

THE NEW

# RECEIPT BOOK,

CONTAINING A LARGE COLLECTION OF

HIGHLY ESTIMATED RECEIPTS,

IN A VARIETY OF BRANCHES, VIZ.,

BREWING,

MAKING AND PRESERVING BRITISH WINES,

DYING,

RURAL AND DOMESTIC ECONOMY,

&c. &c.,

CAREFULLY SELECTED FROM

EXPERIENCED AND APPROVED RECEIPTS,

FOR THE USE OF

HOUSEKEEPERS IN GENERAL,

*A great number of which were never before Published.*

BY G. MILLSWOOD.

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# NEW RECEIPT BOOK.

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## OBSERVATIONS ON BREWING.

MALT is a wholesome and nutritious grain, containing a soft balsamic oleaginous essence highly agreeable to the palate, and healthful to the constitution.

PALE MALT is most nutritive, being, from the tender method of drying it, nearest to the original barley corn; it likewise contains more of the alkaline and balsamic qualities than the brown malt, which enduring a greater degree of heat in the kiln, is sometimes so crushed and burnt, that its mealy parts lose a great share of essential salts and vital properties.

AMBER MALT is that which is dried in a middle state, between pale and brown, and is now much in use.

HOPS are an aromatic grateful bitter, very wholesome, and efficacious in giving both flavour and strength to the beer.

YEAST is necessary to give the liquor a proper portion of elastic air.

SUGAR is a pleasant nutritive extract, when boiled to a proper temper of *essentia* and for what is called colour, it answers for both malt and hops, being in part an agreeable sweet, and in part a pleasant bitter; sugar is likewise a keeper of beer, and gives that substance which improves with age; it is likewise a cheap substitute for malt, six pounds being equal to one bushel of malt.

CAPSICUM disperses wind and crudities caused by indigestion, it gives a warm glow to the stomach, but should be carefully made use of

ESSENTIA BINÆ is made by boiling moist sugar in an iron vessel, till it comes to a thick sirupy consistence, perfectly black and extremely bitter.

COLOUR is composed of moist sugar boiled till it obtains a middle state between bitter and sweet and is used to give porter the fine mellow flavour and colour so much admired.

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## GENERAL DIRECTIONS

FOR BREWING ALE, PORTER, BEER, &c.

Every vessel intended for the purpose of brewing should be perfectly clean and untainted. The mash tub, in the first place, should claim particular attention, and a whisp of hay or straw put over the end of the vessel on the inside, to prevent the malt from running off with the liquor. When the water boils in the copper, add cold water sufficiently to stop the boiling, and leave it just hot enough to bite smartly upon your finger. The water being thus brought to a proper temperature, ladle it out of your copper on to the malt, until it becomes thoroughly wet, stirring it round with a stick, to prevent your malt from clotting. Cover up your mash tub close, to compress the steam, and prevent the heat from evaporating. In small quantities this should be carefully regarded. Let your wort stand, after mashing, a hour and a half or two hours, then let the liquor run off into a vessel prepared to receive it. If at first it runs thick and discoloured, draw off one or two pails full, and pour it back again into the mash tub, to refine again until it runs clear. Never suffer your mash to stand dry; but keep lading fresh water over it, till the quantity of wort you wish to get, is extracted, always allowing for the loss of water in the boiling.

When you boil your wort, add the hops, and after it has boiled one hour, ladle it out of the copper and cool it. When cooled so much that a small degree of warmth is only perceptible by the finger, add yeast in proportion to your wish to bring it forward; let it work till it comes to a good deep head, when it will be fit for barreling. Fill your barrels full

and let the yeast work out, adding fresh liquor till they have done working, then bung or cover up your barrels.

*Receipt for Six gallons of Porter.*

One peck of malt.—Four ounces Spanish juice.—Essentia four ounces.—Hops four ounces, to which add capsicum and ginger four drams. Mash and boil as before directed, adding the ingredients with the hops.

*For one barrel of Ale.*

Malt, two bushels and a half.—Hops two pounds.—Sugar boiled up, three pounds.—Capsicum and ginger, half an ounce.

*Tropenny.*

For thirty-six gallons take one bushel and a half of malt ; hops, one pound ; Spanish liquorice, eight ounces ; capsicum, two drams.

This liquor will be drinkable in a week.

*Ginger Beer.*

Lump sugar, three pounds ; bruised ginger, two ounces ; cream of tartar, one ounce ; two lemons sliced ; on these pour four gallons of water, and add four ounces of yeast ; work for four days ; bottle of and tie the corks down.

Or, moist sugar, six pounds ; ginger, five ounces ; cream of tartar, two ounces ; four lemons sliced ; eight ounces of yeast ; seven gallons of water ; work two or three days, strain, add a pint of brandy, bung it very close and in fourteen days bottle it off as above.

*White Spruce Beer.*

To ten gallons of water add six pounds of sugar, and four ounces of the essence of spruce, add yeast ; work as in ginger beer, and bottle immediately.

Brown Spruce is made in the same manner, with the exception of using treacle instead of sugar.

*Treacle Beer.*

Hops, one pound four ounces, boiled for an hour in thirty-six gallons of water; add fourteen pounds of treacle, a little yeast, and let it ferment.

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W I N E S .

*To make Gooseberry Wine.*

Take gooseberries just beginning to turn ripe; bruise them but not so as to break their stones. Then pour clear spring water on them, at the rate of eight pounds of pulp to each gallon of water, and let them stand in the vessel covered, in a cool place, twenty-four hours; then put them into a strong canvass hair bag, and press out all the juice that will run from them, and to every quart of it put twelve ounces of loaf or other fine sugar, stirring it till it be thoroughly melted; then put it up into a well seasoned cask, and in a cool place. When it has purged and settled about twenty or thirty days, fill the vessel full and bung it down close, that as little air as possible may come at it.

When it is well wrought and settled, draw it off into smaller casks or bottles, keeping them in cool places, for nothing hurts any sort of wine more than heat.

*Currant Wine.*

After gathering the currants, which you must do when the weather is dry, and when they are full ripe, strip them carefully from the stalks, so as not to bruise them with your fingers; put them into a pan, and bruise them with a wooden pestle; let the whole stand about twenty hours (according to the quantity) after which strain through a seive. Add

three pounds of fine powder sugar to every four quarts of the liquor, and then shaking or stirring it well, fill the cask, and put about a quart of brandy to every six or seven gallons. As soon as it is fine, which will be in four or five weeks, you must bottle it off. If it should not prove quite clear, draw it off into another vessel, let it stand about ten days, and then bottle it off.

### *Birch Wine.*

In the beginning of March, while the sap of the birch-tree is rising, holes must be bored in the body of the tree, and forsets 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, according to the number of trees, the quantity of liquor is obtained. This 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. As soon as it is almost cold, work it with a toast spread with yeast, and let it stand for five or six days, stirring it twice or thrice each day. Now bung it very close in a cask for three months and bottle it off for use. In a week or two after, it will be fit for drinking.

### *Sage Wine.*

Boil twenty-six quarts of spring water a quarter of an hour, and when it is blood warm, put twenty-five pounds of Malaga raisins, picked, rubbed and shred, into it, with almost half a bushel of red sage well shred, and a pint of ale yeast; stir all well together, and let it stand in a tub, covered warm, six or seven days, stirring it once a day; then strain it off, and put it in a runlet. Let it work three or four days, and then stop it up; when it has stood six or seven days, put in a quart or two of Malaga sack; and when it is fine, bottle it off for use.

### *Blackberry, Strawberry, or Dewberry Wines.*

Take of these berries, in their proper season, moderately ripe, what quantity you please; press them as other berries;

boil up water and fine sugar, to a considerable sweetness and when it is well skimmed, put the juice in and let it simmer to incorporate well with the water, when it has done so take it off, let it cool, skim it again, and put it up in a barrel, or close glazed earthen vessel, to ferment and settle. To every gallon put half a pint of Malaga; and draw it off as clear as possible. Bottle it up, and keep it cool for use.

### *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 skimmed as required, 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. In two or three days it will be rich and valuable.

### *Cherry Wine.*

Take cherries nearly ripe, of any red sort; clear them of the stalks and stones, and put them in a glazed pan. Then with your hands squeeze them to a pulp; or, do it with a wooden ladle, or presser. Let them continue twelve hours to ferment; then put them into a linen cloth, not too fine and press out the juice with a pressing board. Let the liquor stand till the scum rises, and with a ladle take it clean off: then pour out the clearer part into a cask, where to each gallon put a pound of the best loaf sugar, and let it ferment and purge seven or eight days; draw it off, when you find it clear into less casks or bottles; keep it cool as other wines, and in ten or twelve weeks it will be ripe.

### *Plum Wine.*

Take what plums you please, mix those of a sweet taste with those that are somewhat sour, though they must be all inclined to ripeness; slit them in halves, so that the stones



may be taken, then mash them gently, and add a little water and honey; the better to moisten them, boil to every gallon of pulp a gallon of spring water, in it a few bay leaves and cloves; add as much sugar as will well sweeten it, skim off the froth, and let it cool, then press the fruit, squeezing out the liquid part; strain all through a fine strainer, and put the water and juice together in a cask; let it stand and ferment three or four days, fine it with white sugar, flour, and whites of eggs, draw it off into bottles, then cork it up. In twelve days it will be ripe, and taste like sherry, or rather a nearer flavour of Canary.

#### *Damson Wine.*

Damsons may be ordered as other plums, though they produce a tarter wine, it is more clear and lasting; but put not so much water to them as luscious plums, unless you mix some sweet wine with, as Malaga, Canary, or the like; or infuse raisins in it, which will give it a rich and mellow taste.

#### *Wine of Raspberries.*

Take red raspberries, when they are nearly ripe, for if they grow over ripe they will lose much of their pleasant scent, and after clearing the husks and stalks from them, soak them in a like quantity of water, that has been boiled and sweetened with fine loaf sugar, a pound and a half to a gallon when they have soaked about twelve hours, take them out, put them into a fine linen pressing bag, press out the juice into the water, and boil them up together, and skim them well twice or thrice over a gentle fire; take off the vessel, and let the liquor cool, and when the scum arises, take off all that you can, and pour off the liquor into a well seasoned cask, or earthen vessel; then boil an ounce of mace quite down, if possible, into a pint of white wine, till the third part of the wine be consumed; strain it and add it to the liquor: let it settle two days, and when it has well settled and fermented, draw it off into a cask, or bottles, and keep it in a cool place.

#### *Cowslip Wine.*

Put five pounds of loaf sugar to four gallons of water, sim-

mer them over a fire half an hour, to dissolve the sugar, and when it is taken off, and cool, put in half a peck of cowslip flowers, clean picked and gently bruised ; then put two spoonful of new ale-yeast, and a pound of sirup of lemons beaten with it, with a lemon peel or two. Pour the whole into a well seasoned cask or vessel, let them stand close stopped for three days, that they may ferment well. When it has stood a month, draw it off into bottles, putting a little lump of loaf sugar into each, by which means you may keep it well for a year. In like manner, you may make wine of such other flowers as are of a pleasant taste and scent, as oxlips, jessamine, peach blooms, comfry, scabeous, featherfew, fumitory, and many more, as your fancy and taste may lead you.

*To Make Mead.*

To thirteen gallons of water, put thirty pounds of honey, boil and skim it well ; then take rosemary, thyme, bay leaves, and sweet briar ; one handful altogether ; boil it an hour ; then put it into a tub, with two or three handfuls of malt ; stir it till it is blood warm ; then strain it through a cloth, and put it into a tub again ; cut a toast round a quartern loaf, and spread it over with good ale yeast, and put it into a tub ; and when the liquor is covered with the yeast, put it up in the vessel ; then take of cloves, mace, and nutmegs, an ounce and a half ; of ginger, sliced, an ounce ; bruise the spice, and tie it up in a rag, and hang it in the vessel : stop it up close for use.

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CORDIALS .

*To make Twenty Gallons of Peppermint.*

Put fifteen penny-weights of oil of peppermint, and a quarter of a pound of lump sugar into a mortar : rub the same well, but so as not to be pasty ; then add a little spirits of wine, by degrees, until you put to the same about one pint, so as the sugar, wine, and oil, are so well mixed, that there is no appearance of oil left. Take twelve pounds and a half of lump sugar, dissolved in about two gallons of pure rain or soft water, or water that has boiled.

## CORDIALS.

Then take your oil, wine, and sugar, so beaten, as before-mentioned, mix them well in fourteen gallons and a half of spirits, one in five under proof, and add to the same, two gallons of water, which will nearly fill up your cask, always leaving room for the spirit to work itself. In using the water to the sugar, take care it is only milk warm, as in that heat it dissolves best, and will not damage either the oil or sugar.

### *To make Twenty Gallons of Anniseed.*

Take one ounce and a half of the oil of anniseed mixed with sugar as before, in a mortar, until they are well incorporated; and six pounds of loaf sugar dissolved in five gallons of water, mixed with thirteen gallons of spirits, one in five under proof. Fine down the same with two ounces of alum, boiled in about two quarts of water; always leave room in your cask for your fining.

### *To make fine Carraway, for two Gallons*

Take two ounces of cassia and two of carraway seeds, pound them well, and steep them for four or five days in a pint of proof spirits, then strain the spirits well off, and wash the seeds with a little clean spirits; then take four pennyweights of the oil of carraway, dissolve in it a lump of white sugar, as before directed: add your sugar, oil, and steeped spirits to one gallon and one quart of spirits under proof, nearly filled up with water, that has boiled, fine it down with about half a tea-spoonful of alum, put in about one hour after it is prepared.

Take always great care in mixing your spirits, water, and the ingredients, that you shake or stir them well together with a stick.

### *For two Gallons of Lovage*

Take two pounds of lump sugar dissolved in a quart of water; take one pound of celery cut small, steeped in a pint of spirits of wine, as before directed; about six drops of the oil of carraway, done up in your mortar, mix it as before, and nearly fill your cask with water

You must fine down your lovage with alum only, as is directed in receipt of peppermint.

To colour your lovage to a pale brown. This is done by mixing a little brown sugar burned, with a little spirit, and put it in with the finings, and you may by so doing bring it to what colour you please. Your water must be boiled.

*Cherry Brandy, either British or Foreign,*

Is made by picking the small black cherries clean from the stalk, putting them in a cask, and adding as much spirits, one in five, as will cover them. In six weeks you may begin to draw off, or bottle it, as you may want the goods, and if you find the colour too high, add some more spirits; and be careful to every twenty gallons of water, add one pound of Lisbon sugar.

*Tansy Brandy.*

To every six gallons of common brandy, one in five, you must press one pound of tansy, which has boiling water poured upon it, to make it yield its colour and flavour, add two pounds of sugar to every ten gallons of goods.

*Two Gallons and one Quart of Orange Brandy.*

Put into a cask three quarts of brandy, or if it be British brandy, it must be under proof spirits, with the rind of fourteen Seville oranges, steep them for fourteen or fifteen days, in a stone bottle or cask, close stopped, then boil three quarts of spring water, with two pounds of lump sugar, for near one hour upon a slow fire, fine down your sugar and water with the white of two eggs; strain the water into a clean pot and boil it near half an hour. When the sugar and water is cold, strain your brandy into the sirup, and in five or six days it is fit for use.

*Lemon Brandy*

Mix three quarts of water with one gallon of brandy or spirits, as before. If to make British, take thirty lemons, three pounds and a half of loaf sugar, and two pints of water pare the rinds of the lemons very thin, steep them in your

brandy or spirits three days, squeeze the lemons upon the sugar, then add your water to mix all your sugar, water, milk, and lemon juice, with your brandy, let it again stand three days, and then strain it off for use.

*To make Six Gallons of Raspberry Brandy.*

Dissolve in three quarts of water that has boiled, four pounds of lump sugar, add the same to four gallons of brandy, or spirits under proof, as before described, and five gallons of raspberries; infuse them for eleven days, close bunged down, strain them off the liquor, and in about ten days it is fit for use, as it fines itself. Add a little cherry brandy, if it wants more colour, and some currant wine, mixed in equal quantities.

*To make Twenty Gallons of Shrub.*

Take fourteen gallons of rum, six quarts of lemon juice, six quarts of Seville orange juice, one gallon of orange wine, fifteen pounds of loaf sugar, dissolved in four gallons and a half of water, with half an ounce of the essence of lemon; put all together in your cask, let it stand till fine.

*To make Capillaire.*

Take fourteen pounds of lump sugar, three pounds of Lisbon coarse sugar, and six eggs well beat up; put these into three gallons of water to dissolve: boil the same, and skim it four or five times; add one pint of orange-flower water, strain it through a bag, and bottle it; put about two penny-weights of the essence of lemon to three gallons, which will flavour punch, &c.

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MANAGEMENT OF SPIRITS.

*How to choose Rums.*

In selecting your rums, be careful they do not contain any bad flavour, as still burnt, smokey, woody, oily, &c. To give them a fair trial, in a large glass wherein is some warm

water, without sugar, mix a little of your rum; this opens the flavour, and will assist your judgment.

The more over proof you are charged the better, as it produces as many gallons of rum as there are gallons charged; and for which you pay only the duty, if it should be charged overproof. When you have occasion to reduce the overproof, put into your vat the same quantity of water, as the number of gallons charged.

To give what is called a false proof, or make low goods stand a better bead or head than they would in their natural state.—I shall describe two kinds of the Doctor.

The first is pearl-ashes, a quarter of a pound; pot-ashes, a quarter of a pound; soap-boilers' lye-water, three quarts; one ounce of the oil of vitriol; one pint of the oil of almonds; and lime waters one gallon.

Of this receipt put a sufficient quantity to raise the low goods, so as to carry a good head or bead.

The second is, oil of vitriol, and oil of almonds, of each a like quantity, and used in the same manner as the former; for two gallons of spirits, two-pennyworth of the oil of almonds, two-pennyworth of the oil of vitriol, beat up in a tea-cup, or mixed well together, with a small portion of sugar, will raise the bead; but it must be left to stand for two days before it is fit to draw.

Never bung down your spirits till they are clear; and if not bright and fine, which may be owing to that part of the spirits around the tap, draw a quart or two from your tap, till you see it comes fine from thence; and when you have drawn off the quantity you are in immediate want of, then gently return what you have drawn into your cask again. A glass is better to shew the strength of the bead or head than a phial, and in drawing it, keep the glass a distance from the tap, letting it run slow, and it will carry the better head.

All your liquor taps ought to be boiled in mutton suet twice a year, which will prevent them from fouling the spirits.

Peppermint, anniseed, usquebaugh, &c. must be kept always in the same cask; otherwise they will spoil the flavour of any other spirits which, might, from mistake, be put in a wrong cask. When your Foreign brandies are so high in

price as to afford little or no profit, which is now the case, you may lower them by clean proof spirits, adding a little oil of vitriol, to bring them to the strength of one in seven, and sweeten with loaf sugar; you will always find burnt sugar the best to colour, and be sure in lowering your Foreign or British brandy and rum, that you sweeten the water and colour it to its proper colour before you use it with your brandies, &c. but you should never adulterate a large quantity of goods at a time, as they do not keep their flavour near so long when adulterated.

Rums are likewise lowered in small parcels, by molasses spirits, spirits of vitriol, and sugar: Hollands, by molasses spirits only; you will always find prunes, very much improve flavour of brandies, whether British or Foreign, and stale porter, grounds or waste tea leaves, also improve rum, and a small quantity of elder flowers and rose-water in like manner improve Hollands.

If you want to raise the strength of any goods which are made up too low, nothing is better than clean tasteless spirits of wine. Should your rums at any time get discoloured, a small quantity of skimmed milk put to them and well shaken up together, letting them stand for a day or two, will bring them quite fine, and if any colouring is wanting you must put some burnt sugar. If by chance, or accident, any goods happen to be spoiled in their complexion, so as to become unsaleable, as sometimes come to pass, some ingredients turning them as black as ink, they must then be sent back to be distilled again.

For your brandies, skimmed milk, treacle, and isinglass, well beat on an iron plate, then shred fine, and boiled in water till dissolved: add a little of the brandy, stir it well, and shake the whole up together.

To every hogshead of Geneva or other goods, put five or six ounces of alum, powdered so as to go through a coarse hair sieve, and mixed in three or four gallons of the compounds for the above, and your Geneva will be clear in one or two days. You may make any goods of a deeper colour by burned sugar.

#### *Adulterated Rum.*

To make up rum that may be sold at a low price,

mix as follows: Jamaica rum, 90 gallons; British spirits, 30 gallons. To reduce the overproof add water.

Molasses spirits are the best; when they cannot be had, clear rectified malt spirits will answer, but they are not of so good a flavour.

Brandy may be reduced in price by the same process, only use the best molasses spirits, as the deception is not so soon discovered.

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### OBSERVATIONS ON DYING.

In domestic dying, few utensils are necessary, and those can in general be supplied from every kitchen or wash-house.

In dying, every article destined to receive any colour should be previously made clean, and perfectly free from grease, or oleous matter. Wool, which is naturally of a greasy nature, requires to be scoured before it is dyed. Silk should be washed with soap and warm water, and cotton and linen require bleaching and scouring in an alkaline ley. Generally speaking wool has the strongest affinity for colour, taking it more easily and retaining it most firmly; silk and other animal matters come next to wool, cotton next, and hemp and flax last; but however, it does not always happen that substances which take colour the easiest, retain it the longest.

Cloth may be dyed different shades of the same colour, lighter or darker, merely by varying the quantity of colouring matter. With a small quantity the shade is light and it becomes deeper as the quantity increases. And all those colours which the dyers call compound colours, are, in fact, two different colours applied to the cloth at once. Thus cloth becomes green by being dyed first blue, and then yellow.

The greater number of dyes are not permanent, unless the cloths, or other matter to be dyed, be previously impregnated with what has been termed a MORDANT, which possesses a very strong affinity both with fibre, and with



colouring matter, and hence serves to bind the one to the other. The usual practice is, first to steep the cloth or fibre in the mordant, and afterwards in the dye.

Of earthly mordants, the most important, and most generally used is alum. It is dissolved in water, and very often a quantity of tartar is dissolved along with it. Into this solution the cloth is put, and kept in it till it has absorbed as much alum as is necessary; it is then taken out, and for the most part washed and dried.

### *Colouring with true and false dyes.*

The materials for dying different colours are many and various. Some ingredients produce durable colours, which cannot be discharged either by exposure to air, or washing with soap; others though they may be made to stand the action of soap pretty well, cannot by any means be enabled to resist the action of air. These are distinguished by the different names of *true* and *false*, *permanent* and *fading*, nor is there any method yet discovered of giving the false colours an equal degree of durability with the true ones.

The most permanent dyes we have are cochineal and gumlac, for fine reds and scarlets: indigo and woad for blue; and when mixed in different proportions with cochineal or lac, for purple and violet colours; woad and some other vegetables for yellow; and madder for coarse reds, purples, and blacks.

The fading colours are much more numerous. In this class are included brazil-wood, log-wood, peach-wood, red-wood, fustic, turmerick root, annatto, archil, &c.

### *Salts used in Dying.*

The salts chiefly used as mordants in dying, are fixed alkalis; solutions of tin in sulphuric and muriatic acids, and in aqua regia, or nitro-muriatic acid; sugar of lead; cream of tartar; alum; oil of vitriol, or sulphuric acid, and solution of iron in the acetous acid. By means of these almost any colours may be dyed at an easy rate, and with very little trouble.—Observe, the acids, and acid solutions, must be diluted with a considerable quantity of water, before they are used.

*General Rule for Dying all Colours.*

Having cleared the substance to be dyed, as well as possible, and made choice of the salt proper for fixing the colour desired, dissolve the salt in water, and steep the substance in this solution for twenty-four hours. Then take it out, and without wringing hang it up to dry, but without heat, and for this it will be proper to allow a pretty long time, as the more perfectly the salt penetrates the cloth, the more durable the colour will be. Having then prepared a coloured solution or decoction, put the cloth into it. The less heat applied during the time the cloth remains in the dye, the finer the colour will be; but a longer time is required for completing the operation. If time cannot be spared, so that a strong heat must be applied, it will be necessary to roll the cloth during the time of dying, or the colour will be in danger of proving unequal. After the dying is completed, rinse the cloth in cold water, but do not wring it severely, and then hang it up to dry. In this way may be dyed a great variety of colours, on wood, silk, cotton and linen, without any variation in the process. Solution of tin in the vitriolic acid will produce all degrees of red, from the palest pink or rose colour, to the highest crimson and scarlet; and this on all the before mentioned substances, without exception.

*Substitute for Galls in Dying, and also in 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; so also has a strong decoction of logwood, coperas, and gum arabic.

*To Scour Carpets and Hearth-rugs.*

Rub a piece of soap on every spot of grease or dirt; then take a hard brush dipped in boiling water, and rub the spots well. If very dirty, put a solution of soap into a tub, with hot water, and beat the carpet, &c., well in it; rinse in several clean waters, and put in the last a table spoonful of oil of vitriol, to brighten the colours.

*To Scour Cloths.*

For a black, blue, or brown coat, dry two ounces of fullers earth, and pour on it sufficient water to dissolve it; then plaster the spots of grease. Take a penny-worth of bullock's gall, mix it with half a pint of stale urine, and a little boiling water, dip a hard brush in this liquor, and brush the spotted places. Then dip the coat in a bucket of cold spring water. When nearly dry, lay the nap right, and pass a drop of oil of olives over the brush to finish it.

For grey, drab, fawns, or moroons, cut yellow soap into thin slices, and pour water upon it to moisten it, Rub the greasy and dirty spots of the cloth. Let it dry a little, and then brush it with warm water, repeating, if necessary, as at first, and use the water a little hotter. Rinse several times in warm water, and finish as before.

*To Dye Linens and Cottons Yellow.*

Dissolve one part of acetate of lead, and three parts of alum, in a sufficient quantity of water. This solution should be heated to the temperature of 100°: the cloth should be soaked in it for two hours, then wrung out and dried. The soaking may be repeated, and the cloth again dried as before. It is then to be barely wetted with lime-water, and afterwards dried. The soaking may again be repeated; and if the shade of yellow is required to be very bright and durable, the alternate wetting with lime-water and soaking in the mordant, may be repeated three or four times.

The dying-bath is prepared by putting twelve or eighteen parts of quercitron bark (according to the depth of the shade required,) tied in a bag, into a sufficient quantity of cold water. Into this bath the cloth is to be put, and turned in it for an hour, while its temperature is gradually raised to about 120°. It is then to be brought to a boiling heat, and the cloth allowed to remain in it only a few minutes. If it is kept long at a boiling heat, the yellow requires a shade of brown.

*To Dye Linens and Cottons Black.*

The cloth, *previously dyed blue*, is steeped for twenty-four

hours in a decoction of nut galls. A bath is prepared, containing acetate of iron: into this bath the cloth is put in small quantities at a time, wrought with the hand for a quarter of an hour, then wrung out and aired. This process is repeated, till the colour wanted is obtained. A decoction of elder bark is usually mixed with the liquor, containing the nut galls.

*To Dye Black Cloth Green.*

Clean the cloth well with bullock's gall and water, and rinse the cloth in warm water; then make a copper full of river water boiling hot, and take from one pound to one pound and a half of fustic; put it in, and boil it twenty minutes, to which add a lump of alum of the size of a walnut; when this is dissolved in the copper, put in the cloth, and boil it twenty minutes; then take it out, and add a small wine glass, three parts full of chemic blue, and boil again from half an hour to an hour, and the cloth will be a beautiful dark green; then wash out and dry.

*To Dye Muslin and Cotton Blue.*

Put some chemic blue into a pan of convenient size; add some potash, or other alkali, by degrees, till after several trials, it does not taste sour, or until the acid is entirely saturated or neutralized. Take of this liquor a sufficient quantity to dye what goods are required, and put it into a tub of water, about blood warm, and dip a small piece of cotton into it, to judge of the depth of the colour. Then wet out the goods in warm water, immerse them in the dye, and handle them to the shade required.

Blue when dyed this way, should be dried in a warm room; if book muslins, they must be pinned out; if cotton furniture, it must be made stiff with starch or flour, and afterwards glazed, mangled or calendered. If the acid of the vitriol is not overcome by the pearl or potash, the goods worked in this dye will be rotten; the liquor should rather have a salt than an acid taste, and then it will be sure to work well; but the nearer it can be brought to neutralization the better will be the effect.

*To make Chemic Blue.*

Pour one pound of the best oil of vitriol, upon one ounce

of the best Spanish indigo, well pounded and sifted, stir it well, add a small lump of common pearl ash, the size of a pea; this will immediately raise a great fermentation and cause the indigo to dissolve in minute and fine particles. As soon as this fermentation ceases, put it into a bottle, cork it lightly, and it may be used the next day.

*To make Chemic Green.*

This is made in the same way as for blue, with the addition of one fourth more of the oil of vitriol. If the chemic is to be used for woollen, East India indigo will answer the purpose better than Spanish indigo, and at one quarter the price.

*To Dye a Cotton Gown Black.*

Take half a pint of good shumac, put it into a sieve, and place it in a pan; then pour boiling water on it, and let the shumac water run into the pan; put in the gown, and let it steep for six hours; dissolve two ounces of green copperas in another pan of cold water, into which put the gown, handle it well, and let it remain for two hours; then take it out, and slightly rinse it; next take about three or four ounces of good slacked lime; put this in a pan of cold water, and let it stand for a quarter of an hour, pour off the clear water, into which put the gown, and handle it well for ten minutes; take it out and wash it, prepare the copper with half a pound of chipped log-wood, and one pound of fustic; boil these half an hour, then cool the copper, and put in the gown for half an hour; take it out and add an ounce or more of copperas, put in the gown again for half an hour; take it out, cool it, and put it in again for twenty minutes, taking care to handle it well all the time; then take it out, wash and dry it.

*To Dye a Cotton Gown Crimson.*

Wash well in soap and water; then clear it in warm water, and afterwards in shumac liquor, all night. Now add to the copper, one pound and a half of peach wood, and let it boil half an hour, till the colour is extracted; then add a sufficient quantity of log-wood decoction to the pan

m which the liquor is drawn off from the copper, to make it the colour required; put in the gown and handle it well for half an hour, at a hand-heat, and it will be a good colour. But to make it a full crimson, add more of the log-wood decoction, with a small piece of pearl-ash, and dry in a warm room. Log-wood decoction is made by boiling half a pound of log-wood in two quarts of water and a small quantity of pearl-ash.

*To Dye a Cotton Gown Yellow.*

Wash the gown well in soap and water, and rinse in warm water; then dissolve from a quarter to half an ounce of alum in a pan of boiling water; when at a hand-heat, put in the gown and let it remain for two hours, handling it now and then; boil a sufficient quantity of wold, and dip the liquor out in a pan; then take the gown from the alum water, put it into the dye, and handle it well for an hour, or till it comes to the shade required; afterwards wash and dry in the air.

*To Dye a Cloth Pelisse Raven Grey.*

Put about three quarters of an ounce of alum pounded into the copper when it boils; then put in the garment, and boil it for half an hour or more; take it out, and add to the copper about an ounce of green copperas; when this is dissolved, put in the pelisse again, and boil it for twenty minutes; then throw away the liquor, let the pelisse cool; wash it, and add from one to two ounces and a half of log-wood chips, which must be boiled in a fresh liquor. When boiled about a quarter of an hour, put in the pelisse, and boil again to colour or pattern; lastly, sprinkle a tea-spoonful of powdered alum into the copper; and immerse the pelisse for five minutes: this tends to clear it. Wash it in two or three waters and dry it in the shade.

*To Dye a Mantle Pearl Grey*

For a mantle of about a pound weight, boil the water, and put in about one ounce and a half of log-wood, boil this twenty minutes; add to it three or four drachms of

pearl-ash; let this boil five or ten minutes. In the meanwhile wet the garment in warm water, and wring it; have also another copper or boiler, in which put a small bag with a handful of wheaten bran in it, and two drachms of powdered alum; the alum will throw the scum on the top of the liquor, which take off; then put in the garment for five or ten minutes; take it out, and pour a bowl of log-wood decoction into the vessel containing the bran-water, then put in the goods, and boil the colour, adding more log-wood when required.

This process may be conducted in one copper by making the decoction of log-wood first.

*To Dye a Silk Spencer Pearl Grey.*

Boil off the silk in white soap and water, and then, when clear and pure, rinse it in warm water. Cut rather more than a quarter of an ounce of white soap into thin slices; pour boiling water on it, and then stir and beat it well for five minutes, by which time the soap liquor will be at a hand-heat; then put a small tea-spoonful of chemic blue into the thin soap liquor; stir it, and put in the spencer; handle it over a quarter of an hour in this liquor, and it will be dyed.

*To Dye Silks a Bright Yellow.*

Take a sufficient quantity of quercitron bark, and put it into the copper; when it has boiled five or ten minutes, it will be seen if more bark is required. Boil this quickly for twenty minutes, then dip out a sufficient quantity to cover the silks in a pan, into which put a small quantity of nutriate of tin; pass the silks through warm water, and wring them gently; then put them in the pan of dye water, and handle them with two sticks, till they are nearly cold; then draw out the silks, throw the liquor away, and dip another pan full of bark liquor out of the copper into the pan; handle the silks through this also ten minutes; then add as much more muriate of tin as the colour intended may require. Rinse out in its own liquor slightly, and dry in a warm room.

*To Dye Silk Blue.*

Silk is dyed light blue by a ferment of six parts of bran,

six of indigo, six of potass, and one of madder. To dye it of a dark blue, it must previously receive what is called a *ground colour*; a red dye stuff, called archil, is used for this purpose.

*To Dye Silk Scarlet.*

Silk cannot be dyed a full scarlet; but a colour approaching to it may be given, by first impregnating the stuff with murio-sulphate of tin, and afterwards dying it in a bath, composed of four parts of cochineal, and four parts of quercitron bark. To give the colour more body, both the mordants and dye may be repeated.

*To Dye a Silk Shawl Scarlet.*

Dissolve two ounces of white soap in boiling water, handle the shawl through this liquor, now and then rubbing such places with the hands as may appear dirty. A second or even a third liquor may be used, if required: the shawl must be rinsed out in warm water.

Then take half an ounce of the best Spanish anatto, and dissolve it in hot water; pour this solution into a pan of warm water and handle the shawl through this for a quarter of an hour; then take it out and rinse it in warm water. In the meanwhile, dissolve a piece of alum of the size of a horse-bean in warm water, and let the shawl remain in this half an hour; take it out, and rinse it in clean water. Then boil a quarter of an ounce of the cochineal for twenty minutes; dip it out of the copper into a pan, and let the shawl remain in this from twenty minutes to half an hour, which will make it a full blood red. Then take out the shawl, and add to the liquor in the pan a quart more of that out of the copper, and about half a small wine-glass full of the solution of tin; when cold, rinse it slightly out in spring water.

*To Dye a Silk Shawl Crimson.*

Take about a table spoonful of cudbear, put it into a small pan, pour boiling water upon it, stir, and let it stand a few minutes; then put in the shawl, and turn it over a short time, and when the colour is full enough, take it out; but if



it should require more violet or crimson, add a spoonful or two of purple archil to some warm water, and dry it within doors.

To finish it, it must be mangled or calendered, and may be pressed, if such a convenience is at hand.

#### *To Dye Silk Lilac.*

For every pound of silk, take one pound and a half of archil, mix it well with the liquor; make it boil a quarter of an hour, dip the silk quickly; then let it cool, and wash it in river water, when a fine half violet, or lilac, more or less full, will be obtained.

#### *To Dye Silk Stockings, &c., a Flesh Colour.*

Wash the stockings clean in soap and water, then rinse them in hot water; if they should appear perfectly clear, cut half an ounce of white soap into thin slices, and put it into a saucepan half full of boiling water; when this soap is dissolved, cool the water in the pan, put in the stockings, and simmer for twenty minutes; then take them out, and rinse in hot water; in the interim pour three table-spoonsful of purple archil into a wash-hand basin half full of hot water; put the stockings in this dye water, and when of the shade called half violet or lilac, take them from the dye water, and slightly rinse them in cold; when dry hang them up in a close room in which sulphur is burnt, and when they are evenly bleached to the shade required of flesh colour, take them from the sulphuring room, and finish them by rubbing the right side with a clean flannel. Some persons calender them afterwards. Satins and silks are done the same way.

#### *To Dye Gloves various Colours.*

Take the colours suitable for the occasion; if dark, use Spanish brown and black earth; if lighter, yellow and whiting, and so on with other colours, mix them with a moderate fire, daub the gloves over with the colour wet, and let them hang till they are dry, then beat out the superfluity of the colour, and smooth them over with a stretching or sleeking stick, reducing them to their proper shape.

*To Dye White Gloves Purple.*

Boil four ounces of log-wood and two ounces of roche alum in three pints of soft water till half wasted. Let the liquor stand to cool after straining; then with a brush rub them over, and when dry repeat; then rub of the loose dye with a coarse cloth; beat up the white of an egg, and with a sponge rub it over the leather. The dye will stain the hands, but wetting them with vinegar before they are washed, will take it off.

*Art of Dying 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 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 in 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 the colour required. A common tea cup will contain sufficient in quantity for a single pair of gloves.

*To re-dye Garments.*

Every colour will dye black, whether blue, yellow, red, or brown, and black will always dye black again. All colours will take the same colour again which they already possess; and blues can be made green or black; green may be made brown, and brown green, and every colour on re-dying will take a darker tint than the first.

For maroons, a small quantity of roche alum may be boiled in a copper, and when it is dissolved, put in the goods, keep them boiling, and in a few minutes, enough of it will be discharged to take the colour intended.

Olives, greys, &c., are discharged by putting in two or three table-spoonsful of oil of vitriol; then put in the garment, &c., boil and it will become white. If chemic green, either alum, pearl-ash, or soap will discharge it off to the

yellow; this yellow may mostly be boiled off with soap, it has received a preparation for taking the chemic blue. Mur-riatic acid used at a hand heat will discharge most colours. A black may be dyed maroon, claret, green, or a dark brown; and it often happens that black is dyed claret, green, or a dark brown: but green is the principal colour into which black is changed.

*To Dye Silk Stockings Black.*

These are dyed like other silks, excepting that they must be steeped a day or two in black liquor, before they are put into the black silk dye. At first they will look like an iron grey; but to finish and black them, they must be put on wooden legs, laid on a table, and rubbed with an oily rubber, or flannel, upon which is the oil of olives, and then the more they are rubbed the better. Each pair of stockings will require half a table spoonful of oil at least, and half an hour's rubbing to finish them well. Sweet oil is the best in this process, as it leaves no disagreeable smell.

*To Dye Stran and Chip Bonnets Black.*

These are stained black in various ways. First by being boiled in strong log-wood liquor three or four hours; they must be often taken out to cool in the air, and now and then a small quantity of green copperas must be added to the liquor, and this continued for several hours. The saucepan or kettle may remain with the bonnets in it all night; the next morning they must be taken out and dried in the air, and brushed with a soft brush. Lastly a sponge is dipped in oil, and squeezed almost to dryness; with this the bonnets are rubbed all over, both inside and out, and then sent to the blockers to be blocked. Others boil them in log-wood; and instead of green copperas, use steel filings steeped in vinegar; after which they are finished as above.

*To Dye Straw Bonnets Brown.*

Take a sufficient quantity of Brazil wood, sumach bark, madder, and copperas, and sadden according to shade required.

*To Dye Woollen Cloth Blue.*

Dissolve one part of indigo in four parts of concentrated sulphuric acid; to the solution add one part of dry carbonate of potass, and then dilute it with eight times its weight of water.

The cloth must be boiled for an hour in a solution, containing five parts of alum, and three of tartar, for every thirty-two parts of cloth. It is then to be thrown into a water bath previously prepared, containing a greater or smaller proportion of diluted sulphate of indigo, (Saxon blue) according to the shade required. In this bath it must be boiled till it has acquired the wished for colour.

The only colouring matter employed in dyeing blue, are woad and indigo.

In the dyeing of wool, woad and bran are commonly employed as vegetable ferments, and lime as the solvent of the green base of the indigo. Woad itself containing a colouring matter precisely similar to indigo; and by following the common process indigo may be extracted from it.

When the cloth is first taken out of the vat, it is of a green colour, but it soon becomes blue. It ought to be carefully washed to carry off the uncombined particle. This solution of indigo is apt sometimes to run too fast into the putrid fermentation; This may be known by the putrid vapours which it exhales, and by the disappearing of the green colour. In this state it would soon destroy the indigo altogether. The inconvenience is remedied by adding more lime, which has the property of moderating the putrescent tendency. If the fermentation goes on too languidly, add more bran or woad, in order to diminish the proportion of lime.

*To Dye Woollens a Bright Yellow.*

Let the cloth be boiled for an hour, or more, with above one-sixth of its weight of alum, dissolved in a sufficient quantity of water as a mordant. It is then to be plunged, without being rinsed, into a bath of warm water, containing as much quercitron bark as equals the weight of the alum employed as a mordant. The cloth is to be turned through the boiling liquid till it has acquired the intended colour,

Then a quantity of clean powdered chalk, equal to the hundredth part of the weight of the cloth, is to be stirred in, and the operation of dyeing continued for eight or ten minutes longer. By this method a pretty deep and lively yellow may be given.

*To Dye Woollens Black.*

Let the cloth be boiled for two hours in a decoction of nutgalls, and afterwards, for two hours more, in a bath, composed of log-wood and sulphate of iron, kept during the whole time, at a scalding heat, but not boiling. During the operation, it must be frequently exposed to the air; because the green oxide of iron of which the sulphate is composed, must be converted into red oxide by absorbing oxygen, before the cloth can acquire a proper colour. The common proportions are five parts of galls, five of sulphate of iron, and thirty of log-wood, for every hundred of the cloth. A little acetate of copper is commonly added to the sulphate of iron, to improve the colour.

*To Dye Woollens, &c., a Bright Red.*

Suppose the article to be dyed, weighs about two pounds. When the copper boils, put in the boiling water about six or seven ounces of alum, and about two ounces of red tartar.—When dissolved, put in the goods, and boil from one to two hours; handling well every fifteen minutes, and always keeping them under water, when not handling; then take them out and fill the copper with fresh clean water, pouring off the preparing water; when this water gets pretty warm, put in six pounds of the best madder, which must be well stirred and broken in the copper; when the liquor is of a good red dye, which will be within half an hour, put in the goods and handle them well, about an hour. This will produce a bright red, but if a fine red is required, decrease the quantity of madder, and add a decoction of Brazil wood.

*To Dye a Cloth Pelisse a Puce Colour.*

When the copper boils, add a quarter of a pound of the best canwood, three ounces of sumach, a quarter of a pound of log-wood, and from half a pound to a pound of the best

## ART OF DYING.

purple archil ; if wanted a deeper blue, add more archil ; a small lump of pearl-ash or blue vitriol, purples it. If required to be of a red cast, some dyers use either a small quantity of oil of vitriol in the copper, or pass the article through oil of vitriol, in warm water after it is dyed. But, to prevent any occasion for this, be sparing of archil, and use no pearl-ash. Proportion the ingredients to the colour required. Camwood gives a red brown ; Sumach, a greenish gray brown ; Archil, a blue violet ; and Log-wood, nearly the same colour ; handle well, and boil one hour and a half ; then wash and dry.

### *Dye for Wood.*

This consists of a decoction of walnut or hickory bark, with a small quantity of alum dissolved in it, in order to give a permanency to the colour. Wood of a white colour receives from the application of this liquor a beautiful yellow tinge, which is not liable to fade. It is particularly adapted to furniture made of maple, especially that kind of it which is called bird's-eye ; and which is commonly prepared by scorching its surface over a quick fire. The application of the walnut dye gives a lustre even to the darkest shades, while to the paler and fainter ones, it adds a somewhat greenish hue, and to the whiter parts various tints of yellow. After applying this stain to cherry and apple wood, the wood should be slightly reddened with a tincture of some red dye, whose colour is not liable to fade. A handsome dye is thus given to it, which does not hide the grain, and which becomes still more beautiful as the wood grows darker by age.

### *To Imitate Mahogany.*

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 imitation and the native produce.

The first operation is to plane the surface, so as to render it perfectly smooth ; the wood is then to be rubbed with a solution of nitrous acid, which prepares it for the materials subsequently to be applied. Afterwards one ounce and a

half of dragon's blood, dissolved 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 on 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 we have described. When this application has been properly made, the surface will resemble an artificial mirror; but if the polish becomes less brilliant, by the use of a little cold drawn linseed oil, the wood will be restored to its former brilliancy.

*To Dye Oak a Mahogany Colour*

Boil together Brazil wood and Roman alum, and before applying it to the wood, add a little potass. A suitable varnish for wood, thus tinged, is made by dissolving amber in oil of turpentine, mixed with a small portion of linseed oil.

*To Dye Oak Ebony Black.*

Steep the wood for several days in luke-warm water, in which a little alum has been dissolved; then put a handful of log-wood, cut small, into a pint of water, and boil it down to less than half a pint. If a little indigo is added, the colour will be more beautiful. Spread a layer of this liquor quite hot, on the wood with a pencil, which will give it a violet colour. When dry, spread on another layer; dry it again, and give it a third. Then boil verdigris at discretion in its own vinegar, and spread a layer of it on the wood; when dry rub it with a brush, and then with oiled chamois skin. This gives a fine black, imitating perfectly the colour of ebony.

*To Dye Beech Wood a Mahogany Colour.*

Boil a pound of log-wood in four quarts of water, and add two handfuls of walnut peeling; boil it up again; take out the chips, add a pint of the best vinegar, and it will be fit for use.

*To Dye Musical Instruments Purple.*

Boil a pound of chip log-wood in three quarts of water for an hour; then add four ounces of pearl-ash and two ounces of indigo; then it will be fit for use.

*To Dye Box Wood Brown.*

Hold the work to the fire, that it may receive a gentle warmth; then pass a feather dipped in aquafortis, over the work, till it changes to fine brown. Then oil and polish it.

*To Dye Wood a Silver Grey.*

Put the veneers into the copper, when not too dry, then pour hot iron liquor over them, and add a pound of chip logwood with two ounces of bruised nut-galls. Then boil up another pot of iron liquor to supply the copper, keeping the veneers covered and boiling two hours a day, until thoroughly penetrated.

*To Dye Wood a Bright Yellow.*

Put four pounds of barberry roots, sawed into dust, into a brass pan; and four ounces of turmeric, and four gallons of water; then put in as many holly veneers, as the liquor will cover, boil them three hours, turning them frequently. When cool, add two ounces of aquafortis, and the dye will strike through much quicker.

*To Dye Wood a Bright Green.*

Proceed as with the yellow, but instead of aquafortis, add as much of vitriolated indigo as will produce the required colour.

*To Dye Wood a Bright Red.*

Add four gallons of water to two pounds of genuine brazil dust, put in as many veneers as the liquor will cover, boil them for three hours, and let them cool. Then add two ounces of alum, and two ounces of aquafortis, and keep it lukewarm until it has struck through.

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 GLOSSARY OF CHEMICAL TERMS.

As the alkalis, acids, salts and other chemical substances, are, in the foregoing receipts, mentioned sometimes under their



chemical names, and sometimes under their common appellations, we have given in this place the various substances, with both chemical and common names attached.

Sulphate of iron, . . . . .	<i>is also called</i> green vitriol.
Sulphate of copper, . . . . .	blue vitriol.
Sulphuric acid, . . . . .	oil of vitriol.
Oxide of manganese, . . . . .	black manganese ore.
Oxalic acid, . . . . .	acid of sugar.
Citric acid, . . . . .	salt of lemon.
Oxygenated muriatic acid, . . . . .	chlorine.
Muriatic acid, . . . . .	spirits of salts.
Acetate of copper, . . . . .	distilled verdigris.
Acetic acid, . . . . .	aromatic vinegar.
Acetatic acid, . . . . .	distilled vinegar.
Nitrate of tin, . . . . .	solution of tin.
Muriate of tin, . . . . .	salt of tin.
Murio-sulphate of tin, . . . . .	compound of the two preceding.
Carbonate of potass, . . . . .	common potash.
Sub-carbonate of potass, . . . . .	salt of sorrel.
Tartaric acid, . . . . .	acid of tartar.
Nitric acid, . . . . .	strong or double aqua- fortis.
Nitrous acid, . . . . .	weak or fuming aqua- fortis.
Carbonate of soda, . . . . .	prepared natron.
Alcohol, . . . . .	spirits of wine.

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## RURAL ECONOMY.

### *Best Method of Raising Potatoes.*

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 be shaken, and then the earth should 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 around 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.

A plentiful supply of mould should be given them, and the person who performs this business should never tread upon the plant, or the hilloek that is raised round it, as the lighter the earth is, the more room the potatoe has to expand. From fifteen to twenty pounds weight of large potatoes may be obtained from a single root thus planted.

#### *To Preserve Potatoes from Frost.*

The best and easiest way of preserving potatoes, is for the farmer to drive all his potatoes home, and lay them upon dry ground, without breaking the surface, and as near the stables as possible, putting them in heaps of about three or four carts, then covering them with straw, and above that, with turf where it can be commanded; or a neat thatching of straw. Then let a large quantity of stable dung, of the roughest kind and the newest, be laid upon each heap, to remain during the winter, but which must be removed during the spring.

As the weather becomes severe, the quantity of dung may be increased at pleasure. If this practice were adopted, few or no potatoes would be penetrated by the frost, as none would be in hazard, except one pit, or part of it, when it was removing, or placed in the potatoe-house during the winter season.

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#### DOMESTIC ECONOMY.

##### *To Extinguish a Chimney on Fire.*

Shut the doors and windows, throw water on the fire in the grate, and then stop up the bottom of the chimney.

*Another Method.*

The mephitic vapour produced by throwing a handful of flour of sulphur on the burning coals, where a chimney is on fire, will immediately extinguish the flames.

*A Substitute for Milk or Cream.*

Beat up the whole of a fresh egg, in a basin, and then pour boiling tea over it gradually, to prevent it curdling, it is difficult from the taste, to distinguish the composition from rich cream.

*To make excellent Bread.*

Mix seven pound of best flour, with three pound of pared boiled potatoes. Steam off the water, and leave them a few minutes on the fire, mash them fine and mix them whilst quite warm in the flour, with a spoonful or more of salt. Put a quart of water milk warm, with three large spoonful of yeast gradually to the potatoes and flour. Work it well into a smooth dough and let it remain four hours before it is baked.

*To prepare Household Bread.*

Mix four ounces of salt, three quarts of water, a pint of yeast and a peck of second flour, in a trough, when properly fermented knead and divide it into loaves. Sometimes a portion of rye-meal, rice-flour, or boiled potatoes, are mixed with the flour previous to the kneading; the two former serve to bind the bread, the latter cause it to be open and spongy.

*To detect Adulteration in Bread*

Thrust into the crumb of a loaf one day old, the blade of a knife considerably heated; if it is adulterated with alum it will show its unwholesome adherences on the surface, and it may further be detected by the smell. Bone-dust or plaister of Paris, may be discovered, by slicing the soft part of a loaf thin, and soaking it in a large quantity of water, in an earthen vessel, placed over a slow fire, three or four hours. Then having poured off the water and pap, the obnoxious matter will be found at the bottom.

*To ascertain if Bread be Adulterated with Chalk.*

Pour boiling water on some slices of bread, and then pour into the water a little sulphuric acid (oil of vitriol :) if there be any chalk in the bread, an effervescence will ensue ; but if none be in it, no effervescence will take place.

*To detect bone-dust and plaister of Paris in Flour.*

Drop the juice of a lemon, or good vinegar, upon the flour, if it be pure, it will remain at rest, if adulterated, an immediate commotion will take place.

*To make Furniture Oil.*

Put some linseed oil into a glazed pipkin, with as much alkanet-root as it will cover. Boil gently, and it will become a strong red colour. When cold, it will be fit for use.

*To preserve Houses from Vermin.*

Bugs, in particular, may be readily destroyed by dissolving half a drachm of corrosive sublimate, in a quarter of an ounce of spirits of salts, mixing it with one part of spirits of turpentine ; shake these well together, dip a brush in it, and wash those places where bugs are supposed to resort ; this will remove them with greater certainty than any other mode now practised.

*To drive away Rats.*

Immerse one taken alive into a composition made of equal quantities of tar and train oil, set him at liberty thus anointed, and such is the intolerable offensive smell produced by this preparation in the holes of his companions, that every one, let their number be ever so great collectively, will quit their quarters.

*To Preserve Furs and Woollens from Moths.*

Put a piece of cedar wood into a closet, or box, liable to the visits of moths, and its peculiar odour will effectually preserve the articles from injury. Tobacco leaves, and bruised camphor are likewise infallible remedies against their attacks.

The best way is to place the tobacco leaves at certain intervals in the woollen pieces, and to renew them about once in six months.

*To prevent a Beaver or Silk Hat from being spotted after Rain.*

Shake the moisture as much as possible from the hat, then with a clean linen cloth wipe it very carefully, in its regular direction, and hang it at a distance from the fire to dry.

Brush it the next morning with a soft brush for a considerable time, and the hat will prove without damage. If the gloss seem a little impaired, pass an iron, moderately heated, over it, which will answer the purpose effectually.

*To White-wash.*

Put some lumps of quick lime into a bucket of cold water, and stir it about till dissolved and mixed, after which a brush with a large head, and a long handle to reach the ceiling of the room, is used to spread it thinly on the walls, &c. When dry, it is beautifully white, but its known cheapness has induced the plaisterers to substitute a mixture of glue size and whiting for the houses of their opulent customers; and this when once used, precludes the employment of lime-washing ever after; for the latter, when laid on whiting, becomes a yellow.

White-washing is an admirable manner of rendering the dwellings of the poor, clean and wholesome.

*To Clean Water Casks.*

Scour the inside well out with water and sand, and afterwards apply a quantity of charcoal dust. Another and better method is, to rinse them with a strong solution of oil of vitriol and water, which will entirely deprive them of their foulness.

*To prepare a Liquid for Cleaning Boot Tops.*

Mix in a phial one drachm of oxy-muriate of potash with two ounces of distilled water; and when the salt is dissolved, add two ounces of spirit of salt. Shake it well together. Mix in another phial three ounces of rectified spirits of wine, with half an ounce of the essential oil of lemon; unite the contents of the two phials, and keep the

liquid, thus prepared, closely corked for use. This chemical liquid should be applied with a clean sponge, and dried in a gentle heat; after which the boot tops may be polished with a proper brush, and with care may be made to appear like new leather.

*To make Boots and Shoes Waterproof.*

Mix equal parts of mutton fat, bees wax, and sweet oil together, in a small gallipot, and heat them over the fire till melted; then, after the mixture has cooled a little, apply it to the shoes plentifully, particularly about the welt and seams, and that will render them completely waterproof.

*Liquid to take Stains out of Silk.*

Mix together in a phial two ounces of essence of lemon, and one ounce of oil of turpentine.

Grease and other spots in silk, are to be rubbed gently with a linen rag dipped in the above composition.

*Another.*

Take soap-wort (an herb of that name), bruise it, and strain out the juice; add a little black soap, mix them well to a moderate thickness; rub over the stained or spotted place, wash it out with warm water, and allow it to dry; do it again twice or thrice, and it will effect your desire.

*To take Spots of Ink out of Linen.*

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 Stains out of Cloth.*

Pound fresh chalk fine, and mix with lavender water to the thickness of mustard. Put it on the stain, and rub it lightly with the finger or palm of the hand. Then put a sheet of blotting and brown paper on the top, and smooth it with an iron, milk warm.

*Preserving Vinegar for domestic purposes.*

Cork it up in glass bottles, set them on the fire with cold water, and as much hay or straw, as will prevent them

from knocking together ; when the water nearly boils, take off the pan, and let the bottles remain in the ley a quarter of an hour.

Vinegar thus prepared, never loses its virtue, though kept many years, or occasionally left uncovered, and is peculiarly suitable for pickles.

*Test for detecting Oxalic Acid.*

Serious and even fatal accidents, having occurred from the carelessness of persons selling oxalic acid, (which is a deadly poison,) for epsom salts, the following sure test for detecting the one from the other cannot be unacceptable:— Upon a piece of white paper, drop a good sized spot of black writing ink, and upon this ink a small piece of the supposed salts ; if pure epsom salts, it will have no effect upon the ink ; but if it be oxalic acid, the colour of the ink will change to purple.

*Easy method to keep off Flies from Rooms.*

Take half a tea-spoonful of black pepper in powder, one tea-spoonful of brown sugar, one table spoonful of cream : mix them well together, and place them in the room, on a plate, where the flies are troublesome, and they will soon disappear.

*To detect Dampness in a 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 drops of wet, (for there will often appear a slight cloud of steam,) the bed is safe ; but if drops of wet or damp adhere to the inside of the glass, it is a certain sign of a damp bed. Even wearing apparel, when on the person, will, in most parts of England, by the application of a warming-pan, stain glass with a slight steam, but not drops of wet. Or, take off the sheets and sleep in the blankets.

*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.

*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 liquid 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.

*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 line 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.

*To clean Flint Glass Bottles, Decanters, &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 luke-warm water, shake them well for a few minutes, then rinse the glass with clean water, and it will be as bright and clear as when new from the shops.

*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.

*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.

*Another.*

Apply with a brush a solution of gum-arabic to the shells, or immerse the eggs therein, let them dry, and afterwards pack them in dry charcoal dust.

*To restore Pricked or Stale Beer.*

To about a quart of stale beer, put half a tea-spoonful of salt of wormwood; this will restore the beer, and make it sparkle when poured into a glass, like bottled porter.

*Excellent Cement for Broken China.*

May be made from a mixture of equal parts of glue, white of an egg, and white lead.

Garlick stamped 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.

*Another.*

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

*To Clean Black Veils.*

Pass them through a warm liquor of bullock's gall and water; rinse in cold water; then take a small piece of glue, pour boiling water on it, and pass the veil through it; clip it, and frame it to dry.

*To Clean Black Silks.*

To bullock's gall, add boiling water sufficient to make it warm, and with a clean sponge, rub the silk well on both sides, squeeze it well out, and proceed again in like manner. Rinse it in spring water, and change the water till perfectly clean, dry it in the air, and pin it out on a table; but first dip the sponge in glue water, and rub it on the wrong side; then dry it before a fire.

*To Clean Silk Stockings.*

Wash with soap and water, and simmer them in the same ten minutes, rinsing in cold water. For a blue cast, put one drop of liquid blue, into a pan of cold spring water, run the stockings through this a minute or two, and dry them. For a pink cast, put one or two drops of saturated pink dye into cold water, and rinse them through this. For a flesh colour, add a little rose pink, in a thin soap liquor, rub them with a clean flannel, and calender or mangle them.

*To revive faded Black Cloth.*

Having cleaned it well, boil two or three ounces of log-wood for half an hour. Dip it in warm water, and squeeze it dry, then put it into the copper, and boil half an hour, take it out, and add a small piece of green copperas, and boil another half hour. Hang it in the air for an hour or two, then rinse it in two or three cold waters, dry it and let it be regularly brushed with a soft brush, over which a drop or two of oil of olives has been rubbed.

*To make Breeches Ball.*

Mix one pound of Bath brick, two pounds of pipe clay four ounces pumice stone powder, and six ounces of ox gall colour them with rose pink, yellow ochre, umber, Irish slate, &c. to any desired shade.

*Clothes Ball.*

Mix two pounds of pipe clay, four ounces of Fuller's earth, four ounces of whiting, and a quarter of a point of ox gall.

*To take Stains out of Silver Plate.*

Steep the plate in soap leys for the space of four hours, then cover it over with whiting, wet with vinegar, so that it may stick thick upon it, and dry it by a fire; after which, rub off the whiting, and pass it over with dry bran, and the spots will not only disappear, but the plate will look exceedingly bright.

*Another.*

Dissolve alum in a strong ley, scum it carefully, and stir it up with soft soap, and wash your silver with it, using a linen rag.

*To take Mildew out of Linen.*

Rub it well with soap, 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 after twice doing.

*To clean all sorts of Metal.*

Mix half a pint of refined neat's-foot oil, and a half a gill of spirits of turpentine. Scrape a little kernel or rotten stone; wet a woollen rag therewith, dip it into the scraped kernel, and rub the metal well. Wipe it off with a soft cloth, polish with dry leather, and use more of the kernel. In respect to steel, if it is very rusty, use a little powder of pumice with the liquid, or a separate woollen rag first.

*To take stains out of Mahogany.*

Mix six ounces of spirits of salts, and half an ounce of rock salt of lemons, powdered together. Drop a little on the stains, and rub it with a cork till it disappears. Wash off with cold water.

*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 cork it well.

*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; put it into bottles, and cork it well.

*Genuine Windsor Soap.*

To make this soap for washing the hands, shaving, &c., nothing more is necessary than to slice the best white soap as thin as possible, melt in a stew-pan over a slow fire, scent it with oil of carraway, and then pour it into a frame or mould 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 into square pieces, and it is ready for use.

By this simple mode, substituting any more favourable scent for that of carraway, all persons may suit themselves with a good perfumed soap at a trifling expence. Shaving boxes may be at once filled with the melted soap, instead of a mould.

*To prevent the Tooth-ache.*

Rub well the teeth and gums with a hard tooth-brush, using the flour of sulphur as a tooth powder, every night on going to bed, and if it is done after dinner, it will be best. This is an excellent preservative to the teeth, and void of any unpleasant smell.

*To make common Black Ink.*

A good and durable black ink may be made by the following directions:—To two pints of water add three ounces of dark coloured Aleppo galls in gross powder, and of rasped logwood, green vitriol, and gum arabic, each one ounce. This mixture is to be put into a convenient vessel, and well shaken four or five times a day for ten or twelve days, at the end of which time it will be fit for use; though it will improve by remaining longer on the ingredients. Vinegar instead of water makes a deeper coloured ink; but its action on pens soon spoils them.

*Permanent Red Ink for Marking Linen.*

This useful preparation, which was contrived by the late learned Dr. Smellie, of Edinburgh, who was originally a printer in that city, may be used with types, a hair pencil, or even with a pen. Take half an ounce of vermilion, and a dram of salt of steel; let them be finely levigated with linseed oil, to the thickness or lumpidity required for the occasion.—This has not only a good appearance, but will, it is said, perfectly resist the effects of acids, as well as of all alkaline leys. It may be made of other colours, by substituting the proper articles instead of vermilion.

*To make Red Ink.*

Take a quarter of a pound of best Brazil wood, get in the log if possible, and rasp or shave it yourself, one ounce of cream of tartar, and one ounce of alun; boil these ingredients in a quart of clear water till half 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 becoming mouldy.

*To make Vinegar.*

To every gallon of water put a pound of coarse Lisbon sugar, let the mixture be boiled and skimmed as long as any scum arises. Then let it be poured into proper vessels, and when it is as cold 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 to it 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.

*Easy method of Preserving Animal Food sweet, for several days in the height of Summer*

Veal, mutton, beef, or venison, may be kept 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 Sweeten Meat, Fish, &c., that is tainted.*

Put a few pieces of charcoal, each the size of an egg, into the pot or saucepan wherein the meat or fish is to be boiled.

*The useful Properties of Charcoal for 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 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.

*To Loosen the Glass Stoppers of Smelling Bottles and Decanters.*

With a feather rub a drop or two of olive oil round the stopper, 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 stopper and the neck.

When the bottle or decanter has grown warm, gently strike the stopper on the 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 stopper may be fastened in, you will at length succeed in loosening it.

*To preserve Sea Bread from the Weevil.*

The fatal effects of the weevil 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 and 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 all 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 weevils, 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 to be attributed solely to the quality of the bag.

*To prevent the formation of Crust on the inside of Tea Kettles.*

Put into the 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.

Or, as the shell occasions a disagreeable noise, regularly clean the inside of the kettle. No crust forms on common saucepans, which are cleaned whenever they are used.

*To Clean Mahogany Furniture.*

Three pennyworth of alkanet root, one pint of cold draw,

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.

If the pinky shade occasioned by the alkanet root and pink is disagreeable, they may be omitted in part or entirely.

*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.

*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 weaten bran.

*To purify Water for Drinking.*

Filter 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 may 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 terene 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.

*To purify the Muddy Water of Rivers and Pits.*

Make a number of holes in the bottom of a deep tub ; lay some clean gravel thereon, and above this some clean



and ; 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 to the level of the water on the outside, and will be pure and limpid.

*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 trifling expense.

*To purify River or any other Water.*

Dissolve half an ounce of alum in a pint of warm water, and stirring it about in a puncheon of water just taken from the river. All the impurities will soon settle to the bottom, and in a day or two it will become as clear as the finest spring water.

*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 diluent for carrying off bile, and removing obstruction in the urinary secretion in cases of stone or 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 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 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.

*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 nowise 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 is quite cold; it is then fit to be used; the fresher it is made the better, and of course the more agreeable.

*To make a Vessel for Filtering Water.*

Provide a wooden vessel lined with lead, three or four feet wide at top, but tapering so as to end in a small orifice at the bottom. The under part of the vessel is to be filled with very rough sand or gravel, well freed from earth by washing; over this pretty fine sand may be laid, to the depth of twelve or fourteen inches, but which must likewise be well freed from earthy particles.

The vessel may then be filled up to the top with water, pouring gently at first, lest the sand should be too much displaced. It will soon filter through the sand, and run out at the lower orifice exceedingly transparent, and likewise in very considerable quantities. When the upper part of the sand begins to be stopped up so as not to allow a free passage to the water, it may occasionally be taken off, and the earthy matter washed from it, when it will be equally serviceable as before.

*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 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 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.

*To make British Herb Tea.*

Take of hawthorn leaves, dried, two parts, balm and sage one part; mix these well together and they will make an excellent and pleasant sanative tea, particularly wholesome to nervous people.

*British substitute for Foreign Tea.*

Betany, 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.*

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 estimation among the ancients, that they have left us the proverb, “*Why should a man die while 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, alleging 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.

*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.

*To preserve Eggs sound for the space of Two Years.*

Put into a tub or vessel one bushel, Winchester measure, of quick lime, thirty-two ounces of salt, eight ounces of cream of tartar, and mix the same together with as much water as will reduce the composition or mixture, to that consistence, that it will cause an egg put into it to swim with its top just above the liquid: then put, and keep the eggs therein, which will preserve them perfectly sound for the space of two years at the least.

This method is not the worse for being simple, and the still simpler one of merely keeping eggs in salt, is known by many good housewives to preserve eggs quite sound for a considerable time.

*To prevent disagreeable smells from privies, night chairs, &c.*

Milk of lime (water in which lime has been slacked, and which is 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 neutralized.

For the night chair of sick persons, put within the vessel half a pound of quick lime, half an ounce of powdered salam-mo-niac, and water one pint; this will prevent any disagreeable odour.

*Remark.*—Quick lime, or even lime just slacked, answers the purpose without any addition. It is the only thing used in camps particularly in hot countries, to keep the ditches from creating contagion.

### *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 bin, be preserved in a corner of the coal hole, and make your servants 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.

### *Fly Water.*

Most of the fly water, and other preparation commonly sold for the destruction of flies, are variously disguised poisons, dangerous and even fatal to the human species, such as solutions of mercury, arsenic, &c. mixed with honey or sirup.

The following preparation, however without endangering

the lives of children, or other incautious persons, is not less fatal to flies than even a solution of arsenic. Dissolve two drachms of the extract of quassia, in half a pint of boiling water and adding a little sugar or sirup, pour the mixture on plates. To this enticing food the flies are extremely partial, and it never fails to destroy them.

#### *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 it 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.

#### *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 a 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 bergamot 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.

#### *Economical mode of cutting Cauliflowers.*

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 for: 1, 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.

*Useful properties of Celadine*

The juice of this plant cures tetter and ringworms, destroys warts, and cures the itch.

*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.

*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 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 seed 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.

*To Destroy Ants.*

Ants that frequent houses or gardens may be destroyed by taking flour of brimstone half a pound, and potash 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 leave the place.

*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.

*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 destroys them, and loud sounds drive them away. Cockroaches are likewise destroyed by the smoke of charcoal.

*Remedies against Fleas.*

Fumigation with brimstone, or the fresh leaves of pennyroyal sewed in a bag, and laid in the bed, will have the desired effect.

*To destroy Fleas on Dogs.*

Rub the animal when out of the house, with the common Scotch snuff, except the nose and eyes. Rub the powder well into the root of the hair. Clear lime water destroys the whitish flea-worm, without injuring the skin or hair. Oil of turpentine will likewise do so; but if there be any malignity, or the skin be broken, it will give the animal much pain.

*To destroy Vermin in Children's Heads.*

Take an 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 together in a lina-ment, and rub the head repeatedly with a little thereof.

*To revive Old Writings that are almost defaced.*

Boil nut galls in wine; then steep a sponge in 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 clean Paper Hangings.*

Cut into eight half quarters a stale quartern loaf; with one of these pieces, after having blown off all the dust from the paper with a good pair of bellows, begin at the top of the room, holding the crust in the hand, and wiping lightly downward with the crumbs. Caution must be used not to rub the paper hard, nor to attempt cleaning it the cross or horizontal way.

*A cheap Shoe Blacking.*

Take four ounces of ivory black, three ounces of the coarsest sugar, an ounce of sweet oil, and a pint of small



beer, with half an ounce of oil of vitriol ; mix them gradually cold.

*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 Sweeten Meat, Fish, &c. that is Tainted.*

Put a few pieces of charcoal, each the size of an egg, into the pot or saucepan wherein the meat or fish is to be boiled.

*To Preserve Clothes.*

Clothes when laid by for a time, acquire an unpleasant odour, which requires a long exposure to the atmospheric air to remove ; it will be prevented by laying some recently-made charcoal between the folds of the garments.

*Remedy for Corns.*

The following plaisters will always give relief, and frequently remove them:—1. One ounce of Venice Turpentine, the yolks of two eggs, two drachms of mercurial plaister, half an ounce of yellow wax ; the turpentine and wax must be melted together, and the other ingredients mixed when fluid.—2. Take equal quantities of roasted onions and soft soap ; beat them up together, and apply them as a poultice ; this application will instantly appease the pain.

*To make French Polish for Furniture.*

If the article to be polished has been previously waxed, it must be cleaned off with glass paper. To one pint of spirits of wine, add two ounces of gum shellac, and half an ounce of gum sandrach ; place the whole over a gentle fire, frequently agitating it till the gums are dissolved. Make a roller of list, put a little of the mixture upon it, and cover that with a soft linen rag, which must be slightly touched with cold-drawn linseed oil. Rub them into the wood in a circular direction, covering only a small space at a time, till the pores of the wood are filled up. After this, rub in, in the same manner, spirits of wine, with a small portion of the polish added to it, and the effect will be complete.

*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.

*To prevent Brass Vessels from contracting Verdegris after being used.*

Instead of wiping them dry, it has been found, that by constantly immersing them in water, they are kept perfectly innocuous, and will remain for years full as clean, and nearly as bright as when they first came out of the hands of the workmen.

*Chopped or Sore Lips,*

May be healed by the frequent application of honey-water, and protecting them from the influence of the cold air.

*Medical virtues of Black Currants.*

In Ireland, black currants are frequently steeped in whiskey, of which they make punch, and recommend it as a good medicine for coughs and colds. Some of it when taken in a glass of warm water, by a person who was very much afflicted with a severe cough, and thought to be in a decline, which affected a perfect cure in three or four nights; the currants for this purpose should be bruised and put in a jar, and the whiskey poured over them. Let it stand for a week or a fortnight, covering it close down, and then strain it through a fine sieve and put it in bottles or casks for use. Currants may be used in this manner with brandy, gin, or other spirits.

*To Bleach Muslins.*

There is nothing which removes so effectually and speedily the yellow tinge which muslins acquire, as liquid oxy-muriate of lime. However long the stains may have been in, one tea-spoonful of this liquid to a basin of water, will remove them. Muslins steeped in this solution a few days, and then thoroughly washed in pure water, will become beautifully white.

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