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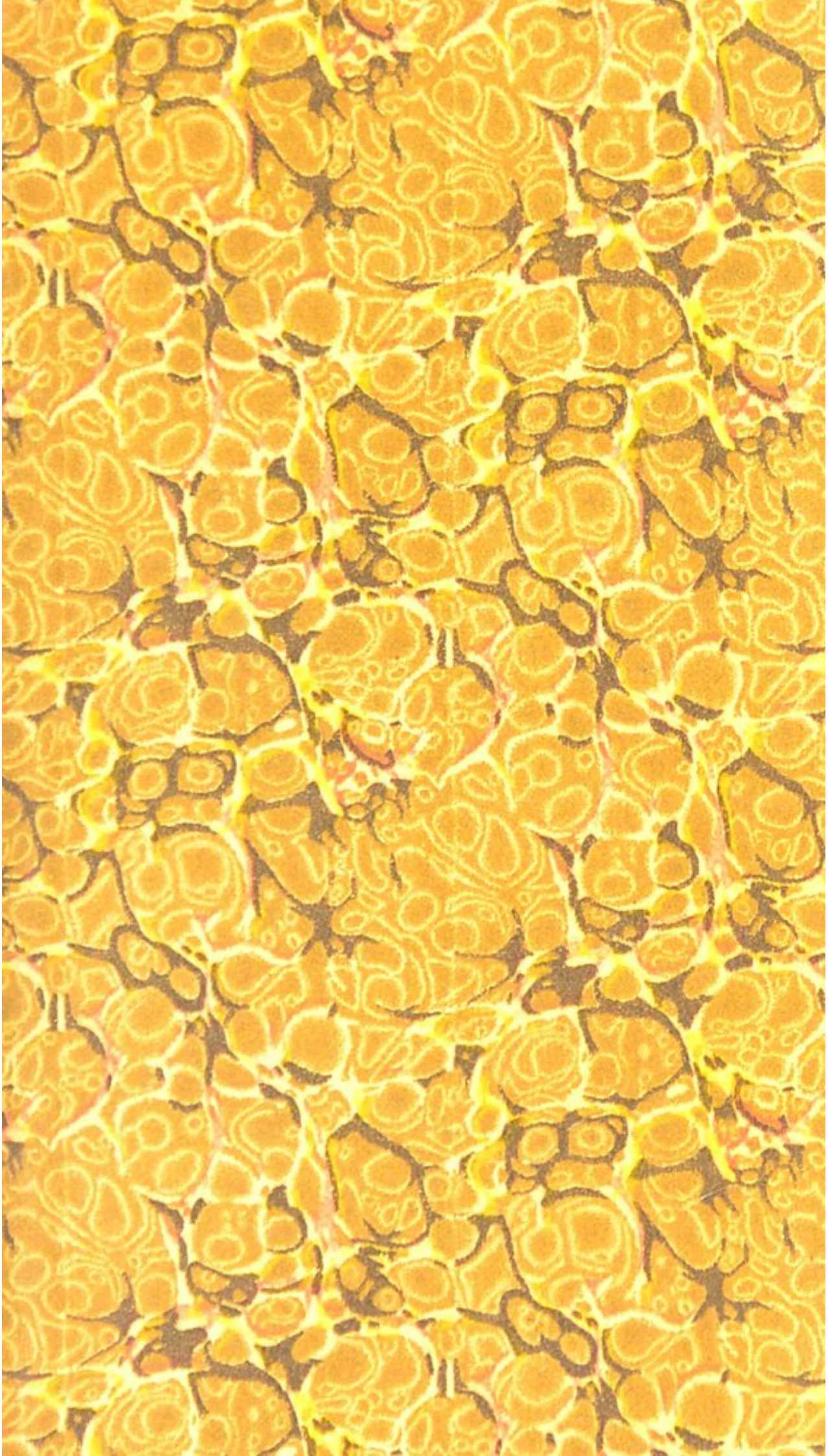
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THE NEW

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TRULY VALUABLE RECEIPTS

IN VARIOUS BRANCHES OF

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Selected from

THE WORKS OF BRITISH AND FOREIGN WRITERS OF UNQUESTIONABLE EXPERIENCE & AUTHORITY,

And from

THE ATTESTED COMMUNICATIONS OF SCIENTIFIC FRIENDS.

"What lookest thou?
GOOD LESSONS FOR THEE, AND THY WIFE?
Then keep them in memory fast,
To help as a comfort to Life." *Tusser.*

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TO

CHARLES TAYLOR, M.D.

SECRETARY TO THE SOCIETY,

Instituted at London,

FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE,

THE FOLLOWING WORK,

Towards which

HE HAS CONTRIBUTED MANY VALUABLE RECEIPTS,

And which embraces

MANY OF THE OBJECTS OF THAT SOCIETY,

IS INSCRIBED,

BY

HIS OBEDIENT SERVANT,

THE EDITOR.

Lately was published, in a neatly-printed Volume, foolscap octavo, similar to the FAMILY RECEIPT-BOOK, containing Ten useful Plates, Price 7s. 6d. boards,

A NEW EDITION OF

A NEW SYSTEM OF DOMESTIC COOKERY, formed upon PRINCIPLES of ECONOMY, and adapted to the use of Private Families. Comprising also the ART of CARVING, Observations on the Management of the DAIRY, and POULTRY-YARD; Instructions for HOME BREWERY, WINES, &c. COOKERY for the SICK, and for the POOR; many very useful MISCELLANEOUS RECEIPTS and DIRECTIONS proper to be given to SERVANTS both in Town and Country. To which is prefixed, an ESSAY on DOMESTIC ECONOMY and HOUSEHOLD MANAGEMENT, comprising many Observations which will be found particularly useful to the Mistress of a Family.

BY A LADY.

"This is really one of the most practically useful books of any which we have seen on the subject. The Lady who has written it, has not studied how to form expensive articles for luxurious tables, but to combine elegance with economy. She has given her directions in a plain sensible manner, that every body can understand; and these are not confined merely to cookery, but are extended to a variety of objects in use in families; by which means the utility of the book is very much increased indeed."---*Anti-Jacobin Review.*

Printed for JOHN MURRAY, 32, Fleet-Street, London; sold also by every Bookseller and Newsman throughout the Empire.

PREFACE.

THE Collection of Domestic Receipts now presented to the public, could not have been formed in any age but the present. The wisdom of this age has been to bring science from her heights down to the practical knowledge of every-day concerns; and the number of its inventions and discoveries have kept pace with the increasing wants of man. Of the past we preserve what experience has sanctioned, and what improvement has rendered more perfect; but we can add much more from our own stores. Scientific men, in the present day, who chuse to be useful as well as celebrated, have studiously noticed facts, and formed discoveries which can only be appreciated in the domestic circle; they have written such Receipts with the zeal which

is felt by a good house-wife—an honest farmer—an ingenious mechanic—and the various artizans of useful and ornamental trades.

The Editor of this Collection, at a very distant period, had amassed for his private use, a number of practical Receipts; but of late, the rapid diffusion of new discoveries, authenticated by the most respectable names, has been such, that his collection grew every day in bulk and in value. He was proud to see, in a Family Receipt-Book, the names of persons eminent for their science. His Collection was further augmented by MSS. which he had purchased; and he is particularly obliged by the advice and aid he has derived from the much-respected Secretary of the Society of Arts, Manufactures, and Commerce.

The popular treatise on "Domestic Cookery," that admirable introduction to the science, which Milton calls "household good," naturally connected itself in the Editor's mind, with this volume, to complete the economy of every

domestic establishment. The idea of its publication arises merely from its obvious utility, and the value of the materials which compose the Collection. Of nearly Eight Hundred Receipts, not one has been admitted, but which has either been experienced by himself or sanctioned by the recommendation of friends, or can be authenticated by a respectable name.

The general usefulness of this Work will probably recommend it to the favour and indulgence of its readers; but the Editor and Publisher cannot relinquish a hope, that ingenious persons may be inclined to assist its improvement, by correcting any article which may be found to fail, or by suggesting a better one, and by the communication of new Receipts of real value.

A methodical arrangement of this miscellaneous Collection, for those who may wish it, has been obtained by an Analytical Table of Contents; and a copious Index will easily direct the reader to any particular article.

We conclude this preface with the plain homely words of our honest predecessor, the venerable TUSSER, *in his "Five Hundred Points of Good Husbandry."*

"What lookest thou? speak at the last?
GOOD LESSONS FOR THEE, AND THY WIFE?
Then keep them in memory fast,
To help as a comfort to Life."

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A

COLLECTION,

&c.

Method of extinguishing Fires in Chimnies.

STOP with a wet blanket the upper orifice of the tunnel: but the surest and readiest method is to apply the blanket either to the throat of the chimney, or over the whole front of the fire-place. If there happens to be a chimney board or a register, nothing can be so effectual as to apply them immediately: and having by that means stopped the draught of air from below, the burning soot will be put out as readily and as completely as a candle is put out by an extinguisher, which acts exactly upon the same principle.

To extricate Horses from Fire.

If the harness be thrown over a draught, or the saddle placed on the back of a saddle horse, they may be led out of the stable as easily as on common occasions. Should there be time to substitute the bridle for the halter, the difficulty towards saving them will be still further diminished.

The useful Properties of Charcoal.---Sweetening the Breath, cleaning the Teeth, &c.

All sorts of glass vessels, and other utensils, may be purified from long retained smells of every kind, in the easiest and most perfect manner, by rinsing them out well with charcoal powder, after the grosser impurities have been scoured off with sand and potash. Rubbing the teeth, and washing out the mouth with fine charcoal powder, will render the teeth beautifully white, and the breath perfectly sweet, where an offensive breath has been owing to a scorbutic disposition of the gums. Putrid water is immediately deprived of its offensive smell by charcoal. The charcoal from burnt willow is the best for this purpose.

To sweeten Meat, Fish, &c. that is tainted.

When meat, fish, &c. from intense heat, or long keeping, are likely to pass into a state of corruption, a simple and pure mode of keeping them sound and healthful, is by putting a few pieces of charcoal, each the size of an egg, into the pot or saucepan, wherein the fish or flesh are to be boiled. Among others, an experiment of this kind was tried upon a turbot, which appeared too far gone to be eatable: the cook, as advised, put three or four pieces of charcoal, each the size of an egg, under the strainer, in the fish kettle; after boiling the proper time, the turbot came to table perfectly sweet and firm.

Common Glue.

It is a desirable fact, not generally known, that common glue, dissolved with linseed oil, will resist any weather.

To purify Oil at a very moderate expence.

Take an ounce of chalk, powdered pretty finely, and half an ounce of lime, slacked by lying exposed to the air; put them into a gallon of stinking oil, and, having mixed them well together by stirring, add half a pint of water, and mix that with them also by the same means. When they have stood an hour or two, repeat the stirring, and continue the same treatment at convenient intervals, for two or three days. Then add a pint and a half of water, in which an ounce of salt is dissolved, and mix them as the other ingredients, repeating the stirring as before, for a day or two. Let the whole then stand at rest, and the water will sink below the oil, and the chalk subside in it, to the bottom of the vessel. The oil will then become clean, be of a lighter colour, and have considerably less smell.

Hint respecting Women's and Children's Clothes catching Fire.

The females and children in every family should be particularly told and shewn, that flame always tends upwards, and consequently, that as long as they continue erect, or in an upright posture, while their clothes are burning, the fire generally beginning at the lower part of the dress, the flames meeting additional fuel, as they rise, become more powerful in proportion; whereby the neck and head, being more exposed than other parts to the intense and concentrated heat, must necessarily be most injured. In a case of this kind, where the sufferer happens to be alone, and cannot extinguish

the flames by *instantly throwing the clothes over the head, and rolling or lying upon them*, she may still avoid great agony, and save her life, *by throwing herself at full length on the floor, and rolling herself thereon.*. This method may not extinguish the flame, but to a certainty will retard its progress, prevent fatal injury to the neck and head, and afford opportunity for assistance; and it may be more practicable than the other, to the aged and infirm. A carpet or hearth-rug instantly lapped round the head and body is almost a certain preventative of danger.

To make Salt Butter fresh.

Put four pounds of salt butter into a churn, with four quarts of new milk, and a small portion of arnotto. Churn them together, and in about an hour, take out the butter, and treat it exactly as fresh butter, by washing it in water, and adding the customary quantity of salt.

This is a singular experiment. The butter gains about three ounces in each pound, and is, in every particular, equal to fresh butter. Firkin butter may be bought for about eight or ninepence per pound in the month of October, and, when churned over again, is worth, in winter, about eighteen-pence. The butter gained pays for the milk. A common earthen churn answers the same purpose as a wooden one, and may be purchased at any pot shop.

Chickweed.

The young shoots and leaves, when boiled, can scarcely be distinguished from spring spinage, and are equally wholesome.

To restore the Lustre of Glasses tarnished by Age or Accident.

Strew on them powdered Fuller's-earth, carefully cleared from sand, &c. and rub them carefully with a linen cloth.

Method of bleaching Straw.

Dip the straw in a solution of oxigenated muriatic acid, saturated with potash. The straw is thus rendered very white, and, it is said, not to be liable to wear yellow, at the same time that its flexibility is increased.

To prevent Hay-Stacks from taking Fire.

When there is any reason to fear that the hay, which is intended to be housed or stacked, is not sufficiently dry, it is only necessary to scatter a few handfuls of common salt (muriate of soda) between each layer. It would be very ill judged to regret this trifling expense; for the salt, by absorbing the humidity of the hay, not only prevents the fermentation and consequent inflammation of it, but it also adds a taste to this forage, which stimulates the appetites of cattle, assists their digestion, and preserves them from many diseases.

The outside Woof of Silkworms, an excellent Stiptic.

This has been tried with great success by several people, more especially by a lady, who, in mending a pen, cut her thumb to the bone, and through

part of the nail; it bled profusely; but, by trying this stiptic, and binding up the wound, the hemorrhage stopped, and the wound healed in three days.

To preserve Seeds, when sown, from Vermin.

Steep the grain or seed three or four hours, or a sufficient time for it to penetrate the skin, or husk, in a strong solution of liver of sulphur.

Bees.---Method of increasing the Quantity of Honey.

The following method of increasing the quantity of honey deserves to be universally known and practised, which, many years ago, occurred in the neighbourhood of Collinghen, in Scotland. In the beginning of August, at a remote place, in the heart of the Pentland hills, the heather, which had just then begun to flower, was observed to be covered with hive bees, though it was known that there was not a bee hive within five or six miles of the place. James Birkmyre, a farmer in Glencron, who kept bees, was persuaded a few days afterwards, to send up a weak second swarm to a herd's house, in that part of the hills. It stood there till the beginning of October. When brought back, it was much heavier than the top swarm, and stood successfully through the winter, which, otherwise, it could not have done. This practice has been repeatedly followed with invariable success.

Cheap Paint for Weather Boards.

Three parts air-slacked lime; two ditto wood ashes; one ditto fine sand, or sea coal ashes; sift

through a fine sieve, and add as much linseed oil as will bring it to a consistence for working with a painter's brush; mix it well. Two coats are necessary, first rather thin, second as thick as can conveniently be worked.

Another.

Take of skim milk two quarts; fresh slacked lime eight ounces; linseed oil six ounces; white Burgundy pitch two ounces; Spanish white three pounds; the lime to be slacked with water, exposed to the air, and mixed in one-fourth of the milk; the oil, in which the pitch is previously dissolved, to be added a little at a time, then the rest of the milk, and afterwards the Spanish white. Great attention is necessary to mix it well, or it will not incorporate.

Substitute for Verdigris in dying Black.

Saturate two pounds of vitriol of copper with a strong alkaline salt, (American potashes, when to be procured, are recommended). The vitriol will make about an equal weight of dry ashes. Both the vitriol and the ashes are to be previously dissolved apart. When this proportion is mixed, well stirred, and suffered to stand a few hours, a precipitate will subside. Upon adding a few drops of the solution of ashes, if the mixture be saturated, the water on the top of the vessel will remain colourless; but if not, a blue colour will be produced, upon which add more ashes; there is no danger in its being a little over saturated with ashes. Take care to add the solution of ashes to that of vitriol by

a little at a time, otherwise the effervescence which ensues, will cause them to overflow the vessel: these four pounds of vitriol of copper and ashes will be equal to about the same weight of verdigris, and should be added to the other liquors of the dye at different times, as is usual with verdigris.

The black, thus dyed, will be perfectly innocent to the goods, rather tending to keep them soft than corrode them, particularly hats, in which there is the greatest consumption of verdigris.

For those who are constantly using verdigris, it would be proper to have a vessel always at hand, containing a saturated solution of vitriol of copper, and another with a saturated solution of ashes, ready to mix as they are wanted; for they do not answer so well if kept long.

Composition for healing Wounds in Trees.

Take, of dry pounded chalk, *three* measures; and of common vegetable tar, *one* measure; mix them thoroughly, and boil them, with a low heat, till the composition becomes of the consistency of bees'-wax; it may be preserved for use, in this state, for any length of time. If chalk cannot conveniently be got, dry brick-dust may be substituted.

Application.—After the broken or decayed limb has been sawed off, the whole of the *saw-cut* must be very carefully pared away, and the rough edges of the bark, in particular, must be made quite smooth; the doing of this properly is of great consequence; then lay on the above composition, hot, about the thickness of half-a-crown, over the

wounded place and over the edges of the surrounding bark; it should be spread with a hot trowel.

Method to escape from Fire.

The following simple machine ought always to be kept in an upper apartment. It is nothing more than a shilling or eighteen-penny rope, one end of which should always be made fast to something in the chamber, and at the other end should be a noose to let down children or infirm persons, in case of fire. Along the rope there should be several knots, to serve as resting places for the hands and feet of the person who drops down by it. No family occupying high houses should ever be without a contrivance of this kind.

Warm Water.

Warm water is preferable to cold water, as a drink, for persons who are subject to dyspeptic and bilious complaints, and it may be taken more freely than cold water, and consequently answers better as a diluant for carrying off bile, and removing obstructions in the urinary secretion in cases of stone and gravel. When water, of a temperature equal to that of the human body, is used for drink, it proves considerably stimulant, and is particularly suited to dyspeptic, bilious, gouty, and chlorotic subjects.

To make a durable Ink, that has been used for nearly half a Century.

To three quarts of water add three pints of white wine vinegar; fifteen ounces of blue galls slightly

bruised; let these stand near a fire six days; then put in six ounces of green copperas, and seven ounces of gum arabic, finely pounded; permit the whole to remain near a fire six days more, and be frequently stirred up; strain the liquor through a fine cloth, and bottle it up for use.

To bronze Plaster Figures.

Lay the figure over with isinglass size till it holds out, or without any part of its surface becoming dry or spotted; then, with a brush, such as is termed by painters a sash tool, go over the whole, observing carefully to remove any of the size (while it is yet soft) that may lodge on the delicate or sharp places, and set it aside to dry: when it has become so, take a little very thin oil gold-size, and, with as much of it as just damps the brush, go over the figure, allowing no more of this size to remain than what causes it to shine. Set it apart in a dry place, free from smoke; and after it has remained there forty-eight hours, the figure is prepared for bronzing.

The bronze, which is almost an impalpable powder, (and may be had at the colour shops, of all metallic colours) should be dabbed on with a little cotton wool; after having touched over the whole figure, let it stand another day; then, with a soft dry brush, rub off all the loose powder, and the figure will resemble the metal it is intended to represent, and possess the quality of resisting the weather.

Sting of Wasps or Bees.

Sweet oil, applied immediately, cures the sting of wasps or bees; and if the sting is left in the wound, it should, if possible, be extracted with hair pincers.

Method for taking the Rankness and disagreeable Taste from Irish Salt Butter.

The quantity proposed to be made use of, either for toasts or melting, must be put into a bowl filled with boiling water, and when the butter is melted, skim it quite off; by this method it is so separated from any gross particles, that it may require a small addition of salt, which may be put into the cold water that is made use of in melting butter for sauce; and though the butter is oiled by hot water, it becomes a fine cream in the boiling for sauce.

For destroying Caterpillars on Gooseberry Bushes.

Take one Scots pint (two English quarts) of tobacco liquor, (which may be made, where it cannot be purchased, by infusing any kind of tobacco in water till all the strength be extracted) which the manufacturers of tobacco generally sell for destroying bugs, and mix them with about one ounce of alum; and when the alum is sufficiently dissolved, put this mixture into a plate, or other vessel, wide and long enough to admit of a brush, like a weaver's brush, being dipped into it; and as

early in the season as you can perceive the leaves of the bushes to be in the least eaten, or the eggs upon the leaves, (which generally happens about the end of May) and which will be found in great numbers on the veins of the leaves on their under side; you are then to take the preparation, or liquor, and after dipping the brush into it, and holding the brush towards the under side of the bush, which is to be raised and supported by the hands of another person; and by drawing your hand gently over the hairs of the brush, the above liquid is sprinkled, and falls in small drops on the leaves; the consequence of which is, if the eggs are there, they never come forward; and if they have already generated worms, in a minute or two after the liquor touches them they either die or sicken, so as to fall off the bush, at least they do so upon giving it a little shake. If, upon their thus falling off, they shall not appear completely dead, the bush should be held up, and either a little boiling water from a watering-pot thrown over them, or a bruise given them by a spade or shovel, or the earth, where they lie, turned over with a hoe. This preparation does not in the least injure the bushes.

To clean Marble.

Take a bullock's gall, a gill of soap-lees, half a gill of turpentine, and make it into a paste with pipe clay; then apply it to the marble, and let it dry a day or two; then rub it off; and, if not clean, apply it a second or third time until it is clean.

Another.

Muriatic acid, either diluted or pure, as occasion may require, proves efficacious. If too strong, it will deprive the marble of its polish, which may be easily restored by the use of a piece of felt, with some powder of putty or tripoli, with either, making use of water.

A Varnish for Toilet-Boxes, Cases, Fans, &c.

Dissolve two ounces of gum-mastich, and eight ounces of gum-sandarach, in a quart of alkohol; then add four ounces of Venice turpentine.

To clean Wood, &c. painted with Oil.

A weak solution of soap in water, or a brush dipped in fresh urine is used with success; after the operation, wash with clean water to take off the smell.

To preserve Game.

Game covered with charcoal may be kept six weeks, in a hot season, without undergoing the smallest change.

Fritters.

Slices of sweet oranges are far preferable to slices of apple or any other fruit put into fritters.

Cement for Iron Flues.

Common salt and sifted wood-ashes, equal parts, made into a paste with water, make a good cement for iron flues, &c. better than most other compositions, and may be applied when the flue is hot or cold. Iron-filings and vinegar will do as well.

To preserve Butter.

The most effectual way of keeping butter, and preventing it becoming rancid, is to beat half an ounce of the following powder into each pound, after it is brought from the market; then put it into a stone pot, cover it with strong brine, and keep it in a cool place.

The powder:—Take common salt, two ounces; nitre and loaf sugar, of each one ounce; rubbed into a fine powder. This not only keeps butter sweet, but gives it a fine flavour.

On the great Increase of Milk from feeding Milch-Cows with Sanifoin.

The quantity of milk produced by cows fed by sainfoin is nearly double to that of any other food. The milk is also much richer, and will yield a larger quantity of cream. The butter will also be better coloured and flavoured than any other.

Methods of stopping the Ravages of the Caterpillars from Shrubs, Plants, and Vegetables.

Take a chafing-dish, with lighted charcoal, and place it under the branches of the tree, or bush, whereon are the caterpillars; then throw a little brimstone on the coals. The vapour of the sulphur, which is mortal to these insects, and the suffocating fixed air arising from the charcoal, will not only destroy all that are on the tree, but will effectually prevent the shrubs from being, that season,

infested with them. A pound of sulphur will clear as many trees as grow on several acres.

Another method of driving these insects off fruit trees, is to boil together a quantity of rue, wormwood, and common tobacco, (of each equal parts) in common water. The liquor should be very strong. Sprinkle this on the leaves and young branches every morning and evening during the time the fruit is ripening.

In the Economical Journal of France, the following method of guarding cabbage from the depredations of caterpillars is stated to be infallible, and may, perhaps, be equally serviceable against those which infest other vegetables. Sow with hemp all the borders of the ground wherein the cabbage is planted; and, although the neighbourhood be infested with caterpillars, the space inclosed by the hemp will be perfectly free, and not one of these vermin will approach it.

To destroy Worms in Gravel Walks, &c.

Pour into the holes a ley, made of wood-ashes and lime: this will also destroy insects, if trees are sprinkled with it. Salt and water will do as well.

The fumes of Brimstone useful in removing Spots or Stains in Linen, &c.

If a red rose be held in the fumes of a brimstone-match, the colour will soon begin to change, and, at length, the flower will become white. By the same process, fruit-stains or iron-moulds may be removed from linen or cotton cloths, if the spots be previously moistened with water.

To destroy Rats and other Vermin.

Sponge, if cut in small pieces, fried or dipped in honey, and given to vermin, distends their intestines, and effectually destroys them.

To preserve Strawberry Plants from the Heat of the Sun, &c.

Sir Joseph Banks, from a variety of experiments, and the experience of many years, recommends a general revival of the now almost obsolete practice of laying straw under strawberry plants, when the fruit begins to swell; by which means the roots are shaded from the sun, the waste of moisture by evaporation prevented, the leaning fruit kept from damage, by resting on the ground, particularly in wet weather, and much labour in watering saved. Twenty trusses of long straw are sufficient for 1800 feet of plants.

To soften Ivory and Bones.

Take sage, boil it in strong vinegar, strain the decoction through a piece of close cloth; and when you have a mind to soften bones or ivory, steep them in this liquor, and the longer they remain in it the softer they will grow.

To cure the Disease in Apple Trees.

Brush off the white down, clear off the red stain underneath it, and anoint the places infected with a liquid mixture of train oil and Scotch snuff.

To increase the Force of Gunpowder.

Dr. Baine says, three ounces of pulverized quick-lime being added to one pound of gunpowder, its force is augmented one-third; shake the whole together till the white colour of the lime disappears.

To cure the Canker in Trees.

Cut them off to the quick, and apply a piece of sound bark from any other tree, and bind it on with a flannel roller. Cut off the canker, and a new shoot will grow strong, but in a year or two you will find it cankered.

To preserve Apples.

Dry a glazed jar perfectly well, put a few pebbles in the bottom; fill the jar with apples, and cover it with a bit of wood made to fit exactly; and over that, put a little fresh mortar. The pebbles attract the damp of the apples. The mortar draws the air from the jar, and leaves the apples free from its pressure, which, together with the principle of putrefaction which the air contains, are the causes of decay. Apples, kept thus, have been found quite sound, fair, and juicy, in July.

To marble Books or Paper.

Marbling of books or paper is performed thus:— Dissolve four ounces of gum arabic in two quarts of fair water; then provide several colours mixed with water in pots or shells, and with pencils peculiar to each colour; sprinkle them by way of inter-

mixture upon the gum water, which must be put into a trough, or some broad vessel; then, with a stick, curl them, or draw them out in streaks to as much variety as may be done. Having done this, hold your book, or books, close together, and only dip the edges in, on the top of the water and colours, very lightly; which done, take them off, and the plain impression of the colours in mixture will be upon the leaves; doing as well the ends as the front of the book in the like manner, and afterwards glazing the colours.

To season new Casks.

Mr. Bentley has a patent for seasoning new casks, and purifying old musty casks, with *steam!*

To cause new Bark to grow on old Trees.

Mr. Forsyth, instead of paring away the bark as heretofore, &c. now merely scrapes off the loose bark, and applies a mixture of cow dung and urine, the consistence of thick paint, with a painter's brush, covering the stem carefully over. This softens the old scabrous bark, which peels off the following winter and spring, and is succeeded by a fine, smooth, new bark.

Preventatives against the Ravages of the Moth.

The most usual preventatives against the injury occasioned by the moth, are cedar-wood and tobacco leaves. A piece of the former put into a box, if sufficiently large to emit its peculiar odour

to whatever may be contained in it, will effectually preserve the cloth from injury; and it is well known, that in libraries where there are books bound with Russia leather, which is tanned with cedar, no moth or worm will corrupt. It is common to put cedar shavings and chips into boxes, &c. which answer just as well as the wood itself.

Tobacco leaves may be placed at certain intervals in the folds of a piece of woollen cloth; and it is sufficient to examine them once in six months, in order to renew the leaves if necessary.

To make portable Balls, for removing Spots from Clothes in general.

Take Fullers'-earth perfectly dried, so that it crumbles into a powder; moisten it with the clear juice of lemons, and add a small quantity of pure pearl ashes; then work and knead the whole carefully together, till it acquires the consistence of a thick elastic paste; form it into convenient small balls, and expose them to the heat of the sun, in which they ought to be completely dried. In this state they are fit for use in the manner following:—First, moisten the spot on your clothes with water, then rub it with the ball just described, and suffer it again to dry in the sun: after having washed the spot with pure water, it will entirely disappear.

To prevent the Fly in Turnips.

Sowing radishes with turnip seed will prevent the fly; because the fly likes radishes better than turnips.

Cause and Prevention of the Dry Rot.

The cause of the dry-rot in wood is moisture; and to prevent well-dried timber from decaying above or under ground, is by charring it well.

To destroy Moss on Trees.

Remove it with a hard scrubbing-brush in February and March, and wash the trees with cow-dung, urine, and soap-suds.

A cheap Refrigerator or Condenser.

A short, somewhat flat, vessel, two yards in length, nine square feet surface, with the same quantity of cold water, has a greater cooling power than a worm of five spiral turns and six yards length.

Effectual Method of destroying Worms and all other Insects which infest and prey upon Vegetables, so injurious to Cultivation.

The method is truly simple; for nothing more is required than to sprinkle some sublimed sulphur, or, as it is commonly called, flowers of brimstone, over the leaves of the tree or plant, wherever the effects of worms or insects of any kind prevail, or may be expected to come. The sulphur may be tied up in a piece of muslin or linen, and with this the leaves and young shoots should be dusted; or it may be thrown on by means of a common swan-down puff, or even a dredging box. It is remarkable, that this substance is even congenial to those

trees and plants on which it is sprinkled. Peach trees, in particular, are remarkably improved by this application.

Economical Mode of cutting Cauliflower.

Instead of cutting off the whole head of a cauliflower, leave a part on, of the size of a gooseberry, and all the leaves: second, and even third heads will be formed, and thus they may be eaten for two or three months; when, at present, by cutting the head completely off, the bed of cauliflowers are gone in two or three weeks. They should be planted in good moist ground, and treated in the same manner as celery.

To cure Wounds in Trees.

Wounds in trees are best cured by covering them with a coat of common lead paint without turpentine; for turpentine is poison to vegetation, in the sun on a fine dry day.

To produce Gas Light, on a small Scale.

Take an ordinary tobacco-pipe, and nearly fill the bowl with small coals, and stop the mouth of the bowl with any suitable luting, as pipe clay, or the mixture of sand and common clay, and place the bowl in a fire between the bars of a grate, so that the pipe may stand nearly perpendicular. In a few minutes, if the luting is good, the gas will begin to escape from the orifice of the pipe, when, if a piece of lighted paper or a candle be applied, it will take fire and burn for several minutes with an

intense light. When the light goes out, a residuum of useful products will be found in the bowl.

Every Family to make their own Sweet Oil.

It is reported, a person is going to take out a patent for making a small hand-mill, for every family to make their own sweet oil. This may easily be done, by grinding or beating the seeds of white poppies into a paste, then boil it in water, and skim off the oil as it rises; one bushel of seed weighs fifty pounds, and produces two gallons of oil. Of the sweet olive oil sold, half of it is oil of poppies. The poppies will grow in any garden: it is the large-head white poppy, sold by apothecaries. Large fields are sown with poppies in France and Flanders, for the purpose of expressing oil from their seed for food. Vide 10th and 11th vols. of Bath Society Papers, where a premium of twelve guineas is offered for the greatest number of acres sown in 1808 and 1809. When the seed is taken out, the poppy head when dried is boiled to an extract, (see New Dispensatory) which is sold at 2s. per ounce, and is to be preferred to opium, which now sells very high. Large fortunes may be acquired by the cultivation of poppies. Some acres of it are now sown near Cambridge.

Improvement in Fire Works.

Professor Ploust has discovered that nitrate of soda is an economical article in their composition; and that five parts of the nitrate, one of charcoal, and one of sulphur, afford a powder which produces a flame of a beautiful reddish yellow colour.

To destroy Ants.

Ants are destroyed by opening the nest and putting in quick lime, and throwing water on it.

To make Sea Water fit for washing Linen at Sea.

Soda put into sea-water renders it turbid; the lime and magnesia fall to the bottom. To make sea-water fit for washing linen at sea, as much soda must be put in it, as not only to effect a complete precipitation of these earths, but to render the sea-water sufficiently lixivial or alkaline. Soda should always be taken to sea for this purpose.

To prevent Hares and Rabbits from barking young Plantations.

Hares, rabbits, and rats, have a natural antipathy to tar; but tar, though fluid, contracts, when exposed to the sun and air for a time, a great dryness and a very binding quality; and if applied to trees in its natural state, will occasion them to be bark bound. To remove this difficulty, tar is of so strong a savour, that a small quantity mixed with other things, in their nature open and loose, will give the whole mixture such a degree of its own taste and smell, as will prevent hares, &c. touching what it is applied to.

Take any quantity of tar, and six or seven times as much grease, stirring and mixing them well together: with this composition brush the stems of young trees, as high as hares, &c. can reach; and it will effectually prevent their being barked.

To give Malt Spirit the Flavour of good Brandy.

Into two quarts of malt spirit, put three ounces and a half of powdered charcoal, and four ounces of rice; shake it every day for fifteen days, then filter it through paper.

To varnish plaster Casts or Models.

Take about a quarter of an ounce avoirdupoise, of the finest white soap, grate it small, and put it into a new glazed earthen vessel, with an English pint of water; hold it over the fire till the soap is dissolved, then add the same quantity of bleached wax cut into small pieces: as soon as the whole is incorporated, it is fit for use.

Mode of application.—Dry the model well at the fire, suspend it by a thread, and dip it in the varnish; take it out, and a quarter of an hour after dip it in again; let it stand for six or seven days, then, with a bit of muslin rolled softly round your finger, rub the model gently, and this will produce a brilliant gloss; but this part of the operation must be done with great care and a light hand, as the coat of varnish is thin.

Another way.

Take skim milk, from which the cream has been carefully taken off, and with a camel's hair pencil lay over the cast till it holds out, or will imbibe no more; shake or blow off any that remains on the

surface, and lay it in a place free from dust; and when it is dry, it will look like polished marble.

N.B. This last mode answers equally well with the former, but will not resist the weather.

To clean Mahogany Tables, &c.

If to the first receipt for a "varnish," (page 13.) there be added three ounces of common wax, it forms an excellent composition for furniture.

To use it.—Clean the table well, dip a bit of flannel in the varnish while warm, and rub it on the table; let it stand a quarter of an hour, then apply the hard brush in all directions, and finish with a bit of clean, dry flannel. This will produce a gloss like a mirror.

For Boots and Shoes.

If to the above varnish there is added two ounces of lump sugar, and the same quantity of ivory black, an excellent compound will be had, equally good for giving a polish to boots or shoes, and preserving the leather from cracking.

To propagate Fruit Trees.

The ingenious people of China have a common method of propagating several kinds of fruit trees, which of late years has been practised with success in Bengal. The method is simply this:—They strip a ring of bark, about an inch in width, from a bearing branch, surround the place with a ball of fat earth, or loam, bound fast to the branch with a piece of matting: over this they suspend a pot or horn, with water, having a small hole in the bot-

tom just sufficient to let the water drop, in order to keep the earth constantly moist. The branch throws new roots into the earth just above the place where the ring of bark was stripped off. The operation is performed in the spring, and the branch is sawn off and put into the ground at the fall of the leaf. The following year it will bear fruit.

To keep Crows from Corn.

Take a quart of train oil, as much turpentine and bruised gunpowder, boil them together, and, when hot, dip pieces of rags in the mixture, and fix them on sticks in the field. About four are sufficient for an acre of corn.

Process for preparing nitrous Acid for extracting Stains, &c. from tanned Leather.

Take half a pint of water, a quarter of a pint of nitrous acid, and half an ounce of salts of lemon. Put the water in a bottle, and add the nitrous acid to it, and afterwards the salts of lemon; when the heat which is caused by this mixture has subsided, add half a pint of skimmed milk; shake them occasionally for three or four days, and the liquor will be fit for use.

The application.—With a brush and soft water clean the surface of the leather, from all grease, dirt, &c. Next scrape on it a little Bath-brick, or white free sand; add a little of the above liquor, and with a brush scour it well, repeating this process till the whole has been gone over; then, with a clean sponge and water, wash off what remains

of the brick: leave the leather to dry gradually, and it will be of a light new colour. If it is wished to be darker, brush it with a hard brush a little before it is dry, and it will be of a rich brown tinge.

To make Sugar from Beet-roots.

Let the beet-roots be pounded in a mortar, and then subjected to the press; the juice is next to be clarified with lime, like that of the sugar cane, and then by evaporation bring it to the consistence of syrup. From one hundred pounds of raw sugar thus obtained, eighty pounds may be had by the first refining of well crystalized sugar, inferior neither in quality or whiteness to that of the West Indies. Two days are sufficient to complete the operation.

To make Eau de Luce, and its Use.

Take of spirit of wine one ounce, spirit of sal-ammoniacum four ounces, oil of amber one scruple, white Castile soap ten grains. Digest the soap and oil in the spirits of wine, add the ammoniacum, and shake them well together.

The immediate application of Eau du Luce to many persons who have been stung by wasps, has caused the pain to subside in a few seconds, and after a few minutes all inflammation ceased.

To cure damp Walls.

Boil two quarts of tar, with two ounces of kitchen-grease, for a quarter of an hour in an iron

pot. Add some of this tar to a mixture of slacked lime and powdered glass, which have passed through a flour sieve, and been completely dried over the fire in an iron pot, in the proportion of two parts of lime and one of glass, till the mixture becomes of the consistence of thin plaster. The cement must be used immediately after being mixed, and therefore it is proper not to mix more of it than will coat one square foot of wall, since it quickly becomes too hard for use; and care must be taken to prevent any moisture from mixing with the cement. For a wall merely damp, a coating one-eighth of an inch thick is sufficient; but if the wall is wet, there must be a second coat. Plaster made of lime, hair, and plaster of Paris, may afterwards be laid on as a cement. The cement above described will unite the parts of Portland stone or marble, so as to make them as durable as they were prior to the fracture.

Parsnips productive of Milk in Cows.

Parsnips cause cows to produce abundance of milk, and they eat them as free as they do oil-cake. Land, 7*l.* an acre in Guernsey, is sown with parsnips to feed cattle, and the milk is like cream.—Sheep, when lambing, fed with them, produce much milk. They are improper food for horses, subjecting them to blindness.

The uses of Tobacco.

Tobacco is employed for so many different uses, that no person possessed of a garden, but will find both pleasure and profit in the cultivation of it,

especially as it is now at such a high price. The seed is very cheap, and may be procured of most nurserymen, and will answer the same end as the foreign for most purposes, and considerably cheaper.

Uses to which it may be applied.—1. To Florists, for two elegant annual plants to decorate the borders of the flower garden; or, on account of their height, to fill up vacant places in the shrubberies; or, when put into pots, they will be very ornamental in the greenhouse during the winter.

2. Kitchen-gardeners would in a few days lose their crops of melons, if not immediately fumigated with tobacco smoke, when attacked by the red spider; and it is useful to destroy the black flies on cucumbers in frames.

3. Fruit-gardeners. When peach and nectarine trees have their leaves curled up, and the shoots covered with smother flies; or the cherry trees have the ends of the shoots infested with the black dolphin fly; canvas, pack-sheets, or doubled mats, nailed before them, and frequently fumigated under them, will destroy those insects.

4. Forcing gardeners, who raise roses and kidney beans in stoves, can soon destroy the green flies which cover the stalks and buds of roses, and the insects which appear like a mildew on kidney beans, by the assistance of the fumigating bellows.

5. Nurserymen. When the young shoots of standard cherry trees, or any other trees, are covered with the black dolphin flies, an infusion is made with the leaves and stalks of tobacco; a quantity is put into an earthen pan, or small oblong wooden trough: one person holds this up, whilst

another gently bends the top of each tree, and lets the branches remain about a minute in the liquor, which destroys them.

6. Graziers, when their sheep are infected with the scab, find relief from making a sheep water with an infusion of the leaves and stalks. Moles, when only a few hills are at first observed, may probably be soon driven out of the ground, by fumigating their holes.

7. Herb tobacco is also greatly improved by having some of the leaves, when dried, cut with a pair of scissars, and mixed with the herbs in any quantity you may think proper, according to the strength you require, and save you the expense of buying tobacco.

The herbs generally used for this purpose are coltsfoot and wood betony leaves; the leaves and flowers of lavendar, rosemary, thyme, and some others of the like nature.

A Water to take Spots out of Cloths, Stuffs, Silk, Cotton, and Linen.

Take two quarts of spring water, put in it a little fine white pot-ash, about the quantity of a walnut, and a lemon cut in slices; mix these well together, and let it stand for twenty-four hours in the sun; then strain it off, and put the clear liquid up for use. This water takes out all spots, whether pitch, grease, or oil, as well in hats, as cloths, and stuffs, silk or cotton, and linen. As soon as the spot is taken out, wash the place with fair water; for clothes of a deep colour, add to a spoonful of the mixture, as much fair water to weaken it.

To make durable Barn Floors.

A double barn floor may be made of well-burnt polished brick on edge, placed in the herring-bone form, on a pavement of stone three inches and a half in thickness; or oaken plank two inches and a half in thickness; or even of well-tempered indurated loam, of a proper substance, not less than eight inches, and laid upon dry materials, or bottom. Any of them will make a durable barn floor, provided it is kept free from wet, waggon-wheels, and horses feet.

Necessary Hints to those who use Copper Vessels for culinary Purposes.

In domestic economy, the necessity of keeping copper vessels always clean, is generally acknowledged; but it may not perhaps be so generally known, that fat and oily substances, and vegetable acids, do not attack copper while *hot*; and, therefore, that if no liquid be ever suffered to grow *cold* in copper vessels, those utensils may be used for every culinary purpose, with perfect safety.

Dr. Johnstone relates the shocking case of three men who died, after excruciating sufferings, in consequence of eating some victuals prepared in an unclean copper on board the Cyclops frigate. Thirty-three other men became ill, and were put upon the sick-list, at the same time, and from the same cause.

Dr. Percival gives an account of a young lady who amused herself, while her hair was dressing, with eating samphire pickle impregnated with copper. She soon complained of pain in the stomach,

and in five days vomiting commenced, which was incessant for two days. After this her stomach became prodigiously distended; and in nine days after eating the pickle, death relieved her from her sufferings.

To preserve Wood in damp Situations.

Two coats of the following preparation are to be applied, after which the wood is subject to no deterioration whatever from humidity. Twelve pounds of rosin are to be beaten in a mortar, to which three pounds of sulphur and twelve pints of whale oil are to be added. This mixture is to be melted over the fire, and stirred during the operation. Ochre reduced to an impalpable powder, by triturating it with oil, may then be combined in the proportion necessary to give either a lighter or a darker colour to the material. The first coat should be put on lightly, having been previously heated; the second may be applied in two or three days, and a third after an equal interval, if from the peculiar dampness of the situation it should be judged expedient.

To facilitate the Growth of Foreign Seeds.

Mr. Humbolt has found, that seeds, which do not commonly germinate in our climates, or in our hot-houses, and which of course we cannot raise for our gardens, or hope to naturalize in our fields, become capable of germinating, when immersed for some days in a weak oxygenised muriatic acid. This interesting discovery has already turned to advantage in several botanic gardens.

To prevent the disagreeable Smell arising from House Drains.

As the diffusion of this noxious matter, within our dwellings, tends to produce disease and mortality, it cannot be too generally known that a cheap and simple apparatus has been contrived for carrying off the waste water, &c. of sinks, and which at the same time prevents the possibility of any air ever returning back into the house from thence, or from any drain which may be connected with it. It is known by the name of a *stink trap*, and may be had of some of the ironmongers in London.

Uses of Ground Ivy in Ale, &c.

The leaves thrown into the vat with ale clarify it, and give it an antiscorbutic quality. The expressed juice mixed with a little wine, and applied morning and evening, destroys the white specks on horses' eyes.

To remove the Spots of Oil, Grease, and Tallow from any kind of Stuff.

Take five or six pieces of lighted charcoal about the size of a walnut, wrap them in a piece of linen which has been previously dipped in water, and squeezed in the hand to press out the superabundant moisture; extend the stuff that is spotted, on a table, on which a clean napkin has been spread; then take the cloth containing the charcoal by four corners, and lay it on the spot; lift it up and put

it down on the spot ten or twelve times successively, pressing lightly upon it, and the spot will disappear.

To brown Gun-Barrels.

After the barrel is finished, to give it a brown colour, it is to be rubbed over with aquafortis or spirit of salt diluted with water, and then to be laid by, for a week or more, till a complete coat of rust is formed. A little oil is then to be applied, and the surface being rubbed dry, it is to be polished by means of a hard brush and a little bees'-wax.

To clean Alabaster or Marble.

Beat pumice stones to an impalpable powder, and mix it up with verjuice; let it stand for two hours, then dip into it a sponge, and rub the marble or alabaster, wash it with a linen cloth and fresh water, and dry it with clean linen rags.

To make a cheap Black Paint from earthy and mineral Substances.

Take of the blueish marly stone, found in copper, tin, and lead mines, (principally in the copper mines) and of iron stone, and of fine blue marle of slate, and of ochre equal quantities, and reduce them by grinding or pounding to a very fine powder. To any given quantity of the above-mentioned materials, when put together, add one-eighth of their weight of lamp black, so that there will be seven-eighths of the earthy or mineral substances and one-eighth of the lamp black. This

produces a superior black paint for wood, iron, canvas, or any other thing for which paint is used; but for the purpose of using such paint, it must be ground (in the usual manner of grinding colours) with oil, as commonly done by colourmen or painters (their boiled oil is to be preferred); and the same when mixed and made up as other paint generally is, may be used with the brush as in common practice. Ivory black may be substituted, but for general purposes the lamp black is preferable.

To kill Eels instantly, without the horrid Torture of skinning them alive.

Pierce the spinal marrow close to the back part of the skull with a pen-knife, or other pointed instrument, and if properly done, all motion immediately ceases.

Other fish, as soon as caught, may be killed by the above method.

Coffee.

The infusion or decoction of the roasted seeds of the coffee-berry, when not too strong, is a wholesome, exhilirating, and strengthening beverage; and when mixed with a large proportion of milk, is a proper article of diet for literary and sedentary people. It is especially suited to persons advanced in years. People who are bilious and liable to costiveness should abstain from it. When drank very strong, it proves stimulating and heating in a considerable degree, creating thirst and producing watch-

fulness. By an abusive indulgence in this drink, the organs of digestion are impaired, the appetite is destroyed, nutrition is impeded, and emaciation, general debility, paralytic affections, and nervous fever, are brought on.

To take Wax out of Velvet of all Colours, except Crimson.

Take a crumby wheaten loaf, cut it in two, toast it before the fire, and, while very hot, apply it to the part spotted with wax. Then apply another piece of toasted bread hot as before, and continue this application till the wax is entirely taken out.

Method of cultivating and curing Turkey Rhubarb from Seed.

The seed should be sown about the beginning of February, on a bed of good soil, (if rather sandy the better) exposed to an east or west aspect in preference to the south; a full sun being prejudicial to the vegetation of the seeds, and to the plants whilst young.

The seeds are best sown moderately thick, (broad cast) treading them regularly in, as is usual with parsnips and other light seeds, and then raking the ground smooth. When the season is wet, make a bed for sowing the rhubarb seeds upon, about two feet thick, with new dung from the stable, covering it near one foot thick with good soil. The intent of this bed is not for the sake of warmth, but solely to prevent the rising of earth worms, which in a

moist season will frequently destroy the young crop.

If the seed is good, the plants often rise too thick; if so, when they have attained six leaves, they should be taken up carefully, (where too close) leaving the standing crop eight or ten inches apart: those taken up may be planted at the same distance in a fresh spot of ground, in order to furnish other plantations. When the plants in general are grown to the size that cabbage plants are usually set out for a standing crop, they are best planted where they are to remain, in beds four feet wide, one row along the middle of the bed, leaving two yards distance betwixt the plants, allowing an alley between the beds about a foot wide, for conveniency of weeding the plants.

In the autumn, when the decayed leaves are removed, if the shoveling of the alleys are thrown over the crowns of the plants, it will be found of service.

Cultivation of Turkey Rhubarb by Offsets.

Slip off several offsets from the heads of large plants: set them with a dibble about a foot apart, in order to remove them into other beds, and in the autumn they will be in a thriving state.

Method of curing Rhubarb.

The plants may be taken up, either early in the spring or in autumn, when the leaves are decayed, in dry weather if possible; when the roots are to be cleared from dirt, (without washing) let them be cut into pieces, and with a sharp knife freed

from the the outer coat, and exposed to the sun and air for a few days, to render the outside a little dry.

In order to accelerate the curing the largest pieces, a hole may be scooped out with a pen-knife; these and the smaller parts are then to be strung on packthread, and hung up in a warm room, where it is to remain till perfectly dry. Each piece may be rendered more sightly by a common file, fixing it in a small vice during that operation; afterwards rub over it a very fine powder, which the small roots furnish in beautiful perfection, for this and every other purpose where rhubarb is required.

Successful Experiment of rearing Calves without Milk. From Transactions of the Bath Society, vol. 5.

SIR, *Tytherton, Dec. 3, 1789.*

The following is as near a calculation of the expenses of rearing my calves without milk, as I can at present assert. In the year 1787, I weaned seventeen calves; in 1788, twenty-three; and in 1789, fifteen. I bought, in 1787, three sacks of linseed; I put one quart of the seed to six quarts of water, which, by boiling ten minutes, became a good jelly; this jelly is mixed with a small quantity of the tea of the best hay, steeped in boiling water.

Having my calves to drop at different times, I did not make an exact calculation of the expense of this hay tea, but out of my three sacks of seed,

I had better than two bushels left at last. I gave them the jelly and hay tea three times a day; to the boy, who looked after them, 6d. per day: the price of the linseed was 4s. 6d. per bushel: the whole three years' seed 2l. 5s.

My calves are kept in a good growing state, and are much better at this time than my neighbours, that are reared by milk: they do not fall off so much when they come to grass.

I am, &c.

THOMAS CROOK.

To clean Turkey Carpets.

To revive the colour of a Turkey carpet, beat it well with a stick till the dust is all got out; then, with a lemon or sorrel juice, take out the spots of ink, if the carpet be stained with any; wash it in cold water, and afterwards shake out all the water from the threads of the carpet. When it is thoroughly dry, rub it all over with the crumb of a hot wheaten loaf; and, if the weather is very fine, hang it out in the open air a night or two.

To take out Spots of Ink.

As soon as the accident happens, wet the place with juice of sorrel or lemon, or with vinegar, and the best hard white soap.

To take Iron Moulds out of Linen.

Hold the iron mould on the cover of a tankard of boiling water, and rub on the spot a little juice

of sorrel and a little salt, and when the cloth has thoroughly imbibed the juice, wash it in lee.

To take out Spots on Silk.

Rub the spots with spirit of turpentine; this spirit exhaling, carries off with it the oil that causes the spot.

To clean Gold and Silver Lace.

Take the gall of an ox and of a pike, mixed well together in fair water, and rub the gold or silver with this composition.

To preserve Churches from Dilapidation.

The earth, next the walls of a church, lying higher in any part than the floor of it, is not only very injurious to the walls, but to the wainscot next to the same on the inside, by causing what is absurdly called the dry rot, and, where there is no wainscot, producing a green moss. The water from the eaves, where there is no parapet, should be carried off by a spout, to extend much farther than the length of the wall, to prevent the wind from driving the wet against it. Where there are parapets it should be brought down close to the wall, in leaden pipes, at the foot of which should be a stone somewhat hollow, to prevent it penetrating, and to throw it off from the wall; a pipe should be also continued from the roof of the steeple to that of the church. These matters attended to, will prove of great advantage to the sacred fabrics, and save much expence in the repairs.

Easy Method of preventing the Rot in Sheep.

It is a custom with the farmers, in some districts, to pasture their sheep on ground abounding with broom for several days, when the broom is in blossom. "This," says Sir John Sinclair, on the authority of an intelligent correspondent, "will prevent the sheep so pastured from being infected with the rot for that season.

Parsley recommended to Farmers to be sown with Rape-Seed, as a Preservative against the Resp *in Sheep.*

A correspondent of the Chester Chronicle recommends to all farmers, who sow rape seed, to sow with it a small portion of parsley at the same time; this he pronounces an infallible preservative against the malady well known by the name of *resp*, in sheep; he also advises to sow parsley on turnip land at the time of hoeing turnips. The above correspondent asserts, that he has pursued this plan upwards of 25 years, and during that time he has never lost one sheep, either in rape or turnip land.

Composition that will effectually prevent Iron, Steel, &c. from rusting.

This method consists in mixing, with fat oil varnish, four-fifths of well rectified spirit of turpentine. The varnish is to be applied by means of a sponge; and articles varnished in this manner will retain their metallic brilliancy, and never contract any spots of rust. It may be applied to copper, and

to the preservation of philosophical instruments, which, by being brought into contact with water, are liable to lose their splendour and become tarnished.

Great Advantage to be gained by cultivating the Everlasting Pea as a Crop for Cattle.

The everlasting pea, commonly grown in gardens, would make an advantageous crop, especially in stony land. When once sown, it will bear a crop for many years, without any annual trouble, except scattering some manure, and getting in the crop. It should be cut for green food.

Safe and expeditious Cure for the Sting of Wasps and Bees.

It has been found, by experience, that a good remedy for the sting of wasps and bees, is to apply to the part affected common culinary salt, moistened with a little water. Even in a case where the patient had incautiously swallowed a wasp in a draught of beer, and been stung by it in the windpipe, the alarming symptoms that ensued were almost instantly relieved by swallowing repeated doses of water, saturated with salt.

Easy Method of discovering whether or not Seeds are sufficiently ripe.

Seeds, when not sufficiently ripe, will swim, but when arrived at full maturity, they will be found uniformly to fall to the bottom; a fact that is said to hold equally true of all seeds, from the cocoa nut to the orchis.

A Test for discovering in Wine, Metals that are injurious to the Health.

The property of liver of sulphur, and of hepatic gas, in precipitating lead of a black colour, has been long known; and that property has been made use of to ascertain the goodness of wine in the preparation of the *liquor probatorius Wurtembergiensis*.

But in trying wines which we suspect to be adulterated, that proof does more harm than good; because it precipitates the iron of the same colour with the pernicious lead; by which means, some dealers of respectable characters have been ruined.

It was wanting, therefore, to find an agent which would discover nothing in wine but what was prejudicial to health. This is accomplished by the following test, which precipitates lead and copper of a black colour, arsenic of an orange-colour, &c. but does not iron, which being innocent, or rather salutary, to the human constitution, gets into a great number of different sorts of wine by various accidents.

Receipt for the Test Liquor :—Mix equal parts of oyster shells, and crude sulphur reduced to a fine powder, and put the mixture in a crucible. Heat this in a wind furnace, and suddenly raise the heat till the crucible be exposed to a white heat for fifteen minutes. When the mass is cool, reduce it to powder, and keep it in a bottle well corked.

To make the liquor, put 120 grains of this powder, and 180 grains of cream of tartar into a strong bottle full of common water, which has been

boiled for an hour, and suffered to cool. Cork the bottle immediately, and shake it from time to time. After having stood a few hours, pour off what is clear of the liquor into ounce phials, after having previously put into each of them twenty drops of spirit of sea salt; and then stop them well with wax mixed with a little turpentine.

One part of this liquor, mixed with three parts of wine adulterated, will discover, by a very sensible black precipitate, the smallest quantity of lead, copper, &c. but will have no effect on any iron it may contain. When the precipitation is made, iron may be discovered by saturating the wine remaining, when poured off, with a little salt of tartar, when the liquor becomes instantly black.

Pure wines remain perfectly clear after the addition of this liquor.

General Rules for the Choice of Spectacles, and for the Preservation of the Sight. [*Adam's Essay on Vision.*]

The most general, and perhaps the best, rule that can be given, to those who are in want of assistance from glasses, in order so to choose their spectacles, that they may suit the state of their eyes, is to prefer those which shew objects nearest their natural state, neither enlarged nor diminished, the glasses being near the eye, and that give a blackness and distinctness to the letters of a book, neither straining the eye, nor causing any unnatural exertion of the pupil. For no spectacles can be said to be properly accommodated to the eyes, which do not pro-

cure them ease and rest; if they fatigue the eyes we may safely conclude, either that we have no occasion for them, or that they are ill-made, or not proportioned to our sight.

Though, in the choice of spectacles, every one must finally determine for himself, which are the glasses through which he obtains the most distinct vision; yet some confidence should be placed in the judgment of the artist of whom they are purchased, and some attention paid to his directions. By trying many spectacles, the eye is fatigued as the pupil varies in size with every different glass, and the eye endeavours to accommodate itself to every change that is produced. Hence, the purchaser often fixes upon a pair of spectacles not the best adapted to his sight, but those which seem to relieve him most, while his eyes are in a forced and unnatural state, and, consequently, when he gets home, and they are returned to their natural state, he finds what he has chosen fatiguing and injurious to his sight.

Of Preservers, and Rules for the Preservation of Sight.

Though it may be impossible to prevent the absolute decay of sight, whether arising from age, partial disease, or illness, yet, by prudence and good management, its natural failure may certainly be retarded, and the general habits of the eyes strengthened, which good purposes will be promoted by a proper attention to the following maxims:—

1. Never to sit for any length of time in absolute gloom, or exposed to a blaze of light. The reasons on which this rule is founded, prove the impro-

priety of going hastily from one extreme to the other, whether of darkness or of light, and shew us that a southern aspect is improper for those whose sight is weak and tender.

2. To avoid reading small print.

3. Not to read in the dark; nor, if the eyes be disordered, by candle-light. Happy those who learn this lesson betimes, and begin to preserve their sight before they are reminded by pain of the necessity of sparing them. The frivolous attention to a quarter of an hour in the evening, has cost numbers the perfect and comfortable use of their eyes for many years; the mischief is effected imperceptibly, the consequences are inevitable.

4. The eye should not be permitted to dwell on glaring objects, more particularly on first waking in a morning; the sun should not, of course, be suffered to shine in the room at that time, and a moderate quantity of light only be admitted. It is easy to see that, for the same reasons, the furniture of a bed should be neither altogether of a white or red colour; indeed, those whose eyes are weak would find considerable advantage in having green for the furniture of their bed chamber. Nature confirms the propriety of the advice given in this rule; for the light of the day comes on by slow degrees, and green is the universal colour she presents to our eyes.

5. The long-sighted should accustom themselves to read with rather less light, and somewhat nearer to the eye than what they naturally like, while those that are short-sighted should rather use themselves to read with the book as far off as possible; by this

means both would improve and strengthen their sight; while a contrary course will increase its natural imperfections.

There is nothing which preserves the sight longer than always using, both in reading and writing, that moderate degree of light which is best suited to the eye; too little strains them, too great a quantity dazzles and confounds them. The eyes are less hurt by the want of light than by the excess of it: too little light never does any harm, unless they are strained by efforts to see objects to which the degree of light is inadequate; but too great a quantity has, by its own power, destroyed the sight. Thus many have brought on themselves a cataract, by frequently looking at the sun, or a fire; others have lost their sight by being brought too suddenly from an extreme of darkness into the blaze of day. How dangerous the looking on bright luminous objects is to the sight, is evident from its effects in those countries which are covered the greater part of the year with snow, where blindness is exceeding frequent, and where the traveller is obliged to cover his eyes with crape, to prevent the dangerous and often sudden effects of too much light; even the untutored savage tries to avoid the danger, by framing a little wooden case for his eyes, with only two narrow slits. A momentary gaze at the sun will for a time, unfit the eyes for vision, and render them insensible to impressions of a milder nature.

The following cases, from a small tract on the "*Fabric of the Eye*," are so applicable to the present article, as to want no apology for their insertion here, though, if any were necessary, the use

they will probably be of to those whose complaints arise from the same or similar causes would, I presume, be more than sufficient.

" A lady from the country, coming to reside in St. James's Square, was afflicted with a pain in her eye, and a decay in her sight. She could not look upon the stones, when the sun was upon them, without great pain. This, which she thought was one of the symptoms of her disorder, was the real cause of it. Her eyes, which had been accustomed to the verdure of the country and the green of the pasture grounds before her house, could not bear the silent and unnatural glare of light reflected from the stones; she was advised to place a number of small orange trees in the windows, so that their tops might hide the pavement, and be in a line with the grass. She recovered, by this simple change in the light, without the assistance of any medicine; though her eyes were before on the verge of little less than blindness."

A gentleman of the law had his lodgings in Pall Mall, on the north side, his front windows were exposed to the full noon sun, while the back room, having no opening but into a small close yard, surrounded with high walls, was very dark; he wrote in the back room, and used to come from that into the front room to breakfast, &c. His sight grew weak, and he had a constant pain in the balls of his eyes; he tried visual glasses, and spoke with oculists, equally in vain. Being soon convinced, that the coming suddenly out of a dusky study, into the full blaze of sun-shine, and that very often in the day, had been the real cause of his disorder, he

took new lodgings, by which, and forbearing to write by candle-light, he was very soon cured.

Blindness, or, at least, miserable weakness of sight, are often brought on by these unsuspected causes. Those who have weak eyes, should therefore be particularly attentive to such circumstances, since prevention is easy, but the cure may be difficult and sometimes impracticable.

When the eye sensibly flattens, all delay is dangerous; and the longer those, who feel the want of assistance, defer the use of spectacles, the more they will increase the failure of the eye; there are too many who procrastinate the use of them, till at last they are obliged to use glasses of ten or twelve inches focus, instead of those thirty-six or forty, which would otherwise have suited them; thus preferring a real evil to avoid one that is imaginary. Mr. Thomin mentions several deplorable cases of this kind, particularly one of a lady, who through false shame had abstained from wearing spectacles so long a time, that at last it was impossible to suit her, but with those adapted to eyes that have been couched. Whereas the instances are numerous of those who, by using glasses of a long focus at the first approaches of long-sightedness, have brought back their eyes to their natural sight, and been able to lay aside their spectacles for years.

To make Wafers.

Take very fine flour, mix it with the glair of eggs, isinglass, and a little yeast; mingle the materials; beat them well together, spread the batter,

being made thin with gum water, on even tin plates, and dry them in a stove; then cut them for use. You may make them of what colour you please, by tinging the paste with Brazil or vermilion for red; indigo or verditer, &c. for blue; saffron, turmeric, or gamboge, &c. for yellow.

Method of recovering the Legibility of decayed Writings.

The best method of restoring legibility to decayed writings is found upon experiment to be, by covering the letters with phlogisticated alkali, with the addition of a diluted mineral acid; upon the application of which, the letters will change very speedily to a deep blue colour, of great beauty and intensity. To prevent the spreading of the colour, which, by blotting the parchment, detracts greatly from the legibility, the alkali should be put on first, and the diluted acid added upon it. The method found to answer best, has been to spread the alkali thin with a feather over the traces of the letters, and then to touch it, gently, as near upon or over the letters as can be done with the diluted acid, by means of a feather or bit of stick cut to a blunt point. Though the alkali should occasion no sensible change of colour, yet the moment the acid comes upon it, every trace of a letter turns at once to a fine blue, which soon acquires its full intensity, and is beyond comparison stronger than the colour of the original trace had been. If, then, the corner of a bit of blotting paper be carefully and dexterously applied near the letters, so as to imbibe

the superfluous liquor, the staining of the parchment may be in a great measure avoided: for it is this superfluous liquor which, absorbing part of the colouring matter from the letters, becomes a dye to whatever it touches. Care must be taken not to bring the blotting paper in contact with the letters, because the colouring matter is soft, whilst wet, and may easily be rubbed off. The acid chiefly employed has been the marine, but both the vitriolic and nitrous succeed very well. They should be so far diluted as not to be in danger of corroding the parchment, after which the degree of strength does not seem to be a matter of much nicety.

The Sting of a Wasp.

For the sting of a wasp, oil of tartar, or solution of pearl-ash, is an effectual and almost instantaneous cure.

Fertilising Steeps for Turnips, Wheat, or Barley.

Steep turnip seed twelve hours in train oil, which strain through a fine sieve, and immediately thoroughly mix the quantity of seed you would wish to sow on an acre, with three bushels of dry loamy earth, finely sifted, which drill (or sow) as soon as possible; and when the plants begin to appear, throw a small quantity of soot over them.

Steep for Wheat, Barley, or other Grain.

Put a peck and a half of wood ashes, and a peck of unslaked lime, into a tub that will hold forty gallons; then add as much water as will slake the

lime and render the mixture into the consistence of stiff mortar. In this state it should remain ten or twelve hours; then add as much water as will reduce the mortar to a pulp by thorough stirring. In this state, fill the tub with water, and occasionally keep stirring for two or three days. After which, draw off the clear lye into an open vessel, and gradually put the grain into it: skim off the light grains; and after the corn has been steeped three hours, spread it on a clean floor to dry, when it will be sufficiently prepared for drilling or sowing. The lye will retain its full virtue, and may be repeatedly used.

Preparation for Carrots and other winged Seeds.

Take two bushels of dry loamy earth, finely sifted; to which add one bushel of bran, and a sufficient quantity of carrot seed, cleaned from stalks, and well rubbed between the hands; all which thoroughly mix together, and drill (or sow.) The carrot seed will stick to the bran, which, with the earth, will be regularly discharged.

Method of draining Ponds in level Grounds.

At a certain distance below the surface of the earth, there is a stratum of loose sand, which freely admits the passage of water. This stratum is at various depths, in different elevations; but it will be generally found, that lands most subject to stagnant ponds have but a shallow stratum of clay over the sand.

All that is necessary, therefore, is to dig a pit in the bottom of the pond, till you arrive at this stratum of sand, when the water will be immediately absorbed and the pond emptied.

Easy Method of obtaining Water in almost any Situation.

The ground must be perforated by a borer. In the perforation is placed a wooden pipe, which is driven down with a mallet, after which the boring is continued, that the pipe may be driven still farther. In proportion as the cavity of the borer becomes loaded, it is drawn up and emptied; and in time, by the addition of new portions of wooden pipe, the boring is carried to any depth, and water is generally obtained.

To make a cheap milk-white Paint.

Skim milk two quarts, fresh slaked lime eight ounces, linseed oil six ounces, white Burgundy pitch two ounces, Spanish white three pounds. The lime is to be slaked in water, exposed to the air, mixed in about one-fourth of the milk; the oil, in which the pitch is previously dissolved, to be added, a little at a time; then the rest of the milk, and afterwards the Spanish white. This quantity is sufficient for twenty-seven square yards, two coats, and the expense not more than tenpence.

To preserve Biscuit from Putrefaction.

To preserve biscuit a long time sweet and good, no other art is necessary than stowing it well baked

in casks exactly caulked, and carefully lined with tin, so as to exclude the air; at the same time the biscuit must be so placed as to leave as little vacant room as possible in the cask; and when the same is opened through necessity, it must be speedily closed again with great care.

To prune Wall Fruit.

Cut off all fresh shoots, however fair they may appear to the eye, that will not, without much bending, be well placed to the wall; for if any branch happen to be twisted or bruised in the bending or turning, (which you may not easily perceive) although it may grow and prosper for the present, yet it will decay in time, and the sap or gum will issue from that place.

To prevent what is commonly called a Thief in Candles.

There is a fault in most candles, viz. that of not having the cottons properly disposed, and of the same length throughout, which causes what is commonly called a thief, from its wasting the tallow in its descent down the candle. Now the effect of steel is such, that if you lay any piece of that metal, as the snuffers, on the opposite side of the candle, to that on which the thief is, in such a manner that it may touch the candle, where it meets the candlestick in the socket, it will not only stop the progress of the thief down the candle, but will cause it to be taken up and consumed in the flame itself.

The Phosphoric Pencil

Is a small bit of phosphorus, put into a quill, and kept in a phial, in water; when you write, dip your pencil often in the water, to prevent its taking fire.

Method of cleaning dirty Prints or Books.

If the Print should be pasted upon canvas, put it into a copper or kettle of water just boiling; and in three or four minutes it will easily separate from the canvas: next expose it to the sun, by placing it on a grass plat, and, to prevent the wind from having any effect upon it, so as to tear it or blow it away, fix four skewers into the ground near the corners, and tie a string to each of the skewers, crossed from corner to corner, so as to confine it completely; when it becomes dry, wet it again thoroughly; and so on for several days, if necessary, in the same manner as you bleach linen; in which operation, as well as in bleaching *Prints*, a hot sun is best. If the foulness of the *Print* should settle in spots, soak those spots well by putting wet linen rags doubled upon them for a considerable time. If soaking in this manner does not get the spots out, put the *Print* into hot water, gently boiling, or very near it, and let it continue for twenty-four hours; but if the paper be spongy, or very thin, it will not bear soaking so long. Soaking in this manner is seldom necessary. The foulness from flies may be gently brushed off with a wet sponge, when the *Print* is thoroughly soaked

Spirit of sea salt, much diluted, will get white-wash off *Prints:* take care not to hold your nose over the vapour of the spirit. Do not leave your *Prints* on the grass-plat at night, for fear of the worms.

Liquor for destroying Caterpillars, Ants, and other Insects.

Take a pound and three quarters of soap, the same quantity of flowers of sulphur, two pounds of champignons, or puff balls, and fifteen gallons of water. When the whole has been well mixed, by the aid of a gentle heat, sprinkle the insects with the liquor, and it will instantly kill them.

To prevent the Formation of Crust upon the Inside of Tea-kettles.

Put into the tea-kettle a flat oyster shell, and keep it constantly there, it will attract the stony particles that are in the water, to itself, and prevent their forming upon the tea-kettle.

To prune Vines to advantage.

In pruning vines, leave some new branches every year, and take away (if too many) some of the old, which will be of great advantage to the tree, and much increase the quantity of fruit.

When you trim your vine, leave two knots, and cut them off the next time; for, usually, the two buds yield a bunch of grapes. Vines, thus pruned, have been known to bear abundantly, whereas others that have been cut close to please the eye, have been almost barren of fruit.

To remove Herbs and Flowers in the Summer.

If you have occasion to transplant in the summer season, let it be in the evening after the heat is past, plant and water the same immediately, and there will be no danger from the heat next day; but be careful, in digging up the earth, you do not break any of the young shoots, as the sap will exude out of the same to the great danger of the plants.

Improvement of Smell and Taste of common Ardent Spirits.

By distilling eight ounces of common ardent spirits (corn or malt spirits) over one ounce of charcoal powder, the smell and taste are considerably improved.

To loosen the Glass Stopples of Smelling Bottles and Decanters.

With a feather rub a drop or two of olive oil round the stopple, close to the mouth of the bottle or decanter, which must be then placed before the fire, at the distance of a foot or eighteen inches; in which position the heat will cause the oil to spread downward between the stopple and the neck. When the bottle or decanter has grown warm, gently strike the stopple on one side, and on the other with any light wooden instrument; then try it with the hand. If it will not yet move, place it again before the fire, adding, if you choose, another drop of oil. After a while strike again as before;

and by persevering in this process, however tightly the stopple may be fastened in, you will at length succeed in loosening it.

To prevent Steel or Iron from Rust.

Take one pound of hog's lard free from salt, one ounce of camphire, two drachms of black lead powder, and two drachms of dragons blood in fine powder, melt the same on a slow fire until it is dissolved, and let it cool for use.

To make an excellent Smelling Bottle.

Take an equal quantity of Sal-ammoniac and unslacked lime, pound them separate, then mix and put them in a bottle to smell to. Before you put in the above, drop two or three drops of the essence of burgamot into the bottle, then cork it close. A drop or two of ether, added to the same, will greatly improve it.

A Method of preserving Fruit fresh all the Year.

Take of saltpetre one pound, of bol-armoniac two pounds, of common sand, well freed from its earthly parts, four pounds, and mix altogether. After this, let the fruit be gathered with the hand before it be thorough ripe, each fruit being handled only by the stalk; lay them regularly, and in order, in a large wide-mouthed glass vessel; then cover the top of the glass with an oiled paper, and carrying it into a dry place, set it in a box filled all round to about four inches thickness, with the aforesaid preparations, so that no part of the glass vessel shall appear, be-

ing buried in a manner in the prepared nitre: and at the end of a year such fruits may be taken out as beautiful as they were when first put in.

The Effect of Charcoal on Ulcers, &c.

By sprinkling it upon old ulcers, the fetid smell of the pus is taken off. And charcoal powder, mixed with water, is employed with good effect, as a wash for the mouth, to prevent a stinking breath, probably often owing to a rotten tooth.

To make Bottles air-tight.

This may be done without luting or grinding, and consists in only having a groove round the neck, into which the cap fits, so that the groove may be charged with water or mercury.

The Virtues of Poplar Wood for the Flooring of Granaries.

The Lombard Poplar is recommended as a timber adapted for flooring granaries, which is said to prevent the destruction of corn by weevils and insects. Poplar wood will not easily take fire.

To prevent Combustible Substances from taking Fire.

This composition consists of a powder, made of one ounce of sulphur, one of red ochre, and six of copperas. To fortify wood against fire, it is first to be covered with glue, over which the powder is spread. This process to be repeated three or four times. For linen and paper, water is used instead of glue, and the process repeated twice. If this

powder be thrown on substances actually in combustion, in the proportion of two ounces to a square foot, it will instantly extinguish the fire.

How to improve the Flavour of Malt Spirits.

The flavour of malt spirits is said to be highly improved, by putting three ounces and a half of finely powdered charcoal, and four ounces and a half of ground rice, into a quart of spirits, and letting it stand during fifteen days, frequently stirring it; then let the liquor be strained, and it will be found nearly of the same flavour as brandy.

To keep Insects from Corn during long Voyages.

It has been found, that bags steeped in a solution of nitre, will effectually keep off the weevil, and other destructive insects, from corn, during the longest voyages.

To prevent the Destruction of Field Turnips.

A few years since, a considerable farmer, near Bath, observing the turnips in one of his fields strongly attacked by something, discovered by accident, that the enemy was really a slug, and immediately prevented farther damage by well rolling the whole field, which killed all the slugs.

To prevent Mice from destroying early sown Peas.

The tops of furse, or wins, chopped and thrown into the drills, and thus covered up (by goading

them in their attempt to scratch) is an effectual preventative. Sea sand strewed pretty thick upon the surface, has the same effect. It gets into their ears and is troublesome.

The good Effects of Elder in preserving Plants from Insects and Flies.

1. For preventing cabbage and cauliflower plants from being devoured and damaged by caterpillars.
2. For preventing blights, and their effects on fruit trees.
3. For preserving corn from yellow flies and other insects.
4. For securing turnips from the ravage of flies.

The dwarf elder appears to exhale a much more fœtid smell than the common elder, and therefore should be preferred

New Varnish for Earthenware.

Equal parts of white glass and soda, finely pulverised, carefully sifted and mixed. This varnish is applied in the same manner as that in common use. The advantage of it is this, that it is safe, and can have none of the poisonous effects that arise from the decomposition of lead varnish.

Important Discovery relative to the Preservation of Corn.

To preserve rye, and secure it from insects and rats, nothing more is necessary than to winnow it after it is threshed, and to stow it in the granaries, mixed with the chaff. In this state it has been kept

for more than three years, without experiencing the smallest alteration, and even without the necessity of being turned to preserve it from humidity and fermentation. Rats and mice may be prevented from entering the barn, by putting some wild vine or hedge plants upon the heaps, the smell of the wood is so offensive to these animals, that they will not approach it. The experiment has not yet been made with wheat and other kinds of grain, but they may probably be preserved in the chaff with equal advantage.

To make a Quickset Hedge or Fence.

Quick fences often become open in many places at bottom, notwithstanding the utmost attention, and more especially if neglected. The barberry shrub, on the contrary, will make an impenetrable fence, and always close at the bottom, because it puts up numerous suckers from the roots, which fill every vacancy. It may as easily be raised from the berries as quick or hawthorn, and it grows faster. The suckers also will strike root easily, especially if planted early. These shrubs may be had at most nurseries. This is worth a thought from those who have new grounds to inclose.

Striped Grass recommended for Hay.

The Indian striped or ribband grass, which is cultivated in gardens, would answer admirably for hay. In rich grounds plants are frequently four feet high; what a burden of hay would a field so cropped produce! Cattle are exceedingly fond of it; the seeds are easily saved, so that a person might

soon have enough for a rood, and from that save again and again, for as many acres as he might chuse. It is probable that the crop might be much too large to be made on the field where it grew; but if so, it would be worth while to carry part into another field.

To keep Ponds and artificial Pieces of Water free from Weeds.

At the Marquis of Exeter's seat, near Burghley, there is an artificial piece of water, about a mile in length, which used to be so over-run with weeds, that three men were employed constantly, for six months in every year, to keep them under; in which they never perfectly succeeded. About seven years ago, two pair of swans were put on the water; they completely cleared away all the weeds the first year, and none have appeared since, as the swans constantly eat them before they rise to the surface.

Scotch Kale, excellent Food for Cattle.

Scotch kale planted out in June, in good land will grow very large before winter, and would give an abundant supply for cattle, where no other juicy food is to be had. As it grows upwards, it may be planted close, and a vast deal will stand upon an acre.

Colouring for Cheese.

The colouring for cheese is, or at least should be, Spanish Annotto; but as soon as colouring became

general in this country, a colour of an adulterated kind was exposed for sale in almost every shop; the weight of a guinea and a half of real Spanish Annotto, is sufficient for a cheese of fifty pounds weight. If a considerable part of the cream of the night's milk be taken for butter, more colouring will be requisite. The leaner the cheese is the more colouring it requires. The manner of using Annotto, is to tie up, in a linen rag, the quantity deemed sufficient, and put it into half a pint of warm water over night. This infusion is put into the tub of milk, in the morning with the rennet infusion; dipping the rag into the milk, and rubbing it against the palm of the hand as long as any colour runs out.

When to cut Rye Grass for Hay.

Rye grass, if mown for hay, should be cut when in blossom, and not green. The hay made from it does not heat or sweat so much, and is very good for horses, but not for sheep and cattle. If it is suffered to stand too long before it is cut, the seeds rob the plants of their juices, and leave it no better than wheat or rye straw.

The Fire Bottle.

Take as much unslacked lime as will lie on the point of a small penknife, put it into a short bottle, then put in about half a drachm of phosphorus, and shake it gently until it takes fire; then blow gently into the bottle until it has done crackling or frizing, and it will be fit for use.

To manage Calves about Michaelmas, to prevent Sickness.

Take of fresh butter, newly churned, without salt, and form of it a cup the size of a hen's egg; put it into the said cup made of butter, three or four claws of garlic bruised, and fill it up with tar; do so for each calf; put this cup, &c. down each calf's throat; immediately afterwards put into the calf's nostrils half a table spoonful of spirit of turpentine; then tar the calf's snout well, and keep them within doors for an hour. The calves ought to be housed the night before this medicine is given.

How to judge of the Weather.

If a person intends to ride any where in winter, and suspects it will rain, he may know by the following observation eight hours before the rain comes on; and so resolve to take a great coat with him, or otherwise escape it. viz. Let him observe the top of the Mercury in the tube of a barometer, and if rain be about to come, it will be indented or concave, *otherwise,* convex or protuberant.

Improvement in the Management of Bees.

The improvement is that of having double seeps, the one on the top of the other. When the lower seep is filled with honey, it is to be removed after the bees are admitted (through a passage which is made to be opened) into the upper seep; into this seep food must be put, and the bees will remain there, and go on with their work in it. When it is

filled with honey, the former seep (with food in it) may be replaced, and the bees again admitted into it. The full seep is then to be taken away. This change of the seeps must always be made about Midsummer; and by thus annually removing the full one, more honey will be collected than is usual, and the bees will not be destroyed.

To cork and preserve Cyder in Bottles.

Good corks are highly necessary, and if soaked before use in scalding water, they will be the more pliant and serviceable; and by laying the bottles, so that the liquor may always keep the cork wet and swelled, will much preserve it.

To make Water more efficacious in extinguishing Fires.

Throw into a pump, which contains fifty or sixty buckets of water, eight or ten pounds of salt or pearl ashes, and the water thus impregnated will wonderfully accelerate the extinction of the most furious conflagration.

To make Jessamine Butter, or Pomatum.

Hog's lard melted, and well washed in fair water, laid an inch thick in a dish, and strewed over with Jessamine flowers, will imbibe the scent, and make a very fragrant pomatum.

To preserve Oats from being musty.

Richard Fermor, Esq. of Tusmore, in Oxfordshire, hath, in his stable, a contrivance to let oats

down from a loft out of a vessel, like the hopper of a mill, whence they fall into a square pipe, let into a wall, about four inches diagonal, which comes into a cupboard set into a wall, but with its end so near the bottom that there shall never be above a desirable quantity in the cupboard at a time, which being taken away, another parcel succeeds; by this motion the oats are kept constantly sweet (the taking away one gallon moving the whole above) which, when laid up otherwise in great quantities, grow frequently musty.

Innocent Method of destroying Rats.

Lay bird lime in their haunts, for though they are nasty enough in other respects, yet being very curious of their fur, if it is but daubed with this stuff, it is so troublesome to them that they will even scratch their skins from off their own backs to get it off, and will never abide in the place where they have suffered in this manner.

To take Impressions on Paper from Designs made on Stone.

The stone should be close grained, and the drawing or writing should be made with a pen dipped in ink, formed of a solution of lac, in leys of pure soda, to which should be added, some soap and lamp black for colouring; leave it to harden for a few days; then take impressions in the following manner: dip the surface in water, then dab it with printer's ink, and printer's balls; the ink sticks to the design, and not to the stone, and the impres-

sion may be taken with wet paper by means of a rolling or screw-press, in the ordinary manner. Several hundred copies may be taken from the same design in this simple manner.

To clean Boot Tops, or any Tanned Leather.

Boil one quart of milk, let it stand till cold; one ounce of oil of vitriol; one ounce of spirits of salts; shake them well together: then add one ounce of red lavender. You may put half a pint of vinegar, with the white of an egg beat to a froth.

Receipt for Blacking.

Two ounces ivory black; one tea spoonful oil of vitriol, one table spoonful sweet oil; and two ounces brown sugar; roll the same into a ball, and to dissolve it add half a pint of vinegar.

French Soft Varnish for Engravers.

One ounce of virgin's wax, one ounce of asphaltum or Greek pitch, half an ounce of common pitch, and a quarter of an ounce of Burgundy pitch.

N.B. The celebrated Vivares, the landscape engraver, always used this varnish, in preference to any other.

To make a continual Light by Night.

Take one ounce of the oil of almonds, put half a drachm of phosphorus, and two or three grains of the flower of sulphur into it; hold it in a gentle warmth to dissolve, then shake the bottle and draw

your cork, and you will have a fine glow-worm light. If you rub a little on the nose, or any other part, it will appear all in a flame.

To cut Glass.

Take a red-hot shank of a tobacco-pipe, lay it on the edge of your glass, which will then begin to crack, then draw the shank end a little gently before, and it will follow any way you draw your hand.

Wash for the Skin.

Four ounces of pot-ash, four ounces of rosewater, two ounces of pure brandy, and two ounces of lemon juice; put all these into two quarts of water, and when you wash, put a table spoonful or two of the mixture into the bason of water you intend washing in.

To stain Wood a fine black.

Drop a little oil of vitriol into a small quantity of water, rub the same on your wood, then hold it to the fire until it becomes a fine black, and, when polished, it will be exceedingly beautiful.

Varnish for Furniture.

To one part of virgin's white wax add eight parts of oil of petroleum; lay a slight coat of this mixture on the wood with a badger's brush, while a little warm; the oil will then evaporate, and leave a thin coat of wax, which should afterwards be polished with a coarse woollen cloth.

To prevent Wood, Linen, &c. from catching Fire.

One ounce of sulphur, one ounce of red ochre, and six ounces of a solution of copperas. To prevent wood from catching fire it is first to be covered with joiner's glue, over which the powder is spread. This process is to be repeated three or four times after the wood is become dry. In linen and paper, water is to be used instead of glue, and the process is repeated twice.

To clean Marble Chimney Pieces.

Beat pumice stone to an impalpable powder, and mix it up with verjuice; let it stand for two hours, then dip into it a sponge, and rub the marble or alabaster; then wash it with a linen cloth and fresh water, and dry it with clean linen rags.

To make brown Paint.

Take green muriate of copper, diluted with about ten parts of distilled or rain water; then pour in prussiate of lime until the whole is precipitated; the prussiate of copper is then to be well washed, with cold water, on the filter, and to be dried without heat.

Black Japan Ink.

The addition of Prussian blue in solution will contribute much to the intensity and beauty of the colour of the ink.

Varnish for Earthenware.

To make it white, glass and soda in equal proportion must be pounded together, very fine, carefully sifted, and well mixed. The mixture must next be exposed to a strong heat till it is rendered very dry. It is after that to be put into vessels which have been already baked; it will then be melted, and the varnish is made. It may be applied in the usual manner.

A comfortable Meal for Six People.

Take a gallon of water, put into it half a pint of split peas, a pound of lean beef cut in pieces, six potatoes, two onions, two ounces of rice, some pepper and salt; put all into a pot, and bake the same in an oven.

To destroy Caterpillars, or Flies, hurtful to Turnips.

Take one stone of flour of sulphur, two bushels of sawdust, or fine sand, and sow the same on an acre as you do corn.

Another.

Take a small branch of elder, put it into a tub of water for two days; then water your bed of turnips with the same as the vermin begin to appear.

N.B. This will prevent caterpillars, or any insect, from touching cabbages or other vegetables.

To kill Reptiles.

Take twelve ounces of quicklime in powder, two ounces of Scotch snuff, two ounces of basket salt, two ounces of sulphur vivum, dissolved in ten gallons of water, and thrown on the insects, either in the liquid or powder, will destroy them.

To prevent Infection or the Plague.

Place pots of tar in your windows, and burn frankincence, galbanum or pitch, in different parts of the house, and strew the floor with wormwood.

To stain Wood green.

Dissolve verdigris in vinegar, or chrystals of verdigris in water; and, with the hot solution, brush over the wood till it be duly stained.

To destroy the Gooseberry Caterpillar.

Notice the bushes with care about the beginning of June; and whenever you perceive the appearance of a leaf stripped by the caterpillar, instantly examine the place, with a view to eradicate the disease. You will always perceive that the first appearance of them is towards the bottom of the bush. While they are young they herd very close together, so that at this early period you will frequently find the whole nest upon one leaf; and by picking off that leaf, and crushing the same with your foot, you destroy the whole nest at once.

To prevent Blossom and Fruit Trees from being damaged by early Spring Roots.

If a rope (a hempen one it is presumed) be intermixed among the branches of a fruit tree in blossom, and the end of it brought down, so as to terminate in a bucket of water, and should a slight frost take place in the night time, in that case the tree will not be affected by the frost; but a film of ice of considerable thickness will be formed on the surface of the bucket in which the rope's end is immersed, although it has often happened that another bucket of water, placed beside it for the sake of experiment, has had no ice at all upon it.

To stain Horn to imitate Tortoise Shell.

The horn to be stained must first be pressed into proper plates or scales, or other flat form. The following mixture must then be used:—

Take of quicklime two parts, of litharge one, and temper them to the consistence of a soft paste with soap lye. Put this paste over all the parts of the horn, except such as are proper to be left transparent, in order to the greater resemblance of the tortoise shell. The horn must then remain thus covered with the paste till it be thoroughly dry: when the paste being brushed off, the horn will be found partly opake and partly transparent in the manner of tortoise shell; and when put over a foil, will be scarcely distinguishable from it. It requires some degree of fancy and judgment to dispose of the paste in such a manner, as to form a variety of

transparent parts, of different magnitude and figure, to look like nature. This may be done by mixing whitening with some of the paste to weaken its operation in particular places, by which spots of a reddish brown will be produced; that if properly interspersed, especially on the edges of the dark parts, will greatly increase as well the beauty of the work as its similitude with the real tortoise shell.

For Compost Dunghills.

Mix one hundred loads of earth with ten chaldrons of lime (a chaldron is thirty-six bushels) about May; let them lie together until the lime is fallen, but not run to mortar; then turn it over; lay seventy loads of stable dung close to it. When the dung is in a high putrid heat, which will perhaps be in four months, lay a layer of this and a layer of earth, two thirds of manure to one of earth, and so go through the hill; turn it over in the spring, and lay it on in March or April; eight loads on an acre of grass.

Another Compost.

Mix lime and earth as before, and turn it; then cover it with soil from privies, and coal ashes about one-third in quantity: lay it on the top for some months, in an oblong heap; then turn, and mix all together, letting it lie some months longer; and lay about eight loads on an acre of grass.

To destroy the Fly, &c. in Turnips.

Roll them in the night with a heavy roller.

N.B. This is the grand secret that was advertised

for two thousand subscribers, at one guinea each, by W. Vagg.

To preserve Turnips from Frost.

The best way is to stack them up in straw in the following manner:—One load of any sort of dry straw is sufficient for an acre of fifty tons weight. Pull up the turnips, top and tail them, then throw them in a sort of windrow, and let them lie a few days to dry.

First, lay a layer of straw next the ground, and upon it a layer of turnips about half a yard thick; then another layer of straw; so go on alternately with a layer of straw and a layer of turnips; every layer grows narrower, till it comes to nothing at the top, like a sugar loaf. The last layer must be straw, which serves to keep all dry. You must observe always, when you have laid a layer of turnips, to stroke or lap over the ends of the under layer of straw, in order to keep them close or from tumbling out. The heap should be as large as a hay-cock; the tops may be given to sheep or cattle as they are cut off.

To prevent the Smut in Wheat.

The means (to prevent smut) are simple; and no other than immersing the seed in pure water, and repeatedly scowering it therein, just before it is sown or dibbled in. Whether well, spring, or river water be used, is indifferent; but repeated stirring and change of water is essential to remove the possible particles of infection that may have impercep-

tibly adhered to the seed: thus purified, the subsequent crop will be perfect in itself, and seed successively so likewise, if there be no adjacent fields from whence this contamination may be wafted.

Manure for Clover.

The best farmers make it a rule to spread about fifty bushels per acre of ashes over their clover in March, which they find from long experience to be the best manure for this grass.

Improved Method of salting Butter and Meat.

Best common salt two parts, saltpetre one part, sugar one part; beat them up together, so that they may be completely blended. To every sixteen ounces of butter add one ounce of the composition; mix it well in the mass, and close it up for use.—It should not be used for a month, that it may be thoroughly incorporated. Butter, thus cured, has been kept for three years perfectly sweet.—Keep the air from it, or it spoils. Cover it with an oiled paper, and a board on that.

To cure meat, you add one ounce of the above composition to every sixteen ounces of meat. It must be *very well rubbed into the meat.* You cannot have it too finely powdered, nor too well rubbed into the meat.

To preserve Hazel Nuts in great Perfection for many Months.

Hazel nuts may be kept a long time in full kernel by burying them in earthen pots, well closed,

a foot or two in the ground. They keep best in gravelly or sandy places.

Easy Method of producing Mushrooms.

If the water wherein mushrooms have been steeped or washed be poured upon an old bed, or if the broken parts of mushrooms be strewed thereon, there will speedily arise great numbers.

Efficacy of Horse Chesnuts in bleaching of Linen and clearing of Woollen Stuffs, and as a Ley for preparing of Hemp.

The manner of making this ley is to peel the chesnuts, and rasp them as fine as possible into soft water. This is done ten or twelve hours before the mixture is to be used; and, in the mean while, it is stirred from time to time, the better to dissolve these raspings and impregnate the water. The last stirring is given about a quarter of an hour before the water is drawn off from the thickest part of the raspings which subside; and this is done either by inclining the vessel and pouring off the ley gently, or by ladling it out by hand, while the water is yet white and froths like soap-suds. In order to use this ley, it is made rather hotter than the hand can well bear, and the hemp is then steeped and washed in it as in soap-suds. Linen may also be washed in this ley, and even when very dirty much less soap will be required than is commonly used, it being sufficient to rub the dirtiest parts only with soap.—The raspings of the chesnuts, which sink to the

bottom of the ley, are good for fowls and pigs. Hemp, as above prepared, may be dyed like silk, wool, or cotton, and may be made into stuff and garments of all kinds; a great advantage attending the use of this material is, that it will not be destroyed by those insects which devour woollen cloth.

Method of extracting Starch from Horse Chesnuts.

First take off the outward green prickly husks, and then, either by hand, with a knife, or other tool, or else with a mill adapted for that purpose, very carefully pare off the brown rind, being particular not to leave the smallest speck, and to entirely eradicate the sprout or growth. Next take the nuts, and rasp, grate, or grind them fine into water, either by hand or by a mill adapted for that purpose. The pulp, which is thereby formed in this water, must be washed as clean as possible through a coarse horse hair sieve, then again through a finer sieve, and again through a still finer, constantly adding clean water to prevent any starch adhering to the pulp. The last process is to put it with a large quantity of water (about four gallons to a pound of starch) through a fine gauze, muslin, or lawn, so as entirely to clear it of all bran or other impurities; as soon as it settles, pour off the water; then mix it up with clean water, repeating this operation till it no longer imparts any green, yellow, or other colour to the water; then drain it off till nearly dry, and set it to bake either in the

usual mode of baking starch, or else spread out before a brisk fire, being very attentive to stir it frequently to prevent its horning, that is to say, turning to a paste or jelly, which, on being dried, turns hard like horn. The whole process should be conducted as quickly as possible.

To make Transparent Paper for Drawing.

Tracing paper is readily made by taking a sheet of very thin silk, or other paper, and rubbing it over gently with some soft substance, filled with a mixture of equal parts of drying oil and oil of turpentine, which, suspended and dried, will be fit for use in a few days; or it may be had at any of the shops. Lay this transparent material on the print or drawing to be transferred, and, with a sharp black lead pencil, trace the outlines exactly as they appear through the paper. If more permanent or stronger lines are wished, ink mixed with ox-gall will be necessary to make it adhere to the oiled surface.

To preserve Carrots, Parsnips, and Beets all the Winter.

A little before the frost sets in, draw your beets or parsnips out of the ground, and lay them in the house, burying their roots in sand to the neck of the plant, and ranging them one by another in a shelving position; then another bed of sand, and another of beets, and continue this order to the last. By pursuing this method they will keep

very fresh. When they are wanted for use, draw them as they stand, not out of the middle or sides.

To trace Drawings or Prints against the Light.

There are two methods: one to lay the print, &c. flat against a pane of glass, with thin paper over it, when the lines appearing through it are to be followed by the lead: the other is more convenient, and consists of a frame inclosing a square of glass, supported by legs, on which the paper is laid as before, and a candle placed behind the glass. A pen and ink may be used in this manner, but they cannot in the former instance.

Method of using Tracing Paper.

Take a piece of the size required, and rub it equally over, on one side, with black lead, reduced to a powder, till the surface will not readily soil a finger; then lay a piece of white paper with the leaded side of this paper next to it, under the print; and securing them firmly together with pins at the corners, proceed to trace the outlines with a blunt point, and some degree of pressure, which will transfer the lead to the clean paper precisely in the direction the point passed over the print; this may be corrected with the black lead pencil, and cleansed of any soil by the crumbs of stale bread.

To copy Drawings, &c. with fixed Materials.

Rub a thin piece of paper thoroughly and equally with fresh butter, and after well drying it by a fire,

cover it with black lead, or with carmine, lamp-black, or blue bice, on the other side which received the butter. When the operation has so far succeeded, as that the colour will not adhere to any substance passed over it, lay the coloured surface on white paper, the print on it, and trace the subject through with a point as mentioned in the foregoing receipt.

To transfer any Impression with Vermillion.

Mix the colour with linseed oil in a state sufficiently fluid to flow from the point of a pen, with which let every line of the print be accurately traced; then wet the back of it, and, turning the face downwards on clean white dry paper, place the other paper on the back, and gently rub or press it till it may be supposed the red lines are completely transferred to the paper from the print.

To clarify Quills.

Scrape off the outer film, and cut the ends off; then put the barrels into boiling water, wherein is a small quantity of allum and salt; let them remain a quarter of an hour, and then dry them in a hot pan of sand or an oven.

Fire Lute.

For a fire lute, take porcelain clay from Cornwall, (not pipe clay) let it be pounded small, and mixed up to the consistence of thick paint, with a solution of two ounces of borax in a pint of hot

water. For want of this peculiar kind of clay, slaked quicklime mixed up in the same manner may be used. This may be kept ready mixed in a covered vessel.

Cold Lute.

Take equal parts, by measure, of the above clay and wheat flour; mix them to a proper consistence with cold water. This is more tenacious than the fire lute, but does not keep so well.

Another.

A very excellent lute for many purposes may be made by beating up an egg, both the white and the yolk, with half its weight of quicklime in powder. This lute is to be put upon a piece of linen, and applied as usual. It dries slowly, but becomes very compact, and acquires great hardness.

To destroy Ants.

Ants that frequent houses or gardens may be destroyed by taking flour of brimstone half a pound, and pot-ash four ounces: set them in an iron or earthen pan over the fire till dissolved and united; afterwards beat them to a powder, and infuse a little of this powder in water; and wherever you sprinkle it the ants will die, or fly the place.

To cure Smoky Chimnies.

Put on the top of the chimney a box, in each of whose sides is a door hanging on hinges, and kept open by a thin iron rod running from one to the other, and fastened by a ring in each end to a

staple. When there is no wind these doors are at rest, and each forms an angle of 45°, which is decreased on the windward side in proportion to the force of the wind, and increased in the same ratio on the leeward side. If the wind be very strong, the door opposed to the wind becomes close, while the opposite one is opened as wide as it can be.—If the wind strikes the corner of the box, it shuts two doors, and opens their opposites. This scheme has been tried with success in a chimney which always filled the room with smoke, but which, since adopted, has never smoked the room at all. The expense is trifling, and the apparatus simple.

To make One Gallon of Black Writing Ink.

Into a glazed stone jar or pitcher put one pound of Aleppo galls, slightly bruised; then add one gallon of rain water, nearly of a boiling heat; let these stand together for fourteen days upon the kitchen hearth, or moderately warm; after that time add four ounces of green copperas or sulfate of iron, four ounces of logwood chips or shavings, one ounce of alum, one ounce of sugar candy, and four ounces of gum arabic or Senegal. Let the whole remain ten or twelve days longer in a moderate heat, the mouth of the vessel slightly covered with paper. Stir the ingredients well with a stick twice a day during the whole time; then strain off the ink through linen or flannel, bottle it, pour a little brandy on the top of the ink in each bottle, then cork them well, and keep them for use in a place of temperate heat.

This ink may be depended upon as excellent, durable, and preserving the writing all a deep black.

N. B. The best galls for the purpose are those which are dark coloured, heavy, and free from grub holes.

Red Ink.

Take a quarter of a pound of the best Brazil wood, (get it in the log if possible, and rasp or shave it yourself) one ounce of cream of tartar, and one ounce of allum; boil these ingredients in a quart of clear water till half is consumed, then add to the ink, when filtered hot, one ounce of gum arabic and one ounce of fine sugar.

A little salt added will prevent it from going mouldy.

Acorn Coffee.

Take sound and ripe acorns, peel off the shell or husk, divide the kernels, dry them gradually, and then roast them in a close vessel or roaster, keeping them continually stirring; in doing of which special care must be taken that they be not burnt or roasted too much, both which would be hurtful.

Take of these roasted acorns (ground like other coffee) half an ounce every other morning and evening, alone or mixed with a drachm of other coffee, and sweetened with sugar, with or without milk.

This receipt is recommended by a famous German physician, as a much esteemed, wholesome, nourishing, strengthening nutriment for mankind;

and, by their medicinal qualities, have been found to cure the slimy obstructions in the *viscera*, and to remove nervous complaints when other medicines have failed.

For improving Coffee.

To valetudinarians and others the following method of making coffee for breakfast is earnestly recommended, as a most wholesome and pleasant jentacular beverage, first ordered by an able physician.

Let one ounce of fresh ground coffee be put into a clean coffee-pot, or other proper vessel well tinned, pour a pint and a quarter of boiling water upon it, set it on the fire, let it boil thoroughly, and afterwards put by to settle; this should be done on the preceding night, and on the following morning pour off the clean liquor; add to it one pint of new milk; set it again over the fire, but do not let it boil. Sweetened to every person's taste, coffee thus made is a most wholesome and agreeable breakfast, summer or winter, with toast, bread and butter, rusks, biscuits, &c. This process takes off that raw, acidous, and astringent quality of the coffee, which makes it often disagree with weak stomachs. It should not be drank too warm.

A gentleman of the first fortune in the kingdom, after a variety of medical applications in vain, was restored to health by applying to the above beverage morning and afternoon.

An improved Method of making the Coffee beverage.—To an ounce of coffee add a common tea spoonful of the best flour of mustard seed, previous

to the boiling. To those unacquainted with the method, it is inconceivable how much it improves the fragancy, fineness, transparency, and gratefully quick flavour of the beverage, and probably too it adds to its wholesomeness.

To preserve Eggs for a length of time.

Put an egg for one minute in water just about to boil, (it will not in that time be hard) and it will afterwards keep well for a month. Steep one a little while in sweet oil, and it will keep for half a year.

To destroy Rats or Mice.

Mix flour of malt with some butter, add thereto a drop or two of oil of anniseeds; make it up into balls, and bait your traps therewith. *If you have thousands,* by this means you may take them all.

Manner of destroying Insects which attack Fruit Trees.

M. de Thosse having found that oil of turpentine when applied to animals which were covered with vermin, destroyed those vermin without hurting the animal, the author of this memoir tried it on several sorts of tree lice and other insects, all of which it killed without hurting the trees. He then mixed some oil of turpentine with fine earth, so as to make it incorporate well, and then added water, stirring it well till the whole was brought to a considerable degree of fluidity. In this mixture he dipped branches of fruit trees covered with

insects, which were intirely destroyed by it, eggs and all, without hurting the fruit, branch, or leaves.

The composition may be got off with artificial watering, or left to be washed away by the first shower. From those experiments he thinks that oil of turpentine may well be employed for killing various kinds of lice that infest domestic animals, and sometimes produces diseases on fruit trees.—Experiments will ascertain how far this remedy will prove efficacious in different cases.

Method of making the best Sort of Bird Lime, and Manner of using it.

Take, at midsummer, the bark of holly, and peel from the tree so much of it as will fill a moderate large vessel; then put to it running water, and set it over the fire, and boil it till the grey and white bark rise from the green, which will take up sixteen hours; then separate the barks after the water is well drained away: then take all the green bark, and lay it on the ground in a close place and moist floor, and cover it over with green weeds, as hemlocks, docks, thistles, and the like; thus let it lay ten or twelve days, in which time it will rot, and turn to a filthy slimy matter; then put it into a mortar, and beat it till it comes universally thick and tough, without the discerning of any part of the bark or substance; then take it out of the mortar, and carry it to a running stream, and there wash it well, not leaving any foulness about it; then put it up in a very close earthen pot, and let it stand and purge for divers days together, scum-

ming it as often as any foulness arises for four or five days; when you perceive no more scum, then take it out of that pot and put it into another clean earthen vessel, cover it close, and keep it for use.

When you want to use your lime, take what quantity you think fit, and put it into a pipkin, adding a third part of goose or capon's grease, finely clarified, and set them over a gentle fire; let them melt together, and stir them continually till they are well incorporated; then take it from the fire, and stir it till it be cold.

When your lime is cold, take your rods and warm them a little over the fire; then take your lime and wind it about the tops of your rods, then draw your rods asunder one from the other, and close them again, continually plying and working them together, till, by smearing one upon another, you have equally bestowed upon each rod a sufficient proportion of the lime.

If you lime any strings, do it when the lime is very hot and at the thinnest, besmearing the strings on all sides, by folding them together and unfolding them again.

If you lime straws, it must be done likewise when the lime is very hot, doing a great quantity together, as many as you can well grasp in your hand, tossing them and working them before the fire till they are all besmeared, every straw having its due proportion of lime. Having so done, put them in cases of leather till you have occasion to use them.

To prevent the freezing of your lime, either on twigs, bushes, or straws, you must add a quarter

as much of the oil of petroleum as of capon's grease, mixing them well together, and then work it on your rods, &c.; and so it will ever keep supple, tough, and gentle, and will not be prejudiced should the weather freeze ever so hard.

A simple Experiment to prevent the dreadful Effects of sleeping in a damp Bed.

Let your bed be first well warmed, and immediately as the warming-pan is taken out, introduce between the sheets, in an inverted direction, a clear glass goblet; after it has remained in that situation a few minutes examine it; if found dry, and not tarnished with steam, the bed is perfectly safe, but if drops of wet or damp adhere to the inside of the glass, it is a certain sign of a damp bed.

To make good Liquid Shoe-Blacking.

Three ounces of ivory black, one ounce of sugar candy, one ounce of oil of vitriol, one ounce of spirits of salts, one lemon, one table spoonful of sweet oil, and one pint of vinegar.—First mix the ivory black and sweet oil together, then the lemon and sugar candy, with a little vinegar to qualify the blacking, then add your spirits of salts and vitriol, and mix them all well together.

N.B. The last ingredients prevent the vitriol and salts from injuring the leather, and add to the lustre of the blacking.

Another.

A quarter of a pound of ivory black, a quarter of a pound of moist sugar, a table spoonful of

flour, a piece of tallow about the size of a walnut, and a small piece of gum arabic —Make a paste of the flour, and while hot put in the tallow, then the sugar, and afterwards mix the whole well together in a quart of water, and you will have a beautiful shining blacking.

To clean Mahogany Furniture.

Three pennyworth of alkanet root, one pint of cold drawn linseed oil, two pennyworth of rose pink; put these into a pan, and let them stand all night: then take some of this mixture, rub it over the tables or chairs, and let it remain one hour; then take a linen cloth and rub it well off, and it will leave a beautiful gloss on the furniture.

Transparent Paper.

Wet some fine paper with a feather on both sides with a thin layer of rosin, dissolved in spirits of wine. It will then serve to put over any thing you wish to take off.

To make Ginger Cakes for a Pain in the Stomach.

To two pounds of the brownest sugar add one pint of water, let them simmer over the fire, scumming it well till all is taken off; let it boil till it is as thick as cream, then add one spoonful of ginger and one of cinnamon, finely powdered.

N. B. It is boiled enough when it will stand dropped on a cloth.

Tooth Powder.

To one ounce of fine powder of bark, and one ounce of gum myrrh, add three fourths of an ounce of bole armoniac, mix these ingredients well together, and they will produce an excellent tooth powder, valuable in itself, and highly approved of by many gentlemen of the faculty.

Another.

Pound charcoal, made, if you can, from willow trees, as fine as possible, in a mortar, or grind it in a mill, then well sift it, and apply a little of it to the teeth about twice a week, and it will not only render them beautifully white, but will also make the breath sweet, and the gums firm and comfortable.

To make Pounce.

Cuttle fish bone, properly dried, one ounce, best rosin one ounce, and the same quantity of burnt allum, well incorporated together, will make very good pounce, equal, if not superior, to any bought at the shops.

Remedy for the Tooth-ache.

Accustom yourself the first thing every morning, winter and summer, as soon as you are out of bed, to wash behind your ears with cold water, and you may depend upon it you will never be troubled with that distressing pain.

Excellent Bitter for the Stomach.

One ounce of gentian root sliced, one ounce of fresh rind of lemon, two drachms of cardamom seeds bruised, three drachms of Seville orange peel, pour a pint and a half of boiling water over the ingredients, let it stand an hour, then decant the clear liquor, and take a wine glass full two or three times a day.

It should be kept closely covered after the water is put in the ingredients.

Lavender Water.

Take a pint of the best rectified spirits of wine, a shillingsworth of oil of lavender, sixpennyworth of essence of ambergrease; mix these altogether, and keep it close from the air, then draw it off for use.

N.B. Let it stand till it is fine before you draw it off.

Gargle for a Sore Throat.

Take half a pound of Turkey figs, put them into a quart of spring water, and let them simmer over a slow fire till better than one half is wasted; in the mean time, take a large lemon, cut it in slices, and between every slice put some brown sugar candy, and let it stand before the fire to roast; then strain the figs, and squeeze them through a coarse cloth, and put the juice of the lemon into it.

N.B. Gargle the throat with it warm, and the oftener the better.

To cure a Sore Throat.

Take rosemary tops, about a handful, put them into a bason, and pour a pint of boiling hot verjuice upon it; then cover it over with a tin funnel, the broad side downwards, and the steam will come through the nossel of the funnel; then hold your mouth over the steam till it is gone down your throat.

N.B. Be very careful that you do not put your mouth too close to the funnel, as it may scald it, but let the steam go down your throat as much as possible, and repeat it as often as necessary.

To make a common Drink for a Sore Throat.

Take two ounces of Turkey figs, and the like quantity of raisins of the sun, and cut them small; two ounces of French or pearl-barley, boiled in three pints of spring water till it comes to a quart, and then strain through a sieve. To be taken warm. Boil it slowly over a gentle fire.

To cure a Bruise in the Eye.

Take conserve of red roses, and also a rotten apple, put them in a fold of thin cambric, apply it to the eye, and it will draw the bruise out.

A Receipt for a Cough.

Take a glass of spring water and put into it a spoonful of the syrup of horehound, and mix with it nine or ten drops of the spirit of sulphur.

Proper Method of laying Carnations.

In summer, towards the latter end of June, or any time in July, or beginning of August, when the shoots of the year are advanced to a proper growth, being from four, five, or six, to seven or eight inches long, which are to be layed as they grow on the plants, and to remain affixed thereto till rooted in the ground.

Thus far observed, begin the work by first clearing away all weeds about the plants, and loosen the earth a little around them, and if the surface is low, add some mould thereto sufficient to raise it high enough to receive the layers easily; then begin the laying the shoots one by one; strip off the lower leaves so as to have some inches of a clear shoot below; and trim the top leaves shorter and even, and then slit or gash the shoot on the under side; in doing which, fix on a joint about the middle of the shoot underneath, and with your sharp knife cut half through the joint, and slanting upwards, so as to slit the shoot up the middle half an inch, or but little more; which done, directly lay it, by bending it down to the earth with the gash or slit part open, making an opening in the earth, and peg it down with one or two of the small-hooked sticks, and earth over the body of the layer an inch or two deep, still keeping the slit open and the top raised gently upright, pressing the earth moderately upon them; and in this manner proceed with laying all the shoots on each plant; and when all are layed give a gentle watering to settle the earth close about the layers, and repeat it frequently in dry weather.

They will soon emit roots at the gash or slit part, generally at the bottom of the tongue, and in five or six weeks will often be rooted fit for separating and planting off from the parent, so that when they have been about five, six, or seven weeks layed, you will examine the progress they have made in rooting, by opening the earth gently about some of the layers; and as soon as they appear to be tolerably rooted let them be cut off from the old plant with a sharp knife, in order to be planted out timeously in nursery beds, that they may root more abundantly, and get due strength before winter; observing, in cutting them off from the mother plant, to open the ground so as to take them up with all the roots they have made, and cut them clean off beyond the gash; afterwards trim off any naked woody part or bottom, but preserve all the roots and trim the long tops a little, then plant them in nursery rows, six inches asunder, or may prick some in small pots, one layer in each, giving water directly at planting, and repeat it often in dry weather till they take good root, and grow freely, keeping them clean from weeds.

Those in the nursery beds will, by October, be good strong plants. The choicest sorts may then be planted in pots, to move under occasional shelter in time of severe frost, and for which purpose either use small pots (32) to contain them all winter, or plant them in large pots (24 or 16) to remain to flower, observing to take them up out of the nursery beds for potting, &c. with a garden trowel, each layer with a good ball of earth about

the roots; and having the pots ready, placing a shell over the holes at bottom, and put some good light rich earth therein; plant one layer with its ball about the roots entire, in each pot, fill up with more earth, and give some water; you may also at the same time plant some of the more ordinary or common sorts into flower-borders or beds; to stand the full weather all the year, but the choicer sorts in the pots, may, in November, be placed close together, either in a garden-frame, to have occasional protection of the glasses, or mats, in severe frost, and have the full air in all open weather and mild days, or may be plunged in a raised bed of any dry compost, raised some inches above the common level, and arched over with hoop arches, in order to be protected with occasional covering of garden mats when hard frosts prevail; but in either method be sure to expose them fully in all open weather, as aforesaid.

In the spring, such as have remained all winter in small pots, should, in February or early in March, be turned out with the ball of earth about the root, and planted into larger pots, to remain for flowering, giving proper waterings; and those which were potted at once into larger pots in autumn, should now have the earth stirred at top, taking out some and fill up with fresh good earth, and give a little water.

The layers planted in the common borders of the pleasure and flower garden, require no other care than keeping them clean from weeds, and tying up the flower stalks to sticks when they are advanced long enough to require support.

To make an improved Tincture of Bark.

Red bark grossly powdered, one ounce; of snake root, in powder, six drachms; saffron, one drachm and a half; cochineal, ten grains; orange peel, one ounce and a half. Steep the above articles in one pint of the best brandy, and you will have a tincture equally good as the famous Dr. Huxham's.

To make Milk of Roses.

To one pint of rose water, add one ounce of oil of almonds, and ten drops of the oil of tartar.

N.B. Let the oil of tartar be poured in last.

A Preparation to preserve Wood from catching Fire, and to preserve it from Decay.

A member of the Royal Academy at Stockholm, says, in the memoirs of that academy, "Having been within these few years to visit the allum mines of Loswers, in the province of Calmar, I took notice of some attempts made to burn the old staves of tubs and pails that had been used for the allum works. For this purpose they were thrown into the furnace, but those pieces of wood which had been penetrated by the allum did not burn, though they remained for a long time in the fire, where they only became red; however, at last they were consumed by the intenseness of the heat, but they yielded no flame."

He concludes from this experiment, that wood or timber, for the purpose of building, may be secured against the action of fire, by letting it remain for some time in water, wherein vitriol, allum,

or any other salt, has been dissolved, which contains no inflammable parts.

To this experiment it may be added, that wood, which has been impregnated with water, wherein vitriol has been dissolved, is very fit for resisting putrefaction, especially if afterwards it is brushed over with tar, or some kind of paint; in order to this, the wood must be rubbed with very warm vitriol water, and afterwards left to dry, before it is painted or tarred. Wood prepared in this manner will for a long time resist the injuries of the air, and be preserved in cellars and other low moist places. It is to be observed, that if a dissolution of vitriol is poured on such parts of timber where a sort of Champignons are formed by moisture, and rubbed off, none will ever grow there again.

By boiling, for some hours, the spokes of wheels, in vitriol water, they are not subject to rottenness in the parts where they enter the stocks. After boiling them in this manner, they are dried as perfectly as possible, and then, in the accustomed way, painted with oil colour.

To cure the Sting of a Wasp or Bee.

To the part affected, apply oil of tartar, and it will give instant ease, as will also bruised mallows.

Directions for painting Rooms, Rails, &c.

Red lead must be ground with linseed oil, and used very thin, it being the priming or first colouring: when used, some drying oils must be put to it.

To make Rose Water.

Gather roses on a dry day, when they are full blown, pick off the leaves, and to a peck put a quart of water, then put them into a cold still, make a slow fire under it, the slower you distil it the better it will be; then bottle it, and in two or three days you may cork it.

Lavender Water.

Put two pounds of lavender pips into two quarts of water, put them into a cold still, and make a slow fire under it; distil it off very slowly, and put it into a pot till you have distilled all your water; then clean your still well out, put your lavender water into it, and distil it off slowly again, and put it into bottles and cork it well.

Walnut Ketchup.

Take half a bushel of green walnuts, before the shell is formed, and grind them in a crab mill, or beat them in a marble mortar; then squeeze out the juices through a coarse cloth, and wring the cloth well to get all the juice out, and to every gallon of juice put a quart of red wine, a quarter of a pound of anchovies, the same of bay salt, one ounce of allspice, two of long or black pepper, half an ounce of cloves and mace, a little ginger and horse-radish, cut in slices; boil altogether till reduced to half the quantity, pour into a pan; when it is cold bottle it, cork it tight, and it will be fit to use in three months. If you have any pickle left in the

jar after your walnuts are used, to every gallon of pickle put in two heads of garlick, a quart of red wine, an ounce each of cloves and mace, long, black, and Jamaica pepper, and boil them altogether till it is reduced to half the quantity, pour it into a pan, and the next day bottle it for use, and cork it tight.

Currant Wine.

Gather your currants on a fine dry day, when the fruit is full ripe, steep them, put them in a large pan, and bruise them with a wooden pestle; let them stand in a pan or tub twenty-four hours to ferment, then run it through a hair sieve, and do not let your hand touch the liquor; to every gallon of this liquor put two pounds and a half of white sugar, stir it well together, and put it into your vessel. To every six gallons put in a quart of brandy, and let it stand six weeks; if it is fine bottle it, if it is not draw it off as clear as you can into another vessel, or large bottles, and in a fortnight bottle it into smaller bottles.

Elder Wine.

Pick the elder-berries when full ripe; put them into a stone jar, and set them in the oven, or a kettle of boiling water, till the jar is hot through; then take them out and strain them through a coarse cloth, wringing the berries, and put the juices into a clean kettle; to every quart of juice put a pound of fine Lisbon sugar; let it boil, and skim it well; when it is clear and fine pour it into a jar; when

cold cover it close, and keep it till you make raisin wine; and to every gallon of wine put half a pint of elder syrup.

Grape Wine.

To every gallon of ripe grapes put a gallon of soft water, bruise the grapes, let them stand a week without stirring, and draw the liquor off fine; to every gallon of wine put three pounds of lump sugar; put it into a vessel, but do not stop it till it has done hissing, then stop it close, and in six months it will be fit to bottle.

New Method of raising Cucumbers.

From the best seed that can be got of the common prickly cucumber, raise plants on a moderate hot-bed, not hurrying them too much in their growth. In May, when the danger of the frost is nearly over, familiarise the plants, by degrees, to the air, and towards the latter end of the month plant them in the open ground against a south wall. Take care not to give them too much water, as that will injure the fruit. When they have run up about five feet, they will send forth blossoms, and the fruit will begin to shew itself soon after. The flesh of cucumbers raised in this manner will be thicker and firmer, and the flavour vastly more delicious, than those raised from the same seed, but planted in the ordinary way, and the runners suffered to trail on the ground. Though a south wall, in most gardens, is too much appropriated to other things, to give room for cucumbers in general, yet in every

garden a few plants may be so trained by way of rarity, and to save seed, which is found to be greatly improved by this method, so as to produce much better cucumbers in the common way of raising them. One or two plants, so raised, will supply a sufficient quantity of seed for a large garden.

Laying a cucumber, or melon bed, with tiles, is also of particular service in improving the fruit, and giving it a proper flavour.

A sure Method of curing Gravel Walks.

Three parts pond water to one of brine, from the salting-tub in a family, poured with a watering pot upon gravel walks, will not only kill the moss upon them, but drive away the worms which make so many holes in them, and also prevent weeds springing up. This a gentleman has lately tried, who has several gravel walks in a grove near his house. Since he moistened his walks with brine, which is now four years ago, they are incommoded neither by moss, weeds, or worms. Every autumn he causes them to be well watered with the brine and pond water, during a whole week, to prevent moss, and a week in the spring, to guard against weeds and worms, besides giving them a sprinkling every now and then in summer season, when they seem to want it.

Cure of the Rot in Sheep.

Take a quantity of rue leaves, which bruise well, and then press out the juice, and add an equal weight of salt; and when any of the sheep are in great danger of being rotten, give them a table

spoonful of this once a week; and if they are not so bad, once in ten or twelve days. This will be found an excellent preservative, and, in fact, should always be given to new-brought-in sheep, as it may preserve them in health, and can do them no harm, let them be ever so well.

A Method of curing Fruit Trees infected with an Easterly Blight.

Where valuable fruit trees are infected with this blight, they may, with little trouble and expence, be in a short time cured, by fumigating them with brimstone strewed on light charcoal; this effectually kills them; but the workman must observe to get to windward of the trees, as the fumes, both of brimstone and charcoal, are very offensive and pernicious.

Mr. Miller recommends washing and sprinkling the blighted trees from time to time, with common water, (that is such as hath not had any thing steeped in it), and the sooner that is performed, (whenever we apprehend danger) the better; and if the young and tender shoots seem to be much infected, wash them with a woollen cloth so as to clear them, if possible, from all glutinous matter, that their respiration and perspiration may not be obstructed, and if some broad flat pans, or tubs are placed near the trees, it will keep their tender parts in a ductile state, and greatly keep them; but whenever this operation of washing the trees is performed, it should be early in the day, that the moisture may be exhaled before the cold

of the night comes on, especially if the nights are frosty, nor should it be done when the sun shines very hot upon the wall, which would be subject to scorch up the tender blossom.

Method of recovering Fruits, Potatoes, and other Roots that have been frosted.

This may be done by putting such fruits and roots, as pears, apples, potatoes, &c. as have been penetrated by frost, into cold water, when a thaw approaches, and letting them remain in the water some time, till by the plumpness and fairness of the fruit and roots it appears that the particles of the frost are extracted. This method has been often tried and found to answer, but at the same time the utmost care should be taken to preserve these things from the frost, as it is better to keep off an enemy than to be at the trouble of driving him out.

Rules for the Preservation of the Teeth and Gums.

The teeth are bones, thinly covered over with a fine enamel, and this enamel is more or less substantial in different persons. Whenever this enamel is worn through by too coarse a powder, or too frequent cleaning the teeth, or eaten through by a scorbutic humour in the gums, the tooth cannot remain long sound, any more than a filbert kernel can, when it has been penetrated by a worm.

The teeth, therefore, are to be cleaned, but with great precaution, for if you wear the enamel off

faster by cleaning the outside than nature supplies it within, your teeth will suffer more by this method than perhaps by a total neglect. A butcher's skewer, or the wood with which they are made, must be bruised and bit at the end, till with a little use it will become the softest and best brush for this purpose, and in general you must clean your teeth with this brush alone, without any powder whatever; and once in a fortnight, or oftener, dip your skewer-brush into a few grains of gunpowder, breaking them first with the brush, and this will remove every spot and blemish, and give your teeth an inconceivable whiteness. It is almost needless to say that the mouth must be well washed after this operation, for, besides the necessity of so doing, the saltpetre, &c. used in the composition of gunpowder, would, if it remains, be injurious to the gums, &c. but has not, nor can have any bad effect in so short a time.

It is necessary to observe, that very near the gums of people, whose teeth are otherwise good, there is apt to grow a false kind of enamel, both within and without, and this false enamel or tartar, if neglected, pushes the gums higher and higher, till it leaves the fangs of the teeth quite bare, above the true enamel, so that sound teeth are destroyed, because the gum has forsaken that part which is not sheathed and protected in consequence of such neglect. This false enamel must therefore be carefully scaled off, for the gum will no more grow over the least particle of this false enamel, than the flesh will heal over the point of a thorn.

Of the great Benefit of Furze or Gorse as a Winter Food for Horses.

Having a horse which had been over-worked to the appearance of a surfeit, I treated him in the usual manner for that disorder; and knowing how necessary it would be to his speedy recovery to give him green food after his physic, it occurred to me that furze might answer the purpose immediately, as there could be none of the common herbage procured before the end of April at soonest. I therefore had a quantity of the tops, and the tenderest parts of that plant, cut daily, to preserve it fresh, which I hashed upon a block, with a very long and heavy chopping-knife, as small as possible, and then beat it again over the same block with a carpenter's mallet, (which blunted in a great measure the sharp prickles), and gave half a peck a day of it to the horse, (in the stable), which eat it most greedily, and received so much benefit from it that he is totally recovered and carries a very fine coat.

The success of this experiment, led me to consider the great utility this plant may be of to poor people who live in the neighbourhood of large commons overgrown with it, as food for cows in winter, when fodder is dear; and, in reality, none so proper for milch cattle as this green food, which must naturally increase the milk, and from the fragrant smell it sends forth while cutting, it may reasonably be conjectured it will give no ill taste to it as many vegetables do.

Method of fattening Geese and Ducks.

Geese, the more quiet and undisturbed they are kept, the faster and better they fatten.

I shall begin with what are usually called green geese:—Let these young geese be put in a place that is almost dark, and be fed with some ground malt mixed up with milk, and they will very soon, and at very little expence, be fit to kill; the method has often been tried, and the flesh has been found to eat very delicate.

I sometimes fat them in a still cheaper way, especially when milk is scarce: I mix up some barley meal, pretty thick, with water, which they constantly have by them, to eat as they chuse; in another part of the shed, where they are kept in a pan, with some boiled oats, and water for them to resort to when they are inclined to change their food. This variety is agreeable to them, and they thrive apace, being so fatted at less expence than in any other manner I know of.

The manner in which I manage my Michaelmas or stubble geese, is not very different from that above described. Immediately after harvest I turn them on the wheat eddishes, where they pick np flesh apace: but when I take them up to fatten I feed them with ground malt, mixed up with water, and give them with it boiled oats, boiled malt or boiled barley, and sometimes for change, even boiled wheat and water. Thus managed, they grow fatter, and acquire a finer flavour than would at first be imagined, and greatly superior to those in the London Markets.

I fatten my ducks in the same manner, only allowing them a larger pan to dabble in, which answers extremely well,

I keep a very considerable number of ducks for breeders, having near my house the convenience of several ponds, and I annually set in the spring a great number of duck eggs under hens; it is therefore natural that I should chuse such a breed as will lay me a large store of eggs, and I have always found such as have their bills turn up rather more than ordinary, to answer this purpose best.

A New Experiment in manuring of Land.

As a farmer, like a chemist, should lose none of his materials, but even make his washings, runnings, and residuums, turn out to his advantage, I have sent you some account of an experiment I have made in manuring of land, which I beg you will lay before the committee of agriculture, that they may communicate it to others.

I am possessed of a farm of near three hundred pounds a year, and have in my yard what you usually see in most farmer's yards, two recesses or pools, as reservoirs of dung and water. These reservoirs of dung and water are continually running over, and of course part of the matter contained in them is carried off by the necessary drains, into the highways, ditches, and rivers.

As much of the essential quality of the dung is lost in this manner, (for part of the salts, whether fixed or volatile, will be washed into the pools, and when they run over, will be conveyed into the ditches, &c.) I thought it a part of good hus-

bandry to carry this superabundant water or manure, (for so we may justly call it), on my land, which I did by means of a watering-cart, not unlike those with which the roads near London are watered in summer time, to allay the dust.

That the experiment might be the more obvious and certain, I first tried it in the beginning of March, on a few acres, in the middle of a large field of wheat, where, in a little time, I found a considerable increase in growth, both of grass and grain; and at hay-time and harvest, both the one and the other, were much better crops than what the same lands produced that were not so manured.

As a man, or even a boy, with one of these carts, and one horse, may manure a great deal of land in a day, provided it be near the yard, I would recommend the practice to all farmers; for the expence is nothing but the value of the time of the boy and horse, and the increase by what I have seen will be very great.

This manure may be also laid to great advantage on land, that is fresh sown with barley, oats, or any other grain; but on grass it should be laid in the winter time, when the rains will wash the salts off the blades; or in the spring, when the lands are laid up for hay, as the cattle will not feed on the grass while the dung or salt adheres to the blade of it.

This dung water should likewise be carried on the land, not at a time when it rains, but in dry weather, and at a time when the dung water in the pools is of a deep brown colour, and strongly im-

impregnated with salts. By this means the land may be manured from time to time, and the pools kept almost empty for the reception of fresh matter every time it rains, and nothing will be lost.

Cement to mend broken China or Glass.

Garlick stampt in a stone mortar; the juice whereof, when applied to the pieces to be joined together, is the finest and strongest cement for that purpose, and will leave little or no mark if done with care.

Water for taking out Spots in Cloths, Stuffs, &c.

Take two pounds of spring water, put in it a little pot-ash, about the quantity of a walnut, and a lemon cut in small slices; mix this well together, and let it stand for twenty-four hours in the sun; then strain it through a cloth, and put the clear liquor up for use. This water takes out all spots, whether, pitch, grease, or oil, as well in hats, as in cloth, stuffs, silk, cotton, and linen, immediately; but as soon as the spot is taken off, wash the place with water, and when dry you will see nothing.

Remedy for destroying Bugs.

Take of the highest rectified spirits of wine (viz. lamp spirits) that will burn all away dry, and leave not the least moisture behind, half a pint; new distilled oil of, or spirits of turpentine, half a pint; mix them together, and break into it, in small bits, half an ounce of camphire, which will dissolve it

in a few minutes; shake them well together, and with a sponge, or a brush, dipt in some of it, wet very well the bed or furniture wherein these vermin harbour and breed, and it will infallibly kill and destroy both them and their nits, although they swarm ever so much. But then the bed or furniture must be well and thoroughly wet with it, (the dust upon them being first brushed and shook off) by which means it will neither stain, soil, or in the least hurt the finest silk or damask bed that is. The quantity here ordered of this curious neat white mixture, which costs about a shilling, will rid any one bed whatsoever, though it swarms with bugs. Do but touch a live bug with a drop of it, and you will find it die immediately; if any should happen to appear, after once using, it will only be for want of well wetting the lacing, &c. of the bed, or the foldings of the linings or curtains, near the rings, or the joints, or holes in and about the bed or head-board, wherein the bugs or nits nestle and breed, and then their being well wet altogether again, with more of the same mixture, which dries in as fast as you use it, pouring some of it into the joints or holes where the sponge or brush cannot reach, will never fail absolutely to destroy them all. Some beds, that have much wood work, can hardly be thoroughly cleaned without being first taken down; but others that can be drawn out, or that you can get well behind to be done as it should be, may.

Note.—The smell this mixture occasions will be gone in two or three days, which is yet very wholesome, and to many people agreeable. You must remember always to shake the liquor together very

well whenever you use it, which must be in the day time, not by candle-light, lest the subtlety of the mixture should catch the flame as you are using it, and occasion damage.

Cure for the Poison of the Deadly Night-shade.

Give to the patient a vomit as soon as possible, then let him drink vinegar, or lemon juice, about a pint, diluted in an equal quantity of water, in the course of the day, and let him walk about to prevent sleep, which would most certainly prove fatal.

To clean Silver or plated Goods.

Mix some whitening with water until it is about the thickness of good paste; then smear a little of the same on the article you intend to clean, and with a brush, similar to those used for shining shoes, brush the whitening off. While wet, persevere for a few minutes in so doing, and you will restore a beautiful polish to the tarnished article.

To clean Gilt Buckles or Toys.

Rub a little soap on a soft brush, dip the same in water, and gently brush the article you intend cleaning for a minute or two, then wash the same clean off, wipe it and place it near the fire till it is perfectly dry, then burn a piece of bread, pound it to a fine powder, and brush your articles with it as you do silver goods with whitening.

Useful Hint, whereby Farmers may make a Saving in the Article of Thatching.

The barns and tenements of many farmers holding on lease, and obliged to repair, being thatched, and sudden winds sometimes making much thatching necessary, farmers would do well to make a rick of wheat straw, except it happens to be very short, and then they would keep their stack two years, and make a new one the second.

The author of this article says, that though he not only ricks his straw, but slightly thatches his rick to keep out the weather, he has in ten years gained 53*l.* by the practice, beside what he saved by not being obliged to thresh wheat for straw at an improper season.

Method of preventing the Smut in Wheat.

I have seen a great deal, read a great deal, heard a great deal of the benefits arising from steeping seed wheat in brines and other preparations, to prevent its being smutty; some have answered, others have miscarried; but I always observed that if the seed was well washed, it failed not.

I took the hint, washed well in a large tub some seed I knew to be smutty. I washed it, I say, in plain simple water, stirring it violently with birchen brooms, and took care, from time to time, to skim off the light corn, impurities, &c.

It answered well, and I have continued the practice ever since; let your practical readers try it, and will do the same.

Method of making putrid Water sweet in a Night's Time.

Four large spoonfuls of unslacked lime put into a puncheon of ninety gallons of putrid water, at sea, will, in one night, make it as clear and sweet as the best spring water just drawn.

A profitable Way of fattening Pigs.

Put four pigs in a stye, for they feed best in company, but if there are too many they are apt to quarrel; feed them moderately the first week, and thrice during the second week mix with their barley meal as much antimony as will lie on a shilling; and the third week twice give them the same quantity. I need scarcely observe it is in powder.

This purifies the blood, gives them an appetite, and make them thrive apace.

How to make Red Coral Branches for embellishing of Grottos, and the Method of building a Grotto at a very little Expence.

Take clear rosin, dissolve it in a brass pan; to one ounce thereof add two drachms of the finest vermillion; and when you have stirred them well together, and have chose your twigs and branches, peeled and dried, take a pencil and paint these twigs all over, whilst the composition is warm, and shape them in imitation of natural coral of black thorn; when done, hold it over a gentle coal fire, turn the branches about with your hand, and it will make it all over smooth and even, as if polished. In the

same manner you may, with white lead, prepare white; and with lamp black, black coral.

A beautiful grotto may be built at a very little expence with glass cinders, which may easily be had, pebbles or pieces of large flint, and embellish it with such counterfeit coral, amber, pieces of looking-glass, oyster, muscle,and snail shells, moss, pieces of chalk, ore, &c. The cement to bind them together is as follows: take two parts of white rosin, melt it clear, add to it four parts of bees' wax; when mixed together add stone-flower of the stone you design to cement two or three parts, or so much as will give the cement the colour of the stone; to this add one part of flour of sulphur; first incorporate altogether over a gentle fire, and afterwards knead it with your hands in warm water, with this cement the stones, after they are well directed, and have been warmed before the fire, in order to receive the cement the better.

To sow Wheat to advantage, without laying on Manure.

It has been found advantageous to sow wheat without laying on any manure; and, in the beginning of February, to collect twenty bushels of lime, unslacked, for every acre, and forty bushels of sand, or the rubbish of a brick-kiln; then, about the end of the month, to slack the lime, which doubles the measure, and mix it well with the sand, and immediately afterwards to scatter it by way of top-dressing over the green wheat. As rain generally succeeds, it is soon washed down to the roots

of the plants, and gives them a vigour and strength, that to those who never made the experiment is astonishing.

To make Stiff Paste.

Mix some flower well in cold water, and dissolve a small piece of allum in hot water, then incorporate these articles together, boil them a few minutes, pour them out in a vessel, and when cold will be fit for use.

Method for the speedy Recovery of the Use of the Foot or Hand that has been violently sprained.

It may lead to a right management of the part strained, if we consider the effects of a strain when it is very great.

First. Such an extension of the tendons and vessels of the muscles strained, that they cannot contract themselves to their natural lengths.

Second. That the great elongation of the vessels, which deprives them of their contractile power, lessens the diameter of their cavities, obstructs the free course of the fluids through them, makes them swell and become painful, and incapable of their actual service, or of being moved by the acts of the will, or before the accident happened.

These effects of violent sprains may lead us to conclude that the best remedies are those applications which may best attenuate their obstructed fluids, recover an easy circulation of them, and sufficiently contract the elongated vessels.

For these purposes I advise vinegar, the rectified

spirits of wine, such as are burnt in lamps, friction, and motion, in the following manner, viz.

Suppose the ancle sprained.

First. Let it be fomented with vinegar, a little warm, for four or five minutes at a time, once every four hours; this will render the circulation of the fluids in the parts affected more easy, and either prevent its swelling or promote its subsiding.

Second. Let the person stand three or four minutes at a time on both his feet in their natural posture, and sometimes move the sprained foot, and sometimes when sitting with his foot on a low stool let him move it this way and that, as he can bear it: this will contribute much to contract the overstretched vessels, and to recover a due circulation of their fluids through them.

Third. Let a gentle dry friction with a warm hand be sometimes used to the parts affected, which will conduce much to the same ends.

Two hours after every application of vinegar, let the parts affected be just wetted with rectified spirits of wine, and gently rubbed.

By these means, persons to whom I have advised them, have recovered from the effects of very violent sprains in a few days, when others have been weeks in recovering, where different ways of management, such as continual resting of the strained foot, and disuse of its motions, &c. had been recommended.

To make White Varnish.

White varnish is made with gum-sandarac and gum-mastick dissolved in spirits of wine, left to

settle two days, then strained through a linen cloth; and after standing some time, the clear poured off, and bottled for use.

Method of destroying Caterpillars on Trees.

Take a chaffing-dish, with lighted charcoal, and throwing some pinches of brimstone in powder on the coals, hold it under the branches that are loaded with those vermin; the vapours of the sulphur, which is mortal to them, will not only destroy all that are on the tree, but also prevent it from being infested by them afterwards. A pound of sulphur will clear a great extent of ground.

A Method to discover poisonous Muscles.

Put a silver spoon into the vessel with the muscles, and let it continue therein while they are over the fire; and when they are removed, take out the spoon, and if it continues of a bright colour there is no poison, but it it is tinged of a black or dark hue, it is a demonstration that such are unfit for use.

By this easy experiment the dismal effects of eating poisoned muscles may be prevented.

Preparation of common Cement for joining Alabaster, Marble, Porphyry, or other Stones.

Take of bees'-wax two pounds, and of rosin one pound, melt them, and add one pound and a half of the same kind of matter, powdered, as the body to be cemented is composed of, strewing it into the melted mixture, and stirring them well together,

and afterwards kneading the mass in water, that the powder may be thoroughly incorporated with wax and rosin. The proportion of the powdered matter may be varied, where required, in order to bring the cement nearer to the colour of the body on which it is employed.

This cement must be heated when applied; as must also the parts of the subject to be cemented together; and care must be taken likewise, that they be thoroughly dry.

It appears to me that the proportion of bees'-wax is greater than it ought to be; but I received this receipt from too good an authority to presume to alter it. When this composition is properly managed, it forms an extremely strong cement, which will even suspend a projecting body of considerable weight, after it is thoroughly dry and set, and is therefore of great use to all carvers in stone, or others who may have occasion to join together the parts of bodies of this nature.

Method of employing Fallow Grounds to advantage.

I planted on about half an acre of fallow of an indifferent quality, the soil inclining to sand, some potatoes in straight lines, two feet asunder, and the plants forty inches distant in the rows, plowing the intervals three times in the summer, that is to say every six weeks.

The plough that was used was very light, and without wheels, and with two horses going one before the other; it was easy to draw two furrows,

about five inches deep, without much damaging the roots.

My workman, at first, smiled at my attempt; the potatoes sprouted but slowly, and did not seem to promise any great success, but after the first plowing they got forward; and after the other two plowings were, to the full, as forward as those of my neighbours which had been plentifully dunged.

Finally, after the third ploughing, every one was astonished to see that the stalks of my potatoes, which had not been at all dunged, were fresh and green, when the stalks of others which had been dunged, were turned yellow, withered, and almost dry.

In a word, this piece of ground yielded me in autumn half as many potatoes as the same quantity of land would have done in the ordinary method of planting, and these were all of a delicious flavour.

This small experiment will encourage me to adopt the same method in succeeding years, and in inclosed fields, when they are intended to be fallow, planting them with various roots. The careful husbandman may always promise himself success by adopting this method; and he will be delivered from the pernicious weeds which constantly infest his fallows.

Method of curing bad Tub Butter.

A quantity of tub butter was brought to market in the West Indies, which, on opening, was found to be very bad, and almost stinking. A native of

Pensylvania undertook to cure it, which he did, in the following manner:—

He started the tubs of butter in a large quantity of hot water, which soon melted the butter! he then skimmed it off as clean as possible, and worked it over again in a churn, and the butter was sweet and good.

A new Styptic, which will stop Bleeding, and will be found extremely useful in a Family.

This styptic has been tried on animals, for experiment's sake, before a number of persons, who can attest the truth of it. It gives little or no pain, nor is it hurtful in its consequences, as will appear from the prescription:—

Take brandy, or common spirit, two ounces; Castile soap two drachms, pot-ash one drachm; scrape the soap fine, and dissolve it in the brandy; then add the pot-ash, and mix it well together, and keep it close stopped from the air in a vial. When you apply it, warm it in a vessel, or dip pledges of lint into it, and the blood will immediately congeal. It operates by coagulating the blood, both a considerable way within the vessels, as well as the extravasated blood without, and restraining, at the same time, the mouth of the vessels.

It forms a valuable embrocation in cases of tumors, or swellings from bruises, by being frequently rubbed on the part. It is also used in a similar manner for rheumatic pains.

An experienced Remedy for Deafness.

Put a table spoonful of bay salt into near half a pint of cold spring water, and after it has steeped therein twenty-four hours, (now and then skaking the phial), cause a small tea spoonful of the same to be poured into the ear most affected, every night when in bed, for seven or eight nights successively, observing to lay your head on the opposite side, by which the cure is generally completed.

A Method of rendering putrid Water sweet.

In a course of experiments which a gentleman was making, he had occasion to mix clay with a large quantity of water in a cistern.

After the water and clay had remained thus mixed for some weeks, he tasted the water before it should be thrown out, and found it sweet and well flavoured. On this he stirred them, to find whether any putrid stench might rise from the bottom, but was agreeably surprised to find that the whole was equally sweet.

He now resolved to keep it longer, in order to determine what effect time might have on the mixture, and, if my memory serves me right, repeated the tastings and stirrings for several months, with equal success, though some part of the time was summer, during which he expected that the water would have become highly putrid.

He communicated this discovery to the Society for the Encouragement of Arts, &c. it was referred to the Committee of Chemistry, with orders to

make what experiments should seem to them requisite to determine a point so necesssry to the welfare of numbers, as many diseases are known to take their rise from putrid water. The whole was confirmed by the report of the committee. Here is then a very easy means whereby every cottager has it in his power constantly to use sweet and wholesome water.

It is no more than mixing with water a quantity of common clay, sufficient to take off its transparency, so far as that the hands, held just under the surface, shall not appear through it.

Niceties in Malting, the Observance of which will increase the Profits of the Maltster, near Ten per Cent.

In malting barley the water should be changed oftenest in spring and autumn, when the weather is warm: if barley is left to steep too long at these seasons in the same water, the water will grow slimy, and sometimes sour: the maltster should therefore watch the change of the water, and when he finds it smoothy or oily to the touch, or inclining to smell or taste sour, it must be changed immediately.

The common method of changing it, is first to draw off that in which the barley was steeping, and then by pails full, or pumping, fill the cistern again; but this is a bad way, for when the water is drawn off, the barley lies closer, and is apt to heat, which causes great damage. It is therefore recommended to get a hogshead of water in readiness

near the cistern, which should be thrown on the barley the instant the first water is drawn off; and as a hogshead of water is sufficient to wet eight bushels of barley, as many hogsheads, save one, be afterwards added, as the cistern will wet quarters.

River water is the best, and hard spring water is the worst; in general the water that soonest lathers should be preferred.

A thin-skinned fine-coated barley is the best for making malt; it need not be very full-bodied, but should be quite ripe.

Barley that has grown on land highly manured is not so good as that produced on a land moderately rich without manure; and if the soil is very luxuriant, either by nature or art, the barley will not be fit for the maltster.

It is a good practice to give malt as much drying as possible on the floor; it does not shrink so much as on the kiln, and acquires no foreign taste; when it comes to the kiln, the fire in the furnace should be moderate, but equal.

Brown malt, used in the same proportion as pale, will not make the strongest beer; but the pale malts that are slack dried, make a raw, unwholesome liquor that will not keep.

Maltsters should never buy barley grown on various soils, or even different fields, because the kerns will spire at different times; they should therefore never buy tythe barley. A maltster having bought one hundred quarters of tythe barley, without knowing it, soon discovered it in the malting, and sold it to a hog feeder for eight-pence a

quarter less than he gave, as the least loss he should incur by his bargain.

To discover whether malt has been made of mixed or unripe barley, throw a couple of handfuls of it into a bowl of water; stir it gently, and the grains that have not been malted will sink the half-malted grains, will have one end sunk, and so swim in a perpendicular position, and those that are perfectly malted will swim. The best barley will not malt equally well at all times. As soon as housed, before it is in sweat, and after the sweating is over, it will malt well, but not while it is in sweat.

Barley that has been got in early in a very dry season malts but indifferently; but if the same barley is left abroad till rain falls on it to loosen the husks from the kernel, it will malt well, and yield a large increase.

Method of obtaining exact Copies of Inscriptions.

The stone, or other matter, in which the inscription is cut, is to be first well washed, and dried; then with printer's balls the surface is laid over with printing ink, in the same manner as is laid on types; one or more sheets of paper, according to the size of the inscription, previously damped, are then laid over it, and the impression taken off by striking the paper with a clean ball, the hand, or a brush.

Three or four copies should be taken in this manner, as the fourth is usually the most perfect.

As the inscription will be reversed on the paper, it may be read off right, on the other side, by holding the paper against the light. If the inscription is in relievo, the letters will be black ; if in hollow, the letters will be white and the ground black.

Easy and safe Method of discharging Grease Spots from Woollen Cloths.

Fullers'-earth, or tobacco-pipe clay, being put wet on an oil spot absorbs the oil as the water evaporates, and leaves the vegetable or animal fibres of cloth clean, on being beaten or brushed out. When the spot is occasioned by tallow or wax, it is necessary to heat the part cautiously by an iron or the fire, while the cloth is drying. In some kinds of goods, blotting paper, bran, or raw starch, may be used with advantage.

Method of dressing Watery Potatoes.

Wash the potatoes clean, put them into a covered pot, without any water, on a slow fire ; the heat very soon draws out sufficient water to stew them in, and the potatoes so managed are dry and mealy, though the same boiled in the common way are so wet as to be scarce eatable. In Yorkshire, if the potatoes are boiled in water, the women drain it off; when they are supposed to be boiled thoroughly, they cover them up in the steam till they are dry.

To take Mildew out of Linen.

Take soap, and rub it well: then scrape some

fine chalk, and rub that also in the linen; lay it on the grass; as it dries wet it a little, and it will come out at twice doing.

Method of taking out Fruit Stains.

To remove a fruit stain from lace, muslin, calico, linen, &c. soak it in warm water, and expose the place to the vapours of burning brimstone; the vapour will move the blemish in less than a minute.

Receipt to prevent the Fly in Turnips.

To six pounds of turnip seed put four ounces of flour of brimstone, and four ounces of black coal-soot; mix and sow them together, which will give such distaste to the fly as to prevent its usual ravages, and will occasion the produce of a favourable crop.

To prevent the baneful Effects of burning Charcoal.

Set an uncovered vessel, filled with boiling water over the pan containing the charcoal, the vapour of which will counteract the deleterious fumes, and while it keeps boiling will make charcoal as safe as any other fuel.

To prevent Snow Water or Rain from penetrating the Soles of Shoes or Boots in the Winter Season.

This simple and effectual remedy is nothing more than a little bees'-wax and mutton suet,

warmed in a pipkin, until in a liquid state; then rub some of it slightly over the edges of the sole where the stitches are, which will repel the wet, and not in the least prevent the blacking from having the usual effect.

An artificial Water for writing Letters of Secrecy.

Take copperas, finely powdered, put a little thereof into a new ink-horn, pour clean water on it; and after it has stood a little while write therewith, either on vellum or parchment, and the writing cannot be seen any other way than by drawing the letters through a water thus prepared. Take a pint of water, put into it one ounce of powdered galls, temper it together, and strain it through a cloth; put the water into a dish that is wide enough, and draw your writing through it, and you will read it as you do other writings; and to make the secret contents less liable to suspicion, you may write on the contrary side of the paper or parchment with black writing ink, matters of less consequence.

Method of destroying Wasps and Hornets.

Those that are not unacquainted with natural history know that all the working wasps die every autumn, when the cold weather comes on, and that only a few females survive the winter, and keep up the breed. These (which are turgid with eggs, and much larger than the workers) come forth about April from their lurking holes, and being

singly each its nest, which in a moderate time becomes very populous. It is therefore of great consequence to kill as many of these as possible, since a whole swarm is destroyed in every single female early in the year. The places to find them are at new posts, pales, melon frames, or any solid timber; for, as they make their combs with the shavings of the sound wood, which they rasp off with their fangs, and moisten up with a certain mucus that nature has provided in their bodies, they will readily be found near such materials.

Hornets must be searched for on decayed posts, rails, &c. for they make their combs with touch-wood, and the same kind of natural cement.

In the very hot summer 1762, wasps were so numerous and alert that it looked as if no fruit could have hung till it was fit for the table. They began on the grapes before they were half ripe; and, getting into the melon-frames, scooped out all the pulp of the fruit, leaving only empty shells. I tried phials, as usual, filled with sugared beer, &c. this destroyed some, but did not seem to lessen their swarms; at last I bethought myself to buy some bird-lime, with which I tipped several taper hazel-rods of different lengths, and so began catching them by hand, applying the top of the rod as they settled on the fruit. This appeared at first to be a tedious method, but after a little practice it soon had the desired effect, for a handy person or two would in a few hours entangle four or five hundred; and it soon appeared they were not so numerous as we imagined; and the taking the workers, starved the grubs which are supported by

them, and prevented a succession. By this simple method, (ineffectual as it may appear), I saved my fruit entire, which hung till it was ripened to great perfection.

Hornets, as they are larger and more sluggish, are easily taken: this method of touching them is a sort of angling, and not a bad amusement for half an hour. As fast as they are caught they must be squeezed to death with a flat piece of a lath, the tip of the rod refreshed with bird-lime now and then. The reason of providing rods of different lengths is to suit the different heights of the wall.

While I am speaking of fruit it may not be amiss to add, that this summer I recovered a peach-tree that was quite shrivelled up on one side by a partial watering, two or three times a week, of the affected part.

For destroying Bugs and Worms in Wood.

An eminent physician has discovered that by rubbing wood with a solution of vitriol, insects and bugs are prevented from harbouring therein. When the strength of this remedy is required to be increased, there need only be boiled some coloquintida apples in water, in which, afterwards, vitriol is dissolved, and the bedstead, with the wood about them, and the wainscoting being anointed with the liquor, will be ever after clear of worms or bugs. The wall may be likewise rubbed with the composition, and some of it may be dropped into the holes where these insects are suspected to be harboured. As to the walls they require only to be washed over with the vitriol water.

Receipt to make six quarts of hearty Broth or Soup at a small Expence.

Take two pounds of any meat, cut into very small bits, put it into a pot with six quarts of water, letting it boil or stew till it is tender, then put in a quarter of a pound of carrots or parsnips, with half a pound of turnips, all sliced pretty small, or instead of these a few potatoes sliced, also two ounces of onions or leeks, and other greens, according to discretion, such as kahl, cabbage, &c. ; the whole thickened with about a quart of oatmeal, or some ground rice ; these well boiled together, and seasoned with a little pepper and salt make an excellent well-relished soup, which has served, by experience, a whole family, a considerable time, and kept them in good case in hard times, when bread corn was very dear.

An infallible Receipt for curing Worms in the Human Body.

Take Senna leaves, well bruised, half a pound ; oil olive, twelve ounces : digested together in a sand heat four or five days ; then, by a strong expression, force the oil from the fœces, which reserve by itself.

N.B. In the most obstinate worm case, which eludes the force of mercurials, and baffles the efforts of the most famed specifics, this successfully kills worms, grubs, and ascarides, (which last kind cause extreme itching), and by stools expel them.

Dose :—One spoonful fasting, and to persevere in it.

Method of causing Children to cut their Teeth easy.

Feed them with an ivory spoon and boat, to be made thick round, and smooth at the edges, ivory being of the hardness and texture as the jaws and tender teeth, the gums are not hurt or injured, but when they are thus pressed facilitate the teeth in their progress; whereas the silver implements, being of a hard texture, and the edges made thin, bruise and wound the gums, and make a hard seam; so that the teeth cannot make their way direct, and if they do cut, come irregular; so that the operation of launcing is frequently absolutely necessary, which of course must prejudice the teeth, as some are exposed before the time they are fit to cut.

By this method fevers, convulsions, &c. owing to the teeth being not able to find their way through the hard seam, may be prevented. It must be often observed, that children cry much when feeding, as if ill, or disgusted with their food, whereas it is frequently owing to quite the contrary, for being hungry, and over eager to take their food, they press hard, through eagerness, on the boat and spoon, which, being sharp, bruises and cuts the gums, and consequently causes great pain, which by the ivory implements will be prevented. Those who cannot afford ivory may have horn or wood, or even pewter is greatly preferable to silver, provided the edges are made thick, round, and smooth.

The wooden sort, unless they are kept very sweet, and clean on that very account are the least eligible, and should be made, however, of box, or such hard and close textured wood as is the least liable to be tainted by the milky food.

To make Yeast or Barm.

Mix two quarts of soft water with wheat flour, to the consistence of thick gruel, or soft hasty pudding; boil it gently for half an hour, and when almost cold, stir into it half a pound of sugar, and four spoonfuls of good yeast. Put it into a large jug, or earthen vessel, with a narrow top, and place it before the fire, so that it may, by a moderate heat, ferment. The fermentation will throw up a thin liquor, which pour off and throw away; the remainder keep for use in a cool place in a bottle, or jug tied over. The same quantity of common yeast will suffice to bake or brew with. Four spoonfuls of this will make a fresh quantity as before.

Method of destroying Insects on Fruit Trees.

Make a strong decoction of tobacco, and the tender shoots of elder, by pouring boiling water on them; then sprinkle your trees with the same (cold) twice a week, for two or three weeks, with a small hearth brush, which will effectually destroy the insects, and the leaves will retain their verdure until the fall of the year.

If used early, as soon as the bud unfolds itself, it will probably prevent the fly. The effect of tobacco has been long known, and elder water frequent-

ly sprinkled on honeysuckles and roses, has been found to prevent insects from lodging on them.

The quantity to be made use of is one ounce of tobacco to one gallon of water, with about two handfuls of elder. You may, however, make it as strong as you please, it being perfectly innocent to the plants.

To make Red Sealing Wax.

Take one pound of bees'-wax, three ounces of fine turpentine, olive oil, and rosin finely powdered, of each one ounce; when they are well melted, and the dross taken off, put in an ounce and a half of vermillion, or red lead, finely ground, and stir them together till they are well incorporated; and when this mixture grows a little cool roll it into sticks, or any other form. You will find it an excellent sealing wax.

To make Hungary Water.

Take a quantity of the flowers of Rosemary, put them into a glass retort, and pour in as much spirit of wine as the flowers can imbibe; dilute the retort well, and let the flowers macerate for six days, then distil it in a sand heat.

To prepare Drying Oil and Paint.

Put a Scots pint, (two English quarts), of linseed oil in a pan, with a pint of burnt umber; boil it gently two hours; prepare this without doors, for fear of fire in the house; when it settles it will be fit for use; pour the clear off, and use it with the white lead; the dregs will do for the red lead.

For the second Priming.

Take a hundred weight of white lead, with an equal quantity of Spanish white in bulk but not in weight; grind them pretty stiff with linseed oil; when you use it, put in some of the above-mentioned drying oil, with a little oil of turpentine; but do not lay on this till the first coat is very dry.

To make Putty and finish Painting.

Mix a quantity of whitening, very stiff, with linseed oil, and drying oil, equal quantities; when it cannot be wrought by the hand more whitening must be added, and beat up with a mallet, till it is stiffer than dough; when the second priming is dry, stop all holes and cracks with the putty, when hard and dry lay on the last paint, viz. grind the best white lead very stiff with linseed oil; when used put some of the drying oil to it, and oil of turpentine: this will preserve out-works a long time.

N.B. For rooms, and places within doors, your own fancy must direct you to the colours, only proceed as above.

To bleach Bees'-wax.

Melt your wax, and while hot throw it into cold water to reduce it into little bits, or spread it out into very thin leaves, and lay it out to the air, night and day, on linen cloths, then melt it over again, and expose it as before: repeat this till the sun and dew have bleached it; then, for the last time, melt

it in a kettle, and cast it with a ladle on a table covered over with little round hollows, in the form of the cakes sold by the apothecaries; but first wet your moulds with cold water, that the wax be the easier got out; lastly, lay them out in the air for two days and two nights, to make it more transparent and drier.

To make Soft Pomatum.

Take what quantity of hog's lard you choose to make; cut it down in small pieces, and cover it with clear spring water, changing it every twenty four hours for eight days; when it is quite white put it into a pan, and melt it over a clear fire; when it is all melted, strain it and put to it some essence of lemon to perfume it, so keep it for use.

To make Hard Pomatum.

For hard pomatum, blanch the hog's lard in the same manner, as also some mutton suet, and boil them together with a little white wax; scent it with essence of lemon or lavender, then make round paper cases, and when cold turn down the other end, and keep it for use.

To take Iron Molds out of Linen.

Bruise some sorrell well in a mortar; put boiling water in a bowl; lay a pewter plate over it; put your linen on the plate, and rub the mark with the sorrel till it comes out, and then wash it.

To Silver Glass Globes.

Take two ounces of quick silver, one ounce of bismuth, of tin and lead half an ounce of each: first put the tin and lead infusion, then put in the bismuth, and when you perceive all infusion let it stand till almost cold, and pour in the quick-silver.

After this take the glass globe, which must be very clean, and the inside free from dust, make a paper funnel, which put in the hole of the globe, as near the glass as you can, so that the amalgama, when you pour it in, may not splash and spot the glass: pour it in softly, and move it about that the amalgama may touch every where; if you find it begin to be curdly hold it over a gentle heat, and it will flow again; the cleaner and finer your globe is the looking-glass will be the better.

To make Shell Gold.

Take the paring of leaf gold, or even the leaves themselves, and reduce them into an impalpable powder, by grinding them on a marble with honey; put this into shells where it will stick and dry; when you want to use it dilute it with gum water.

N.B. Shell silver is made the same way.

To clean Oil Paintings.

If smoaked, or very dirty, take stale urine, in which a little common salt is dissolved; rub them over with a woollen cloth dipt in that, till you think

them quite clean, then with a sponge wash them over with fair water; then dry them, and rub them over with a clean cloth.

To make Indian Ink.

Put six lighted wicks into a dish of oil; hang an iron or tin concave cover over it so as to receive all the smoak; when there is a sufficient quantity of soot settled to the cover, then take it off gently with a feather upon a sheet of paper, and mix it up with gum tragacanth to a proper consistence.

N.B. The clearest oil makes the finest soot, consequently the best ink.

To prepare Blue Colour from Verdigrease.

Take sal-ammoniac and verdigrease, of each six ounces; mix them well together with water of tartar to a paste; put this into a vial, and stop it close; let it stand for several days, and you will have a fine blue colour.

To make China Ink.

Take dried black horse-beans, burn them to a powder, mix them up with gum-arabic water, and bring them to a mass; press it well and let it dry.

To make Glass Jars, and other Pieces of Ornament look like China.

After you have painted your figures, cut them out, so that none of the white remain; then take some thick gum-arabic; go over all your figures, and place them on the inside of your glass to your own

taste; let them stand to dry for twenty-four hours; then clean them well with a wet cloth betwixt the prints, and let them stand a few hours longer, lest the water should move any of the edges; then take white wax and flake white, ground very fine, and melt them together; with a japanning-brush go over all your glass inside above the prints; done in this manner they will hold water; or you may boil isinglass to a strong jelly, and mix it up with white lead ground fine, and lay it on in the same manner; or you may do them with nut oil and flake white. For a blue ground do it with white wax and Prussian blue, ground fine; for red, wax and vermillion, or carmine; for green, wax and verdigrease; for a chocolate colour, wax and burnt umber.

Composition for gilding Brass or Silver.

Take two ounces of gum-lacca, two ounces of karabe, or yellow amber, forty grains of dragon's blood in tears, half a drachm of saffron, and forty ounces of good spirits of wine: infuse and digest the whole in the usual manner, and afterwards strain it through a linen cloth: when the varnish is used, the piece of silver or brass must be heated before it is applied, by this means it will assume a gold colour, which is cleaned, when soiled, with a little warm water.

To make Varnish for Oil Paintings.

According to the number of your pictures, take the whites of the same number of eggs, and to each picture take the bigness of a hazel-nut of white su-

gar-candy, dissolved, and mix it with a tea spoonful of brandy; beat the whites of your eggs to a froth; then let it settle; take the clear, put to it your brandy and sugar, and varnish over your pictures with it; this is much better than any other varnish, as it is easily washed off when your pictures want cleaning again.

To extract Essences and Essential Oils from Woods, Barks, Roots, Herbs, Berries, Seeds, &c. without the help of Fire or Distillation.

Take mint, sage, orange-peel, cinnamon, cloves, mace, or any thing you please; pour upon them a spoonful or two of ether, and after it has stood an hour in a cold place fill up the bottle with cold water, and you will see the essential oil swimming upon the surface, and easily separated by a funnel, Of this oil, one drop only, upon a lump of sugar, manifests to the taste and smell the medicinal virtues of the plant, &c. exquisitely drawn, and comhended in this essence.

To make Lip Salve.

Take an ounce of white wax and ox marrow, three ounces of white pomatum, and melt all in a bath heat; add a drachm of alkanet, and stir it till it acquire a reddish colour.

To make British Herb Tea.

Take of hawthorn leaves, dried, two parts, sage and balm one part; mix these well together, and

they will make an excellent and pleasant sanative tea, particularly wholesome to nervous people.

To make Pounce.

Gum-sandaric powdered and sifted very fine, will produce an excellent preventive to keep ink from sinking in the paper after you have had occasion to scratch out any part of the writing.

To make Primrose Vinegar.

To fifteen quarts of water put six pounds of brown sugar; let it boil ten minutes, and take off the scum: pour on it half a peck of primroses; before it is quite cold put in a little fresh yeast, and let it work in a warm place all night; put it in a barrel in the kitchen, and when done working close the barrel, still keeping it in a warm place.

The Virtues of Coffee.

Coffee accelerates digestion, corrects crudities, removes cholic, and flatulencies. It mitigates headaches, cherishes the animal spirits, takes away listlessness and languor, and is serviceable in all obstructions arising from languid circulation. It is a wonderful restorative to emaciated constitutions, and highly refreshing to the studious and sedentary.

The habitual use of coffee would greatly promote sobriety, being in itself a cordial stimulant; it is a most powerful antidote to the temptation of spirituous liquors.

It will be found a welcome beverage to the robust labourer, who would despise a lighter drink.

To make good Spruce Beer.

This cheap and wholesome liquor is thus made: take of water sixteen gallons, and boil the half of it; put the water thus boiled, while in full heat, to the reserved cold part, which should be previously put into a barrel or other vessel; then add 16 pounds of treacle or molasses, with a few table spoonfuls of the essence of spruce, stirring the whole well together; add half a pint of yeast, and keep it in a temperate situation, with the bung-hole open, for two days, till the fermentation be abated; then close it up, or bottle it off, and it will be fit to drink in a few days afterwards. In North America, and perhaps in other countries, where the black and white spruce firs abound, instead of adding the essence of the spruce at the same time with the molasses, they make a decoction of the leaves and small branches of these trees, and find the liquor equally good.

It is a powerful antiscorbutic, and may prove very useful in a long sea voyage.

To destroy Snails.

Snails are great enemies to wall fruit; and in a dewy morning you may easily find where they most delight to breed; but the best way is to find out their haunts in a hard winter, and then destroy them; they lie much in holes of walls, under thorns, behind old trees, or old and close hedges. If you pluck not the fruit they have began to devour, but let it alone, they will finish their repast on this before they begin another.

To make a never-failing Mouse Trap, by which forty or fifty Mice may be caught in a Night.

Take a plain four-square trencher, and put into the two contrary ends of it a large pin, or piece of thick knitting needle; then take two sticks about a yard long, and lay them on your dresser, with a notch cut at each end of your sticks, placing the two pins, stuck on the corner of the trencher, on the notches of the two sticks, so that one corner of your trencher may lie about an inch upon your dresser, or place that the mice come to; then let the corner that lies opposite to this be baited with some butter, and oatmeal plastered fast on, and when the mice run off the dresser to the butter, it will tip them into a vessel full of water, which you must place under the trencher, in which they will be drowned.

That your trencher may not tip over, with a little sealing-wax and a thread seal the string to the dresser and trencher, and it will remain in good order for weeks or months.

A Varnish for preserving Insects, Fruits, &c.

Take one pound of rectified spirits of wine, and two ounces of white amber; digest the whole in Balneo Mariæ during 48 hours; add thereto an ounce of white sandaric and white mastick, an ounce and a half of Venice turpentine; digest the whole in Balneo Mariæ during 48 hours, to an entire dissolution; take out the intestines of the insect you have a mind to preserve, lay them for

some days in rectified spirits of wine, mixed with clarified sugar candy; afterwards besmear them with your varnish till they are transparent as glass, in this manner you will preserve them a long time.

This varnish succeeds equally with vegetables and fruits, which never rot or decay when not affected by the exterior air, as has been observed with regard to cherries, which are preserved perfectly well, by besmearing them with melted white wax.

To breed Canary Birds.

Canary birds, that are kept tame, will breed three or four times in the year; they usually begin in April and breed in May and June, though sometimes in July and August.

Towards the middle of March, begin to match your birds, putting one cock and one hen in a small cage; and when they have been so long together, that they are perfectly reconciled and well pleased with each other, towards the end of March or the beginning of April, put them into the breeding cage for that use, let it be full large so that the birds may have the more room to fly and exercise themselves; let there be two boxes in the cage for the hen to build in, because she will sometimes hatch a second brood before the first are fit to fly, leaving the care of them to the cock to feed and bring them up, whilst she breeds in the other box; therefore if she has not not a spare box to build in she will be apt to make her nest upon the birds, (as it sometimes happens) and smother them, or build so near that they will spoil one another. Whilst

your birds are a-pairing, feed them with soft meat, egg, bread, maw seed, and a little scalded rape seed, hardly a third part of egg; this last, and the bread grated fine, and so mix it together.

When they have young ones, give the same soft victuals fresh every day, and let them have fresh greens likewise, such as cabbage-lettuce, now and then; but give them more constantly chick-weed with seeds upon it; towards June, shepherd's purse; in July and August, plantain; and before they have young ones, give them groundsel, with seed upon it.

I would recommend to such persons who breed only a few birds for their own diversion, to use very large cages, it being much the best way; but those who intend to breed a number should prepare a room for that purpose.

Let the situation of it be such that the birds may enjoy the benefit of the morning sun, which is both delightful and nourishing, and let wire, instead of glass, be at the windows, that they may have the advantage of the air, which will add to their health, and make them thrive the better; keep the floor of the room clean, sometimes sifting fine gravel or sand, and often removing the dung and the other foul stuff. You must take care to fix nest boxes and back cages in every convenient corner and place in the room, at least twice the number that you have of birds, that they may have the more variety to choose a lodging to their minds, for some love to build high, and some very low, some in a light place, and others will chuse a dark place to build in.

There ought to be two windows in the room, one at each end, and several perches, at proper distances, for the birds to settle upon as they fly backwards and forwards.

You may set likewise a tree in some convenient part of the room, it will divert the birds, and some of them will like to build in it. You must observe that their nest is secure from falling through, and if in danger, to tie the tree closer, to prevent it, and they will hatch there as well as in any other place.

Remember not to put too many birds together; eight or ten pair are enough for a middling room. When your birds are first paired, as directed before, turn them into the room where they will live, as it were, a conjugal life; and notwithstanding there are several male and female birds in the same room, one cock and one hen, as they first couple together, will keep constant to each other, and both concur and assist in sitting and feeding their young, for the cock bird takes his turn in building the nest, sitting upon the eggs, and feeding the young, as well as the hen.

Of their nests, and how to order their young.—You must furnish the birds with stuff for making their nests, such as fine hay, wool, cotton, and hair, let these materials be thoroughly dry; then mix and tie them up together in a net, or some such thing, so that the birds may easily pull it out as they want it, and let it be hung in a proper place in the room for that purpose.

They build a pretty nest, about which they will sometimes be so industrious, as to begin and finish

it in one day, though they are generally two or three days in making their nest; the hen lays commonly four or five eggs, and sits fourteen days.

When the young are hatched, leave them to the care of the old ones to nurse and bring up till they can fly, and feed themselves. The hen, as I said before, by reason of their rankness in being kept together, and provided with all things necessary at hand, without any trouble in seeking their food, &c. will sometimes build and hatch again before the first can shift for themselves, the care of which she transfers to the cock-bird, who will feed and nurse them himself, supplying the part of both parents, while she brings on and attends her new progeny: but it is not so with those birds that live at large in the fields, they observe their season for breeding, and after they have hatched, company with their brood till their young are grown up, and able to provide for themselves.

When the young canary birds can feed themselves, take them from the old ones, and cage them; if they are flying about the room, to catch them bring a spare cage with some soft victuals in it, taking the other meat that is in the room away, and placing the cage there in its stead, with the door open, and a string fastened thereto, then stand at a distance, and the old ones will presently, for the sake of the meat, intice the young ones into the cage; then pull the string, and shut in as many as you can and catch them.

Let their meat be the yolk of an egg hard boiled, with as much of the best bread, and a little scalded rapeseed; when it is boiled soft, bruise the seed

fine, and put a little maw seed amongst it, and mix it altogether, and give them a sufficient quantity fresh every day ; never let it be stale or sour : besides this give them a little scalded rapeseed, and a little rape and canary by itself. You may keep them to this diet till they have done moulting, and afterwards feed them as you do the old ones, unless at any time they are sick, then continue it.

Porter Plaster for Bruises.

This *simple, singular,* and *safe* remedy for bruises, is nothing more than a gallon of porter simmered in an earthen vessel, till, when cool, it will be of the consistence of a plaster. This preparation was spread on an old glove, and applied round the ancle of a coachman, who was thrown off his box, and miserably bruised. In three days it so effectually performed a cure, that *coachee* was enabled to remount his box, perfectly relieved from all swelling and pain.

For preventing Flies from destroying the Seedling Leaves of Turnips, &c.

Mix six ounces of flour of brimstone with three pounds of turnip seed, daily, for three days successively, in an earthen-glazed pot, and keep it close covered, stirring altogether well at each addition, that the seed be the more tainted with the sulphur ; this will sow an acre of ground, and let the weather come wet or dry, it will keep the fly off till the third or forth seeding leaf is formed ; and by this time they will all be somewhat bitterish, and con-

sequently very much out of danger of this little black flying insect, which, in summer time, may be seen in swarms, on the wing, near the ground, searching for, and settling on fresh bites, till they ruin thousands of acres.

Cure for the Dry Rot in Timber, so as to make it indestructible by Water.

Melt twelve ounces of rosin in an iron pot; add three gallons of train oil, and three or four rolls of brimstone; and when the brimstone and rosin are melted and become thin, add as much Spanish brown or red, and yellow ochre, or any other colour required, first ground fine with the same oil as will give the whole a shade of the depth preferred; then lay it on with a brush as hot and thin as possible; sometime after the first coat is dried, give it a second. This preparation will preserve planks for ages, and keep the weather from driving through brick work.

The Use of Sulphur in destroying Insects on Plants, and its Benefit for Vegetation.

Tie up some flower of sulphur in a piece of muslin or fine linen, and with this the leaves of young shoots of plants should be dusted, or it may be thrown on them by means of a common swansdown puff, or even by a dredging-box.

Fresh assurances have repeatedly been received of the powerful influence of sulphur against the whole tribe of insects and worms which infest and prey on vegetables. Sulphur has also been found

to promote the health of plants, on which it was sprinkled; and that peach trees, in particular, were remarkably improved by it, and seemed to absorb it. It has likewise been observed, that the verdure, and other healthful appearances, were perceptibly increased; for the quantity of new shoots and leaves formed subsequently to the operation, and having no sulphur on their surfaces, served as a kind of comparative index, and pointed out distinctly, the accumulation of health.

To clean Silk Stockings.

Wash your stockings first in white soap liquor, luke warm, to take out the rough dirt; then rince them in fair water, and work them well in a fresh soap liquor. Then make a third soap liquor, pretty strong, in which put a little stone blue, wrapped in a flannel bag, till your liquor is blue enough; then wash your stockings well therein, and take them out and ring them. Then let them be dried so that they may remain a little moist; then stove them with brimstone, after which, put upon the wood leg two stockings, one upon the other, observing that the two fronts, or outsides, are face to face, then polish them with a glass.

N.B. The two first soap liquors must be only luke warm, the third soap liquor as hot as you can bear your hand in it.

Blonds and gauzes are whitened in the same manner, only a little gum is put in the soap liquor before they are stoved.

The Virtues of Hay Tea for Cattle.

When there is a scarcity of hay, the following experiment, which is easily made, will be found a valuable succedaneum to the cattle, and a great saving to the farmer.

Boil about a handful of hay in three gallons of water, (and so in proportion for any greater or smaller quantity), or if the water is poured boiling hot on the hay it will answer nearly as well. Give it to the cattle and horses to drink when cold; or if the cattle or horses are any way ill, and under cover, give it them blood warm.

This drink is so extremely nutritive that it nourishes the cattle astonishingly, it replenishes the udder of the cows with a prodigious quantity of milk, makes the horses stale plentifully, and keeps them healthy and strong; and by this method one truss or hundred of hay will go as far as eight or ten otherwise would do. The cattle and horses will not seem to like it at first, but if they are kept till they are very thirsty they will drink freely of it ever afterwards.

Farmers, and others, in Sweden, and other cold countries, who have cattle and horses, when they are in want of fodder, constantly pursue this method, and find the good effects of it; and there is no doubt but this method would have the same good effect on sheep in severe weather, when the sheep are housed, or the land covered with snow, especially if they were given a small quantity of salt, (a practice used in Spain to make the wool fine and soft), to strengthen the sheep, and prevent

the rot, for the stronger the sheep are the greater quantity of wool they will produce, and which will be much finer and softer than when the sheep are lean and weak.

The hay, after being used as before-mentioned, and dried, may be used as a litter for horses or cattle; it makes very good manure, and saves straw, which will be a considerable advantage, especially when there is a scarcity of that article.

N.B. By a handful of hay, is meant as much as a person can grasp in his hand from a parcel of loose hay. And it is presumed and wished, as the above method is so easy and safe, that no person, who has cattle, cows, horses, or sheep, will neglect to try it.

To make sham Asses Milk.

Two ounces of pearl barley, two ounces of harts-horn shavings, three ounces of Eringo root candied, nine garden snails; boil these in six quarts of spring water till it comes to three; put two spoonfuls of cow's milk into half a pint of the above, and drink it luke warm about half an hour before you rise in the morning.

N.B. You may leave out the snails if you do not like them, but it is best to use them.

To take the Stains of Grease from Woollen or Silk.

Three ounces of spirits of wine, three ounces of French chalk, powdered, and five ounces of pipe clay.

Mix the above ingredients, and make them up in rolls about the length of a finger, and you will find a never-failing remedy for removing grease from woollen or silken goods.

N.B. It is to be applied by rubbing on the spot either dry or wet, and afterwards brushing the place.

Simple and effectual Cure for those who may accidentally have swallowed a Wasp.

Instantly, on the alarming accident taking place, put a tea spoonful of common salt in your mouth, which will instantaneously not only kill the wasp, but at the same time heal the sting.

Secret Methods of Writing.

A letter of common business may be interlined, by writing with sal-ammoniac dissolved in water, or with the juice of a lemon; these letters will not be visible till they are held by the fire; but a letter so written will, in a short time, discover itself from the corroding acid and moisture of the liquid. So a letter, written with dissolved allum, will not be discernable till the paper be dipt in water.

A letter may be written with the yolk of an egg, but when the letters are quite dry the paper must be blackened all over with ink, and the confederate, by scraping the paper gently with a knife, will expose the letters written with an egg, while the rest of the paper continues black.

To make artificial Yeast.

Boil potatoes of the mealy sort till they are thoroughly soft; skin and mash them very smooth, and put as much hot water as will make the mash of the consistency of common beer yeast, and not thicker. Add to every pound of potatoes two ounces of coarse sugar or treacle, and when just warm, stir in for every pound of potatoes two spoonfuls of yeast; keep it warm till it has done fomenting, and in twenty-four hours it may be used. A pound of potatoes will make about a quart of yeast, and when made will keep three months. Lay your bread eight hours before you bake it.

N.B. Instead of water and sugar in the above receipt, beer has been used, not bitter nor strong, in the same proportion, and with equal if not better success.

Method used in Sweden for preserving from Rust any Sort of Iron Work that is exposed to Air.

They take such a quantity of pitch and tar as they think they have occasion for, and mix up with it such a quantity of the best sort of soot as not to make it too thick for use; with this composition they paint or besmear all the parts of the iron work, for which purpose they make use of short hard brushes, because they must press pretty strongly upon the iron in order to give it a sufficient quantity, and they al-

ways chuse to perform this operation in the spring time of the year, because the moderate heat of the season hardens the pitch so much that it is never melted by the succeeding heats of the summer, but on the contrary, acquires such a gloss as to look like varnish. This has been found, by experience, to preserve iron from rust much better than any sort of paint, and is as cheap as any that can be made use of.

To prevent Slugs from getting into Fruit Trees.

If the trees are standards tie a coarse horse hair rope about them, two or three feet from the ground. If they are against the wall, nail a narrow slip of coarse horse-hair cloth against the wall, about half a foot from the ground, and they will never get over it, for if they attempt it, it will kill them, as their bellies are soft, and the horse hair will wound them.

Cure for Warts.

The milky juice of the stalks of spurge or of the common fig leaf, by persevering application, will, to a certainty, soon remove them.

To destroy Worms in Gardens.

Water your beds with a strong decoction of walnut tree leaves, where there are worm casts; the worms will immediately rise up out of the earth, and you may easily take and cut them to pieces,

and fatten your poultry therewith, or feed fish in ponds with them.

By laying ashes or lime about any plant, neither snails nor worms will come near it. As the moisture weakens it, you must, more or less, continue to renew the lime or ashes.

To make British Champagne.

Take gooseberries before they grow ripe, crush them with a mallet in a wooden bowl, and to every gallon of fruit put a gallon of water; let it stand two days, stirring it well, squeeze the mixture well with your hands through a hop sieve; then measure your liquor, and to every gallon put three pounds and a half of loaf sugar; mix it well in the tub, and let it stand one day: put a bottle of the best brandy in the cask; leave the cask open five or six weeks, taking off the scum as it rises; then make it up, and let it stand one year in the barrel before bottled.

N.B. One pint of brandy is put to seven gallons of liquor.

Method of extracting the Virtue of Hops in Brewing.

The usual method is to put in hops without any preparation, into the strong beer or ale wort; the consequence is, the richer and better the wort is, the less it will partake of the essence of the hops. The rich fat wort sheathes up the pores of the hop, and, as it were, embalm the leaves, so that the beer or ale wort can extract scarcely any part of the ne-

cessary quality of the hop; but when it is put into the small beer wort, a fluid of a more thin nature, there the pores are unsheathed, and the small beer is rendered too bitter; therefore the hops, before they are put into the strong drink, should be previously soaked in a pail of hot water.

To confirm the truth of this observation, take a quarter of an ounce of the best green tea, and instead of pouring on it simple boiling water, let the water have the same quantity of sugar boiled in it that would be necessary to sweeten so much tea when made, and you will find that the sweetness of the water will prevent its extracting the grateful bitter flavour of the tea.

To prevent Gentlemen's Hats from being spotted after a Shower of Rain.

If your hat is wet from rain, or any other cause, shake it out as much as possible; then with a clean linen cloth or handkerchief, wipe the hat very carefully as well as you can, observing, that in so doing you keep the beaver flat and smooth, in the same direction as it was first placed, then with your hands fix it in the original shape, and hang it at a distance from the fire to dry. A few hours after, or the next morning, lay the hat on a table, and brush it round and round several times with a soft brush in the proper direction, and you will find your hat not in the least injured by the rain.

If the gloss is not quite so high as you wish, take a flat iron, moderately heated, and pass the same

two or three times gently over the hat; brush it afterwards, and it will be nearly as handsome as when first sent home from the shop.

A Receipt for the Cholic in a Horse.

One table spoonful of ginger beat and sifted, two or three table spoonfuls of flower of mustard, a gill of gin, and a quart of warm ale, mix them together, and give them in a horn. In an hour or two walk the horse out, and repeat it the following day; care should be taken that the horse drinks nothing but warmed water for two or three days after.

To kill Earwigs, or other Insects, instantly, which may accidentally have crept into the Ear, without Injury to the Sufferer.

Let the person under this distressing circumstance, lay his head upon a table, the side upwards that is afflicted; at the same time let some friend carefully drop into the ear a little sweet oil, or oil of almonds. A drop or two will be sufficient, which will instantly destroy the insect, and remove the pain, however violent.

To prepare White Herrings so as to have the Flavour of Anchovies.

Take the skin clear off, then (cutting off the head and tail) slice the body into four or five parts, which, when done, put the same into a bason,

pouring an equal quantity of vinegar and water, just sufficient to cover the fish: then let it stand a day or two, when it will eat fine and mellow, and very little, if *at all*, inferior in flavour to achovies.

To make excellent and wholesome Table Beer.

To eight quarters of boiling water put a pound of treacle, a quarter of an ounce of ginger, and two bay leaves; let this boil for a quarter of an hour, then cool, and work it with yeast, the same as other beer.

To make Artificial or Potatoe Bread.

Put a pound of potatoes in a net, into a skillet with cold water, and (lest the skin break, and let in the water), hang it at a distance (so as not to boil), over the fire till they become soft; then skin, mash, and rub them so as to be well mixed with a pound of flour, a very large spoonful of salt, and two large spoonfuls of yeast, but less of the yeast is better. Then add a little warm water, and knead it up as other dough; lay it a little while before the fire to ferment or rise, then bake it in a very hot oven. Bread made in this manner has been frequently tried, and found to be well tasted, wholesome, and of good consistence.

Method of trying the Goodness of Timber for Ship Building, used in the Arsenal at Vienna.

One person applies his ear to the center of one end of the trunk, while another, with a key, hits

the other end with a gentle stroke. If the tree be sound and good, the stroke will be distinctly heard at the other end, though the tree should be an hundred feet or more in length.

British Substitute for Foreign Tea.

Betony if gathered when just going to flower, has the taste of tea, and all the good qualities of it, without the bad ones, and, moreover, it cures inveterate head-aches.

Another.

Make an infusion of ground ivy, which is very agreeable in flavour, especially if you add to it a drop or two of lemon juice. It is reported by many, that the habitual use of this herb will cure the most obstinate consumption. It is certainly a good pectoral, and when green is fragrant; if mixed with a few flowers of lavender, it makes a most agreeable liquor for summer use; and, if gathered at a proper time, has an agreeable taste to many, but wholesome to all, even when dry.

Another.

Balm, or lemon balm alone, or with sage, is much recommended, with a few flowers of lavender; it has a most delicious flavour and taste, but is most agreeable when green.

The Virtues of Sage.

This valuable herb was held in such high esteem

among the ancients, that they have left us a latin verse, which signifies,

"*Why should a man die whilst he has sage in his garden?*"

It is reckoned admirable as a cordial, and to sweeten and cleanse the blood. It is good in nervous cases, and is given in fevers, with a view to promote perspiration. With the addition of a little lemon juice, it is very grateful and cooling; some choose to take it dry, alledging that the surface of the leaves of green sage abound with animalcules, which are very visible through a microscope, and so there are in many articles of common food; but we may be assured, even if this is the case, that as they are nourished with the sage, they are of no harm, and, at all events, a little hot water will destroy them.

For a Cold.

Mix with the yolks of two eggs, honey, rum, and sweet oil, of each two spoonfuls; then add the juice of two lemons.

Let this mixture be taken three times a day, in a table spoonful of water, and you will speedily find the cold greatly alleviated.

To make Lady Derby's Soap.

Two ounces of bitter almonds blanched, one ounce and a quarter of tincture of benjamin, one pound of good plain white soap, and one piece of camphire the size of a walnut. The almonds and

camphire are to be beaten in a mortar until they are completely mixed; then work up with them the tincture of benjamin. The mixture being perfectly made, work the soap into it in the same manner. If the smell is too powerful of the camphire and tincture of benjamin, melt the soap by the fire, and the perfume will go off. This soap has been tried by many persons of distinction, is excellent in its qualities for cleansing the skin, and will be found greatly to assist the complexion, the ingredients being perfectly safe, and free from those pernicious properties that are mostly incorporated with other soap.

To increase the Growth in Trees.

It may be depended upon as a fact, that by occasionally washing the stems of trees, their growth will be greatly increased, for several recent experiments have proved that all the ingredients of vegetation united, which are received from the roots, stem, branches, and leaves, of a mossy and dirty tree, do not produce half the increase either in wood or fruit, that another gains whose stem is clean. It is clearly obvious that proper nourishment cannot be received from rain, for the dirty stem will retain the moisture longer than when clean, and the moss and dirt will absorb the finest parts of the dew, and likewise act as a skreen, by depriving the tree of that share of sun and air which it requires.

A common scrubbing-brush and clean water is all that is necessary, only care must be observed not to injure the bark.

To restore Cast Iron Furnaces, and Soap Pans, that through Accident or Mismanagement may be cracked.

Take a small clod of fine new lime, slacked, and finely sifted, mix it up with white of eggs, well beaten, till it is of the consistence of pap or soft mortar, then add to it some iron file dust, and with this composition fill up the inside of the crack, (which be sufficient) raising a little seam or bead upon it, and it will soon become hard and fit for use.

This experiment completely cured a gentleman's furnace which had a crack fourteen inches long, and he has boiled in it three or four days every week since, without the least inconvenience or prospect of its being again disunited.

Sure Method of discovering Canine Madness.

When a person has been bit by a dog that is apprehended to be mad, it commonly happens that the dog is killed before any one is assured of his condition, and the person bit continues in a cruel state of uncertainty. An eminent surgeon in France has lately discovered an expedient for putting an end to this uneasiness. He rubs the throat, the teeth, and the gums of the dead dog with a piece of bread or meat that hath been dressed, taking care that there be no blood to stain it; and then offers the same to a living dog. If the animal refuses it with crying and howling, it may be depended on that the dead dog was certainly mad, but

if the victuals have been well received and eaten, there is nothing to fear.

Method of recovering Persons apparently drowned, as recommended by the Humane Society.

Let those who first discover an unfortunate object in this situation, remove it to some house near, place it by the fire, and begin by rubbing it with salt, volatiles, &c. and warm flannels, the head a little elevated; never attempting giving any thing by the mouth till signs of recovery strongly appear, and let the person be kept from a crowd of people around him. The idea that the stomach is full of water, and thus obviates recovery, is very erroneous and prejudicial, as it is now fully and clearly established, that the respiration being impeded is the sole cause of the suspension of life, and which being restored, the vital functions soon recover their tone; and men are frequently lost from the absurd custom of rolling on casks, lifting the feet over the shoulders, and the head falling on the ground.

Method of extracting Essences from Flowers.

Procure a quantity of the petals of any flowers which have an agreeable fragrance; card thin layers of cotton, which dip into the finest Florence or Lucca oil; sprinkle a small quantity of fine salt on the flowers, and lay them, a layer of cotton, and a layer of flowers, until an earthen vessel, or a wide mouthed glass bottle is full. Tie the top

close with a bladder, then lay the vessel in a south aspect, to the heat of the sun, and in fifteen days, when uncovered, a fragrant oil may be squeezed away from the whole mass, little inferior (if that flower is made use of) to the *dear* and *highly valued* Otto or Odour of Roses.

To prevent Corns from growing on the Feet.

Easy shoes; frequently bathing the feet in luke warm water, with a little salt or pot-ashes dissolved in it.

For the Cure of Corns.

A plaster made of equal parts of gum galbanum, saffron, and camphire; in short, any kind of plaster spread on leather, but none excels the mercurial plaster with ammoniacum.

To prevent Shoes from taking in Water.

One pint of drying oil, two ounces of yellow wax, two ounces of turpentine, and half an ounce of Burgundy pitch, melted carefully over a slow fire. If new boots or shoes are rubbed with this mixture, either in the sun-shine, or at some distance from the fire, with a sponge or soft brush, and the operation is repeated as often as they become dry, till the leather is fully saturated, they will be impervious to wet, and will wear much longer, as well as acquiring a softness and pliability that will prevent the leather from ever shrivelling.

Note. Shoes or boots prepared as above ought not to be worn till perfectly dry and elastic, other-

wise their durability would rather be prevented than increased.

To make Yeast in the Turkish Manner.

Take a small teacup-full of split or bruised peas, and pour on it a pint of boiling water, and set it in a vessel all night on the hearth, or any warm place. The next morning the water will have a froth on it, and be good yeast, and will make as much bread as two quartern loaves.

Useful Method of preserving Bees, as lately adopted in America.

Instead of destroying whole swarms in their hives, to get the honey when the hives are full, they clear them out into a fresh hive, while they take the combs out of the old one; and they prevent their perishing in winter by putting a great quantity of honey into a very wide earthen vessel covering its surface with paper, exactly fitted on, and pricked full of holes with a large pin; this being pressed by the weight of the bees keeps a fresh supply continually arising. Their most fatal destruction by severe cold, they prevent, by taking as many large tubs as they have hives, and knocking out the heads they set the other end in the ground, laying a bed of dry earth or chopped hay in it, of six inches deep; over this they place the head knocked out, and then make a small wooden trough for the passage of the bees; this is transfixed through a hole cut through each side of the tub, at such a height as to lay on the false bottom, on which

is placed the covered dish of honey for the food of the bees, leaving a proper space over this covered with strong matting; they then fill up the tub with more dry earth, or chopped hay, heaping it up in the form of a cone, to keep out the rain, and wreathing it over with straw on account of the warmth. This method is so secure, that out of a hundred tubs a few winters since, when this experiment was tried, not one of them was known to fail. The quantity of honey this way obtained has been amazing, and besides, must every year increase, wherever the example is followed.

Chinese Method of mending China.

Take a piece of flint glass, beat it to a fine powder, and grind it well with the white of an egg, and it joins china without riveting, so that no art can break it in the same place. You are to observe, that the composition is to be ground extremely fine on a painter's stone.

To take Spots effectually out of Silk, Linen, or Woollen.

Spirits of turpentine, twelve drops, and the same quantity of spirits of wine; grind these with an ounce of pipe-maker's clay, and rub the spots therewith. You are to wet the composition when you do either silk, linen, or woollen with it; let it remain till dry, then rub it off, and the spot or spots will disappear.

True spirits of salts diluted with water, will remove iron molds from linen; and sal-ammoniac, with lime, will take out the stains of wine.

Safe, sure, and easy Method of destroying Rats.

Though these vermin are nasty enough in many respects, yet it is a well certified fact, that if you lay bird lime in their haunts they inevitably daub their feet with it, and it is so troublesome to them that they will even scratch their skins from their bodies to get it off, and will never after frequent the place where they met with a disaster so obnoxious to their nature.

To make Blacking Balls for Shoes.

Mutton suet, four ounces, bees'-wax, one ounce, sugar candy and gum-arabic, one drachm each, in fine powder; melt these well together over a gentle fire, and add thereto about a spoonful of turpentine, and ivory and lamp black, sufficient to give it a good black; while hot enough to run, you may make it into a ball, by pouring the liquor into a tin mold, or let it stand till almost cold; you may mold it in what form you please by the hand.

To keep Oranges and Lemons.

Take small sand and make it very dry; after it is cold put a quantity of it into a clean vessel; then take your oranges, and set a laying of them in the same, the stalk end downwards, so that they do not touch each other, and strew in some of the sand, as much as will cover them two inches deep; then set your vessel in a cold place, and you will

find your fruit in high preservation at the end of several months.

To keep Arms and polished Metal from Rust.

Dissolve one ounce of camphor in two pounds of hog's lard, observing to take off the scum; then mix as much black lead as will give the mixture an iron colour. Fire arms, &c. rubbed over with this mixture, and left with it on twenty-four hours, and then dried with a linen cloth, will keep clean for many months.

To prevent Contagion, and to purify and make wholesome, bad and infectious Air.

Take half a pint of the best vinegar in an earthen vessel, which hold in the left hand, and thrust therein a red hot poker, and repeat the same till the vinegar is deprived of its sour quality, and it will prove one of the most effectual remedies in nature in purifying the air, and taking off its noxious qualities.

To make Stuchum, or Perpetual Ink of the Ancients, for writing on Stone.

This ink, or stuchum, as it was formerly called, is made by mixing about three parts pitch, with one of lamp black, which are to be incorporated by melting the pitch into the lamp black. This composition they used in a melted state, by filling up the letters previously marked on stones, which would, unless any extraordinary violence was used, endure as long as the stone itself.

To make Parchment Glue.

Take one pound of parchment, and boil it in six quarts of water, till the quantity be reduced to one, then strain off the dregs, and boil it again till it be of the consistence of glue.

The same may be done with glovers' cuttings of leather, which make a colourless glue, if not burnt in the evaporation of the water.

To make Lip Glue, for joining Paper, Silk, or thin Leather, &c.

Take of isinglass and parchment glues, of each one ounce; sugar candy and gum-tragacanth, each two drachms; add to them an ounce of water, and boil the whole together till the mixture, when cold, is of the consistence of glue; then form the same into small rolls, or any other figure that may be most convenient, and it will be fit for use.

This glue may be wet with the tongue, and rubbed on the edges of the paper, silk, or leather, that are to be joined; and on being laid together, and suffered to dry, they will be united as firmly as any other part of the substance.

To make strong, or Bookbinder's, Paste.

Mix wheaten flour, first in cold water, then boil it till it be of a glutinous consistence; this method makes common paste. When you wish it to be of a stronger nature, mix a *fourth, fifth,* or *sixth* of the weight of the flour of powdered allum; and where it is wanted of a still more tenacious quality, add a little powdered rosin.

To prepare a Cement for joining broken Glass, China, Earthenware, &c.

Take two ounces of good glue, and steep it for a night in distilled vinegar; boil them together the next day; and having beaten a clove of garlic, with half an ounce of ox-gall, into a soft pulp, strain the juice through a linen cloth, using pressure, and add the same to the glue and the vinegar. Take then sandarac powdered, and turpentine, each 1 drachm, and of sarcocol and mastic powdered, each half a drachm, and put them into a bottle, with an ounce of highly rectified spirits of wine. Stop the bottle and let the mixture stand for three hours in a gentle heat, frequently shaking it. Mix this tincture also with the glue while hot, and stir them well together with a stick or tobacco pipe, till part of the moisture be evaporated; then take the composition from the fire, and it will be fit for use. When this cement is to be applied, it must be dipt in vinegar, and then melted in a proper vessel, with a gentle heat; and if stones are to be cemented, it is proper to mix with it a little powdered tripoli or chalk; or if glass is to be conjoined, powdered glass should be substituted.

For the uniting the parts of broken china, or earthenware vessels, as also glass, where the rendering the joint visible is not of consequence, the following composition, which is much more easily prepared, may be substituted for the foregoing.

Take an ounce of Suffolk cheese, or any other kind devoid of fat, grate it as small as possible, and put it, with an equal weight of quick lime, into three ounces of skimmed milk; mix them tho-

roughly together, and use the composition immediately.

Where the broken vessels are for service only, and the appearance is not to be regarded, the joints may be made equally strong with any other part of the glass, by putting a slip of thin paper, or linen, smeared with this cement, over them, after they are well joined together by it. This method will make a great saving in the case of glasses employed for chemical, or other similar operations.

A cement of the same nature may be made by tempering quick lime with the curd of milk, till it be of a due consistence for use. The curd, in this case, should be as free as possible from the cream or oil of the milk. On this account it should be made of milk from which the cream has been well skimmed off, or the kind of curd commonly sold in the markets, made of whey, and the milk from which butter has been extracted, commonly called butter milk. This cement should be used in the same manner as the preceding, and they may be applied to stones, marble, &c. with equal advantage as the compound one above given, and is much more easy and cheaply prepared.

Drying oil, with white lead, is also frequently used for cementing china and earthenware; but where it is not necessary the vessels should endure heat or moisture, isinglass glue, with a little tripoli or chalk is better.

To make Gold Varnish.

This ingenious process, which is at present employed all over Europe, in gilding wooden frames,

coaches, and various articles, and which was formerly used in the preparation of the *now* old-fashioned leather tapestry, was invented towards the end of the sixteenth century. The composition is as follows:

Take gum-lac, and having freed it from the filth and bits of wood with which it is mixed, put it into a small linen bag, and wash it, in pure water, till the water becomes no longer red, then take it from the bag and suffer it to dry. When it is perfectly dry, pound it very fine, because the finer it is pounded it will dissolve the more readily. Then take four parts of spirits of wine, and one of gum, reduced, as before directed, to an impalpable powder, so that for every four pounds of spirits you may have one of gum; mix these together, and, having put them into an alembic, graduate the fire so that the gum may dissolve in the spirits. When dissolved, strain the whole through a strong piece of linen cloth; throw away what remains in the cloth, as of no use, and preserve the liquor in a glass bottle, closely corked. This is the gold varnish which may be employed for gilding any kind of wood.

When you wish to use it, you must, in order that the work may be done with more smoothness, employ a brush made of the tail of a certain quadruped called Vari, well known to those who sell colours for painting; and with this instrument dipped in the liquor, wash over gently, three times, the wood which has been silvered. You must, however, remember every time you pass the brush over the wood, to let it dry: for, in so doing, your

work will be extremely beautiful, and have a resemblance of the finest gold.

To prepare Ivory Leaves for Miniature Painters.

Take the ivory leaves, or tables on which the painting is to be made, and, having cleansed it, rub it over with the juice of garlic. This takes off that greasiness which is so much complained of, as preventing the colours from taking on the ground, and which is not otherwise to be remedied by the use of soap, or even gall. It is, however, effectually removed by the above simple preparation.

To make a Varnish for Pales and coarse Wood Work.

Take any quantity of tar, and grind it with as much Spanish brown as it will bear, without rendering it too thick to be used as a paint or varnish, and then spread it on the pales, or other wood, as soon as convenient, for it quickly hardens by keeping.

This mixture must be laid on the wood to be varnished, by a large brush, or house-painters' tool; and the work should then be kept as free from dust as possible, till the varnish be thoroughly dry. It will, if laid on smooth wood, have a very good gloss, and is an excellent preservative of it against moisture; on which account, as well as its being cheaper, it is far preferable to painting, not only for pales, but for weather-boarding, and all other kinds of wood work for grosser purposes. Where the

glossy brown colour is not liked, the work may be made of a greyish brown, by mixing a small proportion of white lead, or whitening, or ivory black, with the Spanish brown.

Method of Dry Gilding.

Dry gilding, as it is called by some workmen, is a light method of gilding, by steeping linen rags in a solution of gold, then burning them; and with a piece of cloth dipped in salt water, rubbing the ashes over silver intended to be gilt. This method requires neither much labour, nor much gold, and may be employed with advantage for carved work and ornaments. It is not, however, durable.

To make Sympathetic, or Invisible Ink.

Let quick lime be quenched in common water, and while quenching let some red orpiment be added to it, (this, however, ought to be done by placiug warm ashes under it for a whole day), and let the liquor be filtered and preserved in a glass bottle well corked. Then boil litharge of gold, well pounded, for half an hour, with vinegar, in a brass vessel, and filter the whole through paper, and preserve it also in a bottle closely corked. If you write any thing with this last water, with a clean pen, the writing will be invisible when dry; but if it be washed over with the first water it will become instantly black. And it is wonderful, that though sheets of paper without number, and even a board, be placed between the invisible writing and the second liquid, it will have the same effect, and turn the writ-

ing black, penetrating the wood and paper without leaving any traces of its action, which is certainly surprising.

New Method of preserving Potatoes.

The following method of preserving potatoes was communicated by Mr. Millington, to the Society for Bettering the Condition of the Poor:

I caused (says this gentleman) three pounds and a half of potatoes to be peeled and rasped; then put in a coarse cloth, between two boards, in a napkin press, and pressed them into a dry cake, hardly so thick as a thin cheese. They were then placed on a shelf to dry. There was about a quart of juice expressed from the potatoes. To this was added about a like quantity of water, and in about an hour it deposited more than sixty grains of white starch or flour, fit to make pastry. A cake of this was prepared and sent to the Society. In bulk it occupied only a sixth of the compass of the potatoes; in weight it had lost about two thirds by the process; but the cake, when dressed with steam or otherwise, will produce nearly the same quantity of food, as three pounds and a half of potatoes properly dressed for table, would do. Some potatoes, quite frozen, have been prepared this way, and the cake was perfectly sweet; whereas some of the same parcel that were left, and not pressed, were rotten and spoiled in a few days.

Sure Method to know the State of the Weather.

It is found, by experience, that the leech, kept in a common eight ounce vial, three-fourths filled

with water, changed once a week in summer, and twice in winter, and covered with a bit of linen rag, is a sure prognosticate of the weather. First: in serene weather it lies rolled up in a spiral form at the bottom. Secondly: when it rains before afternoon it creeps to the top, and remains till the weather is settled. Thirdly: against wind it keeps in rapid motion, and seldom rests until it begins to blow hard. Fourthly: if a remarkable storm of thunder and rain is to succeed, it lodges some days before continually without the water, and is very uneasy and convulsed. Fifthly: in frost, as in clear weather, it lies at the bottom; and in snow, as in rain, it keeps at the mouth of the phial.

Chinese Method of rendering Cloth waterproof.

To one ounce of white wax, melted, add one quart of spirits of turpentine, which, when thoroughly mixed and cold, dip the cloth in and hang it up to dry. By this cheap and easy method, muslin, as well as the strongest cloths, will be rendered impenetrable to the hardest rains, without the pores being filled up, or any injury done, when the cloth is coloured.

New Method of cleaning Silks, Woollens, and Cottons.

The following receipt is recommended as a good method of cleaning silk, woollen, and cotton goods, without damage to the texture or colour of the same:

Grate raw potatoes to a fine pulp in clean water, and pass the liquid matter through a coarse sieve into another vessel of water; let the mixture stand still till the fine white particles of the potatoes are precipitated; then pour the mucilaginous liquor from the fecula, and preserve the liquor for use. The article to be cleaned should then be laid upon a linen cloth on a table, and having provided a clean sponge, dip the sponge into the potatoe liquor, and apply it to the article to be cleaned, till the dirt is perfectly separated; then wash it in clean water several times. Two middle sized potatoes will be sufficient for a pint of water. The white fecula will answer the purpose of tapioca, and make an useful nourishing food, with soup or milk, or serve to make starch and hair powder. The coarse pulp, which does not pass the sieve, is of great use in cleaning worsted curtains, tapestry, carpets, or other coarse goods. The mucilaginous liquor will clean all sorts of silk, cotton, or woollen goods, without hurting or spoiling the colour; it may be also used in cleaning oil paintings, or furniture, that is soiled. Dirtied painted wainscots may be cleansed by wetting a sponge in the liquor; then dipping it in a little fine clean sand, and afterwards rubbing the wainscot with it.

To prevent the Increase of Pismires in Grass-Lands newly laid down.

Make a strong decoction of walnut-tree leaves, and after opening several of the pismire's sandy habitations, pour upon them a quantity of the li-

quor, just sufficient to fill the hollow of each heap; after the middle of it has been scooped, throw in the contents from the sides, and press down the whole mass with the foot, till it becomes level with the rest of the field. This, if not found effectual at first, must be repeated a second or a third time, when they will be infallibly destroyed.

To discover adulterated Wine.

Boil, together, in a pint of water, an ounce of quick lime, and half an ounce of flour of brimstone; and when the liquor, which will be of a yellow colour, is cold, pour it into a bottle, and cork it up for use. A few drops of this liquor being let fall into a glass of wine or cyder, containing lead, (which is the general adulteration) it will change the same, more or less, into a brown colour, according to the quantity of lead which it contains. If the wine be wholly free from lead, it will be rendered turbid by the liquor, but the colour will be rather a dirty white than a blackish brown.

Method of cultivating Radishes for Sallad, so as to have them ready at all Seasons of the Year.

Take seeds of the common radish, and lay them in rain water to steep for twenty-four hours; then put them quite wet, into a small linen bag, well tied at the mouth with packthread. If you have steeped a large quantity of seeds you may divide them into several bags. Then expose the bags in a place where they will receive the greatest heat of

the sun, for about twenty-four hours, at the end of which time the seed will begin to grow, and you may then sow it in the usual manner, in earth well exposed to the heat of the sun. Prepare two small tubs to cover each other exactly. These may be easily provided, by sawing a small cask through the middle, and they will serve in winter; in summer one will be sufficient for each kind of earth that has been sown. As soon as you have sown your seeds you must cover them with your tub, and at the end of three days you will find radishes of the size and thickness of young lettuces, having at their extremities two small round leaves, rising from the earth, of a reddish colour. These radishes, cut or pulled up, will be excellent, if mixed with sallad, and they have a much more delicate taste than the common radishes which are eaten with salt.

By taking the following precautions you may have them in the winter, and even during the hardest frosts: After having the seeds in warm water, and exposed them to the sun as already directed, or in a place sufficiently hot to make them shoot forth, warm the two tubs; fill one of them with earth well dunged; sow your seeds, thus prepared, in one of them, and cover it with the other tub; you must then be careful to sprinkle it with warm water as often as may be necessary. Then carry the two tubs closely joined, taking care they cover each other, into a warm vault, or cellar, and at the end of fifteen days you may gather a fine sallad.

Easy and expeditious Method of dissipating the noxious Vapours found in Wells, &c. by Ebenezer Robinson, of Philidelphia.

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After various unsuccessful trials, I was led to consider how I could convey a large quantity of fresh air from the top to the bottom of the well, supposing that the foul would necessarily give way to the pure air. With this view, I procured a pair of smith's bellows, fixed in a wooden frame, so as to work in the same manner as at the forge. This apparatus being placed at the edge of the well, one end of a leathern tube, (the nose of a fire engine), was closely adapted to the nose of the bellows, and the other end was thrown into the well, reaching within one foot of the bottom.

At this time the well was so infected, that a candle would not burn at a short distance from the top; but, after blowing with my bellows only half an hour, the candle burned bright at the bottom: then, without further difficulty, I proceeded in the work, and finished my well.

Wells are often made in a very slight manner, owing to the difficulty of working in them, and there have been several fatal instances of the danger attending the workmen; but by the above method there is neither difficulty nor danger in completing the work with the utmost solidity.

It is obvious, that in cleaning vaults, and working in any subterraneous place subject to damps, as they are called, the same method must be attended with the same beneficial effects.

A most excellent Glue.

Beat an ounce of isinglass to shreds; put it into a pint of brandy; dissolve it gradually by means of gentle heat, and then strain the solution through a piece of fine muslin. The glue thus obtained should be kept in glass closely stopped. When required for use, it should be dissolved with moderate heat, when it will appear thin, transparent, and almost limpid. When applied in the manner of common glue, its effects is so powerful as to join together the parts of wood stronger than the wood itself is united. This glue dries into a very strong, tough, and transparent substance, not easily damaged by any thing but aqueous moisture, which renders it unfit for any use where it would be much exposed to wet or damp air.

To preserve Furs, Woollens, &c.

Many woollen-drapers put bits of camphor, the size of a nutmeg, in papers, on different parts of their shelves in their shop; and as they brush their cloths every two, three, or four months, this keeps them free from moths; and this should be done in boxes where furs, &c. are put. A tallow candle is frequently put within each muff when laid by.

For cleaning Steel or Iron-polished Stoves.

Stoves may be admirably cleaned, in a few minutes, by using a small portion of fine corn emery-stone; and afterwards finishing with flour of emery or rotten-stone, either of which may be obtained at any ironmongers.

To make artificial Sea Water.

Take common sea salt, two pounds; bitter purging salt, two ounces; magnesia earth, half an ounce; dissolve all in river water, six gallons. These are the exact proportions and contents of sea water, from an accurate analization.

To prevent disagreeable Smells from Privies, Night Chairs, &c.

Milk of lime (water in which lime has been dissolved and whitened by the fine particles of that substance) must be mixed with a ley of ashes, or soapy water that has been used in washing, then thrown into the sink of the privy, it will destroy the offensive smell. By these means, for the value of a few pence, any collection of filth whatever may be neutralised.

For the night-chairs of sick persons, put within the vessel half a pound of quick lime, half an ounce of powdered sal-ammoniac, and water one pint: this will prevent any disagreeable odour.

To prevent the bad Effects in Cattle from eating young Clover.

Cattle being apt to die from eating young clover, the following has, in many instances, been found to have produced an effectual cure:—fill an egg-shell with tar, and make them swallow it, breaking it as it passes down to the gullet.

To purify Fish Oil.

Mix one part wheaten flour with ten parts water, add them to one hundred parts of oil; strongly agitate the mixture; heat it slowly on the fire to just the boiling point of water, about 212; take the mixture from the fire, and allow it to settle.

Gooseberry Vinegar.

Take the gooseberries, when full ripe, stamp them small; to every quart put three quarts of water, stir them well together; let it stand twenty-four hours, then strain it through a canvas bag.

To every gallon of liquor add one pound of brown sugar, and stir them well together before you barrel your liquor.

The old bright yellow English gooseberries are the best.

Caution in Washing Linen.

When fevers are prevalent, or any complaints, even common colds, it is of much importance that the dirty linen of the sick should be washed in separate waters by themselves; for a degree of infectious taint will attach and communicate to all linen washed with the linen of the sick. This hint may induce considerate persons to attend to it, and to give directions accordingly to laundresses.

For taking Grease out of the Leaves of Books.

Fold up, in two small bags made of fine open muslin, some ashes of burnt bones, finely powdered,

or of calcined hartshorn, which is always ready prepared at the shops of the druggists; lay the bags of muslin, containing the powder, one on each side of the greasy leaf; and having heated a pair of fire tongs, or hair-dressers' pinching tongs, of a moderate warmth, press with them the two bags against the greasy spot, and hold them some time in that situation. Repeat the process, if necessary.

When the irons cannot be conveniently used, the powder may be heated over the fire, in a clean earthen vessel; and, whilst hot, applied, without any muslins, on each side of the grease spot, and a weight laid on it to assist its effect.

Tincture for the Teeth.

Dissolve two drachms of gum-arabic, finely powdered, in six ounces of pure water; then add half an ounce of simple tincture of bark, half an ounce of simple tincture of myrrh, and two drachms of simple tincture of benzoin.

Beef Tea.

Take lean beef, a pound, cut it in thin slices, put it into a quart of water, boil it a quarter of an hour; then take out the meat, mince it small, and boil it a quarter of an hour more, skimming it well.

To preserve Lemon Juice during a long Voyage.

Care must be taken to squeeze only sound fruit, as a tainted lemon will endanger the spoiling of the

whole; the expressed juice must be depurated, by standing a few days, adding one ounce of cream of tartar to every quart of lemon juice; filter it pretty clear; then it is to be put into small bottles, none of them containing more than a pint of juice; in the neck of the bottle, a little of the best oil of olives is to be poured, and the cork well sealed over.

To manage Ripe Fruit for a Desert.

Take some fruit baskets of open work, cover them with large leaves, and at seven o'clock in the morning go out and gather the fruit. When you have carefully chosen what is ripe, and laid it handsomely in the basket, let it be placed in a cool, but not damp room, till it is wanted. When the ripest are gathered, the rest are to be preserved; and, with respect to birds, some lime twigs and trap cages should be placed, and lines of feathers hung about the place.

Ferment for Bread, used by the Inhabitants of Long Island, in the State of New York.

Take as many hops as may be held between the thumb and three fingers; put them into a pint and a half or a quart of water, and boil them well together. If you have some apples, or a pumpkin, in the house, cut a few slices of either of these, and throw in, and it will be all the better. Then pour the liquor off, or strain it through a coarse cloth, and add three or four spoonfuls of molasses, and stir in as much flour as will mingle with it to the consistence of thin batter. Set the whole in the corner

of the kitchen fire-place, or in any temperature of moderate warmth, until a fermentation takes place, which will happen in a few hours, and then mix it with flour.

This will be sufficient for one baking, for a family of eight or ten persons.

An excellent Family Wine

May be made of equal parts of red, white, and black currants, ripe cherries, and raspberries, well bruised, and mixed with soft water, in the proportion of four pounds of fruit to one gallon of water. When strained and pressed, three pounds of moist sugar are to be added to each gallon of liquid. After standing open three days, during which it is to be stirred frequently, and scum it as it may require, it is to be put into a barrel, and left for a fortnight to work, when a ninth part of brandy is to be added, and the whole bunged down; and in two or three years it will be rich and valuable.

Burns.

A little spirits of turpentine, made about milk warm, applied to recent burns, will mitigate the pain, if not wholly remove it.

Court Plaister.

Take of isinglass, half an ounce; Turlington's (or Friar's) balsam, a drachm; melt the isinglass in an ounce of water, and boil the solution till a great part of the water is consumed; then add gradually to it the balsam, stirring them well together. After the mixture has continued a short time on the fire, take the vessel off, and spread the extended

silk with it whilst it is yet fluid with heat, using a brush for spreading it.

To dry Haddocks.

Take haddocks, of two or three pounds in weight, and, after taking out the gills and eyes, gut them, and remove all the blood from the back bone. Rub them dry, and put a little salt in the bodies and eyes. Lay the fish on a board for one night, then hang them up in the kitchen, or any dry place. After hanging two or three days the fish will be fit for use. When to be dressed, skin them, and rub them over with egg yolk, and strew upon them some bread crumbs; then lay them before the fire, and baste them till they become sufficiently brown. Serve up, either round or split open, with egg sauce.

Haddocks, preserved in this manner, will occasionally prove a great accommodation to families resident in the country, and whose distance from a great town may prevent their being regularly supplied with fish.

A cheap and simple Process for Painting on Glass, sufficient for the Purpose of making a Magic Lanthorn.

Take good clear rosin, any quantity, melt it in a iron pot; when melted entirely, let it cool a little, and, before it begins to harden, pour in oil of turpentine sufficient to keep it liquid when cold. In order to paint with it, let it be used with colours ground with oil, such as are commonly sold in colour shops.

Curious Mode of growing Fruits and Flowers during Winter.

In order to produce this effect, the trees or shrubs being taken up in the spring, at the time when they are about to bud, with some of their own soil carefully preserved among the roots, must be placed upright in a cellar till Michaelmas; when, with the addition of fresh earth, they are to be put into proper tubs or vessels, and placed in a stove or hot-house, where they must every morning be moistened or refreshed with a solution of half an ounce of sal-ammoniac in a pint of rain water. Thus, in the month of February, fruits or roses will appear; and with respect to flowers in general, if they are sown in pots at or before Michaelmas, and watered in a similar manner, they will blow at Christmas.

White Varnish. By Dr. Withering.

Take of gum-sandarach, an ounce and a half; mastic, in drops, half an ounce; gum-elemi, a quarter of an ounce; oil of spike lavender, a quarter of an ounce; put them into a half pint phial, and fill it up with best spirits of wine. Let it stand in rather a warm place, till all the gums are dissolved, and then pour off the varnish into a clean phial, and it will be ready for use.

Effectual and easy Manner of preserving Eggs perfectly fresh, for Twelve Months.

Having provided small casks, like oyster barrels, fill them with fresh laid eggs; then pour into each

cask, the head of which is supposed to have been first taken out, as much cold thick lime-water as will fill up all the void spaces between the eggs, and likewise completely cover them. The thicker the lime-water is the better, provided it will fill up all the interstices, and be liquid at the top of the cask; this done, lay on the head of the cask lightly. No farther care is necessary, than merely to prevent the lime from growing too hard, by adding, occasionally, a little common water on the surface, should it seem so disposed, and keeping the casks from heat and frost. The eggs, when taken out for use, are to be washed from the adhering lime with a little cold water, when they will have both the appearance and qualities of fresh laid eggs, the lime preserving them from shrinking or putridity.

Easy Method of preventing Moths in Furs or Woollens.

Sprinkle the furs or woollen stuffs, as well as the drawers or boxes in which they are kept, with spirits of turpentine; the unpleasant scent of which will speedily evaporate, on exposure of the stuffs to the air. Some persons place sheets of paper, moistened with spirits of turpentine, over, under, or between pieces of cloth, &c. and find it a very effectual method.

Excellent Composition to take out Stains or Grease Spots from Silk, Cotton, or Woollen.

To two ounces of spirits of wine add one ounce of French chalk and five ounces of tobacco-pipe

clay, both in fine powder; make this mixture into rolls about the length of a finger, and let them dry. This composition is to be applied by rubbing on the spot, either dry or wet, and afterwards brushing the part rubbed therewith.

Process for making lead-coloured Paint to preserve Iron.

Take a small quantity of common litharge, and place it over the fire in a shovel; afterwards, when sufficiently warm, scatter over it a little flour of brimstone, which will instantly convert it into a blackish colour, and which, when ground in oil, makes a good dark lead colour. It dries quick, gets remarkably hard, and resists the weather better than any other lead colour.

On preserving Seeds of Plants in a State fit for Vegetation.

Seeds of plants may be preserved, for many months at least, by causing them to be packed, either in husks, pods, &c .in absorbent paper, with raisins or brown moist sugar; or a good way, practiced by gardeners, is to wrap the seed in brown paper or cartridge paper, pasted down, and then varnished over.

To restore the Lustre of Gold or Silver Lace, when tarnished.

When gold or silver lace happens to be tarnished, the best liquor that can be used for restoring its lustre is spirits of wine; it should be warmed be-

fore it is applied to the tarnished spot. This application will preserve the colour of the silk or embroidery.

Method of rendering all Sorts of Paper, Linen, and Cotton less combustible.

This desirable object may be, in some degree, effected, by immersing these combustible materials in a strong solution of allum water; and, after drying them, repeating this immersion, if necessary. Thus, neither the colour, nor the quality of the paper, will be in the least effected; on the contrary, both will be improved: and the result of the experiment may be ascertained, by holding a slip of paper, so prepared, over a candle.

To make Otto (or Odour) of Roses.

Pick the leaves of roses from all seeds and stalks, put them in a clean earthen vessel, glazed within, or a clean wooden vessel. Pour spring water on them, so as to cover them; set the vessel in the sun in the morning at rising, and leave it in the sunshine till sun set; then take them into the house, repeat this for six or seven days, and in three or four days there will be a fine yellow oily matter on the surface of the water; and, in two or three days more, there will appear a scum upon the surface, which is the otto of roses. This may be taken up with cotton, and squeezed into a phial with the finger and thumb.

To discover whether Flour be adulterated with Whitening or Chalk.

Mix with the flour some juice of lemon or good vinegar; if the flour be pure they will remain together at rest, but if there be a mixture of whitening or chalk, a fermentation, or working like yeast, will ensue. The adulterated meal is whiter and heavier than the good. The quantity that an ordinary tea-cup will contain has been found to weigh more than the quantity of genuine flour by four drachms and nineteen grains troy.

To make Ginger Beer.

To every gallon of spring water add one ounce of sliced white ginger, one pound of common loaf sugar, and two ounces of lemon juice, or three large table spoonfuls; boil it near an hour, and take off the scum; then run it through a hair sieve into a tub, and when cool (viz. 70°) add yeast in proportion of half a pint to nine gallons; keep it in a temperate situation two days, during which it may be stirred six or eight times; then put it into a cask, which must be kept full, and the yeast taken off at the bung-hole with a spoon. In a fortnight add half a pint of fining (isinglass picked and steeped in beer) to nine gallons, which will, if it has been properly fermented, clear it by ascent. The cask must be kept full, and the rising particles taken off at the bung-hole. When fine (which may be expected in twenty-four hours) bottle it, cork it well,

and in summer it will be ripe and fit to drink in a fortnight.

Preservation of Succulent Plants.

Green succulent plants are better preserved after a momentary immersion in boiling water, than otherwise. This practice has been successfully used in the preservation of cabbage, and other plants, dried for keeping; it destroys the vegetable life at once, and in a great degree prevents that decay which otherwise attends them.

Bread made from the Water Gladiole.

The root of the flowering rush, or water gladiole, when dried and ground, makes a bread but little inferior in colour, nutriment, or taste, to that made from wheaten flour. It is the common food of the Calmucs, and, in deficient harvests, is used in many of the northern parts of the continent.

Bad Effects of Iron Nails, &c. on Fruit Trees, or mischievous Effects of Iron Nails in Conjunction with Branches of Fruit Trees.

It often happens that some of the limbs of fruit trees, trained against a wall, are blighted and die, while others remain in a healthy and flourishing state. This has been hitherto erroneously attributed to the effects of lightning; but, from closer observation, and from several experiments, it has been found to arise from the corroding effects of the rust of the nails and cramps with which trees in this situ-

ation are fastened. To avoid this inconvenience, therefore, it requires only to be careful in preventing the iron from coming in contact with the bark of the trees.

Substitute for Curriers' Oil.

A cheap substitute for the oil used by curriers in the preparation of leather, is made by boiling whale-oil for a few minutes, at a temperature of twenty-five degrees Reaumur, with nitric acid, in the proportion of half an ounce of the acid to a pound of oil.

Important Uses of the Leaves of the Vine.

From experiments made by Sir James Hall, it has been found that the leaves of the vine, dried in the shade, make an excellent and extremely wholesome tea, though differing in taste and flavour from that commonly used. Besides, also being admirably calculated for making vinegar, the prunings of the vine, on being bruised and put into a vat or mashing tub, and boiling water poured on them, in the same way as is done with malt, will produce a liquor of a fine vinous quality; which, being fermented, forms a substitute for beer; and which, on being distilled, produces a good spirit of the nature of brandy.

A cheap and simple Method of making Vinegar.

To every gallon of water put a pound of coarse Lisbon sugar; let the mixture be boiled, and skim-

med so long as any scum arises. Then let it be poured into proper vessels; and when it is as cool as beer when worked, let a warm toast, rubbed over with yeast, be put to it. Let it work about twenty four hours, and then put it into an iron-hooped cask, and fixed either near a constant fire, or where the summer sun shines the greater part of the day; in this situation it should not be closely stopped up, but a tile, or something similar, laid on the bung-hole, to keep out the dust and insects. At the end of about three months (sometimes less) it will be clear, and fit for use, and may be bottled off. The longer it is kept after it is bottled the better it will be. If the vessel containing the liquor is to be exposed to the sun's heat, the best time to begin making it is in April.

A useful Paste to stop Holes in Iron Culinary Utensils.

To six parts of yellow potter's clay, add one part of steel filings, and a sufficient quantity of linseed oil, and make the paste of the consistence of glazier's putty, with which the holes are to be filled. The composition should be suffered to dry upon the vessel after being applied.

Genuine Windsor Soap.

To make this famous soap for washing the hands, shaving, &c. nothing more is necessary, than to slice the best white soap as thin as possible, melt it in a stew pan over a slow fire, scent it well with oil of carraway, and then pour it into a frame or mold made for that purpose, or a small drawer, adapted in size and form to the quantity. When it

has stood three or four days in a dry situation, cut it into square pieces, and it is ready for use. By this simple mode, substituting any more favourite scent for that of carraway, all persons may suit themselves with a good perfumed soap at the most trifling expence. Shaving boxes may be at once filled with the melted soap, instead of a mould.

To drive away Crickets.

These troublesome insects, from a superstitious notion that they bring good luck, are frequently preserved. Those who wish to have them removed will find the smoke of charcoal destroy them, and loud sounds drive them away. Cock roaches are likewise destroyed by the smoke of charcoal.

Cheap and excellent Composition for preserving Weather Boarding, Paling, and all other Works liable to be injured by the Weather.

Lime, it is well known, however well burnt, will soon become slacked by exposure in the open air, or even if confined in a situation not remarkably dry, so as to crumble of itself into powder. This is called air-slacked lime, in contradistinction to that which is slacked in the usual way, by being mixed with water. For the purpose of making the present useful composition to preserve all sorts of wood-work exposed to the vicissitudes of the weather, take three parts of this air-slacked lime, two of wood ashes, and one of fine sand; pass them through a fine sieve, and add as much linseed oil to the composition as will bring it to a proper consistence for

working with a painter's brush. As particular care must be taken to mix it perfectly, it should be gound on a stone slab with a proper muller, in the same manner as painters grind their white lead, &c. but, where these conveniences are not at hand, the ingredients may be mixed in a large pan, and well beat up with a wooden spatula. Two coats of this composition being necessary, the first may be rather thin; but the second should be as thick as it can conveniently be worked. This most excellent composition for preserving wood when exposed to the injuries of the weather, is highly preferable to the customary method of laying on tar and ochre.

Best Method of cleaning fine Block tin Dish Covers, Patent Pewter, &c.

Where the polish is gone off, let the articles be first rubbed over the outside with a little sweet oil, on a piece of soft linen cloth; then clear it off with dry pure whitening, quite free from sand, on linen cloths, which will make them look as well as when new. The insides should be rubbed with rags moistened in wet whitening, but without a drop of oil. Always wiping these articles dry, when brought from table, and keeping them free from steam or other damp, greatly facilitates the trouble of cleaning them.

Plate Powder.

In most of the articles sold as plate powders, under a variety of names, there is an injurious mix-

ture of quicksilver, which is said sometimes so far to penetrate and render silver brittle, that it will even break with a fall. Whitening, properly purified from sand, applied wet, and rubbed till dry, is one of the easiest, safest, and certainly the cheapest, of all plate powders; jewellers and silversmiths, for small articles, seldom use any thing else. If, however, the plate be boiled a little in water, with an ounce of calcined hartshorn in powder to about three pints of water, then drained over the vessel in which it was boiled, and afterwards dried by the fire, while some soft linen rags are boiled in the liquid till they have wholly imbibed it, these rags will, when dry, not only assist to clean the plate, which must afterwards be rubbed bright with leather, but also serve admirably for cleaning brass locks, finger plates, &c.

To recover damaged Gunpowder.

The method of the powder merchants is this:—they put part of the powder on a sail cloth, to which they add an equal weight of what is really good; then, with a shovel, they mingle it well together, dry it in the sun, and barrel it up, keeping it in a dry and proper place.

To stop Cracks in Glass Vessels.

The cracks of glass vessels may be mended, by daubing them with a suitable piece of linen over with white of egg, strewing both over with finely powdered quick lime, and instantly applying the linen closely and evenly.

To perfume Linen.

Rose leaves dried in the shade, cloves beat to a powder, and mace scraped; mix them together, and put the composition into little bags.

How to judge the Properties of Nutmegs.

The largest, heaviest, and most unctuous of nutmegs are to be chosen, such as are the shape of an olive, and of the most fragrant smell.

To counteract the baneful Effects of Poison.

Whenever arsenic has been taken internally, by design or mistake, the best medicine is sulphuret of potash (liver of sulphur) dissolved in water. A few scruples should be dissolved in half a pint or a pint of water, and administered a little at a time, as the patient can bear it.

Vanherman's incomparable and durable White Paint, for Inside Work only, which will dry and cease to smell within six Hours.

Add, to a gallon of spirit of turpentine, two pounds of frankincense. Let it simmer over a clear fire, till dissolved; then strain it, and bottle it for use. To a gallon of bleached linseed oil, add a quart of this mixture, shake them well together, and bottle this also. Let any quantity of white lead be ground very fine with spirit of turpentine; then add to it a sufficient portion of the last mix-

ture, till it be found fit for laying on. If, in working, it should grow thick, it must be thinned with spirit of turpentine. This is what painters call a flat or dead white, to distinguish it from common white paint, being only suitable for the very best internal work, both on account of its superior delicacy and expence.

Method of Cleaning and Polishing Rusty Steel.

After well oiling the rusty parts of the steel, let it remain two or three days in that state; then wipe it dry with clean rags, and polish with emery or pumice stone, on hard wood. Frequently, however, a little unslacked lime, finely powdered, will be sufficient, after the oil is cleaned off. Where a very high degree of polish is requisite, it will be most effectually obtained by using a paste composed of finely levigated blood-stone and spirits of wine. Bright bars, however, are admirably cleaned, in a few minutes, by using a small portion of fine corn emery, and afterwards finishing with flour of emery or rotten-stone; all of which may be had at any ironmonger's. This last very simple method will, perhaps, render any other superfluous.

Easy Method of Cleaning Paper Hangings.

Cut into eight half quarters, a quartern loaf two days old, it must neither be newer nor staler. With one of these pieces, after having blown off all the dust from the paper to be cleaned by means of a good pair of bellows, begin at the top of the room; holding the crust in the hand, and wiping lightly downward with the crumb, about half a

yard at each stroke, till the upper part of the hangings is completely cleaned all round. Then go again round, with the like sweeping stroke downward, always commencing each successive course a little higher than the upper stroke had extended, till the bottom be finished. This operation, if carefully performed, will frequently make very old paper look almost equal to new. Great caution must be used not by any means to rub the paper hard, nor to attempt cleaning it the cross or horizontal way. The dirty part of the bread, too, must be each time cut away, and the pieces renewed as soon as at all necessary

New Method of clearing Feathers from their Animal Oil.

Take, for every gallon of clear water, a pound of quick lime; mix them well together; and, when undissolved lime is precipitated in fine powder, pour off the clear lime-water for use at the time it is wanted. Put the feathers to be cleaned in another tub, and add to them a sufficient quantity of the clear lime-water to cover the feathers about three inches, when well immersed and stirred therein. The feathers, when thoroughly moistened, will sink down; and should remain in the lime water three or four days; after which, the foul liquor should be separated from the feathers, by laying them on a sieve. The feathers should be afterward well washed in clean water, and dried on nets, the meshes being about the same fineness as those of cabbage nets. The feathers must, from time, be shaken on the nets; and, as they dry, they will fall through the meshes, and are to be collected

for use. The admission of air will be serviceable in the drying, and the whole process may be completed in about three weeks. The feathers, after being thus prepared, will want nothing more than beating for use, either for beds, bolsters, pillows, or cushions.

Composition for restoring Scorched Linen:

Boil, to a good consistency, in half a pint of vinegar, two ounces of Fuller's earth, an ounce of hen's dung, half an ounce of cake soap, and the juice of two onions. Spread this composition over the whole of the damaged part; and, if the scorching were not quite through, and the threads actually consumed, after suffering it to dry on, and letting it receive a subsequent good washing or two, the place will appear full as white and perfect as any other part of the linen.

Vulgar Error respecting the putting of Spirits into Boots or Shoes to prevent the Effects of Cold.

The custom of pouring brandy into the boots or shoes, when the feet have got wet, with a view to prevent the effects of cold, is a practice which (though very common) is founded in prejudice and misconception, and often proves fatal, by bringing on inflammation and consequent obstruction in the bowels. This practice is adopted upon the supposition that, because spirits, when swallowed, excite an universal warmth and restore the circulation in the extremities, they must do the same when applied to

the extremities themselves. But the reverse happens. Fluids, when evaporating, produce cold; and the lighter or more spiritous the fluid, the more quickly it evaporates, and the greater is the degree of cold generated. This may be proved by a very simple experiment. If one hand be wetted with spirit and the other with water, and both are held up to dry in the air, the hand wetted with spirit will feel infinitely colder than the other; or if the bulbs of two thermometers be so treated, the mercury will be observed to fall much more rapidly and extensively in the one case than in the other. Whatever danger, therefore, arises from cold or damp feet, it is generally enhanced by the practice alluded to. If such a remedy is to be at all employed, it ought, undoubtedly, to be taken into the stomach.

Approved Method of removing Bees.

Set the hive where there is only a glimmering light; turn it up; the queen first makes her appearance; once in possession of her you are master of all the rest; put her into an empty hive, whither she will be followed by the other bees.

To make Birch-tree Wine.

The vernal sap of the birch tree is made into wine. In the beginning of March, while the sap is rising, holes must be bored in the body of the tree, and fassets, made of elder, placed in them, to convey away the liquid. If the tree be large it may be tapped in several places at a time, and thus, ac-

cording to the number of trees, the quantity of liquid is obtained. The sap is to be boiled with sugar, in the proportion of four pounds to a gallon, and treated in the same manner as other made wines.

One great advantage attaching to the birch is, that it will grow on almost any barren ground.

Remedies against Fleas.

Fumigation with brimstone, or the fresh leaves of penny-royal sewed in a bag, and laid in the bed, will have the desired effect.

To make the Phosphoric Match Bottle.

These bottles may be prepared by mixing one part of flour of sulphur with eight of phosphorus. This requires caution, and should afterwards be handled with great care, lest any part of the mixture get under the finger nails, a small portion of which might occasion great inconvenience. When used to procure a light, a very minute quantity is taken out of the bottle on the point of the match, and rubbed upon cork or wood, which produces an immediate flame.

To make the celebrated Pomade Divine.

According to Dr. Beddoes, this composition is as follows, viz. beef marrow, twelve ounces, steeped in water ten days, and afterwards in rose water twenty-four hours; flowers of benjamin, pounded storax, and Floerntine orris, of each half an ounce; cinnamon, a quarter of an ounce, and clove and

nutmeg, a quarter of an ounce. The whole to be put in an earthen vessel, closely covered down, to keep in the fumes, and being suspended in water mader to boil three hours; after which, the whole is to be strained and put into bottles.

To Blue Mourning Buckles, Swords, &c.

Take a piece of grindstone and whetstone, and rub hard on the work, to take off the black scurf from it; then heat it in the fire, and as it grows hot the colour changes by degrees, coming first to a light then to a dark gold colour, and lastly, to a blue. Indigo and sallad oil, ground together, is also used by rubbing the mixture on the work, with a woollen cloth, while it is heating, leaving it to cool of itself.

Rules for Milking Cows.

Cows should be milked three times a day, if fully fed, throughout the summer; and great caution should be exercised by the persons employed, to draw the milk from them completely, not only to increase the quantity of produce, but to preserve its quality. Any portion which may be left in the udder seems gradually to be absorbed into the system, and no more is formed than enough to supply the loss of what is taken away; and, by the continuance of the same mode, a yet farther diminution of the secretion takes place, until at length scarcely any is produced. This last mode of milking is always practised when it is intended that a cow should be rendered dry.

To cure Spirituous Liquor of bad Flavour.

If common raw spirits be agitated with charcoal, they will be deprived of their bad flavour; but if kept in the cask long afterwards, are very apt to resume the old flavour.

To destroy Ants.

Corrosive sublimate, mixed well with sugar, has proved a mortal poison to them, and is the most effectual way of destroying these insects.

To fatten Turkies as they do in Norfolk.

The quality and size of the Norfolk turkies are superior to those of any other part of the kingdom. They are fed almost entirely with buck-wheat, which, perhaps, may account for their excellence, and are bred by almost every little farmer in the county. When young, they demand perpetual attention, and must be fed with allum, curds, and chopped onions; and the expence attending their management and food can be compensated only where broods are tolerably successful, and the prices high.

To Braze or Solder Pieces of Iron.

This is done by means of thin plates of brass, melted between the pieces that are to be joined. If the work be very fine, as when two leaves of a broken saw are to be brazed together, cover it with pulverized borax, melted with water; that it may incorporate with the brass powder which is added to it; the piece must be then exposed to the fire without touching the coals, and heated till the brass is seen to run.

To alleviate the Pain occasioned by the Sting of Gnats.

The disagreeable itching occasioned by the sting of these insects, may be removed by volatile alkali, or immediately rubbing and washing the part affected with cold water.

At night, to rub with Fuller's earth and water lessens the inflammation.

Certain Cure for the Cramp.

An effectual preventative for the cramp in the calves of the legs, which is a most grievous pain, is to stretch out the heel of the leg as far as possible, at the same time drawing up the toes towards the body. This will frequently stop a fit of the cramp after it has commenced; and a person will, after a few times, be able, in general, to prevent the fit coming on, though its approach be between sleeping and waking. Persons subject to this complaint should have a board fixed at the bottom of the bed, against which the foot should be pressed when the pain commences.

To judge of Transparent Colours for Painting.

Transparent colours should be so clear, when mixed with abundance of water, as to communicate a strong tint without in the smallest degree plastering or concealing the paper, &c. hence their designation. The best of every kind are made from either vegetable or animal substances, minerals being extremely difficult to prepare, equally so to work with water, and many of them very subject to change.

To gild Letters on Vellum or Paper.

Letters written on vellum or paper, are gilded in three ways; in the first, a little size is mixed with the ink, and the letters are written as usual: when they are dry, a slight degree of stickiness is produced by breathing on them, upon which the gold leaf is immediately applied, and by a little pressure may be made to adhere with sufficient firmness. In the second method, some white lead or chalk is ground up with strong size, and the letters are made with this by means of a brush; when the mixture is almost dry, the gold leaf may be laid on, and afterwards burnished. The last method is, to mix up some gold powder with size, and make the letters of this by means of a brush.

Substitute for Galls in Dyeing and making Ink.

The excrescences on the roots of young oaks may be used with advantage as a substitute for galls. Oak dust has been used in this country instead of galls, to produce a black dye.

To preserve Aromatic and other Herbs.

The boxes and drawers in which vegetable matters are kept, should not impart to them any smell or taste; and more certainly to avoid this, they should be lined with paper. Such as are volatile, of a delicate texture, or subject to suffer from insects, must be kept in well covered glasses. Fruits and oily seeds, which are apt to become rancid,

must be kept in a cool and dry, but by no means in a warm or moist place.

To cure Red Herrings.

They must lie twenty-four hours in brine, in as much as they are to take in all their salt there, and when they are taken out they are to be spitted, that is, strung by the head on little wooden spits, and then hung in a chimney made for that purpose. After which, a fire of brush wood, which yields a deal of smoke, but no flame, being made under them, they are to remain till sufficiently dried, and afterwards to be barrelled up for keeping.

To prevent Ink from moulding.

Half a dozen cloves, bruised with gum-arabic, are to be put into the bottle. If a very fine ink is wanted, white wine, or vinegar and water should be used instead of water alone.

A new Method of rearing Poultry to Advantage. Communicated by Mrs. D'Oyley to the Society of Arts, &c.

"I keep a large stock of poultry, which are regularly fed in a morning upon steamed potatoes chopped small, and at noon they have barley; they are in high condition, tractable, and lay a very great quantity of eggs. In the poultry yard is a small building, similar to a pigeon cote, for the hens to lay in, with frames covered with net to slide before each nest; the house is dry, light, and well venti-

lated, kept free from dirt, by having the nests and walls white-washed two or three times a year, and the floor covered once a week with fresh ashes; when I wish to procure chickens, I take the opportunity of setting many hens together, confining each to her respective nest; a boy attends morning and evening to let any off that appear restless, and to see that they return to their proper places; when they hatch, the chickens are taken away, and a second lot of eggs allowed them to set again, by which means they produce as numerous a brood as before; I put the chickens into long wicker cages, placed against a hot wall, at the back of the kitchen fire, and within them are artificial mothers for the chickens to run under; they are made of boards about ten inches broad, and fifteen inches long, supported by two feet in the front, four inches in height, and by a board at the back two inches in height. The roof and back are lined with lamb's-skins dressed with the wool upon them. The roof is thickly perforated with holes for the heated air to escape; they are formed without bottoms, and have a flannel curtain in front, and at the ends, for the chickens to run under, which they do apparently by instinct. The cages are kept perfectly dry and clean with sand or moss. The above is a proper size for fifty or sixty new hatched chickens, but as they increase in size they of course require a larger mother. When they are a week old, and the weather fine, the boy carries them, and their artificial mother, to the grass-plot, nourishes and keeps them warm, by placing a long narrow tin vessel, filled with hot water, at the back of the artificial mother, which will retain its heat for three hours, and is then renewed

fresh from the steamer. In the evening they are driven into their cages, and resume their station at the hot wall, till they are nearly three weeks old, and able to go into a small room, appropriated to that purpose. The room is furnished with frames similar to the artificial mothers, placed round the floor, and with perches conveniently arranged for them to roost upon.

"When I first attempted to bring up poultry in the above way, I lost immense numbers by too great heat and suffocation, owing to the roofs of the mothers not being sufficiently ventilated; and when that evil was remedied I had another serious one to encounter; I found chickens brought up in this way did not thrive upon the food I gave them, and many of them died, till I thought of getting coarse barley-meal, and steaming it till quite soft; the boy feeds them with this and minced potatoes alternately; he is also employed rolling up pellets of dough, made of coarse wheat flour, which he throws to the chickens to excite them to eat, thereby causing them to grow surprisingly. Hens kept as mine are, and having the same conveniences, will readily set four times in a season, and by setting twice each time, they would produce, at the lowest calculation, eighty chickens each, which would soon make them very plentiful.

White-washing the Trunks of Trees recommended.

Being one day upon a visit (observes Mr. Northmore, who recommends this experiment) at my friend's, near Yarmouth, in the Isle of Wight, I

remarked that several of the trunks of trees in his orchard had been covered with whitewash; upon enquiring the reason he replied, that he had done it with a view to keep off the hares, and other animals, and that it was attended not only with that good effect, but several others, for it made the rind smooth and compact, by closing up the cracks; it entirely destroyed the moss; and as the rains washed off the lime, it manured the roots. These several advantages derived from so simple a practice deserve to be more generally known. The whitewash is made in the usual manner, with lime, and may be applied twice, or oftener, if necessary.

To preserve Potatoes from the Frost.

If you have not a convenient store place for them, dig a trench three or four feet deep, into which they are to be laid as they are taken up, and then covered with the earth taken out of the trench, raised up in the middle like the roof of a house, and covered with straw, to carry off the rain. They will be thus preserved from the frost, and can be taken up as they are wanted.

Preservative from Moths in Clothes or Books.

Get some narrow slips of the best Russia leather, and lay the same indiscriminately among the books, clothes, &c. The leather may be procured at any bookbinder's in town, and a pound, which will last a long time, costs about a shilling. This will have the desired effect, it having been frequently used with great success.

To make Sky Rockets.

The charges for sky rockets are made of saltpetre four pounds, brimstone one pound, and charcoal one pound and a half; or by another direction, saltpetre four pounds, brimstone one pound and a half, charcoal twelve ounces, and meal powder two ounces. These proportions vary again according to the size of the rockets; in rockets of four ounces, mealed powder, saltpetre, and charcoal, are used in the proportions of 10, 2, and 1; but in very large rockets the proportions are, saltpetre four, mealed powder and sulphur one each. When stars are wanted, camphor, alcohol, antimony, and other ingredients, are required, according as the stars are to be blue, white, &c. In some cases gold and silver rain is required, then brass dust, steel dust, saw dust, &c. enter into the composition; hence the varieties may be almost indefinite. With respect to colour, sulphur gives a blue, camphor a white or pale colour, saltpetre a whitish yellow, sal-ammoniac a green, antimony a reddish, rosin a copper colour. These materials require preparation before they are fit for use; and before a person can be qualified for the business of fire-work making, he must understand the method of making the moulds, cases, &c. and and be acquainted with the instruments used in the art, their dimensions and materials.

To make Mezzotintos.

Mezzotintos are made in the following manner: take a well-polished copper-plate, and, beginning at the corner, rake or furrow the surface all over

with a knife or instrument made for the purpose, first one way and then the other, till the whole is of a regular roughness, without the least smooth part to be seen; in which state, if a paper was to be worked from it at the copper-plate press, it would be all over black. When this is done, the plate is rubbed over with charcoal, or black lead, and then the design is drawn with white chalk; after which, the outlines are traced out, and the plate finished, by scraping off the roughness, so as to leave the figure on the plate. The outlines and deepest shades are not scraped at all, the next shades are scraped but little, the next more, and so on, till the shades gradually falling off, leave the paper white, in which places the plate is neatly burnished.

Proper Soil for the Culture of Turnips.

Sandy loams, in good heart, are most favourable to their growth, though they will thrive well on strong loams, if they are not wet; but on clayey, thin, or wet soils, they are not worth tilling; the crop is always poor, and the land injured by them.

To judge of the Quality of Wheat Flour.

As the state of wheat is ascertained by the quantity and quality of the glutinous matter it contains, the following method is made use of for extracting that matter from it:

Take four ounces of the flour of wheat, separated from the bran; let it be mixed with water so as to form a thick paste, which must be thoroughly kneaded for a quarter of an hour. The paste is

afterwards to be well washed, continually kneading it with the hands under the water, and changing the water from time to time. This washing and kneading are to be continued until the water no longer becomes white by the operation; the glutinous matter, which is of a whitish grey colour, then remains in the hands. If the wheat was sound the matter is glutinous and elastic, if the wheat was heated the matter will be brittle, if the wheat was in a state of fermentation no glutinous matter will be obtained from it.

Comfort for those nearly Blind.

Inscriptions on dark blue glazed paper, written with white ink, have been found very legible by persons afflicted with bad eyes, who have had many things written in a strong plain hand for that purpose. The ink is made with gum water and flake white, finely powdered; it must be often shaken, even whilst you are writing, as the flake white very soon subsides. A common pen will do very well for the writing. A bright yellow, or dark green paper, is likewise very easily read.

To stop the Progress of Fire on board of Ships.

From the great confusion occasioned by the alarm of fire on board a ship, with the difficulty often of ascertaining the precise spot where it is, it appears almost impossible to devise any means to prevent the progress of such an accident when once it has got head.

The only means that seem to promise success is

to convey water to any part of the ship according to the following method:—To place strong pipes through the decks, close to the sides of the vessel; those going to the hold must be cased, to prevent their being damaged by moving stores between the decks. These may be so distributed that every part between the decks may be within the reach of a stream of water issuing from them. The magazine and place where spirits and inflammable stores are kept, ought to have the greatest number of pipes about them, to prevent the fire reaching those parts.

Streams of water to the part on fire, may be directed by a lever fixed on the top of the pipe, the end of which corresponding with the aperture below, the same vertical plane will pass through the lever and the stream.

Small engines, such as those used for watering gardens, will be sufficient for the purpose. Two men only will be required for the service of each pipe, one to supply it, and the other to direct the stream.

Cheap and easy Method of Brewing.

One bushel of malt, and three quarters of a pound of hops will, on an average, brew twenty gallons of good beer.

For this quantity of malt, boil twenty-four gallons of water; and having dashed it in the copper with cold water to stop the boiling, steep the malt (properly covered up) for three hours; then tie up the hops in a hair cloth, and boil malt, hops,

and wort, altogether, for three quarters of an hour, which will reduce it to about twenty gallons. Strain it off, and set it to work when lukewarm.

In large brewings this process perhaps would not answer, but in small ones, where the waste is not so great, and where the malt can be boiled the essence is sure to be extracted.

Rules for Fly Fishing.

A fishing fly is a bait used in angling for various kinds of fish. The fly is either natural or artificial. The chief of the natural flies are the "stone fly," found under hollow stones at the sides of rivers, between April and July; it is brown, with yellow streaks, and has large wings. The "green-drake," found among stones by river sides; it has a yellow body ribbed with green; it is long and slender, with wings like a butterfly, and is common in the spring. The "oak fly," found on the body of an oak or ash, is of a brown colour, and common during the summer months. The "palmer fly or worm," found on the leaves of plants, when it assumes the fly state from that of the caterpillar; it is much used in trout fishing. The "ant fly," found on ant hills from June to September. The "May fly," is to be found playing at the river side, especially before rain. And the "black fly," which is to be found upon every hawthorn after the buds are off. There are two ways to fish with natural flies, either on the surface of the water, or a little underneath it. In angling for roach, dace, &c. the fly should be allowed to glide down the stream to the fish, but in very still water the bait may be drawn by the fish, which will make him eagerly pursue it.

There are many sorts of artificial flies to be had at the shops; they are made in imitation of natural flies, and the rules for using them are as follow: Keep as far from the water's edge as may be, and fish down the stream with the sun at your back; the line must not touch the water. In clear rivers the angler must use small flies with slender wings, but in muddy waters a larger fly may be used. After rain, when the waters are muddy, an orange-coloured fly may be used with advantage; in a clear day the fly must be light coloured, and in dark water the fly must be dark. The line should in general be twice as long as the rod; but, after all, much will depend upon a quick eye and active hand. Flies made for catching salmon must have their wings standing one behind the other. This fish is said to be attracted by the gaudiest colours that can be obtained; the wings and tail should be long and spreading.

To prevent the Effects of Poison of Lead on Painters, Glaziers, &c.

The physicians and surgeons of the Bath Hospital have ordered the following cautions to be made public, to be observed particularly by printers or compositors, plumbers, glaziers, painters, and other artificers.

"To maintain the strictest temperance respecting distilled spirits, which had better be altogether forborne. To pay the strictest attention to cleanliness; and never, when it can be avoided, to daub their hands with paint, and particularly, or never,

to eat their meals, or go to rest, without washing their hands and face. Not to eat or drink in the room or place wherein they work, and much less to suffer any food or drink to remain exposed to the fumes or dust of the metal in the rooms or warehouses. As the clothes of persons in this line (painters particularly) are generally observed to be much soiled with the colours they use, it is recommended to them to perform their work in frocks of ticking, which may be frequently washed, and conveniently laid aside, when the workmen go to their meals, and again put on when they resume their work. Every business which can, in these branches, should be performed with gloves on the hands; and woollen or worsted gloves are recommended, as they may be often washed, as they should always be after being soiled with paint, or even by much rubbing against the metal. Caution is necessary in mixing, or even in unpacking, the dry colours, that the fine powder does not get into their mouths, or be drawn in by their breath. A crape covering over the face might be of service, but care should be taken to turn always the same side towards the face, and to clean or wash it frequently. All artificers should avoid touching lead when hot; and this caution is especially necessary for printers or compositors, who have often lost the use of their limbs by handling the types when drying by the fire, after being washed. Glaziers' putty should never be made or moulded by the hand. An iron pestle and mortar would work the ingredients together, at least equally well, and without hazard.

Substitute for Brewers Yeast.

Take a small tea cup, or wine glass full of split peas, pour on it a pint of boiling water, and set the whole in a vessel all night on the hearth, or any other warm place; the water will have a froth on its top the next morning, which will be good yeast. The colder the place the longer it will be forming.

How to stencil, or multiply Patterns, for working Muslins, &c.

When a print or drawing is to be copied in this way, it must be placed upon a sheet of white paper, and the outline pricked through both with a pin or needle; the pierced sheet may then be laid on a second clean one, and a muslin bag of powdered charcoal shook or rubbed over it, when, upon removing the former, the latter will be found a perfect copy.

To keep Moths, Beetles, &c. from Clothes.

Put a piece of camphire in a linen bag, or some aromatic herbs, in the drawers, among linen or woollen clothes, and neither moth or worm will come near them.

To cultivate Rhubarb.

It is not enough to give it depth of good soil, but it must be watered in drought; and in winter must be well covered with straw or dung. If this is at-

tended to, your rhubarb will be solid when taken out of the ground; and your kitchen, if a warm one, when cut into large pieces, will soon fit it for use.

To make very good Soup, and from its small Expence, called Poors' Broth.

One pound of lean beef, cut into small pieces; half a pint of split peas; two ounces of rice, or Scotch barley; four middling sized potatoes, sliced; two large onions cut in quarters; pepper and salt according to the taste; the peppercorns should be tied in a bag. Put these into one gallon and one pint of water, and let it be baked for three hours and a half. When baked, it does not waste more than one pint, and rather more in boiling.

The expences of a gallon of this soup in Jan. 1795, was as follows, viz. beef, 5d. spice, 1d. onions, 1d. peas, 1½d. rice or barley, 1d. salt and potatoes, 1d.—total, 10½d.

N.B. In the country it would be much less; and by buying a large quantity of the separate ingredients, a London parish might make it for 9d. a gallon.

What a valuable acquisition would this soup be to the poor in a hard season.

To take off the Taste of Turnips from Milk or Butter.

The taste of the turnip is easily taken off milk and butter, by dissolving a little nitre in spring water, which being kept in a bottle, and a small tea cup full put into eight gallons of milk, when warm

from the cow, entirely removes any taste or flavour of the turnip.

Additional Quantity of Milk to be gained by keeping Milch Cows in the House.

In the management of cows a warm stable is highly necessary; and currying them like horses, not only affords them pleasure but makes them give their milk more freely. They ought always to be kept clean, laid dry, and have plenty of good sweet water to drink. Cows treated in this manner have given two gallons of milk at a time, when within ten days of calving.

Substitute for Mahogany.

The difficulty of procuring mahogany, and other precious woods, and the consequent exorbitant prices demanded for the ordinary articles of family convenience, has occasioned the art of the chemist to be applied to a subject peculiarly calcūlated to promote domestic embellishment at a trifling expence. It has been contrived to render any species of wood of a close grain, so nearly to resemble mahogany in the texture, density, and polish, that the most accurate judges are incapable of distinguishing between this happy imitation, and the native produce. The first operation, as now practised in France, is to plane the surface, so as to render it perfectly smooth; the wood is then to be rubbed with diluted nitrous acid, which prepares it for the materials subsequently to be applied. Afterwards, one ounce and a half of dragon's blood, dis-

solved in a pint of spirits of wine, and one third of that quantity of carbonate of soda, are to be mixed together, and filtered; and the liquid, in this thin state, is to be rubbed, or rather laid, upon the wood, with a soft brush. This process is repeated with very little alteration, and in a short interval afterwards, the wood possesses the external appearance of mahogany. When this application has been properly made, the surface will resemble an artificial mirror; but if the polish become less brilliant, by rubbing it with a little cold drawn linseed oil, the wood will be restored to its former brilliancy.

Method of making Stilton Cheese.

Take the night's cream, and put it to the morning's new milk, with the rennet; when the curd is come it is not to be broken, as is done with other cheeses, but take it out with a soil dish altogether, and place it on a sieve to drain gradually, and, as it drains, keep gradually pressing it till it becomes firm and dry; then place it in a wooden hoop; afterwards to be kept dry on boards, turned frequently, with cloth-binders round it, which are to be tightened as occasion requires.

In some dairies the cheeses, after being taken out of the wooden hoop, are bound tight round with a cloth, which cloth is changed every day until the cheese becomes firm enough to support itself; after the cloth is taken away, they are rubbed every day all over, for two or three months, with a brush; and if the weather is damp or moist,

twice a day; and even before the cloth is taken off, the top and bottom are well rubbed every day.

N.B. The dairy-maid must not be disheartened if she does not succeed perfectly in her first attempt.

Improved Method of making Butter.

If the dairy consist of three or four cows they should be milked in the summer thrice a day; in the morning, at noon, and in the evening. Each milking must be kept by itself, in flat wooden vessels, to cool in like manner; and thus in succession for two or three days, according to the temperature of the air, the milk thickening, and thence is fit for churning, soonest in the warmest weather. The quantity of butter will be generally in the proportion of a pound (twenty-two ounces) for each ten pints, or five English gallons of milk. In winter the cows are to be milked only twice a day, and the milk is to be put into the churn warm from the cow, where it must stand a day or two longer than in summer before it becomes sufficiently thick; although, to promote the coagulation, it is sometimes brought near the kitchen fire, particularly on the preceding night before it is churned; and, in intense cold, it will be necessary to add a small quantity of boiling water. The operation of churning is performed with the plunge churn, from two to three hours, for thirty or forty pints of milk; and at the last stage of the process, a little cold water thrown in has the effect of promoting the separation of the butter from the milk, and making it

adhere more closely together. In all the operations it is of great moment to attend to the cleanliness of the different vessels employed; they are therefore to be carefully rinced from time to time, and endeavoured to be preserved in all possible purity.

Sir Ashton Lever's Method of preserving Birds and Beasts.

Beasts. Large beasts should be carefully skinned, with the horns, skull, jaws, tail, and feet, left entire; the skins may then either be put into a vessel of spirit, or else rubbed well in the inside with the mixture of salt, allum, and pepper, hereafter mentioned, and hung to dry. Small beasts may be put into a cask of rum, or any other spirit.

Birds.—Large birds may be treated as large beasts, but must not be put in spirits. Small birds may be preserved in the following manner:—take out the entrails, open a passage to the brain, which should be scooped out through the mouth; introduce into the cavities of the skull, and the whole body, some of the mixture of salt, allum, and pepper, putting some through the gullet and whole length of the neck; then hang the bird in a cool airy place, first by the feet, that the body may be impregnated by the salts, and afterwards by a thread through the under mandible of the bill, till it appears to be sweet, then hang it in the sun, or near a fire; after it is well dried, clean out what remains loose of the mixture, and fill the cavity of the body with wool, oakum, or any soft substance, and pack it smooth in paper.

Fishes, &c.—Large fishes should be opened in the belly, the entrails taken out, and the inside well rubbed with pepper, and stuffed with oakum. Small fishes put in spirit, as well as reptiles and insects, except butterflies and moths, and any insects of fine colours, should be pinned down in a box prepared for that purpose, with their wings expanded.

Birds shot in this Kingdom.

When fresh killed, observe to put tow into the mouth; and upon any wound they may have received, to prevent the feathers being soiled; and then wrap it smooth, at full length, in paper, and pack it close in a box. If it be sent from a great distance, the entrails should be extracted, and the cavity filled with tow dipt in rum or other spirit. The following mixture is proper for the preservation of animals: one pound of salt, four ounces of allum, and two ounces of pepper, powdered together.

Rules for collecting Curiosities on Sea Voyages.

Set apart a small cask of spirits, into which put every uncommon sea production you may meet with during the voyage, and wrap every article separate in a rag, or a little oakum.

Curious Experiment with Phosphorus.

Put a bit of phosphorus in a small phial, then fill it one third with hot olive oil, and cork it close.

Whenever the stopper is taken out in the night, light will be evolved sufficient to shew the hour upon a watch.

Most proper Food for Milch Cows.

Milch Cows are infinitely more profitable kept in the house than out of doors, but they must be trained to it, otherwise they do not thrive.

The best food for them are clover, lucerne, potatoes, yams, turnips, carrots, honeygrass (a German grass not known in England) cabbages, peas, and beans.

Such cows as those in the neighbourhood of London, kept in the house, and properly fed, ought to yield nine gallons per day, for the first four months after calving.

Method of preparing a cheap Substitute for Oil Paint, as durable as that prepared with Oil, and free from any bad Smell.

Take fresh curds, and bruise the lumps on a grinding-stone, or in an earthen pan or mortar, with a spatula. After this operation, put them into a pot with an equal quantity of lime well quenched, and become thick enough to be kneaded; stir this mixture well, without adding water, and you will soon obtain a white coloured fluid, which may be applied with as much facility as varnish, and which dries very speedily. But it must be employed the same day, as it will become too thick the day following.

Ochre, Armenian bole, and all colours which hold with lime, may be mixed with it, according to the colour which you wish to give the wood, but care must be taken that the addition of colour to the first mixture of curds and lime may contain very little water, else the painting will be less durable.

When two coats of this paint have been laid on, it may be polished with a piece of woollen cloth or other proper substance, and it will become as bright as varnish. It is certain that no kind of painting can be so cheap; but it possesses, besides, other advantages; in the same day two coats may be laid on and polished, as it dries speedily, and has no smell. If it be required to give it more durability in places exposed to moisture, do over the painting, after it has been polished, with the white of an egg. This process will render it as durable as the best oil painting.

Method to destroy or drive away Earth Worms, and various other Insects hurtful to Fields and Gardens.

Three parts of quick-lime, newly made, and two parts of soap boilers lye or potash dissolved in water, will produce a somewhat milky liquor sufficiently caustic, and highly hostile and poisonous to earth worms and other small animals; for, as soon as it touches any part of their bodies, it occasions in them violent symptoms of great uneasiness. If this liquor be poured into those holes, in which the earth worms reside under ground, they immediately throw themselves out as if driven by some

force, and, after various contortions, languish, and die. If the leaves of plants or fruit trees, frequented by the voracious caterpillars, which are so destructive to them, be sprinkled over with this liquor, these insects suddenly contract their bodies and drop to the ground. For, though nature has defended them tolerably well by their hairy skins, from any thing that might injure their delicate bodies, yet, as soon as they touch with their feet or mouths the leaves which have been moistened by this liquor, they become as it were stupefied, instantly contract themselves, and fall down.

To remove Herbs and Flowers in the Summer.

If you have occasion to transplant in the summer season, let it be in the evening, after the heat is past; plant and water the same immediately, and there will be no danger from the heat the next day, but be careful in digging up the earth you do not break any of the young shoots, as the sap will exude out of the same, to the great danger of the plants.

Composition to take off Casts of Medals.

Melt eight ounces of sulphur over a gentle fire, and with it mix a small quantity of fine vermilion; stir it well together, and it will dissolve like oil; then cast it into the mould, which is first to be rubbed over with oil. When cool the figure may be taken, and touched over with aqua-fortis, and it will look like fine coral.

To dissolve Wax in Water.

To every pound of white wax take twenty-four ounces of pot-ash dissolved in a gallon of warm water. In this boil the wax, cut in small pieces, for half an hour; at the end of this time take it from the fire, and suffer it to cool. The wax floats on the surface in the form of white soap; triturated with water it yields what is commonly called *milk of wax*, and may be applied to furniture, pictures, &c. An hour after the application, the coated parts are to be rubbed with a piece of woollen cloth, which will give a great brilliancy to paintings, and a fine polish to furniture.

Virtues of the Sun Flower.

The cultivation of the annual sun-flower is recommended to the notice of the public, as possessing the advantages of furnishing abundance of agreeable fodder for cattle in their leaves. When in flower, bees flock to them from all quarters to gather honey. The seed is valuable in feeding sheep, pigs, and other animals; it produces a striking effect in poultry, as occasioning them to lay more eggs, and it yields a large quantity of excellent oil, by pressure; the dry stalks burn well, the ashes affording a considerable quantity of alkali.

Expeditious Method of taking out Stains from Scarlet, or Velvet of any other Colour.

Take soap wort, bruise it, strain out its juices, and add to it a small quantity of black soap. Wash

the stain with this liquor, suffering it to dry between whiles, and by this method the spots will in a day or two entirely disappear.

To make Patent Paste.

Boil a quantity of mealy potatoes, and mash them without peeling; then take as many, and one third more, of raw potatoes, and obtain the starch or flour from them, by grating them into a vessel of water, and reserving only the finer particles. The mashed potatoes are to be diluted, beat up, and passed through a sieve. They are then to be put into a boiler, and, when nearly boiling, the starch produced from the grated potatoes is to be added, and the whole boiled together about twenty minutes, during which it must be kept carefully stirred; it is then good paste, and is to be put into a wide vessel to cool.

Polished Tea Urns preferable to varnished ones.

Polished tea urns may be kept boiling with a much less expence of spirits of wine, than such as are varnished; and the cleaner and brighter the dishes, and covers for dishes, which are used for bringing victuals to table, and for keeping it hot, the more effectual will they answer that purpose.

To harden Quills.

In order to harden a quill that is soft, thrust the barrel into hot ashes, stirring it till it is soft; and then taking it out, press it almost flat upon your

knee with the back of a pen-knife, and afterwards reduce it to a roundness with your fingers. Another method to harden quills is by setting water and alum over the fire, and while it is boiling, put in a handful of quills, the barrels only, for a minute, and then lay them by.

To prevent the irregular Growth of Melons.

It is well known that melons frequently, in certain situations, lose their circular form, and grow larger on one side than the other, and that those mishapen fruits are always bad. To remedy this, take a small forked stick, in proportion to the size of the melon, and thrust it into the ground as nearly as possible to the tail of the fruit, taking the precaution to lay a little moss between the two prongs, and suspend the melon to this fork. In a few days the melon will resume its form, when the fork may be removed, and the operation is finished. The quality of the fruit remains unchanged.

To make Nankeen Dye.

Boil equal parts of arnotto and common potash, in water, till the whole are dissolved. This will produce the *pale reddish buff* so much in use, and sold under the name of *Nankeen Dye.*

To obtain the true Shape and Fibres of a Leaf.

Rub the back of it gently with any hard substance, so as to bruise the fibres; then apply a small quantity of linseed oil to their edges; after

which, press the leaf on white paper, and upon removing it, a perfectly correct representation of every ramification will appear, and the whole may be coloured from the original.

Another Way.

This may be called printing of a leaf; and is effected by carefully touching the fibres with one of those balls, lightly covered with ink, used by printers, and impressing it on wet paper. This is done to most advantage by a round stick, covered with woollen cloths, rolled backwards and forwards over the paper and leaf.

Proper Situation for a Green-house, or Room.

The aspect of a green-house may be at any point from east to west, following the course of the sun; or it may even be a little to the north of east or west; but only a little and the less the better, otherwise the plants will not generally thrive in it, nor will the flowers acquire their natural colours.

Method of increasing the Effects of Gunpowder, and also shewing the Necessity of certain Precautions in loading Fire Arms.

It is a well known fact which cannot be too often published, that a musket, fowling-piece, &c. is very apt to burst if the wadding is not rammed down close to the powder. Hence it is obvious, that in loading a screw barrel pistol, care should be taken that the cavity for the powder be entirely filled with it, so as to leave no space between the powder and the ball.

If a bomb or shell is only half filled with gunpowder, it breaks into a great number of pieces; whereas, if it is quite filled, it merely separates into two or three pieces, which are thrown to a very very great distance.

If the trunk of a tree is charged with gunpowder, for the purpose of splitting it, and the wadding is rammed down very hard upon the powder, in that case, the wadding is only driven out, and the tree remains entire; but if, instead of ramming the wadding close to the powder, a certain space is left between them, the effects of the powder are then such as to tear the tree asunder.

Easy Method of making a saponaceous Liquid, which may be used instead of Solutions of Soap for Washing.

Take the ashes produced from the combustion of wood which has not been floated, and make a ley of them, according to the usual manner, mixing with the ashes a handful or two of quick lime, well pounded or recently slaked. Let the ley stand till it is grown clear by the settling or swimming of the foreign substances contained therein; then pour it into another vessel, and keep it for use. When it is proposed to make use of this ley, take any quantity of oil, and pour upon it thirty or forty times as much as of the ley. Immediately a liquor, white as milk, will be formed, which, by being well shaken, or stirred, lathers and froths like a good solution of soap. This liquor is to be poured into a washing tub, or other vessel, and to be diluted with a greater

or less quantity of water; after which, the linen, meant to be washed, is to be steeped herein, to be rubbed and wrung in the usual way.

Observations on the foregoing Receipt:—

1. It is better that the ley should not be made until the time when it is to be used; if it is left to stand in open vessels its power is weakened, and its nature changed.

2. Fresh wood ashes are preferable to old ones, particularly if the latter have been exposed to the air; in that case they have no longer their usual power; and in order to make them serve the purpose mix with them a greater proportion of quick lime.

3. Those ashes are preferable which are produced from hard wood: those which are left after the burning of floated wood cannot be made use of with equal success.

4. Fat oils, of a thick consistence, are most proper for the purpose here spoken of; fine thin oils are by no means fit for it.

5. If stinking oil be made use of, it is apt to give a bad smell to the linen; this may be removed by passing the linen carefully through a strong pure ley; but, in general, this smell goes off as the linen becomes dry.

6. When the mixture of the oil with the ley is of a yellow colour, it must be diluted with water.

7. When the oil rises in the ley, and swims upon the surface of it, in the form of small drops, it shews that the oil is not fit for the purpose, not being thick enough; or else, that the ley is too weak, or not sufficiently caustic.

8. To prevent the quick lime from losing its power, and to have always some in use when wanted, it may be broken into small pieces, and kept in bottles well dried and well corked, or in barrels.

To clear Gardens of Vermin, by Ducks.

Ducks are excellent vermin-pickers, whether of caterpillars, (such as are within their reach) slugs, snails, and others, and ought to be turned into the garden one or two days every week throughout the season. Never keep them longer in than two or three days at a time, else they become indolent. While here, they should have a little water set down to them, if there be no pond or stream in the garden.

Never turn them into the garden in the time of heavy rains, or in continued wet weather, as in that case, and particularly if the soil be stiff, they patter and harden the surface to the great injury of small crops and rising seeds.

Directions for managing Strawberries in Summer.

On the management of strawberries in June and July, the future prosperity of them greatly depends; and if each plant has not been kept separate, by cutting off the runners, they will be in a state of confusion, and you will find three different sorts of plants.

1. Old plants, whose roots are turned black, hard, and woody.

2. Young plants, not strong enough to flower...

3. Flowering plants, which ought only to be there, and perhaps not many of them.

Before the time of flowering is quite over, examine them, and pull up every old plant which has not flowered; for, if once they have omitted to flower you may depend upon it they will never produce any after, being too old, and past bearing; but to be fully convinced, leave two or three, set a stick to them, and observe them next year.

If the young plants, runners of last year, be too thick, take some of them away, and do not leave them nearer than a foot of the scarlet, alpines, and wood, and fifteen or sixteen inches of all the larger sorts; and in the first rainy weather in July or August, take them all up, and make a fresh plantation with them, and they will be very strong plants for flowering next year.

Old beds, even if the plants be kept single at their proper distance, examine, and pull all the old plants which have not flowered.

When the fruit is nearly all gathered examine them again, and cut off the runners; but if you want to make a fresh plantation, leave some of the two first, and cut off all the rest. Then stir up the ground with a trowel, or three-pronged fork, and in August they will be fit to transplant.

If you have omitted in July do not fail in August, that the runners may make good roots to be transplanted in September, for, if later, the worms will draw them out of the ground, and the frost afterwards will prevent them from striking root; the consequence of which is, their not flowering the next spring; and you will lose a year.

Proper Temperature for a Dairy.

The apartments appropriated to dairy purposes should, if possible, possess a moderate temperature throughout the year, and should be kept perfectly clean and dry. The temperature of about fifty-five degrees is most favourable for the separation of the cream from the milk. The utensils of the dairy are best made of wood; lead and copper are soluble in acid, and highly pernicious; and though iron is not injurious, the taste of it might render the produce of the dairy unpalatable.

To make Chocolate from Cocoa Nuts.

Chocolate is made of the small cocoa bean separated from its shells, which being first coarsely pounded in a stone mortar, is afterwards levigated on a slab of the finest grained marble; to this a small quantity of vanilla is added. The mixture is heated, and put into tin moulds of the size in which the cakes appear.

Rules for Fishing.

When the wind is in some points few fish will bite; the most unfavourable is the eastern quarter. A warm lowering day, with flying showers, and a slight ripple on the water, is the most favourable. Water slightly disturbed prevents fish from seeing the tackle; and in it they take the bait most readily. Hence, whatever tends to disturb it, so as to hide the line, without obscuring the bait, is of advantage. In waters affected by the tide, the flood is the best time for angling. Whirlpools, eddies,

mill tails, sides of bridges, and beneath their arches, are places where fish most readily bite, chiefly for the above reason; and, in general, a certain degree of darkness in the water, whether occasioned by the shades of buildings, rocks, or other bodies, or caused by the agitation of its surface, or by muddy streams flowing into it, is favourable to angling.

Strong Cement.

To prevent the escape of the vapours of water, spirit, and liquors not corrosive, the simple application of slips of moistened bladder, will answer very well for glass, and paper with good paste for metal. Bladder, to be very adhesive, should be soaked some time in water moderately warm, till it feels clammy, it then sticks very well; if smeared with white of eggs instead of water, it adheres still closer.

Experienced Method of catching Larks.

The common way of taking larks, of which so many are used at our tables, is in the night, with those nets which are called trammels. These are usually made of thirty-six yards in length, and about six yards over, with six ribs of packthread, which, at the ends, are put upon two poles of about sixteen feet long, and made lesser at each end. These are to be drawn over the ground by two men, and every five or six steps the net is made to touch the ground, otherwise it will pass over the birds without touching them, and they will escape. When they are felt to fly up against the net, it is

clapped down, and then all are safe that are under it. The darkest nights are properest for this sport; and the net will not only take larks, but all other birds that roost on the ground, among which are woodcocks, snipes, partridges, quails, fieldfares, and several others.

Another Method.

In the depth of winter, people sometimes take great numbers of larks by nooses of horse-hair. The method is this: take 100 or 200 yards of packthread; fasten, at every six inches, a noose made of double horse hair; at every twenty yards the line is to be pegged down to the ground, and so left ready to take them. The time to use this, is when the ground is covered with snow, and the larks are to be allured to it by some white oats scattered all the way among the nooses. They must be taken away as soon as three or four are hung, otherwise the rest will be frighted; but though the others are scared away where the sportsman comes, they will be feeding at the other end of the line, and the sport may be thus continued for a long time.

To destroy Insects on Wall Fruit Trees.

Take an old tin watering pan, or any similar vessel, and make a charcoal fire in it; add a tube or pipe, made of either tin, leather, or stiff paper, to the spout, which may be of any sufficient length; then strow some brimstone, tobacco dust, fine shreds of leather, &c. upon the fire, in the pan, and cover the top; having a pair of bellows ready, hold

the wind flap over the tube or pipe to receive the smoke, which it will do very effectually when you use the bellows. By this means the suffocating vapour may be directed through the bellows to any part of the tree with the greatest ease and facility, and the tree soon cleared of all vermin. This method is much more effectual than the old one, where a chaffing-dish has been recommended for this purpose, because the latter method is more troublesome, and requires the wind to blow from a particular quarter right against the trees, which can seldom be obtained.

Easy Method of preserving Animal Food sweet for several Days in the Height of Summer.

Veal, mutton, beef, or venison, may be kept for nine or ten days perfectly sweet and good, in the heat of summer, by lightly covering the same with bran, and hanging it in a high and windy room; therefore, a cupboard full of small holes, or a wire safe, so as the wind may have a passage through, is recommended to be placed in such a room, to keep away the flies.

To prevent Clothes from catching Fire.

One of the most evident methods to prevent clothes from catching fire, is, to have wire fenders placed before the fire place, of a sufficient height, to hinder the coals from flying into the room; such fenders are so placed in some parlours, but more, it is believed, for protecting the marble hearth and

carpet, than for the safety of the females and children of the family. Wire screens are sometimes placed in rooms where birds are let loose parallel to the fire place; such as these, if more projecting ones should be objected to, might be used in common sitting rooms. One or two strong metal bars would be some protection, if close wire-work should not be liked; these, of course, should come some way forward, otherwise they would not be of much use. Certainly the safest are fenders of close wire-work, projecting into the room, sufficiently open to let the heat through, but not any coals which might fly from the fire. Nurseries, in particular, should have this sort.

Grape Seeds, a Substitute for Coffee.

The seeds of foreign grapes have lately been discovered to be an excellent substitute for coffee. When pressed, they first produce a quantity of oil, and afterwards, when roasted and boiled, furnish a liquid much resembling that produced from coffee. The practice is rapidly becoming general in Germany.

To make Hay Tea for Calves.

Take about one pound of red clover hay, well got in, and six quarts of clear spring water; boil them together till the water is reduced to four quarts; then take out the hay, and mix a pound of barley, oat, or bean meal, amongst a little water; put it into the pot or cauldron, while it is boiling, and keep it constantly stirring until it is thickened. Let it cool, then give it to the calf, adding as much

whey as will make a sufficient meal. This is a cheap way of rearing calves, and the valuable article of milk may be saved for other purposes.

Substitute for Indian Ink.

Boil parchment slips, or cuttings of glove leather, in water, till it forms a size, which, when cool, becomes of the consistence of jelly; then, having blackened an earthen plate, by holding it over the flame of a candle, mix up, with a camel hair pencil, the fine lamp black thus obtained, with some of the above size, while the plate is still warm. This black requires no grinding, and produces an ink of the very colour, which works as freely with the pencil, and is as perfectly transparent as the best Indian ink; it possesses the advantage of furnishing artists with a substitute for that article, which may be prepared in situations where it might be difficult to obtain the ink itself.

Excellent Substitute for Coffee.

The flower de luce, or common yellow waterflag, the seeds of which, being roasted in the same manner as coffee, very much resemble it in colour and flavour, but have something more of a saccharine odour, approaching to that of extract of liquorice. When carefully prepared they possess much more of the aroma of coffee than is to be found in any of the leguminous and gramineous seeds that have been treated in the same manner. Coffee made of these seeds is extremely wholesome and nutritious, in the proportion of half an ounce, or an ounce, to a pint of boiling water.

To preserve Cattle from Disease in the Winter.

When cattle are kept out in the winter, it is recommended as an useful practice to rub some tar at the root of the horn, which prevents the wet from getting between the root and the skin, and, it is said, contributes to preserve the health of the animal, and to keep it free from various diseases to which it may otherwise be liable.

To destroy Black Beetles.

Take some small lumps of unslacked lime, and put into the chinks or holes from which they issue, it will effectually destroy them; or it may be scattered on the ground, if they are more numerous than in their holes.

To free Molasses from their sharp Taste, and to render them fit to be used instead of Sugar.

Take twenty-four pounds of molasses, twenty-four pounds of water, and six pounds of charcoal, coarsely pulverised; mix them in a kettle, and boil the whole over a slow wood fire. When the mixture has boiled half an hour, pour it into a flat vessel, in order that the charcoal may subside to the bottom; then pour off the liquid, and place it over the fire once more, that the superfluous water may evaporate, and the molasses brought to their former consistence. Twenty-four pounds of molasses will produce twenty-four pounds of syrup.

This method has been employed on a large scale, with the happiest effects; the molasses become sensibly milder, and can be employed in many articles of food; though in dishes, where milk is used, or for cordials mixed with spices, sugar is to be preferred.

Dr. Anderson's Method of keeping Milk and Butter.

The pernicious method of keeping milk in leaden vessels, and salting butter in stone jars, begins to gain ground in this country, as well as elsewhere, from an idea of cleanliness. The fact is, it is just the reverse of cleanliness; for, in the hands of a careful person, nothing can be more cleanly than wooden dishes, but under the management of a slattern, they discover the secret, which stone dishes do not.

In return, these latter communicate to the butter, and the milk, which has been kept in them, a poisonous quality, which inevitably proves destructive to the human constitution. To the prevalence of this practice, I have no doubt (says the doctor) we must attribute the frequency of palsies, which begin to prevail so much in this kingdom; for, the well-known effect of the poison of lead is, bodily debility, palsy—death!

To remove Spots of Grease from Books and Prints.

After having gently warmed the paper stained with grease, wax, oil, or any fat body whatever,

take out as much as possible of it, by means of blotting paper. Then dip a small brush in the essential oil of well rectified spirit of turpentine, heated almost to an ebullition (for when cold it acts only very weakly) and draw it gently over both sides of the paper, which must be carefully kept warm. This operation must be repeated as many times as the quantity of the fat body imbibed by the paper, or the thickness of the paper, may render necessary. When the greasy substance is entirely removed, recourse may be had to the following method to restore the paper to its former whiteness, which is not completely restored by the first process. Dip another brush in highly rectified spirit of wine, and draw it, in like manner, over the place which was stained, and particularly round the edges, to remove the border, that would still present a stain. By employing these means, with proper caution, the spot will totally disappear; the paper will resume its original whiteness; and if the process has been employed on a part written on with common ink, or printed with printer's ink, it will experience no alteration.

Approved Method of sowing Wheat on narrow Ridges.

The seedsman should walk up one side of the bed and down the other side, always keeping his face, and the hand with which he sows, towards the bed he is sowing; his eye must be continually on the edge of the opposite interfurrow, and deliver his seed principally on the side of the bed next to

it; as he returns the sides will be of course reversed, and the beds become evenly seeded.

To make Size from Potatoes.

One of the beneficial uses of potatoes, not perhaps generally known, is, that the starch of them, quite fresh, and washed only once, may be employed to make size, which, mixed with chalk, and diluted in a little water, forms a very beautiful and good white for ceilings. This size has no smell, while animal size, which putrifies so readily, always exhales a very disagreeable odour. That of potatoes, as it is very little subject to putrefaction, appears, from experience, to be more durable in tenacity and whiteness; and, for white-washing, should be preferred to animal size, the decomposition of which is always accompanied with unhealthful exhalations.

Great Advantage of Ploughing with Oxen instead of Horses.

A team of four young horses will frequently cost a hundred or hundred and twenty guineas, and in six or seven years time will be mere jades, whereas, on the other hand, a much less sum will purchase four capital six-year old oxen, which, after they have worked five or six years, and have been kept at two thirds of the expence of horses, will fetch as much, or more, than their first cost. This is a management so obviously eligible, and glaringly preferable that many people in the country plough with oxen in preference to horses.

Usefulness of the Wren in destroying Insects.

As a devourer of pernicious insects, one of the most useful birds is the house wren. This little bird seems peculiarly fond of the society of man, and it must be confessed that it is often protected by his interested care It has long been a custom, in many parts of the country, to fix a small box at the end of a long pole, in gardens, about houses, &c. as a place for it to build in. In these boxes they build and hatch their young. When the young are hatched the parent birds feed them with a variety of different insects, particularly such as are injurious in gardens. An intelligent gentleman was at the trouble to observe the number of times a pair of these birds came from their box, and returned with insects for their young. He found that they did this from forty to sixty times in an hour; and, in one particular hour, the birds carried food to their young seventy-one times. In this business they were engaged the greater part of the day; say twelve hours. Taking the medium, therefore, of fifty times in an hour, it appeared that a single pair of these birds took from the cabbage, sallad, beans, peas, and other vegetables in the garden, at least, six hundred insects in the course of one day. This calculation proceeds upon the supposition, that the two birds took only a single insect each time. But it is highly probable they often took several at a time.

To destroy Insects prejudicial to Apple Trees.

To one hundred gallons of human urine, and one bushel of lime, add cow dung to bring it to the con-

sistence of paint. With this composition anoint the trees. The month of March is the proper season for applying it. If the white efflorescence-like substance, in which the insects are lodged, has made its appearance, it should previously be brushed off.

To harvest Barley properly.

The difficulty in harvesting barley lies in preserving its colour, and preventing it growing. There is no fear of its shedding; and it must be very ripe and dry indeed, if the ears break off. It is therefore evident, that, to cut barley before it be quite ripe, is bad management. If it be free from weeds, and is a standing crop, surely it must be good management to let it stand until it can be cut one day and carried the next. The risk of the weather—and this is the only risk—would be almost evaded.

To clean and whiten Prints or Engravings.

Half fill a glass bottle with a mixture composed of one part of the red oxyd of lead, or minium, and three parts of the muriatic acid; and having closed the mouth of the bottle with a glass stopper, put it in a cool place not exposed to the light. A certain heat will then be produced, which is an indication that new combinations are formed. The oxyd of the lead abandons a considerable portion of its oxygen, which remains combined with the liquor; the latter then acquires a beautiful gold colour, and assumes the odour of the oxygenated muriatic acid. It holds in solution a small portion of the lead,

which does not, in the least, injure its effect. It is necessary that the bottle should be of strong glass, and the stopper be well secured, in order to prevent the elastic vapour which rises from forcing it out. When you employ the liquor thus prepared, take a large pane of glass, and raise a kind of border of white wax around its edge, about two inches in height, and every way equal. By these means you form a sort of trough, into which put the prints, and pour over them a little fresh urine, or water mixed with a portion of ox gall. At the end of three or four days, pour off which of these liquids you have employed, and supply its place with warm water, which ought to be changed every three or four hours, until it comes off perfectly clear. When the matter, with which the prints are dirtied, is of a resinous colour, which sometimes happens, dip them in a little alcohol: afterwards suffer all the moisture to drain off, and cover the prints with the liquor of the oxygenated muriatic acid made by minium. Place on the edges of the wax another pane of glass, of the same size as that below, in order that you may not be too much incommoded by the smell of the acid; and you will plainly see the yellowest prints resume their original whiteness. One or two hours will be sufficient to produce the desired effect. Having then poured off the acid, wash the prints several times in pure water, and dry them in the sun.

How to cut Box Edgings.

Box edgings should be cut about the beginning of April, or in the end of July. They should, however, be cut once a year, and should be kept two inches in breadth at bottom; being tapered up to a thin edge at top; for nothing looks so ill as a large, bushy edging, especially to a narrow walk. The use of edging is to separate the earth from the gravel, and the larger they are allowed to grow, the less effectual they become; getting the more open below, as they advance in height. Such also harbour snails, and other troublesome vermin.

To stain Wood a beautiful Red or Mahogany Colour.

Place a square piece of plane-tree wood, a line in thickness, into pounded dragon's blood, from the Canaries, mixed with oil of turpentine, over the fire, in a glass vessel, the wood will slowly assume the colour, even before the spirit has volatilised. After more than an hour take the vessel from the fire, and let it stand the whole night, when the wood will appear of a mahogany colour, not merely on the surface, but also in the interior parts. The denser fibres will be somewhat less coloured; but this, instead of injuring the beauty of the wood, will rather add to it. The red dye can be made stronger or weaker, by taking a greater or less quantity of dragon's blood, and by a greater or less degree of digestion and boiling. The wood of the plane-tree is best for this purpose, because it can be

easily sawn and polished; because it has a white colour; is neither too hard nor too soft; because it neither contracts nor warps; has beautiful white spots with veins that cross each other; and because artists, who make inlaid works, have long attempted to colour it by staining. The wood, when stained, can very easily be freed from the dragon's blood adhering to it, by means of rectified spirits of wine. The spirit of turpentine makes the wood more compact, and renders it more susceptible of a fine polish.

The most proper Time when Leaves of Trees ought to be collected for pharmaceutical and economical Purposes.

It is at that period when the plant is in full flower, that the leaves possess their full virtue. They drop when their particular life has terminated.

Useful Hints to Farmers relative to their Carters and Teams of Oxen.

Do not retard the growth of your beasts of draft, endanger their health, render them insignificant in the eyes of the many, and disgustful to their keepers, by working them too young. There is no danger of their becoming unmanageable; nose-rings will reclaim them, be they ever so riotous, nevertheless, the younger they are inured to light work, the more docile they will generally become.

Do not expect that they can work constantly, on straw, nor expect to find them alert and spirited,

while their buttocks are clodded with dung, and their coats throughout are filled with dirt and vermin.

Divide them into teams of four; let each team be fed by its respective carter. To give the man consequence with his fellow servants, provide him with a currycomb lacquered on the back, and a brush bound with gilt leather. With these he will take a delight in combing off the dirt, and brushing out the dust and filth. The ox, too, after the sensation becomes familiar, partakes in the pleasure, and will momentarily forego his meal to receive the full enjoyment. His feeder perceives this, and brushes the part which gives the most pleasure. The ox shews his gratitude by wagging his tail; the carter, in return, calls him by his name, and ingratiates himself with him. Thus, not only an intimacy but a mutual affection is formed, which at once gives attention to the keeper, and docility to the ox, and renders the labour of both pleasant.

A good carter feeds his cattle early and late, and by little and little, being careful not to give more at once than they will eat immediately.

Their labour and their fodder ought to be so proportioned, that their health and their spirits are kept in full tone. Their coats ought to be sleek; their hides loose and silky; the flank should fill the hand; and the shoulder handle mellow. If they be overworked or under fed, disease and sluggishness must inevitably follow. A working ox ought always to *be beef*, that, in case of accident, he may grace, at least, the poor man's table.

If oxen be introduced into a horse-team country, not only attention, but some address is necessary.

To train Evergreen Hedges.

Evergreen hedges may be clipt about the beginning, but not later than the middle of April, as by that time they will begin to grow, and it is proper that this work should be previously performed. Some content themselves with clipping but once a year, in which case the end of July, or 1st of August, is a better time.

In trimming these, or indeed any hedge intended as a close fence, they should be dressed up to a thin edge at top, as otherwise they are apt to get full of gaps below; and the cause is obvious, that the under part, in square or cut hedges, is too much shaded by the upper part. Now, by sloping the sides, every part of the hedge is freely exposed to the air, nor is in any part over-dropped by another. A hedge, intended merely as a fence, need seldom be more than five feet high, or at most six. Screen hedges may be allowed to run to any height thought necessary for that purpose, neither is it requisite to trim them so often as fence hedges; once a year, or in two years, may be sufficient.

In the training of any hedge, it should not be topped or shortened, until it has arrived at a full yard in height; but it may then have a little taken off the points, in order to make it bush the better, and shoot of a more regular height afterwards. The sides, however, should be trimmed from the second or third year of planting, that it may grow the more complete and close below, for therein consists the excellence of any fence. It should not, in topping, at any time, while in training, be much

cut in, as that would make it push the stronger at top, to the detriment of the sides. When fence hedges outgrow their limits, they must of course be cut either wholly or partly down; but if they be tolerably well kept, it is seldom necessary to cut them down more than half to the ground.

To obtain Aromatic Oils from the Pellicle, which envelopes the Seeds of the Laurus Sassafras, and Laurus Benzoin.

The method of obtaining these oils is, to boil the pellicle which surrounds the seeds of the sassafras and benjamin-tree, in water; when they float upon its surface, from which they may be skimmed with a spoon.

That of the sassafras differs materially from the oil obtained from the bark of the root of this tree. Its aroma is different, it is much lighter, and it congeals in a higher degree of heat.

The oil of the benzoin tree is a delightful aromatic, is very inflammable, and might be used as a spice in food, and in all those diseases in which the aromatic oils are useful. It has been tried with success, as an external application, in a case of severe chronic rheumatism. One half pound of the pellicle of the seeds will yield several ounce measures of oil.

Usefulness of mowing Weeds.

In the month of June weeds are in their most succulent state, and, in this state, especially after they have lain a few hours to wither, the hungry

cattle will eat greedily, almost every species. There is scarcely a hedge border, or a nook, but what at this season is valuable; and it certainly must be good management to embrace the transient opportunity; for, in a few weeks they will become nuisances.

Composition for a Cement to resist the action of Fire and Water.

Take half a pint of milk, and mix with it an equal quantity of vinegar, so as to coagulate the milk. Separate the curds from the whey, and mix the latter with the whites of four or five eggs, after beating them well up. The mixture of these two substances being complete, add quick lime to them which has passed through a sieve, and make the whole into a thick paste of the consistency of putty. If this mastic is carefully applied to broken bodies, or to fissures of any kind, and dried properly, it resists water and fire.

To make Transparent Screens for the Exhibition of the Phantasmagoria.

Transparent screens are to be prepared by spreading white wax, dissolved in spirits of wine or oil of turpentine, over thin muslin. A screen, so prepared, will roll up without injury. A clearer screen may be produced by having the muslin always strained upon a rectangular frame, and prepared with turpentine instead of wax. Such a screen is not always convenient, and it cannot be rolled without cracking and becoming, in a short time, useless.

Therefore nothing can be better for the purpose than the former.

Beneficial Purpose to which the Juice of Aloes may be applied.

In the East Indies aloes are employed as a varnish to preserve wood from worms and other insects; and skins, and even living animals are anointed with it for the same reason. The havock committed by the white ants in India, first suggested the trial of aloe juice, to protect wood from them; for which purpose the juice is either used as extracted, or in solution, by some solvent.

Useful Hints to Lamplighters.

As many accidents happen in the winter time by the sliding of ladders, the same would never occur, if the following simple method was generally adopted. "If a strong nail was put in the top of the ladder, in an horizontal position, accidents could never happen, as, when the ladder slides, the nail would catch the lamp iron."

Efficacy of the Juice of Aloes on Ships' Bottoms.

Aloes have been found effectual in preserving ships from the ravages of the worm, and the adhesion of barnacles. The ship's bottom, for this purpose, is smeared with a composition of hepatic aloes, turpentine, tallow, and white lead. In proof of the efficacy of this method, two planks of equal thickness, and cut from the same tree, were placed un-

der water, one in its natural state, and the other smeared with the composition. When on taking them up, after being immersed eight months, the latter was found to be perfect as at first, while the former was entirely penetrated with insects, and in a state of absolute rottenness.

To make a celebrated Blacking Cake for Boots and Shoes.

Take one part of gum tragacanth, four parts of river water, two parts of neats'-foot or some other softening, lubricating oil, two parts of superfine ivory black, one part of Prussian blue in fine powder, or indigo, four parts of brown sugar candy; boil the mixture; and when the composition is of a proper consistence, let it be formed into cakes of such a size that each cake may make a pint of liquid blacking.

Method of preparing Linseed Oil Varnish.

One pound of well pulverised and sifted litharge, four ounces of finely pounded white vitriol, and one quart of linseed oil. Put these ingredients into an iron pan of such a size that it may be only half full; mix them well together, and boil them till the moisture is evaporated, which may be known by a pellicle being formed on the surface, or by the barrel of a quill bursting when thrust to the bottom of the boiling varnish. Then take it from the fire and pour off the clear liquid, taking care to keep back the thick part, which has despoiled itself, at the bottom. While boiling, it must be stirred several times round, that the litharge may not fall to the bottom; but stir it constantly, else superfluous

litharge will be dissolved, and the varnish become too thick.

The composition of amber varnish consists of half a pound of melted or roasted amber, one pound and a half of linseed oil varnish, and two pounds of turpentine oil. The amber and linseed oil varnish are to be mixed together in a deep cast iron pan, of such a size as to be only one third full, and to be kept over a slow fire till the amber is dissolved, which may be known by its swelling up; the operator, therefore, must have at hand a large copper, or iron vessel, that the varnish may be held over it in case it should rise above the sides of the pan, and to prevent the loss that would thereby be occasioned. When the varnish is dissolved, the pan must be taken from the fire; and when the mixture has cooled the turpentine oil is to be poured into it, continually stirring it. Then let it stand some time, that the coarse undissolved particles may deposit themselves at the bottom; after which pour off the clear varnish, and, having strained it through a piece of linen, put it in bottles for use.

In boiling the varnish care must be taken that it may not boil over, or catch fire. Should this happen to be the case it must not be extinguished by water; for this mode would occasion such a sputtering that the operator would be in danger of having his face bespattered with the boiling varnish. The best method, therefore, is to cover the vessel in such a manner as to exclude the air, and for this purpose, to have at hand, a piece of wood, plate of iron, or any thing else that may cover the vessel and extinguish the flame.

To preserve Corn in Sacks.

Provide a reed cane, or other hollow stick, made so by glueing together two grooved sticks; let it be about three feet nine inches long; and that it may be the easier thrust down to the bottom of the corn in the sack, its end to be made to taper to a point, by a wooden plug that is fixed in, and stops the orifice. About one hundred and fifty small holes, of one eighth of an inch in diameter, are to be bored on all sides of the stick, from its bottom for about two feet ten inches of its length; but no nearer to the surface of the corn, least too great a proportion of the dirt should escape there. By winding a packthread in a spiral form round the stick, the boring of the holes may be the better regulated, so as to have them about half an inch distant towards the bottom, but gradually at wider distances, so as to be an inch asunder at the upper part; by which means the lower part of the corn will have its due proportion of fresh air. To the top of the stick let there be fixed a leathern pipe ten inches long; which pipe is to be distended by two yards of spiral wire, coiled up within it. At the upper part of the pipe is fixed a taper wooden fasset, into which the nose of a common household bellows is to be put, in order to ventilate the corn.

If corn, when first put into sacks, be thus aired, every other or third day, for ten or fifteen minutes, its damp sweat, which would hurt it, will, in a few weeks, be carried off to such a degree, that it will afterwards keep sweet with very little airing, as has been found by experience.

By the same means other kinds of seeds, as well as corn, may be kept sweet either in sacks or small bins.

This method must not be understood as applicable to barley; all other grain may safely be preserved in the same manner; but nothing can prevent a deleterious fermentation of barley when it is once out of the straw.

To preserve Beef and Mutton, in a sound State, a Voyage to the West Indies.

As soon as the meat is cold it must be cut up in quarters, and sprinkled with the following ingredients: lignum vitæ, in fine chips, one pound: common salt, four ounces; coarse sugar, four ounces; salt prunella, half an ounce; when it has been well sprinkled in, close the whole in sheet lead, lay it in a chest, and fill it with fresh saw dust. Meat so prepared, has been kept two months in the finest order. When taken out to be dressed it should be wiped and scraped clean, and roasted as quick as possible.

To stop the Rapidity of Flames when the Female Dress happens accidentally to take Fire.

If a woollen cloth was constantly kept in nurseries and sitting rooms, especially when there are fires, laid loose upon the table, or other piece of furniture, this being always at hand, might be easily resorted to in case of accident, and being wrapt tight round the flames, or strongly pressed against them, would, by excluding the air, in many in-

stances, soon extinguish the fire. A green baize cloth being very pliable, and likewise a neat cover to furniture, is recommended for this purpose; and if such were known in the family by the name of the *Stifling Cloth*, it probably would as readily be used when there was occasion for it, as fire engines and buckets are now. Care must be taken to procure baize of a close texture. Where the convenience of baize cloth cannot be easily procured, as in cottages, &c. a cloth cloak, riding-coat, or blanket, will answer much the same purpose.

To purify Water for Domestic and other Purposes.

This method is extremely simple, and consists in placing horizontally, in the midst of a common water butt, a false bottom, perforated with a great number of small holes. The butt being thus divided into two equal parts, the upper is filled with pieces of charcoal, which must be neither too large nor too small, thoroughly burned, light, and well washed. Immediately under the cock, by which the water enters the butt, must be placed a small hollow cylinder, being merely to break the force of the water, and prevent it from falling upon the charcoal with such violence as to detach from it any particles of dirt, and wash them through into the lower receptacle; it is of little consequence of what material it is made. The water thus filtered into the lower division of the butt, will always be perfectly limpid and salubrious. M. Siauve thinks that this contrivance might be made subservient to the interests of agriculture as well as domestic economy;

and that it would be highly advantageous to provide water thus filtered for the cattle, during the whole of the dog days, and particularly when the ponds and streams are infected by the rotting of hemp and flax.

To make Koumiss, a valuable Wine of the Tartars.

Take of fresh mare's milk, of one day, any quantity; add to it a sixth part water, and pour the mixture into a wooden vessel; use then, as a ferment, an eighth part of the sourest cow's milk that can be got; but at any future preparation, a small portion of old koumiss will better answer the purpose of souring. Cover the vessel with a thick cloth, and set it in a place of moderate warmth; leave it at rest twenty-four hours; at the end of which time the milk will have become sour, and a thick substance will be gathered on its top; then, with a stick, made at the lower end in the manner of a churn staff, beat it till the thick substance above-mentioned be blended intimately with the subjacent fluid. In this situation leave it again at rest for twenty-four hours more; after which, pour it into a higher and narrower vessel, resembling a churn, where the agitation must be repeated as before, till the liquor appear to be perfectly homogeneous; and in this state it is called koumiss. Of which the taste ought to be a pleasant mixture of sweet and sour. Agitation must be employed every time before it is used. This wine operates as a cooling antiseptic, an useful stimulant, cordial, and tonic, and may prove a valu-

able article of nourishment; and it has one excellence, perhaps not the least, that the materials from which it is prepared are cheap, and the mode of preparation simple.

To preserve delicate young Shoots of Flowers from Slugs and Earwigs.

Earwigs and slugs are fond of the points of the young shoots of carnations and pink, and are very troublesome in places where they abound. To prevent them from getting to the fine stage plants, or supports of the stage, they are sometimes insulated in water, being set in cisterns or pans. If a pencil, dipt in oil, was drawn round the bottom of the posts once in two days, neither of these insects nor ants would attempt them. Few insects can endure oil. The smallest drop of it is instantly fatal to many kinds.

To prevent Cows from contracting bad Habits while Milking.

Cows should always be treated with great gentleness, and soothed by mild usage, especially when young and ticklish, or when the paps are tender, in which case the udder ought to be fomented with warm water, before milking, and touched with the greatest gentleness, otherwise the cow will be in danger of contracting bad habits, becoming stubborn and unruly, and retaining her milk ever after. A cow never lets down her milk pleasantly to the person she dreads or dislikes. The udder and paps should always be washed with clean water before

milking; but care should be taken that none of that water be admitted into the milking pail.

Plants watered by being placed in Dishes improper.

The practice of placing flats or saucers under plants, and feeding them by the roots, that is, pouring the water continually into these dishes, and never on the earth at top, is highly improper. The water should always be poured on the surface of the earth, that it may filter completely through it, to the benefit and refreshment of the fibres.

To destroy Earwigs and Wood Lice.

A very simple way of ensnaring them, and by which they may be taken alive in great quantities, is to place four inch cuts of reeds, bean haulm, or strong wheat straw, among the branches, and also lay a number on the ground, at the bottom of the wall. In these the insects take refuge at day-break, as they depredate chiefly in the night; and any time through the day they may be blown into a bottle with a little water in it, and so be drowned.

To destroy Wasps and Flies instantly.

Wasps and flies may be killed very fast, by dipping a feather in a little sweet oil, and touching their backs with it, they will instantly die. When intent on the fruit, and half buried in the excavations they have made, they are easily come at, and are not apt to fly about. Insects of different kinds

are easily killed by oil. It closes up the lateral pores by which they breathe.

To destroy Insects on Fruit Trees.

Wasps, about the month of July, will begin to swarm about the early fruits, and for their destruction, phials should be hung about the branches half filled with honey and water, or with sugar and small beer. These should be emptied and replaced once in two or three days, otherwise they do not take so well; these little animals being extremely sagacious, and disliking the appearance of their own species dead.

Necessity of taking off superfluous Suckers from Shrubs.

Many flowering shrubs put out strong suckers from the root, such as lilacs, syringa, and some of the kinds of roses, which take greatly from the strength of the mother plant; and which, if not wanted for the purpose of planting next season, should be twisted off, or otherwise destroyed.

Simple Remedy for the Cure of Lameness by Contraction. From the Gentleman's Magazine, July, 1809.

"Many years ago, while I lived at Yeovil, in Somersetshire, my advice as a surgeon was desired for a poor man's child, a boy about nine years old, one of whose legs was contracted more than when a person is sitting in a chair; he could neither stretch it out, nor move it. I prescribed a relaxing

liniment, of which carrier's oil was one chief ingredient; and ordered the parts affected to be gently rubbed; but it was of no great service. I then considered what farther might be done for his relief: and it came into my mind that the glovers of the town brought their kid-skins, which were dry, stiff, and hard, to be soft and supple as gloves, by rubbing them with a liquor made of the yolks of eggs and water; hereupon I ordered the contracted parts of his leg to be gently rubbed two or three times a day with the egg liquor, and by this means he soon recovered the perfect use of his leg. The liquor I advise to be thus made: take the yolk of a new laid egg, let it be beaten with a spoon to the greatest thinness, then, by a spoonful at a time, add three ounces of pure water, agitating the mixture that the egg and water may be well incorporated, and let it be applied by gentle friction.

"This remedy I have since advised in like cases with the like happy success; and others to whom I have communicated it, have found the same advantage in similar cases. I therefore, for the good of those afflicted with lameness by contraction, transmit the above."

Hints for ventilating Stage Coaches.

The plan is to have a hole perforated through the centre of the roof of the carriage, of three inches diameter, with a tube or chimney, one or two inches long above the top of the same; into which tube a fine grating might be fixed, if necessary, to prevent the outside passengers putting any thing through. A slide might also be placed in a groove

within the carriage, to enable the inside passengers to close the tube at pleasure.

Best Mode of avoiding the fatal Accidents of Open Carriages.

Jumping out is particularly dangerous (the motion of the gig communicating a different one to the one you give yourself by jumping), which tends very much to throw you on your side or head; many suppose it very easy to jump a little forward, and alight safe; 'tis supposition; they will not find it so on trial. The method of getting out behind the carriage is the most safe of any, having often tried it, when the horse has been going very fast.

The Advantage of planting Waste Lands with Alder.

Alder thrives wonderfully in swampy grounds, and there are few trees of greater general utility. Its uses are so various as to adapt it to an almost endless variety of purposes. The wood of this tree is in great esteem and demand for machinery; the cogs for mill wheels formed of it, being proved, by experience, to be superior to any other. It is commonly used for bobbins, and the country people wear shoes, or, as they are generally termed, clogs, made of it. Its excellent quality of resisting injury from water is universally acknowledged; hence its great value for pump-trees, pipes, drains, conduits to reservoirs, piles under water, and all kinds of wood work which is kept constantly wet. The pipes which are laid under the streets of most large

towns, to convey the water, are generally of alder; and indeed, in all works of the same nature, where it can be procured in sufficient quantity, it is to be preferred to every other wood. It is much to be lamented, that the valuable properties of its bark should be so little known, that in most instances it is buried with the tree. The black dyers of cotton stuffs know its value, and make much use of it; they purchase it at the rate of seven to eight-pence the stone, laid down at their dye-houses. It is not chopped, but sold as it is stripped from the tree, after it has become moderately dry; so that there is no expence in chopping and cleaning it, as is the case with oak bark. It might be used to great advantage as an excellent substitute for many woods used in dying, which we have from abroad, and on which we expend considerable sums.

Valuable Instructions for raising Potatoes to a very great Advantage.

The earth should be dug twelve inches deep, if the soil will allow it; after this, a hole should be opened about six inches deep, and horse dung, or long litter, should be put therein, about three inches thick; this hole should not be more than twelve inches diameter. Upon this dung or litter, a potatoe should be planted whole, upon which a little more dung should be shaken, and then the earth must be put thereon. In like manner the whole plot of ground must be planted, taking care that the potatoes be at least sixteen inches apart. When the young shoots make their appearance they should

have fresh mould drawn round them with a hoe; and if the tender shoots are covered it will prevent the frost from injuring them; they should again be earthed when the shoots make a second appearance, but not covered, as, in all probability, the season will be less severe.

A plentiful supply of mould should be given them, and the person who performs this business should never tread upon the plant, or the hillock that is raised round it, as, the lighter the earth is the more room the potatoe will have to expand.

A gentleman obtained from a single root, thus planted, very near forty pounds weight of large potatoes; and, from almost every other root upon the same plot of ground, from fifteen to twenty pounds weight; and, except the soil be stoney or gravelly, ten pounds, or half a peck, of potatoes may almost be obtained from each root, by pursuing the foregoing method.

But note—cuttings, or small sets, will not do for this purpose.

To preserve Sea Bread from the Wevil.

The fatal effects of the wevil in sea bread have long been severely felt by seamen employed on long voyages; rewards have been humanely offered by the legislature for a cure or preventative, but hitherto without success.

The following fact was discovered by accident, and is now offered to the public as a hint worthy the attention of those who may be employed in supplying ships with provisions, or to captains, and

the owners of vessels, and may, in all probability, lessen, if not wholly remove an inconvenience so injurious to our valuable navigation. A bag belonging to a powder-mill fell into a quantity of liquid nitre; it was immediately taken out, plunged into cold water, and hung to dry; several days after this circumstance the bag was filled with sea-biscuits, and sent on board a West Indiaman, where it was stowed away among the captain's stock. The vessel was nine months out of England before she proceeded on her passage home, when she got becalmed, and remained so long in that situation that her crew was forced to be put on half allowance, more particularly so, as their bread was much destroyed by the wevils, and was hourly consuming. The captain at this time wishing to make use of the bag above-mentioned, which had not been opened since the ship left England, ordered it to be examined, when, greatly to his surprise, the whole contents were found to be perfectly sound, without any appearance of having been injured by any insect whatever, a circumstance solely to be attributed to the quality of the bag.

Method of rendering Assistance to Persons in Danger of Drowning.

This desirable object appears attainable by the proper use of a man's hat and pocket handkerchief, (which being all the apparatus necessary) is to be used thus: Spread the handkerchief on the ground, and place a hat, with the brim downwards, on the middle of the handkerchief; and then tie the hand-

kerchief round the hat as you would tie up a bundle, keeping the knots as near the centre of the crown as may be. Now, by seizing the knots in one hand, and keeping the opening of the hat upwards, a person, without knowing how to swim, may, fearlessly, plunge into the water with what may be necessary to save the life of a fellow creature.

If a person should fall out of a boat, or the boat upset by going foul of a cable, &c. or should he fall off the quays, or indeed fall into any water from which he could not extricate himself, but must wait some little time for assistance had he presence of mind enough to whip off his hat, and hold it by the brim, placing his fingers within side the crown, and hold it so, (top downwards) he would be able, by this method, to keep his mouth well above water till assistance should reach him. It often happens that danger is descried long before we are involved in the peril, and time enough to prepare the above method; and a courageous person would, seven instances out of ten, apply to them with success; and travellers, in fording rivers at unknown fords, or where shallows are deceitful, might make use of these methods with advantage.

To preserve Water and Meat, from Putrefaction, in long Voyages.

The crews of the two Russian ships, which lately sailed round the world, were extremely healthy. During the whole three years of their voyage only two men died of the crew of the *Neva*, and the *Naveshda*, did not lose a single man. It is already

known that their fresh water was preserved in charred casks, but is not so generally known that they used the same precaution for preserving their salted provisions. The beef they carried out with them tasted as pleasantly upon their return, as it did three years before, when first salted.

To preserve Flower Seeds.

Those who are curious about saving flower seeds, must attend to them in the month of August. Many kinds will begin to ripen apace, and should be carefully sticked and supported, to prevent them from being shaken by high winds, and so partly lost. Others should be defended from much wet; such as asters, marigolds, and generally those of the class Syngenesia; as from the construction of their flowers they are apt to rot, and the seeds to mould, in bad seasons. Whenever they are thought ripe, or indeed any others, in wet weather, they should be removed to an airy shed or loft; gradually dried, and rubbed or beat out at conveniency.

Singularly useful Properties of Garlic.

The smell of garlic, which is formidable to many ladies, is, perhaps, the most infallible remedy in the world against the vapours, and all the nervous disorders to which women are subject. Of this (says St. Pierre) I have had repeated experience.

To propagate Herbs, by Slips and Cuttings.

Many kinds of pot herbs may, in July, be propagated by cuttings or slips, which may be planted out to nurse on a shady border for a few weeks, or till

they have struck root, and may then be planted out, where they are to remain. If made about the middle, or end of the month, they will be ready for transplanting before the end of August, and in that case will be well established before the winter.

The kinds are marjoram, mint, sage, savory, sorrel, tansy, tarragons, and thyme.

New, simple, and effectual Method of destroying Rats.

A few years ago, the corn mill at Glossop, was very much infested with rats. A quantity of barley, which lay on the chamber floor, was hourly visited by some of them. The miller, one day, going to drive them away, as usual, happened to catch one of them under his hat, which he killed; he then singed all the hair off its body, &c. until its skin, tail, and legs, became stiff by the operation. In this condition he set it upon its feet by the side of a heap of barley, where it stood, with pricked-up ears and tail, for some time; after this, no rat dared to come near it; and in a short space of time the mill was cleared of those depredators, and has continued so ever since.

To prevent Humidity from being prejudicial to Powder Magazines.

A Prussian officer of rank informed St. Pierre that having remarked vapours to be attracted by lead, he had employed it for drying the atmosphere of a powder magazine, constructed under ground, in the throat of a bastion, but useless from its humidity. He ordered the concave ceiling of the arch

to be lined with lead, where the gunpowder was deposited in barrels: the vapours of the vault, collected in great drops on the leaden roof, run off in streamlets along the sides, and left the gunpowder barrels perfectly dry.

Easy Method of destroying Mites or Weevils in Granaries.

A very sagacious farmer has succeeded in destroying weevils by a very easy process. In the month of June, when his granaries were all empty, he collected great quantities of the largest sized ants and scattered them about the places infested with the weevils. The ants immediately fell upon and devoured every one of them; nor have any weevils since that time been seen on his premises.

Rules for plucking Geese.

Geese destined for breeding in farm yards, and which are what are called old geese, may indeed be plucked thrice a year without inconvenience, at an interval of seven weeks; but young ones, before they are subjected to this operation, must have attained to the age of thirteen or fourteen weeks, and especially those soon destined for the table, because they would become meagre, and lose their quality.

To improve the Down of Geese.

The nature of the food contributes very much to the value of the down, and to the strength of feathers; the particular care taken of geese has no less influence. It has been remarked, that in places where these birds find a great deal of water, they

are not so much subject to vermin, and furnish feathers of a better quality.

To ascertain the Properties of Goose Down.

There is a sort of maturity, in regard to down, which may be easily discovered, as it then falls of itself; if removed too soon it will not keep, and is liable to be attacked by worms. Lean geese furnish more than those which are fat, and are also more esteemed. Farmers ought never to suffer feathers to be pulled from geese some time after they are dead, for the purpose of being sold; they generally smell bad, and become matted; none but those plucked from living geese, or which have been just killed, ought to be introduced into commerce. In the latter case the geese must be plucked soon, and in such a manner that the operation may be terminated before they are entirely cold; the feathers are then much better.

The Usefulness of two common Plants.

Every plant in the corn field possesses virtues particularly adapted to the maladies incident to the condition of the labouring man. The poppy cures the pleurisy, procures sleep, stops hæmorrhages, and spitting of blood. Poppy seeds form an emulsion similar to that from almonds in every respect when prepared in the same manner. They also yield, by expression, fine sallad oil, like that from Florence. The blue bottle is diuretic, vulnerary, cordial, and cooling; an antidote to the stings of venomous insects, and a remedy for inflammation of the eyes.

Mrs. Hooker's Method of preparing and applying a Composition for Painting in Imitation of the Ancient Grecian Manner.

Put into a glazed earthen vessel four ounces and a half of gum-arabic, and eight ounces, or half a pint (wine measure) of cold spring water; when the gum is dissolved, stir in seven ounces of gum-mastic, which has been washed, dried, picked, and beaten fine. Set the earthen vessel containing the gum-water and gum-mastic, over a slow fire, continually stirring and beating them hard with a spoon, in order to dissolve the gum-mastic; when sufficiently boiled, it will no longer appear transparent, but will become opaque and stiff, like a paste. As soon as this is the case, and that the gum water and mastic are quite boiling, without taking them off the fire, add five ounces of white wax, broken into small pieces, stirring and beating the different ingredients together, till the wax is perfectly melted, and has boiled. Then take the composition off the fire, as boiling it longer than necessary would only harden the wax, and prevent its mixing so well afterwards with water. When the composition is taken off the fire, and in the glazed earthen vessel, it should be beaten hard, and whilst hot (but not boiling) mix with it, by degrees, a pint (wine measure) or sixteen ounces more of cold spring water, then strain the composition, as some dirt will boil out of the gum-mastic, and put it into bottles; the composition, if properly made, should be like a cream, and the colours when mixed with it, as smooth as with oil. The method of

using it, is to mix with the composition, upon an earthen pallet, such colours, in powder, as are used in painting with oil, and such a quantity of the composition to be mixed with the colours as to render them of the usual consistency of oil colours; then paint with fair water. The colours, when mixed with the composition, may be laid on either thick or thin, as may best suit your subject; on which account, this composition is very advantageous, where any particular transparency of colouring is required; but in most cases it answers best, if the colours be laid on thick, and they require the same use of the brush, as if painting with body colours, and the same brushes as used in oil painting. The colours, if ground dry, when mixed with the composition, may be used by putting a little fair water over them; but it is less trouble to put some water when the colours are observed to be growing dry. In painting with this composition, the colours blend without difficulty when wet, and even when dry, the tints may easily be united by means of a brush and a very small quantity of fair water. When the painting is finished, put some white wax into a glazed earthen vessel over a slow fire, and when melted, but not boiling, with a hard brush cover the painting with the wax, and when cold take a moderately hot iron, such as is used for ironing linen, and so cold as not to hiss, if touched with any thing wet, and draw it lightly over the wax. The painting will appear as if under a cloud till the wax is perfectly cold; as also, whatever the picture is painted upon is quite cold; but if, when so, the painting should not appear sufficiently clear,

it may be held before the fire, so far from it as to melt the wax but slowly; or the wax may be melted by holding a hot poker at such a distance as to melt it gently, especially such parts of the picture as should not appear sufficiently transparent or brilliant; for the oftener heat is applied to the picture, the greater will be the transparency and brilliancy of colouring; but the contrary effect would be produced if too sudden or too great a degree of heat was applied, or for too long a time, as it would draw the wax too much to the surface, and might likewise crack the paint. Should the coat of wax put over the painting when finished, appear in any part uneven, it may be remedied by drawing a moderately hot iron over it again, as before-mentioned, or even by scraping the wax with a knife; and should the wax, by too great or too long an application of heat, form into bubbles at particular places, by applying a poker heated, or even a tobacco-pipe made hot, the bubbles would subside; or such defects may be removed by drawing any thing hard over the wax, which would close any small cavities.

When the picture is cold, rub it with a fine linen cloth. Paintings may be executed in this manner upon wood (having first pieces of wood let in behind, across the grain of the wood, to prevent its warping,) canvass, card, or plaster of Paris. The plaster of Paris would require no other preparation than mixing some fine plaster of Paris, in powder, with cold water, the thickness of a cream; then put it on a looking-glass, having first made a frame of bees' wax on the looking-glass, the form and

thickness you would wish the plaster of Paris to be of, and when dry take it off, and there will be a very smooth surface to paint upon. Wood and canvas are best covered with some grey tint, mixed with the same composition of gum-arabic, gum-mastic, and wax, and of the same sort of colours as before-mentioned, before the design is begun, in order to cover the grain of the wood or the threads of the canvas. Paintings may also be done in the same manner, with only gum-water and gum-mastic, prepared the same way as the mastic and wax; but instead of putting seven ounces of mastic, and, when boiling, adding five ounces of wax, mix twelve ounces of gum-mastic with the gum-water, prepared as mentioned in the first part of this receipt: before it is put on the fire, and when sufficiently boiled and beaten, and is a little cold, stir in, by degrees, twelve ounces, or three quarters of a pint (wine measure) of cold spring water, and afterwards strain it. It would be equally practicable painting with wax alone, dissolved in gum-water in the following manner: take twelve ounces, or three quarters of a pint (wine measure) of cold spring water, and four ounces and a half of gum-arabic, put them into a glazed earthen vessel, and when the gum is dissolved, add eight ounces of white wax. Put the earthen vessel, with the gum-water and wax, upon a slow fire, and stir them till the wax is dissolved, and has boiled a few minutes; then take them off the fire, and throw them into a bason, as by remaining in the hot earthen vessel the wax would become rather hard; beat the gum-water and wax till quite cold. As there is but a

small proportion of water in comparison to the quantity of gum and wax, it would be necessary, in mixing this composition with the colours, to put also some fair water. Should the composition be so made as to occasion the ingredients to separate in the bottle, it will become equally serviceable, if shaken before used, to mix with the colours.

Distemper in Dogs.

Dr. Blaine has described the disease, called the Distemper in Dogs, with accuracy, and his medicines, in general, are successful: but a gentleman had administered Dr. Blaine's medicines to a favourite pointer, in the disease called *The Distemper*, but with no avail; the unvarying symptoms had come on, when the poor animal crawled into the field, and fell among some grass, attempting, but in vain, to eat it. The gentleman followed this suggestion of nature, and ordered a handful of grass to be cut in shreds of about half an inch long, and when mixed with butter, to be put down the animal's throat; the dose was repeated three times in every twenty-four hours, and a visible amendment almost immediately took place, which terminated in recovery.

To purify Water for Drinking.

Filter river water through a sponge, more or less compressed, instead of stone or sand, by which the water is not only rendered more clear, but wholesome; for sand is insensibly dissolved by the water, so that in four or five years it will have lost a fifth part of its weight. Powder of charcoal should be

added to the sponge when the water is foul, or fetid. Those who examine the large quantity of terrene matter on the inside of tea-kettles, will be convinced all water should be boiled before drunk, if they wish to avoid being afflicted with gravel and stone, &c. &c.

To colour Gloves or Sheep Skins Red, for common Purposes.

Take half an ounce of common alum, two ounces of logwood, shaved fine, or chips, boil them for some time, then strain off the liquor, and with a soft brush dipped in the same, pretty warm, brush over the skins, and when dry mix an ounce of weak spirits of vitriol in four ounces of water, and do over as above, when they become a fine red colour. To make them more beautiful, brush them over with a size made of gum-tragacanth and water. When dry glaze them with white of egg, or they may be glazed by rubbing them with a smooth glass, and then rubbed over with a little sweet oil, by means of a linen rag.

To remove a Thief in a Candle.

It is well known, that a small knot of cotton, or as it is more commonly called, a thief, will occasion such an increased flux of the tallow, as to produce a deep guttering in a burning candle; and it is not less certain that a slip of paper, or any other substance of an oblong form, about four or five inches by one, placed horizontally on the top of the candlestick, in an opposite direction, will al-

most instantly arrest the progress of the said thief, and prevent any subsequent effusion of the tallow.

Cement to resist Moisture.

A cement, to resist moisture, may be formed by melting by heat, without water, common glue, with half its weight of rosin; to which must be added, some red ochre, to give it body; it is particularly useful for cementing hones to their frames.

To make Japanese Cement, or Rice Glue.

This elegant cement is made by mixing rice flour intimately with cold water, and then gently boiling it. It is beautifully white, and dries almost transparent. Papers pasted together by means of this cement, will sooner separate in their own substance than at the joining, which makes it extremely useful in the preparation of curious paper articles, as tea trays, ladies' dressing boxes, and other articles which require layers of paper to be cemented together. It is, in every respect, preferable to common paste made with wheat flower, for almost every purpose to which that article is usually applied. It answers well, in particular, for pasting into books the copies of writings taken off by copying-machines on unsized silver paper.

With this composition, made with a comparatively small quantity of water, that it may have the consistence similar to plastic clay, models, busts, statues, basso-relievos, and the like, may be formed. When dry, the articles made of it are susceptible of a high polish; they are also very durable.

The Japanese make quadrille fish of this substance, which so nearly resembles those made of mother of pearl, that the officers of our East Indiamen are often imposed upon.

Turkey Cement for joining Metals, Glass, &c.

The jewellers in Turkey, who are mostly Armenians, have a curious method of ornamenting watch cases, and similar things, with diamonds and other stones, by simply glueing them on. The stone is set in silver or gold, and the lower part of the metal made flat, or to correspond with the part to which it is to be fixed; it is then warmed gently, and the glue applied, which is so very strong that the parts never separate. This glue, which may be applied to many purposes, as it will strongly join bits of glass or polished steel, is thus made:

Dissolve five or six bits of mastic, as large as peas, in as much spirits of wine as will suffice to render it liquid; in another vessel dissolve as much isinglass (which has been previously soaken in water till it is swollen and soft) in French brandy or in rum, as will make two ounces, by measure, of strong glue, and add two small bits of gum-galbanum, or ammoniacum, which must be rubbed or ground till they are dissolved; then mix the whole with a sufficient heat. Keep it in a phial, stopped; and when it is used set it in hot water.

To make superfine Oil Colour Cakes.

Take of the clearest gum-mastic, reduced to fine powder, four ounces; of spirits of turpentine, one

pint; mix them together in a bottle, stirring them frequently till the mastic is dissolved; if it is wanted in haste, some heat may be applied; but the solution is best when cold. Let the colours to be made use of, be the best that can be procured, taking care that by washing, &c. they are brought to the greatest degree of fineness possible. When the colours are dry, grind them on a hard close stone, (porphyry is the best) in spirits of turpentine, adding a small quantity of the mastic varnish; let the colours so ground, become again dry; then prepare the composition, for forming them into cakes, in the following manner:—Procure some of the purest and whitest spermaceti you can obtain; melt it over a gentle fire, in a clean earthen vessel; when fluid, add to it one third of its own weight of pure poppy oil, and stir the whole well together; these things being in readiness, place the stone, on which your colours are ground, on a frame or support, and, by means of a charcoal fire under it, make the stone warm; next, grind your colours fine with a muller; then, adding a sufficient quantity of the mixture of poppy oil and spermaceti; work the whole together with a muller, to a proper consistence; take, then, a piece of a fit size for the cake you intend to make, roll it into a ball, put it into a mould, press it, and it will be complete.

When these cakes are to be used, they must be rubbed down in poppy or other oil, or in a mixture of spirits of turpentine and oil, as may best suit the convenience or intention of the artist.

Blood Cement for repairing Copper Boilers, &c. &c.

This cement is often used by coppersmiths, to lay over the rivets and edges of the sheets of copper, in large boilers, to serve as an additional security to the joinings, and to secure cocks, &c. from leaking; it is made by mixing pounded quick lime with ox's blood. It must be applied fresh made, as it soon gets so hard as to be unfit for use.

If the properties of this cement were duly investigated, it would be found useful for many purposes to which it has never been yet applied. It is extremely cheap, and very durable.

Method of taking Impressions of Plants.

The impressions of plants, well taken off upon paper, look very little inferior to the best drawings, and may be done with very little trouble. For this purpose, some printer's ink, and a pair of printer's balls, such as are used for laying the ink on types, are necessary. After rubbing these balls with a little of the ink, lay the plant between them, and press it so as to give it sufficient colour; then take the plant, and lay it carefully on a sheet of paper, and press it with the hand, to give the impression of the plant to the paper, which may be afterwards coloured according to nature; a piece of blotting paper may be placed betwixt the plant and the hand, to prevent the latter from being dirtied by the ink. But if white paper be employed, instead of blotting-paper, we acquire at the same moment two impressions, or both surfaces of the same plant.

To make a truly valuable Fumigation Powder.

Nitre, four pounds; sulphur, two pounds; southern-wood and juniper-berries, of each three pounds; tar and myrrh, a pound and a half. This was tried at Moscow in 1772, and ten malefactors, under sentence of death, were fumigated well with this in the Lazaretto, and were confined for three weeks in this abode, saturated with infection, made to sleep with persons infected with the plague, and even dead of it, and not one were infected, or made ill of the disease. The vapour arising from the decomposition of nitre by the vitriolic acid, is perfectly harmless to be breathed, and may be employed in every situation. This was used by Mr. M'Gregor, after the plan of Dr. Carmichael Smith, who relates, in ten weeks at Jersey, he lost, in putrid fever, fifty men from the 88th regiment; but beginning the fumigation, not only the fever was banished the hospital, but that it changed the nature of the existing fever; all the malignant symptoms disappeared, and of sixty soldiers ill of the fever not one died.

Cement for preserving Wood and Brick.

This composition is formed of the following materials, viz. tar, pulverized coal (charcoal is esteemed the best) and fine well-slacked lime; the coal and lime to be well mixed together, proportioned at about four-fifths coal and one-fifth lime; the tar to be heated, and, while hot, thickened with the mixture of coal and lime, until it becomes so hard as that it may be easily spread upon the

surface of a board, and not run when hot. Turpentine or pitch will answer nearly as well as tar, and plaster of Paris will answer instead of lime; to be used in the same manner, and in about the same proportions. The cement must be applied warm, and is found to be used easiest with a trowel.

A Black Varnish for Gentlemen's Old Straw or Chip Hats.

Take best black sealing-wax, half an ounce; rectified spirit of wine, two ounces; powder the sealing-wax, and put it, with the spirit of wine, into a four ounce phial; digest them in a sand heat, or near a fire, till the wax is dissolved; lay it on warm with a fine soft hair-brush, before a fire, or in the sun. It gives a good stiffness to old straw hats, and a beautiful gloss equal to new, and resists wet. If the hats are very brown they may be brushed over with writing ink, and dried before the varnish is applied. Spirit of turpentine may probably be used in the place of the spirit of wine.

An excellent Cement, or Glue, for Wood or Paper.

Isinglass two parts, gum-arabic one part, dissolved in a small quantity of gin or proof spirit, by a very gentle heat, and preserved in a bottle for use.

To purify Wool infested with Insects.

The process of purification consists in putting into three pints of boiling water, a pound and a half

of allum, and as much cream of tartar, which are diluted in twenty-three pints more of cold water. The wool is then left immersed in this liquor during some days, after which it is washed and dried. After this operation it will no longer be subject to be attacked by insects.

A pleasant cheap Ale.

Boil four ounces of best Farnham hops, and ten pounds of treacle or brown sugar, in twelve gallons, or more, of water; boil them ten minutes; work with yeast, as in the common method of brewing of malt; tap the same in ten days, when the beverage will be found fit for drinking.

To make Macaroni.

The white of an egg, and flour enough to make a stiff paste; roll it out thin, and cut it like macaroni; boil it in milk and water a quarter of an hour; stew it with a teacup-full of rich cream, and a teacup-full of rich, old, scraped cheese; stew it till the cheese is melted; cover it with new cheese scraped, that will toast; brown it.

To sweeten Musty Casks.

To destroy foul air in casks, and to sweeten casks, throw in burning coals, and then cold water. Public brewers wash their casks with lime and water, mixed to the consistence of paint; they let it remain till dry, and then wash them with water.

Balls for beautifying Mahogany.

Melt twelve ounces of bees-wax with six ounces of mutton tallow; then add to them one ounce of red saunders wood, in fine powder, and form the same into balls. If the mahogany has spots of ink, grease, &c. first rub them out with vinegar and very fine brick dust with a cork, and afterwards wash with warm water. When rubbed dry, a little of the ball is to be put on flannel, and rubbed well into the pores of the wood, and with a brush into carved work; wipe it off with a clean linen cloth; repeat this in a day or two, and the wood will receive a most beautiful polish.

To fumigate Foul Rooms.

To one table spoonful of common salt in a glass cup, add, four or five different times, a quarter of a wine glass of strong vitriolic acid. At every addition of the acid the vapour will come in contact with the malignant mismata, and destroy them.

To preserve Boot-Tops.

Boot-tops are now painted with common oil paint, made the colour of leather, with one pound of yellow soap, dissolved in six pints of water, and, while hot, mixed in one hundred weight of the paint. The soap, it is said, prevents it from cracking; the tops are dried in a stove, they look beautiful, and are easily cleaned, when dirty, with soap and water.

Simple Way of determining the exact Time of Moon, and to obtain a Meridian Line, on a small Scale.

Near the top of a room facing the south, fix a plate of metal, with a circular hole in it, for the sun to shine through, from eight or nine o'clock in the morning until three or four in the afternoon; then, by means of a line and a plummet, determine the point upon the floor which is directly under the centre of the hole, and from that point, as a centre, draw several concentric semicircles. Having made choice of some clear day near the summer solstice, make the room nearly dark, and about three or four hours before, and afternoon; mark the points where the northern, as also the southern limb of the sun's image cross those semicircles, and there will be several curves included between these points, through the middle of which, a right line being drawn from the centre of the semicircles, is a meridian line. After the line has been drawn in this manner, it must be examined by succeeding observations, and corrected, if necessary, by which means a line may be drawn exceedingly near the true meridian.

Practical observations on the above:

1. The metal plate, which may be about one-fifth of an inch thick, must be placed parallel to the axis of the world, that the sun's rays may pass perpendicularly through it when he is in the equator.

2. The aperture need not be more than one-fifth of an inch in diameter, if it be countersunk on both

sides, to admit the sun's rays to flow through it at the distance of three or four hours before, and afternoon.

3. If the surface of the floor, on which the observations are to be taken for finding the meridian, be not sufficiently even, the floor may be covered with new boards, taking the greatest care that they are laid down perfectly horizontal from east to west. After the line has been correctly drawn, and the north and south ends of it marked upon the walls of the room, the boards may be taken away, and others laid down to draw the lines upon.

A meridian line, upon a small scale, but sufficiently correct for regulating clocks and watches, may be had by the following method :

Let a stone, with an even surface, about three feet long and two broad, be fixed horizontally upon a brick or stone pillar, at a convenient height, for observation, with one of its ends facing the south. Near the middle of this end of the stone fix a gnomon in a direction perpendicular to the horizon. This gnomon, which should be made of a strong bar of metal, must have a small aperture through it, for the sun's rays to flow through early in the morning and late in the evening. From that point, as a centre, which is directly under this aperture, draw several concentric semicircles, and fix the meridian line according to the preceding directions. The gnomon should have several other holes made through it in a line perpendicular to the horizon, that the sun's rays at noon, flowing through some of them, may fall near the north end

of the stone at all seasons of the year; for, if only one hole be used, the sun's image will fall near the centre of the gnomon in the summer, and in the winter it will be thrown far beyond the north end of the stone.

To raise Capsicums, and make Cayenne Pepper.

Cayenne pepper is a spice used in most families, and often cultivated in the gardens for ornament, without either gentlemen or gardeners knowing that they have so valuable a spice in their possession; for the usual price is a shilling an ounce, and even then it is not much dearer than black, as it will go about four times as far.

This pepper originally came from Cayenne, in South America, (and other warm countries) from whence it took its name, but is now naturalized to this climate as to be raised on a common hot bed in spring.

It is produced from the capsicum, which is raised for ornament, with many other annual flowers, or for pickling the green pods, and is the seed and pod when ripe.

In March or April, procure some pods of any of the sorts of capsicums, as there are many varieties of them of different shapes; take out the seeds, and sow them on a hot bed, not too thick.

When they are about four inches high, prick them out on the hot bed, at six inches asunder; or put each into a small pot, or three into a large one, and keep them still under the glasses.

In June, when the weather is settled, plant them all in a warm situation, in rich earth, where they are to remain; some on the borders of the flower garden, and some into larger pots, which you can shelter in bad weather.

If you have a green-house, or some warm windows, place them there, because, in those situations, they will produce the pods to greater perfection, and ripen the seeds better.

The pods, while green, make a very agreeable warm pickle, and only require to be put into old vinegar, with some salt, but without any spice.

To make the pepper:

Procure some pods of capsicums, of any of the sorts; dry them before the fire, and take out the seeds, which keep separate, and cut, with a pair of scissars, all the tender parts of the pods into small pieces.

Grind them separate in a small pepper mill, because the skin will make it of a beautiful scarlet, the seeds of a bright yellow, but in point of strength or flavour there is no difference.

If the mill be not in good condition, let it be cut afresh, because the finer it is ground the better it is, and will go the farther; if it be not very fine the first time of grinding, grind it over again.

Put it into small bottles, wrap each in paper, and keep them in a dry place, to preserve its colour, for, in a damp place, or in the sunshine, it will lose both its flavour and colour.

This is the whole art of making Cayenne pepper; and if you have not an opportunity of raising capsicums yourself, those imported from abroad may be

purchased from the wholesale druggists at about four shillings a pound. The English may be procured of the seedsmen, at the herb shops in Covent Garden. According to the season, the price will vary a little.

Useful Hints relative to Bedclothes, Mattrasses, Cushions, &c.

The purity of feathers and wool employed for mattrasses and cushions ought to be considered as a first object of salubrity. Animal emanations may, under many circumstances, be prejudicial to the health; but the danger is still greater, when the wool is impregnated with sweat, and the excrementitious parts of persons who have experienced putrid and contagious diseases. Bedclothes, and the wool of mattrasses, therefore cannot be too often beat, carded, cleaned, and washed. This is a caution which cannot be too often recommended.

Avoid, as much as possible, living near Church Yards.

The putrid emanations arising from church yards, are very dangerous; and parish churches, in which many corpses are interred, become impregnated with an air so corrupted, especially in spring, when the ground begins to grow warm, that it is prudent to avoid this evil as much as possible, as it is one of the chief sources of the small pox and putrid fevers which are so prevalent at that season.

To plant and make Edgings.

Edgings of daisies, thrift, violets, gentianella, &c. should be planted in February; but those of box succeed better, if planted in April or August.

New edgings should be planted rather closely, that they may have an immediate effect; and, in repairing old ones, plant very close, that the whole may appear the more uniform. Some plant these, in either case, with the dibble, but it is better to do this with the spade; cutting out by the line, a drill, or furrow, perpendicular, on the side next the border, and to a depth suitable to the size of the roots to be laid; placing them against the perpendicular side, and spreading out their fibres sideways; exposing them to the air as short a time as possible.

Utility of Carrots as food for Horses and other stall Beasts.

Carrots are excellent food for horses, either given alone, or along with hay. Likewise for fattening stall beasts. They make them eat straw, and very indifferent hay, greedily. If the same be given to cows, the milk will have a much less offensive taste and smell than when they are fed on turnips.

To make good White Paint.

To one gallon of spirits of turpentine add two pounds of frankincense; let it simmer over a clear fire until dissolved; strain it, and bottle it for use. To one gallon of bleached linseed oil add one quart of the above, shake them well together, and bottle

it. Let any quantity of the white lead be ground with spirits of turpentine, very fine, then add a sufficient portion of the last mixture to it, until you find it fit for laying on. If in working it grows thick, it must be thinned with spirits of turpentine. It is a flat or dead white.

To whiten Linseed Oil.

Take any quantity of linseed oil, and to every gallon add two ounces of litharge; shake it up every day for fourteen days, then let it settle a day or two; pour off the clear into shallow pans, the same as dripping pans, first putting half a pint of spirits of turpentine to each gallon. Place it in the sun, and in three days it will be white as nut oil. This oil, before it is bleached, and without the turpentine, is far superior to the best boiled oil, there being no waste or offensive smell.

To destroy Vermin in Granaries and other Out-buildings.

Cover completely the walls and rafters, above and below, of the granaries, &c. which are infested with weevils and other vermin, with quick lime slacked in water, in which trefoil, wormwood, and hyssop, have been boiled. This composition ought to be applied as hot as possible.

To judge of the Weather by common Chickweed.

The Rev. Mr. Shaw remarks, that chickweed is an excellent out-door barometer; when the flower

expands boldly and fully, no rain will happen for four hours and upwards; if it continues in that open state no rain will disturb the summer's day; when it half conceals its miniature flower, the day is generally showery; but when it entirely shuts up, or veils the white flowers with its green mantie, let the traveller put on his great coat, and the ploughman, with his beasts of draught, rest from their labour.

An improved Method of Writing on Asses Skin, used in Pocket Books.

Use a silver bodkin or pencil, or a pencil made of soft solder. This will save a black lead pencil, and never require cutting. The letters on the asses skin must be washed off with soap and water, not with water only, or saliva, as is usual.

To revive old Writings which are almost defaced.

Boil gall nuts in wine; then steep a sponge into the liquor, and pass it on the lines of the old writing; by this method the letters, which were almost undecypherable, will appear as fresh as if newly done.

To make a Liquid for staining Bone or Wood different Colours.

Take strong white wine vinegar in a glass vessel, and put to it filings of copper, with some Roman vitriol, roach allum, and verdigris, and leave it thus

infused for seven days; then boil it in some vessel, and by putting into it bone, ivory, or wood, it will penetrate, and give it a green colour. If any other colour is required, as red, blue, or yellow, put Brazil wood, indigo, French berries, or any other such colours, to infuse in the vinegar, with a little roach allum.

To take off, instantly, a Copy from a Print or Picture.

Make a water of soap and allum, with which wet a cloth or paper; lay it either on a print or picture, and pass it once under the rolling press; then going round the other side to take it up, you will have a very fine copy of whatever you shall have laid it upon.

New Method of rendering Asparagus more productive, and of producing it in every Month in the Year.

The flowers of asparagus are found, on a strict examination, to be diæcious, although arranged by Linnæus, and other botanists, as hermaphrodite.

Those individuals which bear berries have abortive stamina, and those which have perfect stamina are destitute of pistils, or at least have only abortive ones.

The male plants throw up a far greater quantity of shoots than the female ones, although not quite equal to them in size.

In the formation, therefore, of beds, the male plants only should be selected, which may easily

be done by not planting them from the seed bed until they have flowered.

When the plants are one year old, transplant them into the other beds, at six inches distance; let them remain there until they flower, which will be, in most of them, in the second year; put a small stick to each male plant, to mark them; and pull up the females, unless you choose to make a small plantation with some of them, to prove the truth of the experiment.

As asparagus is esteemed one of the greatest delicacies which the garden affords, no person fond of it should be unacquainted with the method of producing it in every month of the year.

Towards the end of July, especially if it be rainy weather, cut down the stalks of the asparagus, fork up the beds and rake them smooth. If it be dry, water them with the draining of a dunghill; but, instead of leaving them round, leave them rather flat or hollow in the middle, the better to retain the water or rain. In about twelve or fourteen days the asparagus will begin to appear, and, if it be dry weather, continue watering once or twice a week.

By this method you may cut asparagus till about the end of September, at which time the hot beds will succeed this; so that by making five or six hot beds during the winter, you may have a regular succession of it every month of the year.

Some persons will object to cutting the same beds twice a year; to obviate this objection, leave two or three beds uncut in spring, and make a few more beds, if you choose to follow the practice.

Asparagus seed is very cheap; nor is it necessary to use so much as was formerly used in making the beds. It is better to apply a little rotten dung on the tops of the beds, and to sow some seed every year, that you may have plenty of plants for forcing and making new beds. Be not too fond of continuing the old ones, when you perceive they begin to fail, but make new ones, and force the old roots.

To prepare a Species of Writing Ink, indelible even by the Action of the Oxygenated Muriatic Acid.

As common writing ink is susceptible of being effaced by oxygenated muriatic acid, and as the knowledge of this fact may be abused to very fraudulent purposes, the following composition for inks, absolutely indestructible, is recommended to the notice of the curious.

Boil one ounce of fernambuca wood, and three ounces of nut galls, in 46 ounces of water, till they shall be reduced to thirty ounces in all. Pour this decoction, while it is yet hot, upon half an ounce of sulphate of iron, or martial vitriol, a quarter of an ounce of gum-arabic, and a quarter of an ounce of white sugar. After these substances are dissolved, add to the solution one ounce and a quarter of indigo, finely pulverized with three quarters of an ounce of lamp black, very pure, of smoke black, previously diluted in one ounce of the best brandy. The following receipt is still more simple: Boil one ounce of fernambuca with twelve

ounces of water, and half an ounce of allum; continue the ebullition till the liquid mixture shall have been reduced to eight ounces; then add an ounce of oxide of manganese, which has been reduced by decantation to extreme fineness, and, in mixture with it, half an ounce of gum-arabic.

To take Impressions or Copies of valuable Coins and Medals.

Take fish glue or isinglass, cut it in small pieces, immerse it in clear water, and set it on a slow fire; when gradually dissolved, let it boil slowly, stirring it with a spatula, and take off the scum. The liquor being brought to a sufficient tenacity, take it off the fire, and let it cool a little, then pour it on the medal or coin you intend to copy, so that it may lay about the thickness of a crown piece upon the medal. This done, set it in a moderate air, neither too hot nor too cold, and let it cool and dry; when dry it will loosen itself, and you will find the impression exact, and the finest strokes expressed to the greatest perfection. These you may preserve for your own study and satisfaction, or you may send them, put up in letters, to your correspondents abroad. You may mix this liquid with various colours, green, red, yellow, blue, &c. If you put a little parchment size to it, it will make it harder, and answer the purpose better. In this manner a fine collection may be made, which will answer for study as well as real coins or medals. A little brandy, or common spirits, added to the isinglass solution, will prevent its putrefaction.

Excellent Method of rearing Calves, and of preserving the Cream, and a great Part of the Milk during that Time.

It has hitherto been supposed, in most countries, that the best method of rearing calves, either for slaughter or the flock, is to make them such their mother, but it is now ascertained that the following method is to be preferred :—

Put some water on the fire, nearly the quantity that the calf can drink. When it boils, throw into it, one or two handfuls of oatmeal, and suffer the whole to boil for a minute. It is then left to cool until it is no warmer than new milk. Then mix with it one or two quarts of milk, that has stood twelve hours, and has been skimmed; stir the whole, and give it the calf to drink. At first it is necessary to make the calf drink by presenting the fingers to it, but it soon learns to do without this help, and will grow incomparably faster than by the old method. This new method is not only a theoretical truth, but its success is confirmed by experience.

The economical advantages that result from it are the following: According to the old method, a calf intended for slaughter is made to suck for three weeks, and those intended for agriculture from six to eight weeks. Supposing the cow gives only a moderate quantity of milk, the value of it will amount, in three weeks, to nearly the value of the calf. If, on the contrary, we rear a calf according to this method, we consume during the three weeks only three quarts of oatmeal, at most, and the skimmed milk.

Calves that have been brought up by this method have been always healthy and strong, and not subject to disease. They are not suffered to suck at all, but to have the pure milk of the mother to drink for the first four days, because it has been observed, that the separation, after four days, is more painful to the mother than when the calf is taken from her soon after its birth.

To make the Quintessence of Lavender, or other Aromatic Herb.

Take off the blossoms from the stalks, (which must be cut fresh at sun rising in warm weather) spread the blossoms on a white linen cloth, and lay them in the shade for 24 hours; after which, stamp or bruise them; then put them, immersed in warm water, into the still, near a fire, and let them infuse for the space of five or six hours, so closely covered that nothing may exhale from it; after which time, take off the covering, and quickly put on the helm, and lute it carefully. You must, in the beginning, draw over half the quantity of the water you put in. If you take away the receiver, you will see the quintessence on the surface of the water, which you may easily separate from it. Then put the distilled water back again, and distil it over again, till there appear no more of the quintessence on the water. You may distil this water four or five times over, according as you perceive the quintessence upon it.

The best distilling utensils for this work are those for the *balneum-mariæ*, or sand bath; meanwhile you may, after the common method, distil the in-

gredients on an open fire. But if you intend to make quintessence for waters, you may make use of common salt, in order to extract the more quintessence of any blossom.

Take four pounds of blossoms of any aromatic plant, and infuse in it six quarts of water. If you use salt to bring your infusion to a ferment, add half a pound of common salt to it.

To make Vinegar with the Refuse of Bee-hives, after the Honey is extracted.

When honey is extracted from the combs by means of pressure, take the whole mass, break and separate it, and into each tub or vessel put one part of combs and two of water: place them in the sun, if his rays possess a sufficient power, or in a warm place, and cover them with cloths. Fermentation takes place in a few days, and continues from eight to twelve days, according to the higher or lower temperature of the situation in which the operation is performed. During the fermentation, stir the matter from time to time, and press it down with the hands, that it may be perfectly soaked. When the fermentation is over, put the matter to drain upon sieves or strainers. At the bottom of the vessels will be found a yellow liquor, which must be thrown away, because it would soon contract a disagreeable smell, which it would communicate to the vinegar. Then wash the tubs, put into them the water separated from the other matter; it immediately begins to turn sour; when the tubs must be again covered with cloths, and kept moderately warm. A pellicle or skin is formed on their surface, beneath which

the vinegar acquires strength; in a month's time it begins to be sharp; it must be left standing a little longer, and then put into a cask, of which the bung-hole is left open, and it may then be used like any other vinegar.

To prevent the Freezing of Water in Pipes in the Winter Time.

By tying up the ball-cock, during the frost, the freezing of pipes will often be prevented; in fact, it will always be prevented where the main pipe is higher than the cistern or other reservoir, and the pipe is laid in a regular inclination from one to the other, for then no water can remain in the pipe; or if the main is lower than the cistern, and the pipe regularly inclines, upon the supplies ceasing, the pipe will immediately exhaust itself into the main. Where water is in the pipes, if each cock is left a little dripping, this circulation of the water will frequently prevent the pipes from being frozen.

To raise Mazagan Beans early in Summer.

Plant Mazagan beans in October, on a south border, close to the wall, three inches asunder, in two or three rows. In frosty weather cover them with long litter. Transplant them at spring, leaving the largest at five or six inches distance.

Cure for Deafness.

A merchant in Moscow was for half a year deprived of the faculty of hearing, and all the remedies usually prescribed for that disease were used

without effect. At last he had recourse to the following simple operation. After having filled his mouth with the smoke of tobacco, he closed it firmly, and also his nose, thereby forcing the smoke to find its way through the ears. The following morning he felt a crash, first in one ear and then in the other, and from that moment his hearing was completely restored.

Dutch Method of preparing Goose Quills for Writing.

The process consists in immersing the quill, when plucked from the wing of the bird, into water almost boiling; to leave it there till it becomes sufficiently soft to compress it, turning it on its axis with the back of the blade of the knife. This kind of friction, as well as the immersions in water, being continued till the barrel of the quill be transparent, and the membrane, as well as the greasy kind of covering, be entirely removed, it is immersed a last time to render it perfectly cylindrical, which is performed with the index finger and the thumb; it is then dried in a gentle temperature.

To improve the Wool of Sheep by Smearing.

Immediately after the sheep are shorn, soak the roots of the wool that remain all over with oil or butter and brimstone, and three or four days afterwards wash them with salt and water; the wool of next season will not only be much finer, but the quantity will be in greater abundance. It may be depended upon, that the sheep will not be troubled

with the scab or vermin in that year. Salt water is a safe and effectual remedy against maggots.

To improve Fruit-trees by Attention to the Colour of the Soil.

The colour, and also the quality of soils have an effect on the colour and flavour of fruits—even on the colour of many flowers. The effects of the colour of soils, on that of fruits, are most perceptible on the delicate kinds, such as grapes, peaches, &c. but to a nice observer it extends in a greater or less degree to all fruits. For instance, if two black Hamburgh grapes, made from the cuttings of the same plant, shall be planted, the one in a dry hazely loam, and the other in a moist black earth, the fruit of the one will be brown, or of a grizzly colour, and the other very dark red or black; and the grape will be more juicy, though better in flavour, than the other grown in a drier soil.

The Advantage in sowing Peas in Circles instead of straight Rows.

It is a great error in those persons who sow the rows of tall growing peas close together. It is much better in all those sorts, which grow six or eight feet high, to have only one row, and then to leave a bed ten or twelve feet wide for onions, carrots, or any crops which do not grow tall.

The advantages which will be derived are, that the peas will not be drawn up so much, be stronger, will flower much nearer the ground, and in wet

weather can be more easily gathered without wetting you.

But instead of sowing peas in straight rows, if you will form the ground into circles of three feet diameter, with a space of two feet between each circle, in a row thirty feet long, you will have six circles of peas, each nine feet; in all, fifty-four feet of peas instead of thirty, on the same extent of ground.

If you want more than one row of circles, leave a bed of ten or twelve feet before you begin another.

For the very tall sorts, four feet circles will afford more room for the roots to grow in, and care must be taken, by applying some tender twigs, or strings, to prevent the circles from joining each other.

This method is equally applicable for scarlet-beans.

To raise Peas in Autumn, and to prevent Mice from eating them when sown.

The purple-flowered peas are found to answer best for a late crop in autumn, as they are not so liable to be mildewed as many of the other sorts, and will continue flowering till the frost stops them.

Those peas may be sown in July, August, or so late as the first week in September, if sown in a warm sheltered situation, and in a soil inclining to sand.

Soak the peas in warm milk, and after you have drawn the drills, water them before you sow the

peas; it is best to sow them towards the evening. If the autumn should prove very dry, they will require frequent watering.

When peas are sown before winter, or early in spring, they are very apt to be eaten by mice.

To prevent this, soak the peas for a day or two in train oil before you sow them, which will encourage their vegetation, and render them so obnoxious to the mice, that they will not eat them.

To make a Cephalic Snuff. A Remedy for most Disorders of the Head, and to strengthen the Nerves and revive the Spirits.

Take the best Virginia leaf tobacco, and well dry the same; then make it into snuff of the highest flavour; to which add one-twelfth part of the finest roseate rappee snuff, and a small quantity of the true Macabaw, from the West Indies; herbs, betony, eye-bright, marjoram, thyme, syriac, equal quantities, dried and made into a fine powder; to which add one-twentieth part of the leaves of assarum, dried and powdered in like manner; also East India cloves, thoroughly dried and powdered, one-fiftieth part; essential oil of cinnamon, nutmegs, lavender, and flowers of Benzoin; a small quantity of each, which mix well together with the above snuff, and then put the whole into an earthen pan, pressing it very close together; and after it has stood four days to digest, add thereto eau de luce, in quantity one ounce to a pound of the above snuff; together with orange flower, lavender, and rose

water, just sufficient to make the whole a little moist. Then put it into bottles for use, of which a pinch may be taken at any time for the disorders above-mentioned.

Substitute for Soap, easily prepared in small Quantities, by private Families in the Country.

Collect, before the time of seeding, thistles, nettles, fern, and such other weeds as usually infest the borders of high roads and hedges, and burn them in a large heap, gradually, till the whole are consumed, and carefully preserve the ashes in a dry place, ready to make the ley wanted for the purpose of making a substitute for soap.

The requisite materials and utensils should be prepared, which are but few in number. They consist, 1st, Of a small tub of white wood, nine inches in width, and as many in height. This tub should be perforated near the bottom; its use is for mixing the leys. (Were it made of oak it would colour the leys.) 2d, A small copper bason, with a round bottom, a foot in diameter, and seven or eight inches in depth; or where this cannot be procured, an iron pot, or earthen vessel, that can bear the fire, may be used. This vessel is intended for boiling the mixture. 3d, For this small manufacture are finally required a skimmer, a spatula of white wood, and two earthen pans.

The materials necessary are, 1, some good ashes; 2, lime; and 3, oil, tallow, or kitchen fat.

Method of preparing the leys.

Take three pounds of ashes and one pound of

lime. First, moisten the lime with a small quantity of water, in order to slake it; and after it has completely crumbled down, mix with it the ashes, and put this mixture into the tub, having previously spread a piece of canvas at the bottom; carefully close the hole at the bottom of the tub; after which pour upon the materials a quantity of water sufficient to soak it well through, and rise above it in the vessel, to the height of about three finger breadths. Then stir it well with a stick, and suffer it to stand for some hours; then open the hole, in order to let the ley run off, which is collected and kept by itself. This is the first ley; then again put fresh water in the tub, stir the materials with a stick, let them stand for some hours, and then draw off the second ley, which is also kept separate; the third ley is obtained in the same manner, by pouring fresh water upon the remainder of the ashes, which will now have been sufficiently exhausted of its saline particles.

Take equal quantities of the first ley, and of kitchen fat, tallow, or oil, and melt them together in your copper bason, over a gentle fire, till they are well incorporated, by constantly agitating them with your wooden spatula. When the ley and grease are well united, you may add more ley of the second quality, and digest them for some time with a gentle heat, till the mixture is completed, taking care to stir it well all the time; then pour it into your earthen pans to cool and preserve for use. A few trials will enable you to make it in a perfect manner; and a little of this composition will be found to answer all the purposes of soap for family use.

The surplus ley of the stronger kinds may be preserved for future use, and the weaker ley will serve to put upon fresh ashes on a future occasion, or a little of any of these leys will form a useful steep, with a considerable quantity of warm water, for the dirty plain linen intended to be washed, but will be too strong for printed calicoes or dyed articles.

The Use of Garlic against Moles, Grubs, and Snails.

Moles are such enemies to the smell of garlic, that, in order to get rid of these troublesome and destructive guests, it is sufficient to introduce a few heads of garlic into their subterraneous walks. It is likewise employed with success against grubs and snails.

Substitute for Salt of Sorrel, for removing Ink Spots and Iron-moulds.

Take six parts of crystals of tartar, in powder, three parts of allum, likewise pulverized, and use them in the same manner as salt of sorrel.

New Method of making Flour without Grain.

Take turnips, potatoes, parsnips, white beet, and Jerusalem artichokes, grind or grate them fine; then put the substance into water, and let it remain therein several hours; then strain off the water, and add fresh water in quantity sufficient to cover the substance. Continue to repeat this process until the water pours off quite clear. Then strain and press the water from the vegetable substance,

which is to be dried on a kiln, or other proper convenience. When the substance is quite dry, grind it in a corn or other proper mill, until it becomes fine flour. Either of the above vegetables alone, or any two or more of them mixed together, and prepared as before specified, will answer for the purpose. The foregoing description is for the making coarse or common flour; when the best or fine flour is to be made, pare or peel the rind off the vegetables before they are ground or grated. Then pursue the same process as with the coarse or common flour.

Method of purifying the Air of Gardens.

The following method of purifying the air in gardens is intended for the production of melons and other fruits. Take a cylindrical vessel, nineteen inches and a half in diameter, and six inches high, filled with spirits of wine; plunge into the middle of it another glass vessel, three inches and a half in diameter, containing four cubic inches of mercury. This will be sufficient to purify a square of 6237 square feet, having a radius of thirty-one feet six inches, and containing 65,488 cubic feet and a half.

Method of making excellent Butter from the Milk of Cows fed upon Turnips.

Let the bowls, either lead or wood, be kept constantly clean, and well scalded with boiling water, before using. When the milk is brought into the dairy, to every eight quarts mix one quart of boiling water; then put up the milk into the

bowls to stand for cream. By keeping strictly to this method, you will have, during the winter, constantly sweet and well-tasted butter from the milk of cows fed upon turnips.

Experienced Method of healing Wounds in Trees.

This method consists in making a varnish of common linseed oil, rendered very drying, by boiling it for the space of an hour, with an ounce of litharge to each pound of oil, mixed with calcined bones, pulverized and sifted, to the consistence of an almost liquid paste. With this paste the wounds of trees are to be covered, by means of a brush, after the bark and other substance have been pared, so as to render the whole as smooth and even as possible. The varnish must be applied in dry weather, in order that it may attach itself properly.

Usefulness of Hariff, commonly called Clivers or Goose Grass.

Young geese are very fond of the branches of this plant; the seeds may be used instead of coffee. The expressed juice of the stem and leaves, taken to the amount of four ounces night and morning, is very efficacious in removing many of those cutaneous eruptions, which are called, though improperly, scorbutic: but it must be continued for several weeks. It has been known to cure cancers by drinking the juice, and applying the bruised herb to the tumour.

To preserve Grapes till Winter.

About September, when grapes are nearly ripe, procure some bags made either of crape, muslin, gauze, or white paper.

Select some of the best bunches, and, with a pair of sharp narrow-pointed scissars, cut off all small unripe, rotten, mouldy, or imperfect grapes, especially those eaten by flies or wasps.

Inclose each bunch in a bag, and tie the bag fast with a string, so that no insect can get into it. In the middle of a fine day in October, gather them, with a piece of the shoot to them, and hang them up in a dry warm room.

Dip the end of the shoots in melted rosin or sealing-wax Examine them frequently, lest they should get mouldy or rotten.

Method of fattening Pigeons.

When the little animals have attained the nineteenth or twentieth day, when the under part of their wings begins to be covered with feathers, and the quills are just appearing, remove them from the dove-cote, place them in some other situation, in a nest, which cover with a basket capable of keeping out the light, but of admitting the air. It is generally known, that animals intended to be fattened artificially, ought to be kept in darkness. Provide Indian corn, soaked in water about twenty-four hours; take out twice a day, early in the morning, and again in the evening, each of the young pigeons from the nest, open his bill gently, and make him swallow each time, according to his spe-

cies and his size, from eighty to one hundred grains of this soaked corn. Continue this method of proceeding from ten to fifteen days, and you will obtain pigeons as fat and delicate as possible for those birds to be. The success of this method has been frequently experienced.

Method of preventing the premature Decay of Fruit Trees.

The decay of peach trees is owing to a worm, which originates from a large fly that resembles the common wasp. This fly perforates the bark, and deposits an egg in the moist or sappy part of it. The most common place of perforation is at the surface of the earth, and, as soon as the worm is able to move, it descends into the earth, probably from an instinctive effort to avoid the winter's frost. This may be ascertained by observation; the tract of the worm, from the seat of the egg, being visible at its beginning, and gradually increasing in correspondence with the increasing size of the worm: its course is always downwards. The progress of the young worm is extremely slow; and if the egg is deposited at any considerable distance from the surface of the earth, it is long before the worm reaches the ground. The worms are unable to bear the cold of winter unless covered by the earth, and all that are above ground after frost are killed.

By this history of the origin, progress, and nature of the insect, we can better explain the method of cure, which is as follows: In the spring,

when the blossoms are out, clear away the dirt, so as to expose the root of the tree, to the depth of three inches; surround the tree with straw about three feet long, applied lengthways, so that it may have a covering one inch thick, which extends to the bottom of the hole, the butt-ends of the straw resting upon the ground at the bottom. Bind this straw round the tree with these bands, one near the top, one at the middle, and the third at the surface of the earth; then fill up the hole at the root with earth, and press it closely round the straw. When the white frosts appear, the straw should remain uncovered until the blossoms put out in the spring.

By this process the fly is prevented from depositing its egg within three feet of the root; and although it may place the egg above that distance, the worm travels so slow that it cannot reach the ground before frost, and therefore is killed before it is able to injure the tree.

The truth of the principle is proved by the following fact, which was practised on a large number of peach-trees, and they flourished remarkably, without any appearance of injury from the worm, for several years. The straw was then discontinued from about twenty of them. *When all those which were without the straw declined, while the others, which had the straw, continued as vigorous as ever.*

To make Elastic Gum.

Linseed oil, or nut oil, one gallon; bees'-wax, yellow or bleached, one pound; glue, or size, six

pounds; verdigris, a quarter of a pound; litharge, a quarter of a pound; spring, or rain water, two quarts; these ingredients to be put into an iron kettle, and melted down till it comes to the composition.

This gum is very serviceable and useful in the several branches of portrait and house-painting, by making the colours durable and free from peeling; also of great utility in gilding, painting, penciling, and staining of silks, calicoes, &c. and in dressing of silk, linen, and cotton in the loom, instead of gum or paste, so as to strengthen the threads of the finest cottons; and is also excellent for beautifying and fixing the colours upon paper, equal to that done in India; and is of the greatest use for rendering the clayer composition, used in modelling, supple, and preventing the same from drying too fast; and for causing a transparency of colour, fit for China and earthenware, so as to stand baking or burning.

New invented Composition to be used instead of Yeast.

To make eight quarts of this composition, boil in common water eight pounds of potatoes, as for eating; bruise them perfectly smooth, and mix with them, whilst warm, two ounces of honey, or any other sweet, and one quart (being the eighth part of a gallon of yeast) of common yeast. And, for making bread, mix three beer pints of the above composition with a bushel of flour, using warm water in making the bread; the water to be warmer in winter than in summer; and the composition to be used in a few hours after it is made; and as soon

as the sponge (the mixture of the composition with the flour) begins to fall the first time, the bread should be made and put in the oven.

Hints on warming Beds.

In taking the coals into the warming-pan remove therefrom any black coals in a burning state, and scatter upon those in the pan a little common salt; this will correct the unhealthy sulphurous vapour of the coals, and prevent their suffocating smell.

To make Salt or Brine for Meat.

Such families as reside near the sea may supply themselves with good salt or brine at a very cheap rate, merely by boiling the sea water in a common pan, till it forms a strong brine proper for use, or by further boiling to separate the salt therefrom, by means of a ladle, with small holes in it, and drying the salt, thus obtained, upon plates, in an oven, stove, or before the fire.

If this salt is wanted remarkably pure, dissolve it in a little fresh water; filtre, and crystallize it again.

To make a Substitute for Verdigris.

Take one part of the very best sal-ammoniac, one quarter part of oil of vitriol, one half part of aquafortis, one quarter part of acid muriatic, and twelve parts of cold spring water, which, when thoroughly mixed together, is to be put into sheets of copper, of any size, turned up at the edges about half an inch all the way round,

to prevent the mixture from running off. The mixture is then to be stirred well up every two or three hours, until the same is discovered to be of a green or bluish cast or body. The mixture must then remain a few hours, until it is settled, and the water at top appears perfectly clear, which will happen sooner or later, it depending upon the temperature of the atmosphere. The water must then be carefully poured off, leaving the sediment at the bottom. It must be then put into any vessel of sufficient size, and if it is thoroughly prepared the paint will bear washing in water to free it from dirt, &c. after which washing, the water must be poured from the paint. The paint may then be taken and prepared in lumps, by putting the same into moulds of any size that may be convenient, observing afterwards to place the same in a mild warm room. When it is quite dry, it may be ground into powder with ease, or remain in the lumps, as may be convenient; it is then fit for use.

Composition for Shaving, without the Use of Razor, Soap, or Water.

Mix one pint and a half of clear lime water, two ounces of gum-arabic, half an ounce of isinglass, an eighth of an ounce of cochineal, a quarter of an ounce of turmeric root (made into powder) an eighth of an ounce of salt of tartar, and an eighth of an ounce of cream of tartar, together; boil them for one hour at least (stirring up the mixture during the whole time of boiling, and be careful not to let it boil over) clear it through a sieve; then add two pounds and an half of pumice-

stone, finely pulverized; mix the whole together, with the hands, into one cake, by the assistance of the white of two eggs, well stirred up. Then divide the cake, so made, into twelve smaller cakes; dry them in the open air for three days; put them into an oven of moderate heat, for twenty-four hours, when they will be completely dry and fit for use. Apply them, with a gentle friction, to the beard, and they will produce the complete effect of shaving, by rubbing off the hair.

Easy Method of taking off a perfect Copy of a Print or Drawing.

Take a piece of clear lantern horn; lay it upon the print or picture you wish to take off; then, with a crow-quill dipped in Indian ink, draw every stroke of the outline upon the horn; when dry, breathe upon that side of the horn whereon you made your draught, three or four times, and place it directly on a damp piece of clean white paper, with the drawn side downwards; then pressing it hard with the palm of your hand, the drawing will stick to your paper, and the horn come off clear.

To make a Drawing Desk or Frame.

Cause a frame to be made of a reasonable size, so that a pretty large piece of crown glass may rest upon it, supported by a ledge at the bottom part, where, by two hinges, it may be fastened to a drawer of the same dimension, which may be divided to serve for pen, ink, and paper, and other small utensils, or instruments for drawing. To

the top of the frame fix two stays, by which the frame may be raised higher or lower, as occasion may require.

The manner of using the frame is thus; lay the print or drawing you intend to copy, on the glass, and fasten a sheet or piece of fine white paper, with some wafers or paste, upon it; if it be in the day time, place the back, after you have raised the frame to a proper height, against the window, but if night, put a lamp behind it, and you will see every stroke of the print or drawing, which, with your pen, you may copy very accurately, and finish according to the manner you think proper; if it be a solid piece which you intend to copy, then place it behind the desk, and having fastened your paper in the frame, put the lamp so as to produce a strong shade on the object you have before you to draw, and you will plainly see to trace the shape with your pen, or black lead pencil; after which, shade it in the manner it appears to you without the desk.

To increase the Durability of Tiles for covering Buildings.

The following composition has been found to be of extraordinary durability as a glazing or varnish for tiles. No sort of weather, even for a considerable length of time, has had any effect upon it. It prevents that absorption of water, by which common tiles are rendered liable to crumble into dust, hinders the shivering of tiles, and gives to red bricks a soft lustre, by which their appearance is much improved.

Over a weak fire heat a bottle of linseed oil, with an ounce of litharge and a small portion of minium, till such time as a feather, used in stirring it, shall be burnt to the degree of being easily rubbed to powder between the fingers. Then take off the varnish, let it cool, clarify it from any impurities which may have fallen to the bottom, and heat it again. Having, in the mean time, melted from three to four ounces of pitch, mix this with the warm varnish. The specific gravity of the pitch hinders it from mingling thoroughly with the varnish, though it even remain so long upon the fire, as to be evaporated to considerable thickness. It is not till the varnish be cooled, nearly to the consistency of common syrup, that this effect takes place in the requisite degree. If it be too thick let hot varnish be added, to bring it to the proper consistency; if it be too thin add melted pitch. Next, put in as much brick-dust as the mixture can receive, without being made too thick for convenient use. The finer the brick-dust, and the easier it is to be moved with the point of a pencil, so much the fitter will it be to fill up the chinks and unevenness of the bricks, and, as it were, to incorporate itself with their substance. Prepare the brick-dust in the following manner: Take a certain number of pieces of good brick, beat them into dust, and sift the dust in a hair sieve. Then to improve its fineness, rub it on a stone with water, dry it, and mix it with the varnish in the necessary proportion. If the brick-dust be naturally of too dark a colour, a portion of some that is brighter may be added, to make the colour clear.

It is to be laid on the tiles in the same manner in which oil colours in general are put upon the substances on which they are applied. The composition must be heated from time to time when it is to be used.

To obtain a good Crop of Onions.

In order to obtain a good crop of onions, it is proper to sow at different seasons, viz. in light soils, in August, January, or early in February; and in heavy wet soils, in March, or early in April;—Onions, however, should not be sown in January, unless the ground be in a dry state, which is not often the case at so early a period of the season; but if so, advantage should be taken of it.

When to plant Annual and Perennial Flowers.

Many kinds of annuals and perennials, sown in March and the beginning of April, will be fit for transplanting about the end of May, and may either be planted in patches about borders, or in beds, as fancy shall direct. Of these, the kinds improved by transplanting, are, amaranthuses, China asters, columbines, French and African marigolds, foxgloves, holly hocks, India pinks, love lies a bleeding, mallows, mignionette, prince's feather, scabious, stocks, sun flowers, sweet-williams, wall flowers, and others. They should be planted out in a showery time, if possible, or otherwise be frequently watered, till they have struck root.

To air Plants, and ventilate Rooms wherein they are contained.

Plants should have air, every day in the year, to make them grow well; but this matter, in sitting-rooms, will not of course be regulated for their sakes, especially in the colder seasons. Wherever placed, however, some attention should be paid to airing and ventilating the rooms regularly, by opening the windows, and occasionally the doors, in order to excite a free circulation of air. This should be done to a certain extent every day, according to the state of the weather, except in the time of severe frost, when it would not be adviseable to admit external air. But at such times, if bad weather be of long continuance, the rooms may be ventilated by means of the doors, and by exciting a current of air in the passages, or other parts of the house.

In very severe frost, or in a continuation of damp weather, moderate fires should be made for the sake of the plants, if placed in rooms not occupied. The window shuts should also be closed at night.

Method of sweeping Chimnies without employing Children, and the Danger attending the old Method pointed out.

Procure a rope for the purpose, twice the length of the height of the chimney; to the middle of it tie a bush (broom, furze, or any other,) of sufficient size to fill the chimney; put one end of the rope down the chimney, (if there be any wind-

ings in it, tie a bullet or round stone to the end of the rope), and introduce the wood end of the bush after the rope has descended into the chamber; then let a person pull it down. The bush, by the elasticity of its twigs, brushes the sides of the chimney as it descends, and carries the soot with it. If necessary, the person at top, who has hold of the other end of the rope, draws the bush up again; but, in this case, the person below must turn the bush, to send the wood end foremost, before he calls to the person at top to pull it up.

Many people, who are silent to the calls of humanity, are yet attentive to the voice of interest; chimnies cleansed in this way never need a tenth part of the repairs required where they are swept by children, who, being obliged to work themselves up by pressing with their feet and knees on one side, and their back on the other, often force out the bricks which divide the chimnies. This is one of the causes why, in many houses in London, a fire in one apartment always fills the adjoining ones with smoke, and sometimes even the neighbouring house. Nay, some houses have even been burnt by this means; for, a foul chimney, taking fire, has been frequently known to communicate, by these apertures, to empty apartments, or to apartments filled with timber, where, of course, it was not thought necessary to make any examination, after extinguishing the fire, in the chimney where it began.

To destroy the Red Spider, so troublesome in dry Seasons.

The red spider makes its appearance in hot dry weather, and is always found on the under sides of the leaves, generally on roughish leaves, but not always so. It preys on the apple, cherry, fig, peach, pear, and plum, seldom on the apricot. It is among the smallest of the acari; and is sometimes not distinguishable without a microscope. If the bark of the leaf be viewed through one, it appears full of its webs: and if many abound on it the leaf appears full of punctures, becomes discoloured, and brown on the upper surface, fades, and falls off.

This insect is more troublesome in dry seasons than in moist ones, and is wonderfully encouraged by heat, inasmuch that hot houses of every description are sadly infested with it. Water, and water only, is its bane; and the syringe, or the force pump, the engine of its destruction. It is not a mere sprinkling that will do; it requires a forcible dashing to and fro, and that often repeated to be effectual.

To prepare the beautiful Colour called Naples Yellow.

The beautiful yellow colour, commonly sold under the name of Naples yellow, is well known, Those who buy it are often imposed upon, by being told that it is a substance produced from Mount Vesuvius; but it is now known to be a composition by art. The process is composed of the following

substances, viz. one pound of antimony, one pound and a half of lead, half an ounce of allum, and the same quantity of common salt. The antimony and lead should be calcined together, afterwards the other ingredients added, and then the whole mixture undergoes a second calcination.

Another Method.

To procure this colour, take twelve ounces of white lead, three ounces of diaphoretic antimony, allum and sal-ammoniac, of each one ounce. All these must be ground together dry, upon a levigating stone; they must then be put into an open crucible, and exposed to a gentle fire for some hours; the fire is afterwards to be increased during a certain time; and finally, the mixture is to continue three hours in a degree of heat sufficient to keep the crucible red hot. The mass will then be found to have acquired a beautiful yellow colour. If it is wished to be more of the colour of gold, a greater quantity of diaphoretic antimony and sal-ammoniac must be added to the other ingredients.

It is probable that, instead of diaphoretic antimony, the grey calx of antimony might be made use of.

To destroy Beetles.

The mode of destroying beetles is, when the fire is put out at bed time, to lay a little treacle on a piece of wood, afloat, in a broad pan of water. These vermin are so fond of treacle that they will even struggle to gain it in the agonies of death.

For a Pain in the Ear.

Oil of sweet almonds two drams, and oil of amber four drops; apply four drops of this mixture, when in pain, to the part affected.

To make an Illuminated or Phosphoric Bottle, which will preserve its Light for several Months.

By putting a piece of phosphorus, the size of a pea, into a phial, and adding boiling oil until the bottle is a third full, a luminous bottle is formed; for, on taking out the cork, to admit atmospheric air, the empty space in the phial will become luminous. If care be taken to keep it, in general, well closed, it will preserve its illuminative power several months.

Easy and almost instantaneous Cure for the Ague.

When the fit is on, take a new-laid egg, in a glass of brandy, and go to bed immediately.

This very simple recipe has cured a great many after more celebrated preparations have proved unsuccessful.

To prevent excessive Thirst in Cases of Emergency at Sea, in the Summer Time.

When thirst is excessive, as is often the case in summer time during long voyages, avoid, *if possible, even in times of the greatest necessity*, the drinking of salt water to allay the thirst, but rather keep

thinly clad, and frequently dip in the sea, which will appease both hunger and thirst for a long time, and prevent the disagreeable sensation of swallowing salt water.

Easy Remedy for the Tooth-Ach.

The application of a magnetical bar (the artificial loadstone) to the tooth affected, for two or three minutes, will alleviate this truly distressing pain. The bar must be held in a perpendicular direction to the tooth, and will have greater effect if kept on the tooth for some little time after the pain is removed.

Easy Method of attracting Earwigs from the Ear.

A person lately having an earwig crept into his ear, and knowing the peculiar fondness that insect has to apples, immediately applied a piece of apple to the ear, which enticed the creature out, and thereby prevented the alarming consequences which might have otherwise ensued.

To prevent Snow or Rain Water from penetrating Shoes or Boots in the wet Season.

Incorporate a little bees-wax and mutton suet, in a pipkin or other vessel, over the fire, and while in a liquid state, rub some of the mixture well in and about the edges of the sole, which is the place where the wet generally enters. This will repel the wet, preserve the leather, and improve the lustre of the blacking.

Cream preserved in long Voyages.

Mix with a quantity of fresh rich cream half its weight of white sugar in powder; stir the whole well together, and preserve it in bottles well corked. In this state it is ready to mix with tea or coffee, and has continued in good condition during a voyage to America.

The Danger and ill Effects of Tobacco, taken too frequently.

Persons who are in the habit of chewing, snuffing, or smoking this Indian leaf, are not aware, that a few grains of it, taken into the stomach, cause sudden death. Nay, the smoke of it ejected into the rectum, has frequently proved fatal. It acts powerfully on the nervous system, destroys the sensibility of the stomach; and it is observed, that those who devour it in great quantity, die of apoplexy, palsy, and dropsy.

To improve the Sport of Angling, by Attention to the Dress.

Some attention should be paid to the colour of an angler's dress; it is natural to conclude, that green would be most eligible, as it would vary little from those objects with which fish are familiarised, such as trees growing near the sides of rivers, and herbage on the banks; yet, as this particular colour might be disagreeable to many, the angler should avoid all strong contrasts to those objects; particularly scarlet, and very light colours.

Economy in Candles.

In such candlesticks as are not made to slide, the candles are frequently permitted to burn in the socket to great waste, and to the injury of the candlestick; this may be prevented by taking out early the short piece of candle, placing it betwixt three common pins stuck in an old cork, and putting the cork in the candlestick.

Improved Method of making Cork Floats for Fishing.

Take a cork, firm and free from flaws, and with a small red hot iron, bore a hole lengthways through the centre, with a sharp knife cut it across the grain about two thirds of the length, tapering to the end where the hole is bored, and the remaining third rounded with it, (which is the top of the float) in the shape of an egg, the lower end tapering more gradually, resembling in shape the small peg-tops children play with.

To prevent Danger from wet Clothes.

Take fifteen drops of tincture of opium, in a little wine and water, and you will be preserved from the fever which would otherwise ensue.

To preserve Fishing Rods.

Oil your rods in summer with linseed oil, drying them in the sun, taking care the parts lie flat; they should be often turned, to prevent them from warping; this will render them tough, and prevent

their being worm eaten; in time they will acquire a beautiful brown colour. Should they get wet, which swells the wood and makes it fast in the sockets, turn the part round over the flame of a candle a short time, and it will be easily set at liberty.

For Chilblains.

Soak them in warm bran and water, then rub them well with mustard-seed flower, but it will be better if they are done before they break.

To prevent taking Cold while Angling.

Avoid sitting upon the ground, though it may appear dry, for the heat of the body will cause a moisture which soon cools, and may be sensibly felt. If the angler, through age or infirmity, is incapable of standing long, a piece of coarse woollen cloth, doubled two or three times, will be very useful to sit upon, especially in fishing for barbel, roach, and dace, where the angler is confined to one place.

Easy Method of dying Fishing Lines.

Lines of silk or hemp may be coloured by a strong decoction of oak bark, which, it is believed, renders them more durable, and resists the water; it gives them an excellent russet-brown colour, and any shade of it may be obtained, by the time they remain in the decoction, which should be cold.

Fumigation for the Rooms of Sick Persons.

To remove any ill scent in a room, put a few red embers or cinders from the fire, upon a fire shovel, and place thereon a few old bottle-corks; and carry the shovel, with the corks burning thereon, to different parts of the room: the smoke of the corks will immediately dissipate the noisome vapours.

To clean Flint Glass Bottles, Decanters, &c. &c.

Roll up, in small pieces, some whited-brown or blotting paper; then wet and soap the same; put them into the vessel, with a little lukewarm water; shake them well for a few minutes; then rince the glass with clean water, and it will be as bright and clear as when new from the shops.

To make Quill Floats for Fishing.

Take any quantity of swan or goose quills you may want, cut off the barrel part from that where the feathers grow, and with a thick piece of wire wrapped round the end with cotton wool, clear the inside of the quill from the film; put in a small piece of pitch about the size of a sweet pea, and, with the wire force it to the end, ramming it close; this will effectually keep out the water; put a small piece of cotton wool upon the pitch, sufficient, when forced close into the quill, to form a space of a quarter of an inch, and, upon the cotton, add another piece of pitch of the same size as the first, which will secure the cotton, and make the

float easily discerned on the water; take a piece of sallow hazel, or other soft wood, about the same size as the circumference of the quill, and about two inches long; fit it neatly about ¾ of an inch into the quill, and fasten it with a cement made of powdered bees-wax, rosin, and chalk, melted over the fire in a ladle; dip the plug in when it is sufficiently melted and incorporated, and put into it immediately a piece of doubled brass wire, the loop end formed into a round eye, and the other twisted, which will pass into the plug like a screw, holding the wire fast with a pair of small pliers, and turning the float round; the line passes through the eye of the wire; the top of the float is made fast to the line by a hoop made of the barrel part of the quill, and rather wider than the float, to admit the thickness of the line; by means of this hoop the float may be shifted at pleasure, according to the depth you are inclined to fish; the hoops may be dyed red by the following method:—Take some stale urine, and put to it as much Brazil wood in powder as will make it a deep red; then take some fair water, and put a handful of salt into it, and a small quantity of argol, stirring them till they are dissolved; boil them over the fire in a saucepan, and when cold put in the quills, well scraped, and let them lie awhile in it; then take them out, and put them into the urine made red with the Brazil wood, and let them continue a fortnight; when dry rub them with a woollen cloth, and they will be transparent. The hoops must be cut with a sharp knife, or the quill will split.

To make Italian Macaroni, called Tagliati.

[Recommended by Count Rumford.]

Take any number of fresh laid eggs, and break them into a bowl or tray; beat them up with a spoon, but not to a froth; add, of the finest wheat flour, as much as is necessary to form a dough of the consistence of paste. Work this paste well with a rolling pin; roll it out into very thin leaves: lay ten or twelve of these leaves one upon the other, and with a sharp knife cut them into very fine threads. These threads (which, if the mass is of a proper consistency, will not adhere to each other) are to be laid on a clean board, or on paper, and dried in the air. This Macaroni (or *cut paste*, as it is called in Germany, where it is in great repute) may be eaten in various ways; but the most common way of using it, is to eat it with milk instead of bread, and with chicken broth, and other broths, and soups, with which it is boiled. With proper care it may be kept good for many months.

Easy, safe, and pleasant Method of removing Tartar from the Teeth.

Raspberries or strawberries (particularly the latter) frequently eaten, have been found, by experience, to dissolve the tartareous concretions of the teeth.

To make Potatoe Sallad.

This is a dish in high repute in some parts of Germany, and deserves to be particularly recommended.

The potatoes, being properly boiled and skinned, are cut into thin slices, and the same sauce which is commonly used for sallads of lettuce, is poured over them; some mix anchovies with this sauce, which gives it a very agreeable relish, and with potatoes it is remarkably palatable.

To stain Paper or Parchment yellow.

Paper may be stained of a beautiful yellow by the tincture of turmeric, formed by infusing an ounce or more of the root, powdered, in a pint of spirit of wine. This, by afterwards adding water to it, may be made to give any teint of yellow, from the lightest straw to the full colour called French yellow, and will be equal in brightness even to the best dyed silks. If yellow is wanted of a warmer or redder cast, annatto, or dragon's blood, must be added to the tincture.

To stain Paper or Parchment crimson.

A very fine crimson stain may be given to paper, by a tincture of the Indian lake, which may be made by infusing the lake some days in spirits of wine, and then pouring off the tincture from the dregs.

To stain Paper or Parchment green.

Paper or parchment may be stained green by the solution of verdigris in vinegar, or by the chrystals of verdigris dissolved in water; also by the solution of copper in aquafortis, made by adding filings of copper, gradually, to the aquafortis till no ebullition

ensues; or the spirit of salt may be used in the place of aquafortis.

Useful Properties of Red Spurge.

Warts or corns anointed with the juice of this plant, presently disappear. A drop of it put into the hollow of a decayed and *aching tooth*, destroys the nerve, and consequently removes the pain. Some people rub it behind the ears that it may blister, and by that means give relief.

To make Verjuice.

The acid of the juice of the crab or wilding, is called by the country people verjuice, and is much used in recent sprains, and in other cases, as an astringent or repellent. With a proper addition of sugar, it is probable that a very grateful liquor might be made of this juice, but little inferior to old hock.

To make excellent Punch.

One tea spoonful of Coxwell's acid salt of lemons, a quarter of a pound of sugar, a quart of water nearly boiling, half a pint of rum, and a quarter of a pint of brandy; a little lemon peel may be added, or in place thereof, a few drops of essence of lemon.

Useful Properties of Celandine.

The juice of this plant cures tetters and ring-worms; diluted with milk it consumes white opake

spots upon the eyes. It destroys warts, and cures the itch.

To recover sour Beer.

When beer is become sour, add thereto some oyster shells, calcined to whiteness, or in place thereof, a little fine chalk or whiting. Any of these will correct the acidity, and make it brisk and sparkling; but it should not be long kept after such additions, otherwise it will spoil.

To purify the muddy Water of Rivers or Pits.

Make a number of holes in the bottom of a deep tub; lay some clean gravel thereon, and above this some clean sand; sink this tub in the river or pit, so that only a few inches of the tub will be above the surface of the water; the river or pit water will filter through the sand, and rise clear through it to the level of the water on the outside, and will be pure and limpid.

Improved Corks for preserving Wine or Chemical Liquors.

Melt together two parts of white wax and one part of beef suet; dip your corks in this mixture, and immediately dry them in a stove upon an iron plate; repeat this operation twice, and the corks thus prepared will preserve any liquor well without imparting any ill flavour thereto.

To mark Sheep without Injury to the Wool.

To thirty spoonfuls of linseed oil add two ounces of litharge, and one ounce of lamp black; unite them together by boiling, and mark the sheep therewith.

Economy in Fuel.

A saving of nearly one third of the coal consumed in London may be made by the following easy means:—Let the coal ashes, which are usually thrown into the dust binn, be preserved in a corner of the coal hole, and make your servants to add to them from your coal heap, an equal part of the small coal or slack, which is too small to be retained in the grate, and pour a small quantity of water upon the mixture. When you make up your fire, place a few round coals in front and throw some of this mixture behind; it saves the trouble of sifting your ashes, gives a warm and pleasant fire, and a very small part only will remain unburnt.

Another Method.

In managing your fires during the day, first lay on a shovel full of the dust and ashes from under the grate, then a few coals, then more ashes, and afterwards a few more coals, and thus proceed till your grate is properly filled, placing a few round coals in front. You will find that the ashes retain

the heat better than coals alone; you will have less smoke, a pleasant fire, and a very little waste left at night.

Economy in Tinder.

The very high price of paper, at present, renders the saving of even the smallest quantity of linen or cotton rags of consequence, as they sell very dear; trifling as it may be thought, yet it will be found that a considerable quantity of rags may be saved in a family, by using as tinder for lighting matches, the contents of the common snuffers collected in the course of the evening.

Eau de Luce.

Dissolve, in four ounces of rectified spirits of wine, ten or twelve grains of Spanish or Venetian soap; filter this solution through some paper, and then dissolve in the above liquor one drachm of rectified oil of amber, and filter it again; upon the clear filtered liquor pour by degrees, at different intervals, the strongest volatile spirits of sal-ammoniac, stirring the mixture at each addition, till it becomes of a beautiful milk-white colour; if it forms a kind of cream upon the surface, add a little more of the saponaceous amber mixture.

Eau de Luce, thus prepared, will always preserve its colour and qualities.

By taking ten drops of it in water internally, and washing the wound therewith, it is regarded in France as a quick and certain cure against the bites of vipers or other venomous animals, and is re-

ported to have cured the bites of mad dogs, and other disorders, by exciting perspiration, and re-animating the circulation of the blood, when coagulated or languid in the veins.

Method of copying a Design.

Wash the surface of a flat plate of glass with a solution of gum-arabic, in water, to which a small quantity of vinegar has been added; or you may instead thereof, moisten the surface only with white of egg, when dry lay the under side of the glass, which has not been moistened, on the design you want to copy, and with a soft red lead pencil trace the whole that you wish for. Then, having a sheet of white paper properly moistened, lay it upon your pencil drawing, and pressing it on the glass; take off the paper before the egg liquor is re-dissolved, and you will have your design transferred upon the paper from the glass.

Swedish Method of raising Turkies.

As soon as the young turkies leave the shell, they are made to swallow one or two pepper-corns, and are then plunged over head in cold water, and returned to their mother. They are afterwards fed with crumbs of bread and milk, and with common dock leaves, chopped small, and mixed with fresh butter-milk, and kept in a warm place or sun shine, and guarded from the rain or from running among nettles.

Ant eggs are the best food for them, whenever they can be procured.

Valuable concise Rules for preserving Health in Winter.

Keep the feet from wet, and the head well defended when in bed; avoid too plentiful meals; drink moderately warm and generous, but not inflaming, liquors; go not abroad without breakfast. Shun the night air as you would the plague; and let your houses be kept from damps by warm fires. By observing these few and simple rules, better health may be expected than from the use of the most powerful medicines.

Efficacy of Vinegar in curing Burns and Scalds.

The application of vinegar to burns and scalds is to be strongly recommended. It possesses active powers, and is a great antiseptic and corrector of putrescence and mortification. The progressive tendency of burns of the unfavourable kind, or ill-treated, is to putrescence and mortification. Where the outward skin is not broken, it may be freely used every hour or two; where the skin is broken, and if it gives pain, it must be gently used. But equal parts of vinegar and water, in a tepid state, used freely every three or four hours, is generally the best application, and the best rule to be directed by.

House-leek, either applied by itself, or mixed with cream, gives present relief in burns, and other external inflammations.

The Use of Tar Water in expanding the Lungs of Public Speakers, &c.

It has been found by the experience of many, that drinking tar water very much deterges and opens the lungs, and thereby gives a very sensibly greater ease in speaking. A quart of tar is to be stirred six minutes in a gallon of water; but if there be somewhat less tar it may do as well, especially at first, to try how it sits on the stomach. Take about one-fourth of a pint, at four several times, at a due distance from meals. Begin taking it in the spring for about fourteen days, and continue it for a greater length of time, as occasion may require.

To make Jamaica Vegetable Soap.

This soap is prepared from the great American aloe, in the following manner:—The large succulent leaves being cut, are passed between the rollers of a mill, with their point foremost, and the juice being conducted into wide, shallow receivers, through a coarse cloth or strainer, lies exposed to a hot sun, till it is reduced to a thick consistence. It is then made up into balls, with lye ashes, to prevent it from sticking to the fingers; after which it may be kept for years, and serve for use, as well as Castile soap, in washing linen; but it has the superior quality of mixing and forming a lather with salt water as well as fresh.

Another method of preparing this soap is, by cutting the leaves in pieces, pounding them in a

large wooden mortar, and then expressing the juice, which is brought afterwards to a consistence, either by the sun or by boiling. One gallon of this juice, thus prepared, will yield about one pound, avoirdupoise, of a soft extract. It will answer prepared in either of these ways, provided the juice, before exposure to the sun or fire, be very carefully strained from the bruised fibres, and other membrane of the leaves. The extract must never be compounded with tallow, or any other unctuous materials, for such mixtures destroy its effect.

The leaves are used for scouring pewter and other kitchen utensils, and also for floors.

To destroy Vermin on Animals.

Oil of turpentine, when applied to animals, which were covered with insects, destroyed the insects without hurting the animal.

To presesve Flowers, Leaves, and Fruit, from Caterpillars.

These depredators are destroyed by oils, which close the lateral pores by which they breathe. For this purpose it is advised, that on the approach of spring, a cloth dipped in train oil, be laid on such parts of the tree in which there is the least appearance of them.

Valuable Properties of Cherry-Tree Gum.

The gum that exudes from the trunk and branches of the cherry-tree, is equal to gum-arabic. Hasselquist relates that, during a siege, more than

an hundred men were kept alive for two months nearly, without any other sustenance than a little of this gum taken into the mouth sometimes, and suffered gradually to dissolve.

To preserve Meat by Treacle.

This experiment has been successfully tried in the following manner:—A gentleman put a piece of beef into treacle, and turned it often. At the end of a month he ordered it to be washed and boiled, and had the pleasure to find it quite good, and more pleasant than the same piece would have been in salt for that time.

To avoid Obstructions too general to the Growth of Forest Trees.

It is highly to be censured, the neglect of permitting ivy-twines, which grow to forest trees, to remain attached to them. Their roots entering into the bark rob the trees of much of their nourishment; they in a manner strangle their supporters, by impeding the circulation of their juices, and in time destroy the trees. They should be torn up by the roots, for, if any part of them adhere to the tree, they will spread, as they obtain nourishment by their adhering roots.

To make Essential Salt of Lemons.

The expressed juice of wood-sorrel, depurated, properly evaporated, and set in a cool place, affords a crystalline acid salt, in considerable quantity, which may be used whenever vegetable acids are

wanted. It is sold under the name of Essential Salt of Lemons, and is employed to take ink stains and iron moulds out of linen.

To make Cliver, or Goose-grass Ointment, remarkable for its salutary Effects in Cases of inveterate Scurvy, and Cancers.

To a pound of hogs-lard, melted, without spice or salt, put as much clivers as the lard will moisten, and boil them together over a slow fire; after stirring it till it becomes a little brown, strain it through a cloth; and when cold take the ointment from the water that will remain at the bottom, and it will be fit for use.

To make Fire-Balls, which will save Coals, and keep a clear Fire.

Fire, or kindling-balls, should be composed of equal parts of coal, charcoal, and clay. The two former must be reduced to a fine powder, well mixed, and kneaded together with the clay moistened with water, and then formed into balls of the size of hen's eggs, and thoroughly dried; they may be used with great advantage instead of wood. These *kindling balls* may be made so inflammable as to take fire in an instant, and with the smallest spark, by dipping them in a strong solution of nitre, and then drying them again, and they will neither be expensive, nor liable to be spoiled by long keeping. Fire-balls of the size of goose-eggs, composed of coal and charcoal in powder, mixed up with a due proportion of wet clay, and well dried, would make

a much more cleanly, and in all respects a pleasanter fire than can be made with crude coals, and would not be more expensive fuel.

To improve Chimney Fire Places, and increase the Heat, by a proper Attention to the Setting of Stoves, Grates, &c.

The best materials for setting stoves or grates, are fire-stone and common bricks and mortar. Both materials are fortunately very cheap. When bricks are used they should be covered with a thin coating of plaster, which, when it is dry, should be white washed. The fire-stone should likewise be white washed when that is used; and every part of the fire-place, which is not exposed to being soiled and made black by the smoke, should be kept as white and clear as possible. As *white* reflects more heat, as well as more light, than any other colour, it ought always to be preferred for the inside of a chimney fire-place; and *black*, which reflects neither light nor heat, should be most avoided.

To make Balsamic and Anti-putrid Vinegar.

Take the best white wine vinegar, a handful of lavender leaves and flowers, the same quantity of sage leaves and flowers, hyssop, thyme, balm, savory; a good handful of salt, and two heads of garlic; infuse these in the vinegar a fortnight or three weeks; the longer the better; and then it is found to be an excellent remedy for wounds, for

spasms, and suffocation. By rubbing the hands and temples with it, a person may go into foul air with great safety.

Easy Method of purifying Water.

Take a common garden pot, in the midst of which place a piece of wicker work; on this spread a layer of charcoal of four or five inches in thickness, and above the charcoal a quantity of sand. The surface of the sand is to be covered with paper pierced full of holes, to prevent the water from making channels in it. This filter is to be renewed occasionally. By this process, which is at once simple and economical, every person is enabled to procure pure limpid water at a very trifling expence.

Substitute for Human Milk, where, from any Circumstance, it cannot be procured for Children.

In a quart of water boil two ounces of hartshorn shavings over a gentle fire, till the whole is reduced to a pint; mix this with twice its quantity of cow's milk, and the addition of a little sugar. This forms for children a proper aliment, approaching nearly to the nature of human milk.

Preparation of the true Copal Varnish.

Take two parts of gum copal, reduced to a fine powder; wash it repeatedly in water to free it from the woody fibres; then introduce it into a flask,

and pour over it four parts of pure oil of rosemary; digest the mixture in a gentle heat for three days, or longer; after which, add as much highly rectified spirits of wine as is deemed necessary, and suffer it to remain undisturbed, until the impurities subside; then decant the varnish.

To make a wholesome Food of Cashew Nuts.

Cashew nuts may be prepared as food, by blanching them with hot water to wash off the caustic oil, or roasting them in a pot like coffee, but care must be taken to avoid the smoke, which is very acrid. They may also be prepared by sticking them on a fork, and burning them at a candle. The oil of the shell is abundant, and thoroughly roasts the kernel within. The kernel of the fresh cashew nut is made into an emulsion, like almonds, and universally used in the West Indies.

To make old Man's Milk: a nutritious and pleasant Beverage.

Beat up the yolk of an egg in a bowl or bason, and then mix with it some cream or milk, and a little sugar, according to the quantity wanted, and let them be thoroughly incorporated. A glass of spirits, or more, is to be then poured gradually into the mixture, so as to prevent the milk or cream from curdling. This mixture will be found useful to travellers who are obliged to commence their journey early, particularly if the weather be cold and damp.

The Usefulness of Common Hazel-Nut Tree in Brewing.

In countries where yeast is scarce, it is a common practice to take the twigs of hazel, and twisting them together so as to be full of chinks, to steep them in the ale-yeast during its fermentation; they are then hung up to dry, and at the next brewing they are put into the wort instead of yeast. In Italy the chips are frequently put into turbid wine, for the purpose of clearing it, which is effected in twenty-four hours.

To repair Roads near to Coal Mines.

The roads to and from coal mines are usually in bad condition from the heavy loads passing in carts over them. The late Duke of Bridgewater, to repair them, adopted, with great success, the following plan, at Worsley, in Lancashire. The stones, clay, and rubbish, first raised from the shaft, were laid in a large heap above ground; then, such inferior coal, pyrites, or shale, as was unfit for sale, and usually thrown away, was laid in another near it; a third heap was raised from a mixture made by laying repeated layers from the above two heaps, stratum super stratum, and this heap, set on fire in such a direction that the wind would assist the fire to penetrate it throughout. The mass, when burnt, formed a compound of half vitrified substances, and abundantly supplied good materials for

his drag-paths along the canal, and enabled him to sell the surplus advantageously for the repair of the turnpike roads in that neighbourhood.

To fatten Poultry.

Poultry should be fattened in coops, and kept very clean. They should be furnished with gravel, but with no water. Their only food, barley-meal, mixed so thin with water as to serve them for drink. Their thirst makes them eat more than they would, in order to extract the water that is among the food. This should not be put in troughs, but laid upon a board, which should be clean washed every time fresh food is put upon it. It is foul and heated water which is the sole cause of the pip.

To cure tainted Fish.

Tainted fish may be much restored to its proper flavour by mixing a quantity of vinegar and salt in the water in which the fish is to be boiled.

To make the celebrated Eastern Beverage, called Sherbet.

This liquor is a species of negus without the wine. It consists of water, lemon, or orange juice, and sugar, in which are dissolved perfumed cakes, made of the best Damascus fruit, and containing also an infusion of some drops of rose-water: another kind of it is made of violets, honey, juice of raisins, &c. It

is well calculated for assuaging thirst, as the acidity is agreeably blended with sweetness. It resembles, indeed, those fruits which we find so grateful when one is thirsty.

Infallible Remedy for stopping Bleeding of the Nose.

One ounce of sugar of lead, and half an ounce of green vitriol, to be triturated in a glass mortar; add to these half a pint of spirits of wine. Of this composition young people, from ten to twelve years of age, are to take ten or twelve drops; patients under twenty years, fourteen or fifteen drops; and grown persons, twenty drops, four times each, in a spoonful of wine or brandy. Some very interesting trials, in the most obstinate cases, have been made with this mixture, with the greatest success.

Easy Method of dyeing Yellow or Green.

The plant called weld, or dyer's weed, affords a most beautiful yellow dye for cotton, woollen, mohair, silk, and linen, and is that which is most commonly used by dyers for that purpose, as it gives the brightest dye. Blue cloths, dipped in a decoction of it become green. The yellow colour of the paint, called Dutch pink, is got from this plant; the tinging quality resides in the stems and branches, and it is cultivated in sandy soils, because rich soils are apt to lessen its value, by making the stalk hollow.

Substitute for Milk or Cream.

Where cream or milk cannot be got it is an excellent substitute to beat up the whole of a fresh egg, in a bason, and then gradually to pour boiling tea over it, to prevent its curdling. It is difficult, from the taste, to distinguish the composition from tea and rich cream. This might be of great use at sea, as eggs may be preserved fresh in various ways.

To prevent the ill Effects of excessive Damps, or noisome Vapours, in the Winter Season.

Throw small bits of pitch occasionally in the fire, so as to keep an almost constant smell of that bitumen in the sitting and sleeping-rooms of the family. Pitch is an aromatic, and where it is constantly in use, as in the ship yards, no pestilential disorder was ever known to originate.

Method of preserving Grapes.

Take a cask or barrel, inaccessible to the external air, and put it into a layer of bran, dried in an oven, or of ashes well dried and sifted. Upon this, place a layer of grapes well cleaned, and gathered in the afternoon of a dry day, before they are perfectly ripe. Proceed thus with alternate layers of bran and grapes, till the barrel is full, taking care that the grapes do not touch each other, and to let

the last layer be of bran; then close the barrel, so that the air may not be able to penetrate, which is an essential point. Grapes, thus packed, will keep nine or even twelve months. To restore them to their freshness, cut the end of the stalk of each bunch of grapes, and put that of white grapes into white wine, and that of the black grapes into red wine, as you would put flowers into water, to revive or keep them fresh.

To prevent Fishing Lines from rotting.

Never wind your lines on your reel wet, at least, when you get home, wrap them round the back of a chair, and let them be thoroughly dried, otherwise they will soon rot, and cannot be depended on; with this care they will last a considerable time.

Cautions in visiting Sick Rooms.

Never venture into a sick room if you are in a violent perspiration (if circumstances require your continuance there for any time), for the moment your body becomes cold it is in a state likely to absorb the infection, and give you the disease. In attending a sick person place yourself where the air passes from the door or window to the bed of the diseased, not betwixt the diseased person and any fire that is in the room, as the heat of the fire will draw the infectious vapour in that direction, and you would run much danger from breathing in it.

Observations on Leeches, and their Use.

The general demand for these useful reptiles, and the high price at which they are now sold, induces us to give some particulars on taking, preserving, and applying them, from a person who has attended to this business.

The large brown leech is the only kind in use; they are in general from two inches to six, though they are capable of much greater extension and contraction; sometimes they are seen darting through the water with great swiftness, at which time they are very long, at other times they will contract themselves into a form almost round. They are much rounder in body than the horse leech (which, contrary to common report, will not fasten to the human body), with a degree of taper towards each end. The colour is black, and brown stripes on their backs; the belly is covered with dark brown, interspersed with light brown spots. The method of catching them usually employed in England, is agitating the waters where they are contained, which occasions them to float upon the surface thereof, when, with a net made for the purpose, they are secured. Other methods are employed, which would be tedious and unnecessary to relate. They are viviparous, bringing forth their young with all their power, capable of acting in every respect in which this animal is distinguished. The time of fecundity is in the months of April and May, the latter end of August and September;—the num-

ber of young ones a single leech brings forth in one year can hardly be ascertained, though it is very numerous; for when the leech catchers rob a pond of all large enough for use, if nothing happens to obstruct fecundation, in two years afterwards they will find it largely stored with abundance of fine leeches, and a much increased number of small ones; this is particularly found to be the case, from the method which some country people have adopted to obtain leeches as an exclusive property. In order to this, they make a pond, near their house, about three feet deep, twenty wide, and thirty long, if they cannot conveniently form one with a sandy bottom they make the pond a little deeper, in which they deposit a few loads of sandy earth. In this pond, when filled with water, they put their leeches about April, and without any further trouble or expence, they obtain, at the proper season, a large supply of leeches.

Leeches may, with care, be preserved healthy and good for years in pans: during the summer season not more than two hundred should be kept together, in winter double that number may with equal propriety. The vessel they are kept in should be an earthen pan, that will contain about three gallons of water, which should not be more than half filled with water; for I have found, by experience, that it is congenial to their nature to have a place out of the water, which they may retreat to at pleasure; this is proved by their often hanging in clusters round the top of the pan. From May

till September their water should be changed, at least, every other day; in winter every fourth day. The best water to keep them in is spring water, as being least disposed to putrescency. I have of late put a little moss amongst leeches, which practice I would recommend, for they are very much enamoured with it, perhaps from its resembling, in some measure, their native weeds; they creep through it, and by that means clear themselves of slime, which in the warm weather accumulates around them, and, unless removed by timely changes of water, will be productive of disease. During hot weather they should be kept in as cool a place as possible, and in the winter season place them where the water may preserve that degree of warmth it possesses in summer. When you put fresh water to them, during the cold weather, it should be deprived of that intense coldness which it possesses at that season of the year, by warming it in the smallest degree. The leech, as has been before said, feeds upon insects in its native waters, but may be, as hinted, kept in only water for years, though they dwindle by keeping; they remain healthy, and will take with as much avidity as those recently taken from the waters, provided they are well attended to, with respect to changing their water agreeably to the rules laid down.

The mode which I have found, by copious experience, to be infinitely the best, (being attended with quickness, certainty, and efficacy) is as follows: Let the part be first carefully washed clean

with warm milk and water, if very dirty and requires it; a little soap may also be used; when the part is thus washed and wiped dry, rub over the part a little milk, then see that your leech is wiped dry with a smooth cloth, which being done, take it with your fingers by the middle, and apply its mouth to the very spot you wish; you will, perhaps, find it, at first, twist and extend itself in your fingers, and then wish to attach itself to some contrary part; but as repeatedly as it extends itself around, or attempts to fix upon a wrong situation, you must as repeatedly draw it back and re-apply it to the proper part; by so doing you will find it will presently seize the precise spot wished for; when you find this you must not hastily let the leech go, for they will sometimes seem to seize the part with great avidity, and in a few seconds let go their hold; but when you are convinced the leech has good hold, you may then let go, and leave it to the employment it enjoys.

I here find it necessary to remark, that the small end of the leech is the head, whereas, I have repeatedly observed, that the greater part of the people, from the tail of the leech being much broader than the head, mistake the one for the other, and thereby occasion themselves a great deal of fruitless labour. When the animal has fastened himself he generally expands the tail, and sometimes attaches it very firmly to another part of the skin, but without the least pain to the part; this hold, I have

observed, the leech does not quit till it is charged with blood, and then drops off all at once.

I would here observe, that the quantity of blood the leech imbibes, is in general insufficient to answer the purpose: therefore, when the leech comes off, it is necessary to have a bason of warm water, and a spunge or rag, to keep bathing the orifice, in order to encourage the bleeding for an hour or two; if the orifice seem disposed to bleed any longer than wished for, apply a piece of lint, three or four times double, and bandage it up.

To remove Spots of Grease from Paper.

Take an equal quantity of roach allum burnt, and flower of brimstone, finely powdered together; wet the paper a little, and put a small quantity of the powder on the place, rubbing it gently with your finger, and the spot will disappear.

To destroy Insects on Fruit Trees.

Winter is the proper season to apply the following solution. The juices are then determined to the root:—

Soft soap, two pounds; leaf or roll tobacco, one pound; nux vomica, two ounces; and turpentine, half an English gill; boil them in eight English gallons of soft or river water, to six. And use it milk warm.

Unnail, or untie, all the branches from the wall

or trellis; brush every part of the tree clean with a soft brush, such as is used for painting; then, with a sponge, carefully anoint every branch, root, and bud; and be sure rub it well into every joint, hole, and angle, as it is there the eggs or larvæ of the insects are chiefly lodged. The rails, spars, &c. of the espalier or trellis, should also be anointed as above.

This operation should be repeated every winter, sometimes between the fall of the leaf and the 1st of February, as may be most convenient. The solution is effectually destructive to all kinds of insects, their eggs or larvæ.

Excellent Substitute for Table Beer.

As small beer is apt to become sour in warm weather, a pleasant beer may be made, by adding to a bottle of porter, ten quarts of water, and a pound of brown sugar or molasses. After they have been well mixed, pour the liquor into bottles, and place them, loosely corked, in a cool cellar. In two or three days it will be fit for use. A spoonful of ginger, added to the mixture, renders it more lively and agreeable to the taste. This might be adopted in the navy instead of grog.

To purify rancid Oil or Water.

The simple admixture of a tenth part of pounded charcoal will sweeten, and even render white and clear, foul and rancid oil; the same process will

act in the like manner on water, and will also remove the burnt disagreeable taste to which corn spirits are subject when not distilled with care.

To prevent Children from eating their Food too quickly.

Children, when very young, get into the habit of eating their food too quickly, particularly fruit, and other substances of which they are fond. To prevent their acquiring this habit, amusing devices might be employed, as cutting an apple, a pear, a piece of cake, or any other article of the same sort, into a number of pieces, arranging them in lines like an army, with one as an officer in the centre, and telling them that the whole army must be devoured, *piece by piece*, and in a regular manner! This interests little children so much, that they soon prefer it to a more speedy mode of consumption.

How to get the Fish from single Spiral Shells, such as Whelks, Snails, &c. without injuring the Shell intended for Cabinets of the Curious.

To get out the fish from spiral shells, put them into boiling water, and when cool enough to be taken out by the fingers, you may pick them out whole, with a pointed instrument, be the turns of the shell ever so minute.

Easy Method of preserving Yeast.

Yeast may be preserved for a considerable time, by coating a board with a whiting-brush, allowing the coat to dry; then putting on another, which is in like manner to dry; and so a third, and any number of successive coatings, which, when perfectly dry, will keep vigorous for a long time. Another method is to whisk the yeast until it becomes thin, and then to lay it upon a dry platter or dish, repeatedly, with a soft brush as above-mentioned. The top is then to be turned downwards to keep out the dust, but not the air which is to dry it. By this method it may be continued till it be two or three inches thick, when it may be preserved in dry tin cannisters for a long time good. When used for baking, a piece is to be cut off, and laid in warm water to diffuse or dissolve, when it will be fit for use.

Proper Method of making Toast and Water, and the Advantages resulting therefrom.

Take a slice of fine and stale loaf bread, cut very thin, (as thin as toast is ever cut), and let it be carefully toasted on both sides, until it be *completely browned all over*, but no wise blackened or burned in any way. Put this into a common deep stone or China jug, and pour over it, from the tea-kettle, as much clean boiling water as you wish to make into drink. Much depends on the water

being actually in a boiling state. Cover the jug with a saucer or plate, and let the drink cool until it be quite cold; it is then fit to be used; the fresher it is made the better, and of course the more agreeable. The above will be found a pleasant, light, and highly diuretic drink. It is peculiarly grateful to the stomach, and excellent for carrying off the effects of any excess in drinking. It is also a most excellent drink at meals, and may be used in the summer time, if more agreeable to the drinker.

To extract Syrup from Indian Corn.

The young spikes, when they are beginning to form, possess a very agreeable saccharine taste. Ten pounds of them squeezed in a stone mortar, and the juice expressed after the leaves are stripped off, will give about four pounds of a milky juice, which, when clarified, and evaporated to the consistence of a syrup, will be found very agreeable to the palate. This vegetable will grow in England from the seed sown in good soil.

To preserve Sheep in the Depth of Winter.

Sheep can be easily and well sustained during a storm of snow in winter upon branches of fir trees, cut down daily, and given to them. Firs can be reared almost on every sheep farm, without difficulty; and if plantations for this purpose were duly made, and carefully thus applied, many thousand head of sheep might be annually saved, that at present inevitably perish.

Great Utility of sowing Buck-wheat.

In light lands buck-wheat may be raised to great advantage, as a lucrative crop. When green it is a fine feed for milch-kine, and when ploughed is a fine preparation for the land. It fattens pigs with great economy, and, passed throngh the mill, is, with carrot, a capital feed for work horses. The seed is excellent food for poultry, and when ground makes good bread.

To purify fly-blown Meat.

It has been successfully proved, by many experiments, that meat entirely fly-blown, has been sufficiently purified to make good broth, and had not a disagreeable taste, by being previously put into a vessel containing a certain quantity of beer. The liquor will become tainted, and have a putrid smell.

To prevent polished Hardware and Cutlery from taking Rust.

Case-knives, snuffers, watch-chains, and other small articles made of steel, may be preserved from rust, by being carefully wiped after use, and then wrapped in coarse brown paper, the virtue of which is such, that all hardware goods from Sheffield, Birmingham, &c. are always wrapped in the same.

To make Syrup of Carrots.

Free a bushel of carrots from their rind, grind them on a grater, and express the juice. Then boil

and clarify the same with the white of eggs; afterwards thicken it to the consistence of a syrup. About six pounds and a half will be obtained by this process, of a syrup agreeable to the taste, and useful for many purposes. Parsnips may be served in the same manner.

Easy Method of cleaning Shoes or Boots in the Winter Time, so as to prevent soiling the Person, the Clothes, or the House.

When the boots or shoes are covered with dirt, take them off, and with the back of a case-knife, or a piece of wood cut thin at the edges like a stationer's paper knife, scrape the dirt off with the same as clean as possible, which will be very easily done while the boots and shoes are wet. Then, with a small piece of wet sponge or flannel, wipe off the remaining dirt which the pressure of the knife cannot effect. Then place them in a dry room, or at a convenient distance from the fire, for a few hours, and they will take the blacking remarkably well, and bear as fine a polish as they did before wetting. If proper attention is paid to this process, the fingers will scarcely be soiled, and much trouble would be saved by the extra brushing required when the dirt is suffered to dry on.

To increase the Growth of Hair.

Hartshorn beat small, and mixed with oil, being rubbed upon the head of persons who have lost their hair, will cause it to grow again as at first.

To preserve Pencil and Chalk Drawings.

1st. Get a pan, or tub, sufficiently spacious to admit the drawing horizontally; fill it with clean water, and run the drawing through in that direction; then lay it on something flat to dry. This will take off the loose lead.

2dly. Fill the same vessel a second time, with rather more than one-third new milk, and the remaining part clean water, through which run the drawing again horizontally, and leave it to dry as before.

Do not lay the drawing, while wet, on any coloured wood, such as mahogany, &c. which will stain the paper in streaks.

Should milk be scarce, you may mix a little (in the proportions above-mentioned), in a tea-cup, and venture to run the drawing lightly over with a camel-hair pencil, the water having already taken off the superfluous lead, and, in some degree, fixed the other: but be particularly light with the pencil, never touching the drawing twice in the same place.

To prepare Aromatic Vinegar.

Take of common vinegar any quantity; mix a sufficient quantity of powdered chalk, or common whiting, with it, to destroy the acidity. Then let the white matter subside, and pour off the insipid, supernatant liquor; afterwards let the white powder be dried, either in the open air, or by a fire. When it is dry, pour upon it sulphuric acid (oil of vitriol), as long as white acid fumes continue to

ascend. Stone vessels are the properest to be used on this occasion, as the acid will not act upon them. This product is the acetic acid, known in the shops by the name of aromatic vinegar. The simplicity and cheapness of this process points it out as a very useful and commodious one for purifying prisons, hospital-ships, and houses, where contagion is presumed or suspected, the white acid fumes diffusing themselves quickly around.

If any one is desirous of obtaining the acid in a liquid state, the apparatus of Nooth presents a convenience for the purpose. It must of course be collected in water.

Improved Method of taking off Impressions of Leaves, Plants, &c.

Take half a sheet of fine wove paper, and oil it well with sweet oil; after it has stood a minute or two, to let it soak through, rub off the superfluous oil with a piece of paper, and let it hang in the air to dry; after the oil is pretty well dried in, take a lighted candle or lamp, and move the paper slowly over it, in an horizontal direction, so as to touch the flame, till it is perfectly black. When you wish to take off impressions of plants, lay your plant carefully on the oiled paper, and lay a piece of clean paper over it, and rub it with your finger, equally in all parts, for about ½ a minute; then take up your plant, and be careful not to disturb the order of the leaves, and place it on the book or paper, on which you wish to have the impression; then cover it with a piece of blotting-paper, and rub it with your fin-

ger for a short time, and you will have an impression superior to the finest engraving. The same piece of black paper will serve to take off a great number of impressions; so that when you have once gone through the process of blacking it, you may make an impression in a very short time.

The principal excellence of this method is, that the paper receives the impression of the most minute veins and hairs; so that you may take the general character of most flowers, much superior to any engraving. The impressions may afterwards be coloured according to nature.

Art of gilding Iron or Steel.

Dissolve, in aqua regia, with the assistance of a little heat, as much gold as will fully saturate it; then, adding cream of tartar, form it into a paste. Any bright piece of steel or iron, such as the blade of a knife or razor, &c. being first wetted with water, or saliva, and then rubbed with this paste, will be instantly gilded in a beautiful manner; after which, it is to be washed with cold water. If a thicker coat of gold be desired, gold leaf may be laid on, and burnished hard, when it will adhere to the first gilding; and, if the nature of the thing gilded will admit of heat, by warming it, but not so as to become red hot, and then burnishing it, any thickness of gilding may be easily added.

To preserve Fish and Meat in the Portuguese Manner.

The Portuguese make a trade of what they call *pesche moliæ*, which is fish cut in small pieces, with

salt and sugared tamarind. Fish thus preserved may be carried to sea, and will not be found too salt. Meat may also be thus preserved, by throwing away the stones and strings of the tamarinds, and adding a small portion of Cayenne.

Utility of Pigeons Dung as a Manure.

Pigeons dung will improve moist meadows very much by extirpating bad kinds of grasses, bringing white clover in its stead, and augmenting the crop.

Substitute for Hemp and Flax.

As hemp and flax (lint) is now very high-priced, if the public would turn their attention to the Urtica Diocia (common nettle), an excellent hemp might be obtained from it, by cutting it just before the seed is ripe, and steeping it in water, as they do hemp or flax, and manufacturing it the same way; the root of the plant is esteemed to be diuretic, and the roots boiled with allum will dye yarn a yellow colour. It is likewise used by making a strong decoction of the young plant, and salt put to it, and bottled up, which will coagulate milk, and make it very agreeable; by which means that plant, which is an obnoxious weed, might be turned to good account.

To preserve the natural Colour in Petals of dried Flowers.

Nothing more is necessary than to immerse the petals for some minutes in alcohol. The colours

will fade at first, but in a short time will resume their natural tint, and remain permanently fixed.

Method of setting Pencil Drawings.

A solution of allum in water, in which the drawing is to be dipped (not washed on with a brush, as it would smear) will answer the purpose extremely well.

To dye Cotton a fine Buff Colour.

Let the twist or yarn, be boiled in pure water, to cleanse it; then ring it, run it through a dilute solution of iron in the vegetable acid, what printers call *iron liquor*; wring, and run it through lime water, to raise it; wring it again, and run it through a solution of starch and water; then wring it once more, and dry, wind, warp, and weave it for use.

To preserve Game in hot Weather.

Game or poultry may be preserved for a long time, by tying a string tight round the neck, so as to exclude the air, and by putting a piece of charcoal into the vent.

Cheap and valuable Substitute for Coffee.

The flower of rye, and English yellow potatoes, are found an excellent substitute for coffee. These ingredients are first boiled, then made into a cake, which is to be dried in an oven, and afterwards reduced to a powder, which will make a beverage

very similar to coffee in its taste, as well as in other properties, and not in the least detrimental to health.

To promote Sleep.

No fire, candle, rush-light, or lamp, should be kept burning, during the night, in a bed-room, for it not only vitiates the air in a very considerable degree, but also disturbs and prevents the rest of those whose sleep is uneasy, particularly the aged. In a dark apartment, sleep generally comes on without much invitation; whereas, any light in the apartment stimulates the brain, and consequently the whole nervous system, and dispels any tendency to repose.

To make the German Liquor, Mum.

Mum is made of various sorts of grain, in the following proportions: to seven bushels of wheaten malt, add one bushel of oatmeal, one bushel of ground beans, and a variety of other articles, as the tops of fir, wild thyme, &c; also ten new laid eggs. These articles ought to be infused in sixty-three gallons of water boiled down to forty-one.

Short Preventive to autumnal Rheumatisms.

For the sake of bright and polished stoves, do not, when the weather is cold, refrain from making fires. There is not a more useful document for health to the inhabitants of this climate, than "Follow your feelings."

To make a pleasant, sober, and refreshing Drink for the Summer.

Take one bottle of sherry (but Madeira is preferable), two bottles of cyder, one of perry, and one gill of brandy; and after those ingredients are mixed, take two lemons, pare the rind as thin as possible; then slice the lemons, and put the rind and lemons into a cup; to these add a little grated nutmeg and powdered sugar, to make it palatable; stir them together; then toast a biscuit very brown, and throw it hot into the liquor. It is generally found a pleasant draught at dinner, and produces no bad effects on those who drink it in moderation.

German Method of preventing Hysterics.

Carraway seeds, finely pounded, with a small proportion of ginger and salt, spread upon bread and butter, and eaten every day, especially early in the morning, and at night, before going to bed, are successfully used in Germany, as a domestic remedy against hysterics.

Easy Method of curing the Sea Scurvy.

The root of the garden carrot abounds in a nutritious saccharine juice, and is slightly aromatic. These are desirable properties against the scurvy. To experience the good effects of these properties, *the roots must be eaten raw.* There is nothing unpleasant in this; on the contrary, it is what the common people often do by choice. These roots would keep well during the longest voyage, packed

up in casks, having the interstices filled with sand. Each sailor might be allowed to eat one root every day, or every other day, according to the state of their health, and the quantity of roots on board.

A liquid Blacking for Shoes and Boots.

Take ivory black and brown sugar candy, of each two ounces; of sweet oil a table spoonful; add gradually thereto, a pint of vinegar, cold, and stir the whole till gradually incorporated.

Another.

To one pint of vinegar add half an ounce of vitriolic acid, half an ounce of copperas, two ounces of sugar candy, and two ounces and a half of ivory black: mix the whole well together.

Another.

Sweet oil, half an ounce; ivory black and treacle, of each half a pound; gum-arabic, half an ounce; vinegar, three pints; boil the vinegar, and pour it hot on the other ingredients.

Essence of Soap for Shaving or washing Hands.

Take a pound and a half of fine white soap in thin slices, and add thereto two ounces of salt of tartar; mix them well together, and put this mixture into one quart of spirits of wine, in a bottle which will hold double the quantity of the ingredients; tie a bladder over the mouth of the bottle, and prick a

pin through the bladder; set it to digest in a gentle heat, and shake the contents from time to time, taking care to take out the pin at such times to allow passage for the air from within; when the soap is dissolved, filter the liquor through paper, to free it from impurities; then scent it with a little burgamot or essence of lemon. It will have the appearance of fine oil, and a small quantity will lather with water like soap, and is much superior in use for washing or shaving.

To prevent Beer frow growing flat.

In a cask, containing eighteen gallons of beer, becoming vapid, put a pint of ground malt, suspended in a bag, and close the bung perfectly; the beer will be improved during the whole time of drawing it for use.

To prevent Inconvenience from Perspiration of the Hands.

Ladies who work lace or embroidery, sometimes suffer inconvenience from the perspiration on their hands; which may be remedied, by rubbing the hands frequently with a little dry wheaten bran.

To raise the Surface or Pile of Velvet when pressed down.

Warm a smoothing-iron moderately, and cover it with a wet cloth, and hold it under the velvet; the vapour arising from the heated cloth will raise

the pile of the velvet, with the assistance of a rush whisk.

To know whether Hair Powder is adulterated with Lime.

Put a little crude sal-ammoniac, in powder, to the suspected hair powder, and add a little warm water to the mixture, and stir it about; if the powder has been adulterated with lime, a strong smell of volatile alcali will arise from this mixture.

To make durable Writing on Paper.

Dissolve gum-arabic in water, and add thereto ivory black, extremely well ground, and write therewith. Acids cannot discharge this writing; and if you wish to secure it against the steams of hot water, the writing may be covered with white of egg clarified.

To preserve Letters from being opened.

Various ways have been contrived to open letters, sealed with wafers only, but the following composition is perfectly secure:—Take fine powder of bean flour; add thereto white of egg, well whisked to a fine liquid; make a paste from this mixture, of which put a little under the sealing place; then close the two papers, and hold the part close to the steam arising from the spout of a tea-kettle or tea-pot of boiling water, which will harden the cement, so that it cannot be opened without tearing.

To clear Iron from Rust.

Pound some glass to fine powder; and having nailed some strong linen or woollen cloth upon a board; lay upon it a strong coat of gum water, and sift thereon some of your powdered glass, and let it dry; repeat this operation three times, and when the last covering of powdered glass is dry, you may easily rub off the rust from iron utensils, with the cloth thus prepared.

Sophistication of Oils of Turpentine.

If oil of turpentine is adulterated with inferior matters, it may be known by dropping a little upon white paper, linen, or silk, and exposing these drops to a gentle heat; if pure the whole will evaporate without leaving any stain; if impure, a spot or mark will remain upon the paper or cloth.

Sophistication of Oil of Lavender and all Essential Oils.

These valuable oils are frequently adulterated by a mixture of oil of turpentine, which may be known by dipping a little paper or rag in the oil, to be tried; and holding it to the fire, the fine scented oil will first evaporate, and leave the smell of the turpentine distinguishable, if any has been mixed therewith.

Opera Terrific Torches.

These are made hollow of tin, containing, at one extremity, a wick dipped in spirits of wine, and

around it a number of small holes communicating with the hollow of the tube, containing a quantity of powdered rosin. By each shake of the hand some of the powdered rosin is projected through the small holes, and inflamed by the lighted wick, occasioning a tremendous light without any danger.

Potatoe Cheese

Take some potatoes, boil and peel them, and pound them to the consistence of a paste; then add to them an equal quantity of the curd, from which cheese is made, some powdered cloves, a little mace in powder, and some salt; work the whole well together, and leave the mixture for a day to ferment a little; then form them in molds, into small cheeses, in the usual way. These are both nutritive and pleasant to the taste.

To destroy Crickets.

Mix some roasted apple with a little white arsenic powdered, and put a little of this mixture into the holes or cracks in which the crickets are; they will eat it and perish.

To prevent much Mischief to Sea Embankments, or those of Rivers.

Where a breach is actually made therein, it may be prevented from increasing in width, by an early application of old sails fastened to each side of the breach where the water enters, which will allow the water to slide over them, and hinder more of the earth from being carried away.

To prevent Sea Sickness.

Drop a few drops of vitriolic æther upon loaf sugar, and let it dissolve in your mouth; or drink a few drops of æther, added to a solution of sugar, in water, to prevent its immediate evaporation.

Excellent Cement for broken China

May be made from a mixture of equal parts of glue, white of egg, and white lead.

To intoxicate and take Fish.

Make a paste in the following manner: take cocculus indicus, cummin seeds, fenugrec seeds, and coriander seeds, equal parts, reduce them to powder, and make them into a paste, with rice flour and water; reduce this paste into small balls of the size of peas, and throw it into such ponds or rivers where there are fish, which, after eating thereof, will rise to the surface of the water almost motionless, and will allow themselves to be taken out by the hand.

Thunder Powder.

Take separately, three parts of good dry saltpetre, two parts of dry salt of tartar, and pound them well together in a mortar; then add thereto one part, or rather more, of flower of brimstone, and take care to pound and mix the whole perfectly together: put this composition into a bottle with a glass stopper, for use.

Put about two drachms of this mixture in an iron spoon, over a moderate fire, but not in the flame; in a short time it will melt, and go off with an explosion like thunder or a loaded cannon.

To destroy Vermin in Children's Heads.

Take one ounce of vinegar, one ounce of Staves-acre, well powdered, half an ounce of honey, half an ounce of sulphur, and two ounces of sweet oil; mix the whole well together into a liniment, and rub the head repeatedly with a little thereof.

Solder for Tin and Lead

Is usually made by melting together equal parts of tin and lead, but it is better if it contains rather a greater proportion of tin.

To extinguish Fires speedily.

Much mischief arises from want of a little presence of mind on these alarming occasions; a small quantity of water, well and immediately applied, will frequently obviate great danger. The moment an alarm of fire is given, wet some blankets well in a bucket of water, and spread them upon the floor of the room where the fire is, and afterwards beat out the other flames with a blanket thus wet; two or three buckets of water thus used early, will answer better than hundreds applied at a later period. Linen thus wet will be useful, but will not answer so well as woollen.

German Black for Printers.

Take the lees of port wine, dry and burn them; add thereto good ivory black, the stones of cherries, plums, or other stone fruit, burnt in close vessels, and fine soft charcoal made from burnt willow;

grind the whole well together into one mass, from which the best printing ink may be formed.

Polish economical Nourishment, called Kacha.

Heat some water in an earthen vessel; when it begins to boil, add thereto some millet seed, and stir the whole together till it has acquired a proper consistence; then add to it a little salt, milk, or butter, or if you would have it more expensive, add a little sugar and spices.

To clean Gold, and restore its Lustre.

Dissolve a little sal-ammoniac in urine; boil your soiled gold therein, and it will become clean and brilliant.

To discover if Bread is adulterated with Allum.

Make a solution of lime in aquafortis, and put a little of this solution into water, in which you have steeped the bread suspected to contain allum. If such should be the case, the acid, which was combined with the allum, will form a precipitate or chalky concretion at the bottom of the vessel.

To purify the foul Air of a Room.

Take some roots of angelica, and dry them well in an oven, or before the fire; then bruise and steep them in vinegar for four or five days.

To purify the room, heat a brick red hot, and lay one or more of these roots thereon; the vapour which arises from it will perfume the room, and correct the bad air.

To perfume Hair Powder.

Take one drachm of musk, four ounces of lavender blossoms, one and a half drachm of civet, and half a drachm of ambergrease; pound the whole together, and pass it through a sieve. Preserve this mixture in well-stopped bottles, and add, more or less thereof, as agreeable, in your hair powder.

A burning Mixture to perfume a Room, and destroy any bad Smell therein.

Take half an ounce of gum-benjamin, four scruples of styrax calamita, two drachms of dry balsam of Peru, four scruples of cascarilla, half a drachm of cloves, one ounce and a half of powdered charcoal, one drachm of nitre, half a drachm of tincture of amber, half a drachm of essence of lemon; pound and mix the whole well together; and with a little mucilage of gum-tragacanth, form the whole into a paste, in rolls of the thickness of a quill; divide these into small cones of about one inch each, which dry and preserve in well-stopped bottles. When wanted for use, place one of these on a plate or saucer; and on putting a lighted paper to the point of it, it will burn with a sparkling fire, and diffuse an agreeable odour throughout the whole apartment.

Dr. Taylor's Cheap and Efficacious Method of destroying Rats.

[Communicated to the Manchester Agricultural Society.]

In or near the place frequented by these vermin, place on a slate or tile one or two table-spoonfuls of dry oatmeal. Lay it thin, and press it flat, more easily to ascertain what is taken away. As the rats, if not interrupted, will come regularly there to feed, continue to supply them with fresh oatmeal for two or three days; and then, well mixing, in about six table-spoonfuls of dry oatmeal, three drops only of oil of anniseeds, feed them with this for two or three days more. Afterward, for one day, give them only half the quantity of this scented oatmeal which they have before actually eaten; and next day, place the following mixture: To four ounces of dry oatmeal, scented with six drops of oil of anniseeds, add half an ounce of carbonated barytes, previously pounded very fine in a mortar, and sifted through a little fine muslin or cambric. Mix this intimately with the scented oatmeal; and, laying it on the tile or slate, allow the rats to eat it, without the smallest interruption, for twenty-four hours. A few hours after eating any of it, they will frequently be seen running about, as if drunk, or paralytic; but they generally, at last, retire to their haunts, and die. As rats are extremely sagacious, it may be proper, when they have, during the twenty-four hours, eaten only a small portion, to leave the remainder of the mixture twenty-four hours longer; after

which it will be best to burn what is left, a fresh mixture being prepared at so trifling an expence when wanted. The doors of the place where this mixture is exposed to the rats should be kept closed; as well to prevent their being disturbed, as to obviate the possibility of accidents to children or domestic animals; for, though it be not so extremely dangerous as the preparations commonly employed for killing rats, and is even used in medicine, it proves fatal, if improperly taken, unless timely counteracted by emetics. The oil of anniseeds, though it renders the mixture disagreeable to dogs, and many other animals, is alluring, when used in small quantities, to rats. The carbonated barytes, Dr. Taylor adds, may be procured in large quantities at the lead mines belonging to Sir Frank Standish, Bart. at Anglezark, near Chorley, in Lancashire; the proper sort is tasteless, semi-transparent, and effervesces with acids; it is moderately hard, and striated. It is called aërated barytes—terra ponderosa aërata—and, sometimes, by the miners, ponderous spar. It may be purchased at a cheap rate from Messrs. Brown and Mawe, in Tavistock-street, or other collectors of minerals.

To purify Lemon Juice.

Add one ounce of pulverised, well burnt charcoal, to a quart of lemon juice; after standing twelve hours, filter the juice through white blotting paper; it will keep good several years in a cellar, in a bottle, well corked; a thick crust will form beneath the cork, and the mucilage will fall to the bottom.

Excellent Varnish for Umbrellas, &c.

Great coats, and other articles much exposed to the weather, are rendered both sun and rain proof, by the following excellent varnish: Boil well together two pounds of turpentine, one pound of litharge in powder, and two or three pounds of linseed oil. When the article is brushed over with this varnish, it must be dried in the sun; after which, the greatest heat will not affect it.

Turkish or Arabian Mode of preparing Coffee.

The coffee ground or beaten to an impalpable powder is preserved, by closely pressing it down in a wooden box; and the quantity required for use is scraped from the surface by means of a wooden spoon. Two small coffee-pots are employed; in one is boiled the water, generally mixed with the remaining coffee of a former meal; in the other is put the fresh powder, which is sometimes placed near the fire, to become heated before the boiling water is added to it. The mixture is then boiled two or three times, taking care to pour a few drops of cold water upon it the last time, or to place a cloth dipped in cold water over it; then it is allowed to subside, and afterwards poured into the coffee-pot which contained only the boiling water.

N.B. The quantity of coffee powder necessary to make a fine strong tincture of coffee may be estimated as one coffee-cup of coffee-powder, or three dishes of proper coffee-liquor for the table.

German Method of preserving Furs from Moths.

In the month of April beat your fur garments well with a small cane or elastic stick, then lap them up in linen without pressing the fur hard, and put betwixt the folds some camphor, in small lumps; then put your furs in this state in boxes well closed.

When the furs are wanted for use, beat them well as before, and expose them for twenty-four hours to the air, which will take away the smell of the camphor. If the fur has long hair, as bear or fox, add to the camphor an equal quantity of black pepper in powder.

Art of extracting Spots of Grease, Tallow, Oil, &c. from valuable Books, Prints, and Papers of all Sorts, without the smallest Injury to the Printing or Writing.

First, with a knife scrape off the tallow or grease on the surface; then, having in readiness some common blotting paper, gently warm the spotted part of the book, or other article damaged by grease, tallow, or oil; and, as it melts, take up as much as possible, by repeated applications of fresh bits of the blotting paper. When no more can thus be imbibed, dip a small brush in the essential oil of well rectified spirit of turpentine, heated almost to a boiling state; and wet with it both sides of the paper, which should also be at the same time a little warm. This operation must be repeated

till all the grease be extracted; when another brush, dipped in highly rectified spirit of wine, being passed over the same part, the spot or spots will entirely disappear, and the paper reassume its original whiteness, without detriment of any sort to the paper, or any printed or written characters thereon.

To prevent Death from the Bite of venomous Animals.

From observations made by Dr. Bancroft, it is found, that in South America, where the most venomous serpents abound, that a very tight ligature, instantly made after the bite between the part bitten and the trunk of the body, will prevent immediate danger, and allow time for proper means of remedy, either by excision of the whole joint, just above the ligature, or by topical applications upon the part bitten.

For instance, if the bite should be upon the end of the finger, a tight ligature of small cord should immediately be made beyond the next joint of the finger.

If the bite is on any part of the hand, the ligature should be made above the wrist by means of a garter or cord, lapped several times round the arm, and rendered as tight as possible by a small stick thrust betwixt the folds of the cord or garter, and twisted round very hard, to prevent the circulation of the blood betwixt the part bitten and the other part of the body. Ligatures of the same kind, applied by any person present, or the man himself, will frequently save a person's life, where, by acci-

dent, an artery in any of the limbs is wounded, and the person would otherwise bleed to death before regular surgical assistance could be given.

Tincture for the Teeth and Gums.

Mix six ounces of tincture of Peruvian bark with half an ounce of sal-ammoniac. Shake them well a few minutes, every time, before the tincture is used. The method of using it is, to take a tea-spoonful, and hold it near the teeth; then, with a finger dipped in, rubbing the gums and teeth, which are afterward to be washed with warm water. This tincture not only cures the tooth ache, but preserves both the teeth and gums, and makes them adhere to each other.

To prevent the Mischief arising from the Bite of a Mad Dog.

Where the excision of the part bitten can be immediately performed, it is the best preventative of danger, or where the part can be burnt out by the application of a red hot iron, little danger is likely to happen. In cases where neither of these methods are permitted, the following plan is recommended, viz. to rub the wound extremely well with eau de luce, and to give the patient immediately twelve or fifteen drops thereof, in water, then to put him into a warm bed, and to give him repeated doses of Mindererus's spirit, (liquor ammoniæ acetatis), or of white wine whey, to bring on a perspiration, to be continued for twenty-four hours. During this time, and for a week afterwards, the patient

is to be nourished with good meat and drink, to prevent langour, and every means taken to throw out the venomous matter externally, and to prevent its absorption into the system.

To know whether a Dog is mad or not.

Dogs suspected of being mad are frequently killed, leaving persons bitten in a dreadful uncertainty, whether the dogs were or were not really mad; the following experiment has been supposed conclusive on this head:—rub the mouth, teeth, and gums of the dead dog, if free from blood, with a little roast or boiled meat, and offer this meat, so rubbed, to another dog, who will eat it without reluctance if the dead dog was not mad, but will refuse it, and run away howling from it, if the dead dog was really mad. It may be further satisfaction to the parties concerned, to keep the dog tied up for some days, if he eats the meat so prepared.

Art of Silvering.

Dissolve silver in aquafortis, and then add to it a little hot water in which salt has previously been dissolved, when a white precipitate will immediately be seen falling to the bottom. Continue pouring in, gradually, additional water, till there is no longer any precipitation. Pour off the water, and put on fresh, two or three times; then make the whole into a paste, with equal quantities of common salt and cream of tartar. The method of using it is by adding water, and rubbing it on very bright and clean copper or brass. Then wash it clean off with water; immediately dry it; and put on it a

thin varnish, such as copal or sandarac, otherwise its beautiful appearance will in a day or two become changed. Clock dial plates, &c. are thus silvered, and the process is both easy and cheap.

Art of dyeing or staining Leather Gloves, to resemble the beautiful York Tan, Limerick Dye, &c.

These different pleasing hues of yellow, brown, or tan colour, are readily imparted to leather gloves by the following simple process: Steep saffron in boiling hot soft water for about twelve hours; then, having slightly sewed up the tops of the gloves, to prevent the dye from staining the insides, wet them over with a sponge or soft brush dipped into the liquid. The quantity of saffron, as well as of water, will of course depend on how much dye may be wanted; and their relative proportions, on the depth of colour, required. A common tea cup will contain sufficient in quantity for a single pair of gloves.

M. Homassel's Account of his Cure for Burns or Scalds.

Take half a pound of allum in powder, dissolve it in a quart of water; bathe the burn or scald with a linen rag wet in this mixture; then bind the wet rag thereon with a slip of linen, and moisten the bandage with the allum water frequently, without removing it, in the course of two or three days. He relates, that one of his workmen, who fell into a copper of boiling liquor, where he remained three minutes before taken out, was immediately put in-

to a tub containing a saturated solution of allum in water, where he was kept two hours; his sores were then dressed with cloths and bandages, wet in the above mixture, and kept constantly moistened for twenty-four hours, and that in a few days he was able to return to business.

Economical Use of Roots of Trees.

In many parts of England and Scotland, trees are cut down above the surface of the earth, leaving the stumps an incumbrance to the ground, when they might be rooted up to advantage, if used in the following manner:—Dig out these butt ends, or stumps, and with a common augre, bore a hole in their centre, about six or nine inches deep, into which put a charge of powder of three or four inches; then fill up the space above it by an iron screw of the same dimensions, and put a quick match, of about eighteen inches long, into the hollow of the screw, and set fire thereto, and retire; the explosion will split the log or stump into various pieces, in one of which the screw will be found retained. Much valuable fuel may be thus obtained from the knotty roots of oaks, elms, yew trees, &c.

The screws, and other implements for this purpose, may be seen at the Society of Arts, in the Adelphi, or may be purchased from Mr. Knight, ironmonger, Foster-lane, Cheapside.

Application of the Roots of Fir Trees or Pines.

The roots or butt ends of fir trees, split in the manner above-mentioned, will yield a considerable

quantity of pitch and tar, by the following management:—Make a hole in the earth, a few inches deep, on the side of a hill, in which lay a coat of clay, and therein pile the fir roots, split as above, and cut to the length of not more than three feet, upon bars of iron laid above the hole, and the logs piled up at the distance of half an inch from each other, and each row laid cross way of the other, to any height required, fire is to be set to the top of the pile, and as it consumes the wood, the pitch, tar, and rosin, contained in the wood, melt and run from it into the hole below, and from thence by a small trench into a large hole, made several feet deep in the ground, to receive these products.

Cleaning Floor Cloths.

After sweeping and cleaning the floor cloths with a broom and damp flannel, in the usual manner, wet them over with milk, and rub them till beautifully bright, with a dry cloth. They will thus look as well as if they were rubbed first with a waxed flannel, and afterward with a dry one; without being so slippery, or so soon clogging with dust or dirt.

Curious small Cakes of Incense for perfuming Apartments.

Take equal quantities of lignum rhodium, and anise, in powder, with a little powder of dried Seville orange peel, and the same of gum benzoin, or Benjamin, and beat all together in a marble mortar.

Then, adding some gum dragon, or tragacanth, dissolved in rose water, put in a little civet; beat the whole again together, make up this mixture into small cakes, and place them on paper to dry. One of these cakes being burnt in the largest apartment, will diffuse a most agreeable odour through the whole room.

Cephalic Snuff, or Sneezing Powder.

Mix well together one ounce of assurabecca in powder, and one scruple of white hellebore root, powdered, and scent it as you like with a little burgamot, or oil of lavender; a small pinch will wonderfully clear the head from obstructions.

Best Preparation of Black Lead, for cleaning Cast Iron Stoves, &c.

Mix powder of black lead with a little common gin, or the dregs of red port wine, and lay it on the stove with a piece of linen rag; then, with a clean, dry, and close, but not too hard brush, dipped in dried black lead powder, rub it till of a beautiful brightness. This will be found to produce a much finer and richer black varnish on the cast iron, than either boiling the black lead with small beer and soap, or mixing it with white of egg, &c. which are the methods commonly practised.

To take the Smell of Paint from Rooms.

Let three or four broad tubs, each containing about eight gallons of water, and one ounce of vitri-

olic acid be placed in the new painted room, near the wainscot; this water will absorb and retain the effluvia from the paint in three days, but the water should be renewed each day during that time.

To make an Ink or Stain upon Linen, which cannot be washed out.

Procure from a druggist or chemist, a drachm of lapis infernalis, or silver caustic, and let him dissolve it in half an ounce of diluted nitrous acid; then add thereto a small portion of fine powdered charcoal, to make the mixture a little dark coloured.

Wet, with a hair pencil, the part of the cloth which you intend to mark or write upon with a solution of isinglass in water, which being dry, write thereon, with a pen dipped in the preparation of the silver caustic above-mentioned, and let the letters dry; they cannot afterwards be effaced by any means, but will stand washing in soap or any other mixture. Take care not to wet your fingers with this ink, as it will stain them black.

Mixture for cleaning Stone Stairs, Hall Pavements, &c.

Boil together half a pint each of size and stone blue water, with two table spoonfuls of whiting, and two cakes of pipe-maker's clay, in about two quarts of water. Wash the stones over with a flannel slightly wetted in this mixture; and, when dry, rub them with flannel and a brush. Some

persons recommend beer, but water is much better for the purpose.

The Danger of Children eating gilt Gingerbread, or any Article covered with such a Composition.

There are frequently sold eatable things, as images of sugar, &c. having on them what people imagine to be gold leaf, but which is, in reality, leaves of copper, beat out in imitation of it, which is so dangerous a poison as to demand the interference of government, to prevent the sale of such articles; irreparable mischief having been occasioned without suspicion of the cause.

Preparation of the Greek Water, (or the Solution of Silver, for the converting red or light-coloured Hair into a deep Brown.)

Take silver filings, and dissolve them in spirit of nitre. The spirit of nitre, and the silver, being put in a mattrass, must be placed, first, in a gentle sand-heat, and afterwards removed where the fluid may be made to boil for a short time. Being taken out of the sand-heat, while yet hot, add as much water as may have evaporated during the boiling; and, when the solution is grown cold, decant off the clear fluid from the sediment, if there be any, and the undissolved part of the silver filings; which may be dissolved afterwards, by adding more spirit of nitre, and repeating the same treatment.

Note—The solution of silver, thus obtained, with

common water, is the Greek water, used for turning red or light-coloured hair to brown. Its efficacy may be greatly improved by washing the hair before the application of the water, with common water, in which some soda has been dissolved. The proportion may be an ounce and an half of pure soda to a pint of the water; but it requires a frequent repetition to change the colour of the hair; and care must be taken that a sufficient quantity of water be added to dilute the solution to prevent its destroying the hair, or, perhaps, excoriating the skin by its causticity. At least, double the quantity of water should be therefore added.

The hair must first be cleaned from powder and pomatum with a small tooth comb, and then washed with the soda and water till all grease, pomatum, &c. be got out; then use the Greek water in the following manner, first shaking the bottle: Take as much hair as can conveniently be wetted, and with a bit of sponge, tied on a little stick dipped in the Greek water, wet the hair well, and so proceed till all is wetted; let it dry by sun, air, or fire, before you repeat it, which must be done four times, and must afterwards be washed with the soda and water, all which may easily be done in eight hours. A cloth should be put on the shoulders, and do not let theGreek water touch the skin, or as little as possible. To make yourself expert, first try according to the above directions, to dye a lock of hair that is not growing on the head; and make the Greek water stronger or weaker, according as you find it necessary.

Substitute for Barm or Yeast.

[This receipt was presented to the October Meeting of the Manchester Agricultural Society, held at Altringham, 1809; by Charles Lownds, Esq. when it was ordered that a copy should be printed for each member.]

Boil two ounces of hops in four quarts of water twenty minutes; strain it, and whilst hot stir in half a pound of flour; when milk-warm, mix half a pint of good ale yeast, or a pint of this mixture, which you should always reserve to keep a supply. When nearly cold bottle and cork it well, and keep it for use in a cool place, if too warm it would be apt to fly, you will judge of this by the season of the year; observe to fill the bottles only two thirds full.

When used, put of it into the flour you intend for bread, in the proportion of a pint to twenty-four pounds, with water to make it of a proper warmth, mix a little of the flour with it in the middle of the mug, or kneading vessel; it must be covered close and set in a tolerably warm place all night. Knead it well in the morning, and let it stand some hours longer to rise. It should be eighteen or twenty hours from the first putting together, before your bread is set into the oven.

Management of Razor Straps.

Most razor straps are spoiled by being left too dry; a drop or two of sweet oil, frequently added to the strap, would remedy this; and, after

using the strap, passing the razor on the inside of a warm hand, gives the smoothest and finest edge; putting the razor in warm water makes it cut very keen, and perhaps nothing makes a better razor strap than crocus martis, with a little sweet oil rubbed well on leather with a glass bottle.

Paste or Food for Singing Birds, superior to the German Paste in common Use.

Well mix, or knead together, three pounds of split peas, ground or beat to flour, one pound and a half each of fine crumbs of bread and coarse sugar, the fresh yolks of six raw eggs, and six ounces of unsalted butter. Put about a third part of the mixture, at a time, in a frying pan, over a gentle fire, and continually stir it till it be a little browned, but by no means burnt. When the other two parts are thus done, and all are become cold, add to the entire quantity six ounces of maw seed, with six pounds of good bruised hemp seeds separated from the husks. Mix the whole well together, and it will be found an excellent food for thrushes, red robins, larks, linnets, canary birds, finches of the different sorts, and most other singing birds, admirably preserving them in song and feather.

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