means of the following points:—

ONE CENT.—In Type I. there is a full stop after the word "Guiana," absent from Type II. A further point of difference is in the form of the letter "Q" in the word "Que" of the Latin

motto at the foot of the stamp. Type I. shows us the "Q" with a short tail, which is inclined shortly to the left. In Type II. the tail is noticeably longer and its inclination is more to the right.



FOUR CENTS.—Here again we must study the tail of the letter "Q." In Type I. it is short, and only very slightly turned to the right, while Type II. shows the letter with a longer tail, which is far more markedly inclined to the right.

Coming to the issue of 1853, a series of a much less primitive appearance than the preceding issues, we find minor varieties in both the 1 cent and 4 cent values. The three illustrations given here will show clearly enough the three principal types of the 1 cent stamp, as follows:—

TYPE I.—There is no white line over the words of value, "One Cent."

TYPE II.—A white line runs above the words of value.

TYPE III.—Here there is a difference in the spacing of the words of value, and it will be seen that there is a larger space between the "O" of "One," and the left-hand numeral of value than in either of the previous types.

In addition to these three varieties there is a type of the 1 cent stamp showing a smaller "O" in the word "One."



TYPES I., II., AND III. OF THE 1 CENT OF 1853.

Three varieties of the 4 cent stamp of this issue may be very briefly described, and without the aid of illustrations. Type I. is devoid of the white line above the words of value, "Four Cents"; in Type II. this white line is introduced;

in Type III. not only is there the same white line above the words of value, but a white frame appears around each of the corner squares containing the numerals that make up the date of issue: 1—8—5—3.

This third variety of the 4 cents, although bearing date 1853, did not make its appearance until 1859 or 1860; and in the meantime British Guiana had issued a notable pair of type-set provisional stamps—the 1c. and 4c. of 1856, the former of which must be for ever famous as indubitably the scarcest postage stamp in the world. It is well-known that there is at present only one authenticated specimen in existence, and many have been the speculations as to "what it would fetch," should the distinguished French philatelist who owns it decide to offer this unique stamp for sale. That the very existence of a 1 cent of 1856 remained for many years unknown may be proved by a reference to old-time stamp catalogues. We have before us a well-known priced handbook dated 1890 which makes no mention of the 1 cent stamp, but, as if to compensate for this omission, chronicles the 4 cents in no less than four distinct colours—viz., crimson, blue, yellow and brown. As a fact, the 4 cents exists only in two colours: magenta and blue, but there is a variety of the latter known as the "blue all through," the colour going right through the paper. By the way, the stamps of 1856 were initially before issue as in 1850.

In the stamps of 1860-63, which are a modification of the engraved ship type of 1853, there are two types for each value except the 4 cents. Comparative illustrations of Types I. and II. of the 1 cent value are given, from which it will be



TYPES I. AND II. OF THE 1 CENT OF 1860.

seen that the principal difference is to be found in the spacing of the words (or numerals) of value at the foot of the stamp. In Type I. there is a conspicuously wider space between the word "one" and the word "cent" than in Type II., and the same state of affairs holds good with all the other values of the set except the 4 cents, which is to be found only in Type II. There are other than type varieties to be found in this same series. The stamps of Type I. exist on both thick and thin paper, while those of Type II., with the solitary exception of the 4 cents, are found on only the thinner paper. Perforation varieties are numerous, and in certain instances there are many shades of colour. The 1 cent stamp was a veritable chameleon, appearing first of all in a brownish red, changing later to pink, then to brown, and finally settling down into a sober black. In pink or in brown this is one of the rarities of the set, but the black printing is comparatively common.

The further issues of British Guiana, and their minor varieties, we must deal with anon.

PHILATELIC NOTES OF THE WEEK.

"You speak in a recent article (writes "Inveterate Reader of HOBBIES") of the policy of devoting a stated sum per week to one's hobby. But there must be many people who, like myself, cannot afford to lay out more than a shilling or eightpence a week on stamps, taking the year right through. Because, after all stamp collecting is an indoor hobby—a thing for wet and wintry days; and thus there are sure to be other calls on one's pocket money. Now what kind of progress could a stamp collector make on a shilling or eightpence a week?"—Well, let us take the lower figure: A shilling a week. It does not sound a very promising amount, but it is certainly enough to keep a collector going if he will only make full use of all his opportunities, and, above all, rest content with the limitations that his restricted means impose upon him. It is obvious that the shilling-a-week collector cannot hope to purchase the great rarities; he must content himself, until his means improve, with the more ordinary varieties, or he must single out a particular country or group of countries whose issues are well within his reach. We have so often written in HOBBIES that stamp collecting is not necessarily a pursuit in which the rich man wins. Anyone, poor man or patrician, can excel in Philately if he have but the patience and the enthusiasm to study his subject, and to let the knowledge so obtained be reflected in the pages of his well-kept and scientifically arranged album.

A shilling a week, or even less than a shilling a week, will suffice for the building up of an interesting, and in time, valuable collection. Remember that in a year this rate of expenditure means a sum of £2 12s.; in ten years it amounts to more than £25, and if only a sound knowledge of stamps be added to one's available capital there is no question that the result of ten years' collecting would be worth, in cold cash, considerably more than one's actual outlay. It must be remembered, also, that stamps are to be obtained by other means than a cash purchase. Duplicate specimens are accumulated by all collectors, and these are mostly exchangeable, through the agency of the Philatelic Exchange Clubs, for other specimens which will help to enrich one's own collection. In an early number of HOBBIES we shall hope to go far more fully into the subject of "shilling-a-week Philately."

In the Colonies the stamp-collecting hobby has made wonderful strides during recent years. Notable instances are the Transvaal and Natal, where the formation of active Associations like the Johannesburg Philatelic Society, and the Durban and District Philatelic Society has had the effect of attracting many recruits. Under the auspices of the Durban Society a most successful Philatelic Exhibition has recently been held. The Governor of Natal, Sir Henry McCallum—himself a collector of some years' standing—performed the opening ceremony; and a remarkably fine show of good stamps was inspected by a large number of visitors. It was Natal's first experience of the kind, and in all probability will not be its last.

A SPARROW, which built a nest under the roof of a house in Yorkshire, used three hairpins, one and a half yards of string, sixteen small pieces of paper, half a shoelace, two match sticks, and half a telegram form as building materials.



LADIES - WORK

Chamois Leather Trifles.

(Continued from page 9.)

THE penwiper that we promised in our preceding chapter is shown in Fig. 5, and readers will judge from the sketch that it is of the simplest possible construction. It would make a capital little gift for a father, or brother, if the worker would not feel hurt by seeing him wipe his pen on its dainty outer leaf as he would probably do before he had had it long in his possession.

The kid for the outside should be cut first from the skin because it is well to have as perfect a piece as possible. It should be quite square in shape, but the size is of no consequence at all. Quite a change is made in the appearance of this chamois leather trifle by edging it with a frill of narrow lace. If it can be obtained, a very smart effect may be gained by choosing lace having a row of holes by way of a heading through which narrow coloured ribbon may be run. If this is not at hand, the worker must be content to have some full bows at each corner and perhaps to darn round the pattern of the lace with coloured silk or thread. Pale blue, green and heliotrope are the colours that look best upon the yellowish background of the kid.

The inside of our penwiper consists merely of a few leaves of chamois leather, folded in half down the middle and stitched into place inside the cover. Two of these leaves will be enough, as more than this would be apt to make the penwiper uncomfortably thick. They should be rather smaller in every direction than the cover so that the lace sets out beyond them all round and so does not lose its transparency.

A smart little needle case is shown in our sixth sketch. The outer part is made of the wash-leather, but inside we should find some very convenient flannel leaves that will hold any number of needles. The flannel leaves for the cover should be cut eight inches long and three or three and a half inches wide. The flannel leaves, four in number, should be half an inch narrower and

shorter, and should be neatly worked round with buttonhole stitching or bound with narrow ribbon. The leather for this case will look better if it is ornamented with poker-work, or with



FIG. 6.—NEEDLECASE OF CHAMOIS LEATHER.

painting than if it is embroidered. We want the wrong side to be neat and tidy without the trouble of lining it, as we should probably feel we ought to do when we looked at the back of the stitchery.

The chamois leather must next be folded in half across its width, and with a sharp pair of scissors, a number of slits must be cut across the fold. They will probably have to be an inch long, but much will depend upon the thickness of the rod that is to pass through them later on. The flannel leaves must be treated in the same way. The leather will serve as a guide for placing the slits, but as it is wider it will probably have one more on each side than have the woollen sections. All the pieces are then laid together, the leather being outside. A rod is run through the slits, over and under them alternately. It is arranged to set across the centre of the leaves, which should hang from it exactly together as any other loose sheets would form any other roller. Some difficulty may possibly arise in finding a rod of suitable size, but we should suggest a wooden knitting-needle, a small lead pencil, or even a long wooden skewer cut of the required length and so that both ends are alike. The skewer being of rougher make than the others, will have to be rubbed down till it is quite smooth, and then painted, or enamelled, to match the rest of the needlework.

Any little ornament that the worker herself fancies may be added by way of finish for this needlework. She will probably like the idea of clusters of loops of fine cord at each end of the rod, with ends of the cord terminating in tassels. If liked, the loop by which the needle-book

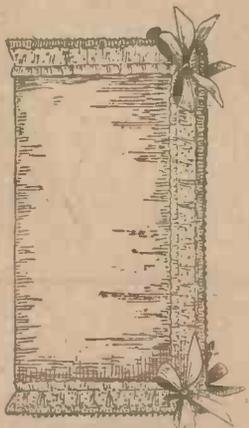


FIG. 5.—CHAMOIS LEATHER PENWIPER.

is to be hung up may be cord instead of ribbon as shown in the sketch. The lower ends of the chamois leather cover were, in our model, cut into a point somewhat like the base of a shield. They may be left square, if preferred, or they may be rounded to make one large scallop. Something will, of course, depend upon the piece of wash-leather that happens to be available for the making of the cover.



FIG. 7.—A ROOMY CASE FOR TRINKETS.

Chamois leather is well adapted for trinket cases of every kind and size. In Figs. 7 and 8 are shown one of these that is rather more elaborate than usual in plan, but is by no means to be despised, as it will hold a great many odds and ends. Only a small case can be made out of one skin, but perhaps the worker has some pieces left over from other things that she would be glad to use for the pockets. The lining is of the leather, some more ornamental material being chosen for the outside. The size must depend upon the size of the kid, but it must be of a shape that will fold up compactly into three with the flap outside, as shown in the small sketch of the closed case. Some workers may like the idea of using velveteen for

the outside, and of sprinkling spangles of all sorts of colours over it before making it up. Brocade, tapestry, satin, silk, coloured linen and fancy ribbon are all suitable for the purpose and may be used if more convenient.

The leather for the inside must have one end turned up to form a pocket that is nearly the width of one-third of its whole length. If the kid does not allow of this being done, the pocket must be cut from a separate piece,

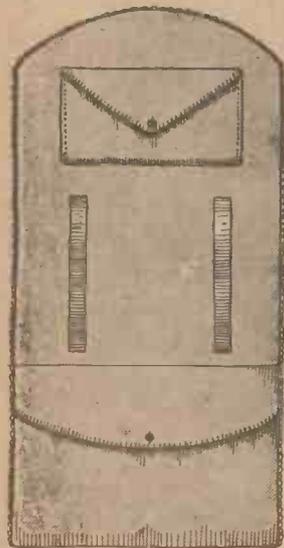


FIG. 8.—TRINKET CASE (OPEN).

and button-holed into place all round the edges. A rounded flap is provided and this also is buttonholed round and stitched into place. A slit is cut which

fastens the flap down to a button on the pocket, or a worked buttonhole loop can be made if it is liked better. A similar pocket, but of much smaller size, is placed in the inside of the flap.

Across the centre of the case we have two straps of elastic which are intended to hold flexible bracelets opened out to their full length. For such a purpose as this, it is a good plan to enclose the elastic within a couple of strips of ribbon joined at the edges. While sewing up the second edge the ribbon must be rumpled up along the elastic so that it sets quite full of it. About three times the length of the elastic will probably be wanted for each strap of ribbon.

When the inside of the case is thus completed to the satisfaction of the worker it must be sewn to the ornamental cover that has been prepared for it. The raw edges of the cover should be turned into the wrong side, and the chamois leather must be neatly sewn or button-holed down to the double fold, every care, however, being taken to avoid taking the stitches through to the right side. Strings of ribbon must be added to tie the case together with after it has been folded up, and the outside may be made extra ornamental by the addition of a fine cord.

There are many other ways of arranging the pockets inside such a case as this, and no doubt every worker will place them according to her own fancy. The plan given here is as good and useful as any when the trifle is to be sent to a bazaar stall. Other much smaller cases will look very dainty with a covering of brocaded ribbon, and these need have but one pocket with a flap over it like that of an envelope. Others may as well have two pockets and may be folded together in the middle and held in place with ribbon strings. Yet other cases can be arranged to hold knitting-needles, dessert knives and forks, and other household articles that it is desirable to keep free from rust.

Travellers are often glad to have a hidden and compact little case in which they can stow away their spare notes and gold. There is an infinite number of ways in which such a pocket can be made, but the flatter it is the more convenient. Some people like to wear it hanging round the neck under the dress bodice, others put it round the waist and fasten the purse itself to the petticoat with a safety pin. In fact, most travellers have their own special fads and in making a case of this kind for a bazaar it is advisable to use plenty of ribbon for securing it in any way the purchaser may prefer.

Many of the trifles we have here described as being made of chamois leather may be made with equal success of the unworn portions of evening gloves. As every woman knows who has to wear those of any length, the parts that go up the arm are quite fresh and new-looking when the fingers and the hands have been pronounced past cleaning. Then is the time for the manufacturer of fancy trifles to step in and turn this otherwise waste material to good account. The small articles that are constructed of pale-tinted kid will be found to have a particularly smart look about them when they have been either painted or embroidered and trimmed with gay ribbons.

CHRISTMAS FRETWORK DESIGNS.—A fine series of these will be presented with the Special Double Number of HOBBIES to be published on October 27th.



Among the Tulips.

WHEN looking at the present-day popular varieties of Tulips, one finds a class almost entirely different from those among the earlier generations. The flowers are larger in build and possess the true cup-shape character. Besides being taller, their growth is sturdy and many of the better kinds find their way to the markets as cut-flowers for early spring decoration. Of the two sections, "Singles" claim to be the most popular, simply because they have more variety of colour and possess a more free habit of growth. The "Doubles," as a market flower, are general favourites. The individual flower lends itself more freely to the uses of the florist than the singles or cup-shape type.

Reverting to the cup-shape type, one may safely say that they adapt themselves for every purpose for which the gardener chooses to plant them. The doubles would, no doubt, be of the same utility, but their stiffness (when used for "massing") does not always harmonise with their surroundings; should those surroundings be of the natural style of planting so much seen in most of our gardens nowadays. For massing or "naturalising" the singles never appear to be out of place. When planted in beds entirely by themselves, they present a wonderful display and have by no means a formal appearance. For naturalising in grass, orchards, or even in the mixed borders there is no better companion to the Narcissus or Crocus than the single Tulip, in which almost every shade of colour is now to be obtained, including "sels" and "bi-color" shades.

The genus *Tulipa* is a much more extensive race than many people are led to believe. Those who only know the showy garden kinds would be surprised at the brilliancy of a collection of Tulip species, as their colours are even more dazzling than those of the mixed race popular in most gardens. Of these scarce species, there are few gardens in the country where a collection may be seen. A very good collection is grown in Kew Gardens, but unfortunately on a secluded border which only a few visitors ever see. One often meets with the rare species of Crocus, Narcissus, and Cyclamen neapolitanum grown in pots as something very choice, but never the Tulip species. As pot plants, they are rare novelties and make capital features for the spring display in a conservatory. The most attractive variety belonging to these beautiful species is *Tulipa Karolkowi*—a variety claimed to be the smallest Tulip in cultivation. It never attains a height of more than six inches, and the flower, when closed, is never larger than a hazel-nut. The two

attractive colours in the flower are bright vermilion and canary yellow. The uppermost part of the flower-segments is yellow and the lower portions vermilion; while the base on the inside is satiny-black. The sexual organs are also brilliantly coloured. Wherever growing it should not have more than six inches of soil, for when planted at a great depth, the bulbs have the peculiar habit of burying themselves deeper, consequently allowing themselves not the slightest opportunity of ripening off properly.

THE "KEIZERSKROON."

In speaking of the popular sorts of to-day, known as the common varieties, there is no other variety to compare with "Keizerskroon," a strong-growing single kind with very large cup-shape blooms of a crimson and yellow colour. It differs in habit entirely from the rest of the family, as its erect and noble appearance makes it the most appreciated kind of all. In choosing a collection of varieties for growing in beds, height should be given a little consideration before any variety is finally settled upon. Many disappointments result through not attending to the height of the varieties before planting, but such dissatisfaction may be easily averted by studying the varieties of some good catalogue beforehand. Where beds and borders are given up to the Tulip entirely in spring, some little judgment is needed beforehand with respect to the relative appearance of the plants when in flower. For instance, such varieties at Keizerskroon, *Chrysolora*, *Joost van Vondel*, *Proserpine*, and all the *Pottebakker* kinds are unsuited for planting beside *Artus*, *La Reine*, *Thomas Moore*, *Crimson King* and *Duc Van Thel* varieties. If mixed together, the effects are uneven, besides which some of the varieties bloom earlier than others.

A dozen good sorts of an even height, flowering just about the same time, and most suitable for bedding purposes are, *Chrysolora*, *Cottage Maid*, *Pottebakker White* and *Scarlet*, *Vermilion Brilliant*, *Keizerskroon*, *Royal Standard*, *Duchess de Parma*, *Bacchus*, *Joost Van Vondel*, *Van der Neer*, and *Fabiola*. For pot culture, the *Duc van Thel* varieties, both double and single, are well adapted. The single bright scarlet sort is very well-known.

Before concluding, some mention should be made of the late flowering kinds—a class so little seen nowadays. They naturally flower about the middle of May. It is no doubt owing to the lateness in flowering that they are unpopular, because they bloom at a time when most gardeners are busy with the summer bedding plants. At

HOBBIES.

one time these varieties fetched enormous prices, now they may be obtained for next to nothing. The species originally come from T. Gesneriana, which are collectively known as florist Tulips. They are arranged into four distinct classes — Bizarres, Byblømens, Roses and Breeders. To recognise the distinction between the four classes, it is essential to know that the flower should be cup-like and symmetrical with smooth petals of a firm texture. The ground colour of the Bizarres is clear yellow, while Byblømens and Roses are white. The upper colour of the Bizarres is various shades of red, that of the Byblømens, purple and black, and those of the Roses pink and shades of scarlet. The Breeders appear to be a class by themselves, although they originated from the old parent. The colour of the flower is various shades of rose.

Parrot Tulips and the Darwins find great favour wherever grown. Their combination of colour differs greatly from that of all the former types and, in addition to this, the petals are fringed or feathered-tipped, which gives them remarkable distinction.

The culture of the Tulip is well known to be quite easy, providing the potting compost or sub-soil is of the ordinary character. Like most of the continental bulbs, they are very accommodating in England, yielding to hard forcing, ordinary greenhouse care, or flourishing entirely in the open ground.

Herbaceous or Perennial Plants.

FIFTEEN years ago the chief features of the garden were the ribbon borders; since then the fashion has changed, and the mixed borders have taken their place. It is often wondered how the public tolerated the ribbon border for so long, as it was late in the season before it could be planted, and then the first frost ended the display. With the mixed border there is a much more extended period of flowering and, with the introduction of a few spring-flowering bulbs, there is something of interest every month of the year. There is an ill-defined class between these and the annuals, known as biennial plants of two years' duration only. These, of course, cannot be dealt with now, as their methods of treatment differ entirely from those we are at present considering. The class of Perennial plants we refer to here are those known as herbaceous, i.e., they die down every year, and are not persistent as in the case of trees and shrubs. Taken as a whole, they are an easy class to manage, as, with few exceptions, they answer well to a general system of cultivation. This system consists of supplying them with a well-situated border, and a soil that is well-drained, fairly rich, and neither light nor heavy. These conditions are obtained in almost every garden, and even when they are not they may be soon brought about. The plants should not be crowded, and should be planted as evenly as possible, choosing the taller kinds for the back of the border. As the plants are usually of somewhat robust growth, they require a large amount of water during the summer to bring about the best results. In the autumn the dead tops should be cut down, and the ground well mulched with a good layer of manure. Early in the year this should be dug in, taking care to injure the plants as little as possible. About every fourth year it is advisable to replant the border entirely. When this is done, the clumps should be carefully lifted and divided, choosing the outer portion of the

roots for replanting, and throwing the central parts on the rubbish heap, or the latter may be utilised if the ground is available by planting them out on spare ground to supply cut bloom. If the plants are well selected, and are kept properly trimmed, tied, and watered, they produce a beautiful and ever-changing scene, far in advance of the old monotonous ribbon border.

Seasonable Hints.

WE often hear much of the merits of gas lime as a useful substance in garden operations. Those who intend to use it should do so now on any vacant land that there is to spare. As a fertilising agent it is scarcely worth the trouble of handling but, when judiciously used, it may be employed to clean land badly infested with weeds and vermin. It should be distinctly understood that fresh gas lime is sufficiently caustic to destroy every particle of vegetable matter living in the soil. Therefore, it follows that when the roots of trees ramify in the soil that is to be dressed, the effect upon them will be very marked. By giving the land a dressing now and allowing it to remain unoccupied till the following spring, the lime will do its work, and by that time will have become so neutralised by the effects of the weather as to form a manure instead of a caustic substance. The quantity applied should be about three pints to the square yard.

As the crops are cleared, it is beneficial to the soil to have the weeds and rubbish cleared off at the same time. If the land is not to be in use again till the spring it is an advantage to have it properly dug and left to remain. Should the weather be severe during the early part of the spring this will assist in getting ready for another season's crop.

When the weather permits, a fair amount of air should be introduced into the greenhouse, but avoid cold draughts, as the winds are always cold at this season of the year. It is advisable to keep side ventilators closed now, as the draughts through these blow directly on to the plants. In the house where Chrysanthemums are placed, a little ventilation should constantly be left on at the top and, if possible, a little dry heat in the pipes to maintain a dry atmosphere.

Be careful not to allow the temperature of the warm house to fall too low at night, or the leaves of many choice plants may fall off in consequence. Soft-wooded plants, especially Coleus, show the effects of decreasing temperature sooner than the hard-wooded kinds. Therefore, at this season, it is better to separate the plants, keeping one section apart from the other, in order to regulate the temperature exactly.

It is safe now to expose foliage and other ornamental plants to all the sun possible, as this will harden them and help them through the coming winter.

Prick over the surface of the soil in pots with a pointed label, removing at the same time any mossy or slimy growth that may have accumulated. This process of cleaning is of the utmost importance, as it opens up the soil to a free access of air to the roots, thus preventing the soil from becoming sour.

Geraniums, in the living-room window, will now require but little water. If the plants are kept wet at the roots at this season, the soil will soon turn sour, as the roots are partly in a dormant state.

HOBBIES.

Chess.

OCTOBER 13, 1906.

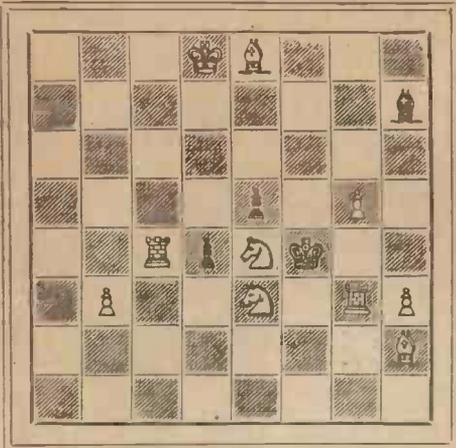
TO CORRESPONDENTS.

All communications will be answered in HOBBIES. Readers desiring replies through the post should enclose stamped envelopes.

PROBLEMS.

No. 223.—By A. BERNSTEIN, London.

Black.—Four pieces.

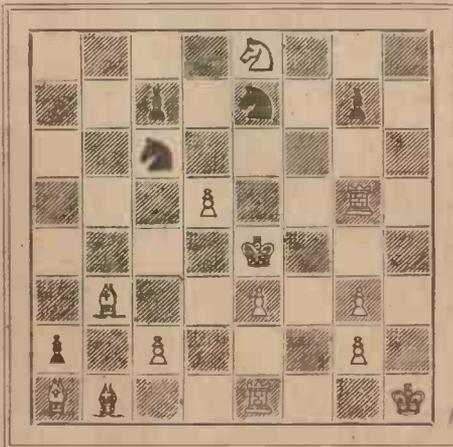


White.—Ten pieces.

White to play and mate in three moves.

No. 224.—By H. Goodwin, Sheffield.

Black.—Seven pieces.



White.—Eleven pieces.

White to play and mate in two moves.

Solutions should be received by Wednesday following issue.

SOLUTIONS.

No. 218.—By the CHESS EDITOR.

1 Kt x KtP.

(A white pawn, preventing a dual continuation, should be on KB5.)

If 1 K x Kt	2 B—Kt7 ch	K moves	3 R—Q4 mate.
If 1 K x P	2 R x BP ch	K x Kt	3 R—B5 mate.
If 1 K—B5	2 R—Q4 ch	K x Kt	3 B—Kt7 mate.
If 1 P—Q3	2 K(Kt4)—B6	{ K x P	3 R x BP mate.
or P—Q4			
If 1 P x P	2 R—Q4 mate.		
If 1 Other	2 R—Q4 ch	K x Kt	3 B—Kt7 mate.

Judging from the small number of correct solutions, our little composition appears to have been somewhat difficult. There are some near "tries," which have been taken as the solution, but neither 1 B—Kt7, nor Kt—K1 will answer, the replies being 1 P—Kt5 or 1 P x P.

Correct solutions received from W. Geary (Peckham), S. D. Frasco (Horton), H. W. Bick (Camberwell), J. D. Tucker (Ilkley), Edmund Perrin (Swindon), R. G. Thompson (Aberdeen).

TOURNEY SCORES.

DIVISION I.—Mr. Battersby beat Messrs. Holmes and Macdonald.
 DIVISION II.—Mr. McMahon beat Messrs. Barfield, Brown, and Holmes, Mr. Head beat Mr. Holmes.
 DIVISION III.—Mr. Hunt beat Messrs. Newham and Heath. Mr. H. Mahon beat Mr. Hosgood. Mr. Hosgood beat Mr. Heath.

QUEEN'S GAMBIT DECLINED.

Played in Division II. :—

White.	Black.	White.	Black.
Mr. McMahon.	Mr. Holmes.	Mr. McMahon.	Mr. Holmes.
1 P—Q4	P—Q4	18 P—B4	P—KB4
2 P—QB4	P—K3	19 R—B3	R—K3 (b)
3 QKt—B3	KKt—B3	20 R—K3	K—Kt2
4 B—Kt5	QKt—Q2	21 B x BP (s)	Q—Kt5
5 Kt—B3	B—K2	22 R—KB1	P x B
6 P—K3	P—B3	23 Q x KBP	Q—K2
7 B—Q3	Castles	24 R—Kt3 ch	K—R1
8 Castles	P x P	25 Kt—Kt6 ch	R x Kt
9 B x P	P—Kt4	26 Q x R	Kt—B3
10 B—Q3	Kt—Q4 (A)	27 P—B5	R—KB1
11 B x B	Q x B	28 R—R3 ch	Kt—R2
12 Kt x Kt	KP x Kt	29 P—B6	Q—KB2
13 Q—B2 (s)	Q—Q3	30 Q—Kt7 ch	Q x Q
14 B x P ch	K—R1	31 P x Q ch	K x P
15 B—Q3	B—Kt2	32 R x Kt ch	K x R
16 Kt—R4 (c)	KR—K1	33 R x R	Resigns.
17 P—Kt1	P—Kt3		

NOTES.

- (A) It was necessary to defend the QBP first.
- (B) One of the pawns must go, but B—Kt2 should have been played to protect the other, instead of moving the queen.
- (C) Valuable time gained: threatening the queen, freeing his KBP, and preventing the advance of the adverse K side pawns; for if P—Kt3; B x P, P x B; Kt x P ch is possible.
- (D) Kt—B1 is better.
- (E) This practically wins, further ultimate loss cannot be avoided, though Q—Kt5 gives temporary relief. From this point White finishes the contest simply and neatly.

THE first batch of Roman Hyacinth, Paper White Narcissus, and the Double Roman Narcissus that were potted early in September will be ready for removing from the frame to the greenhouse. Water them as often as they require it and, when they begin to make satisfactory growth, occasionally stimulate with liquid manure.

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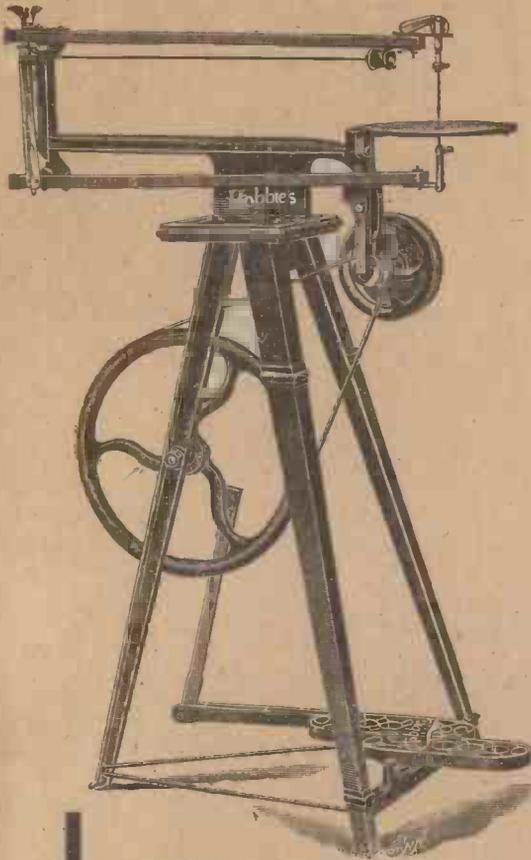
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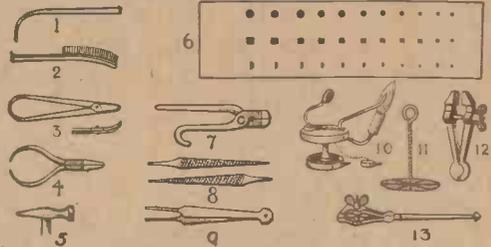
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